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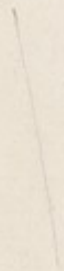
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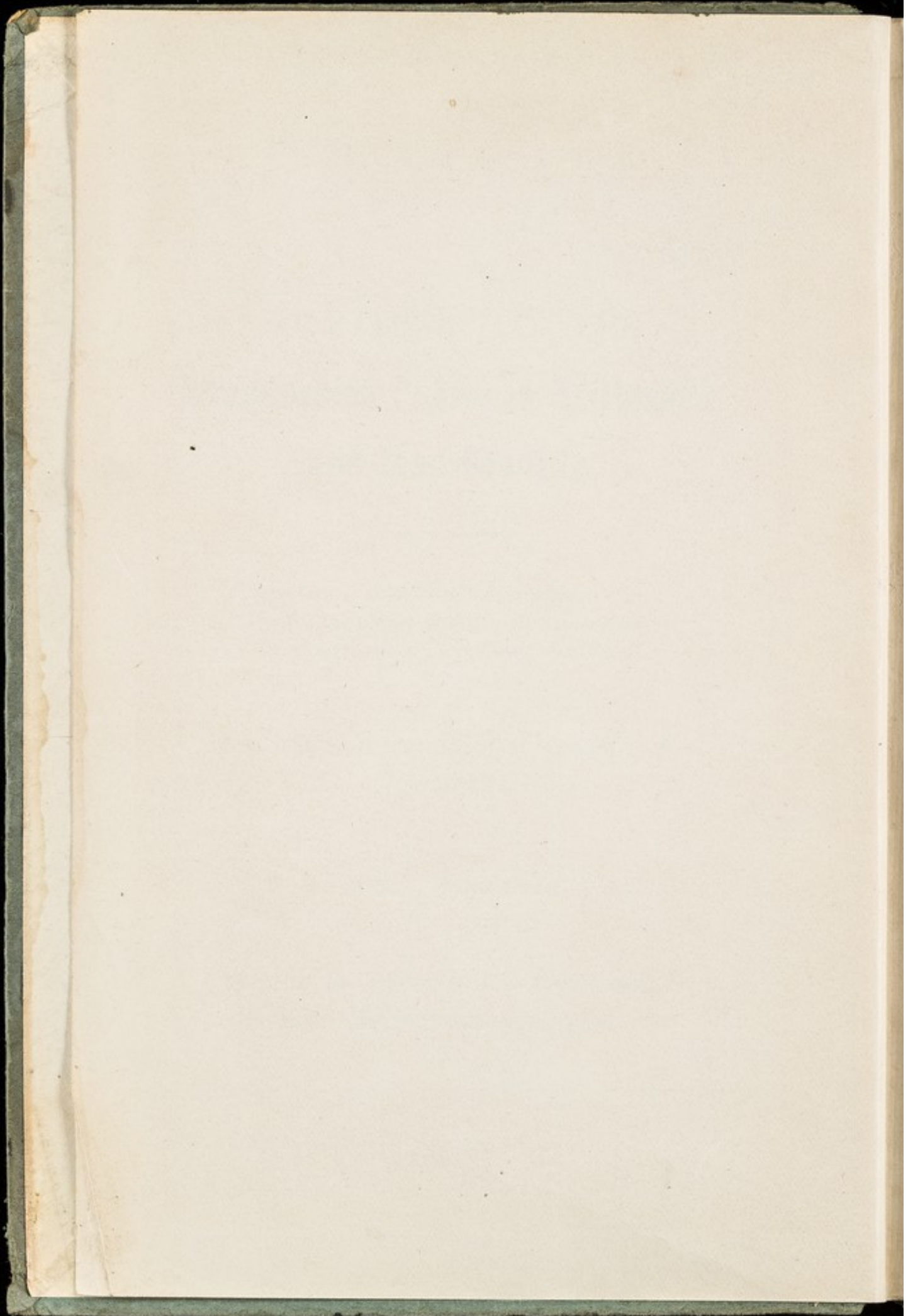
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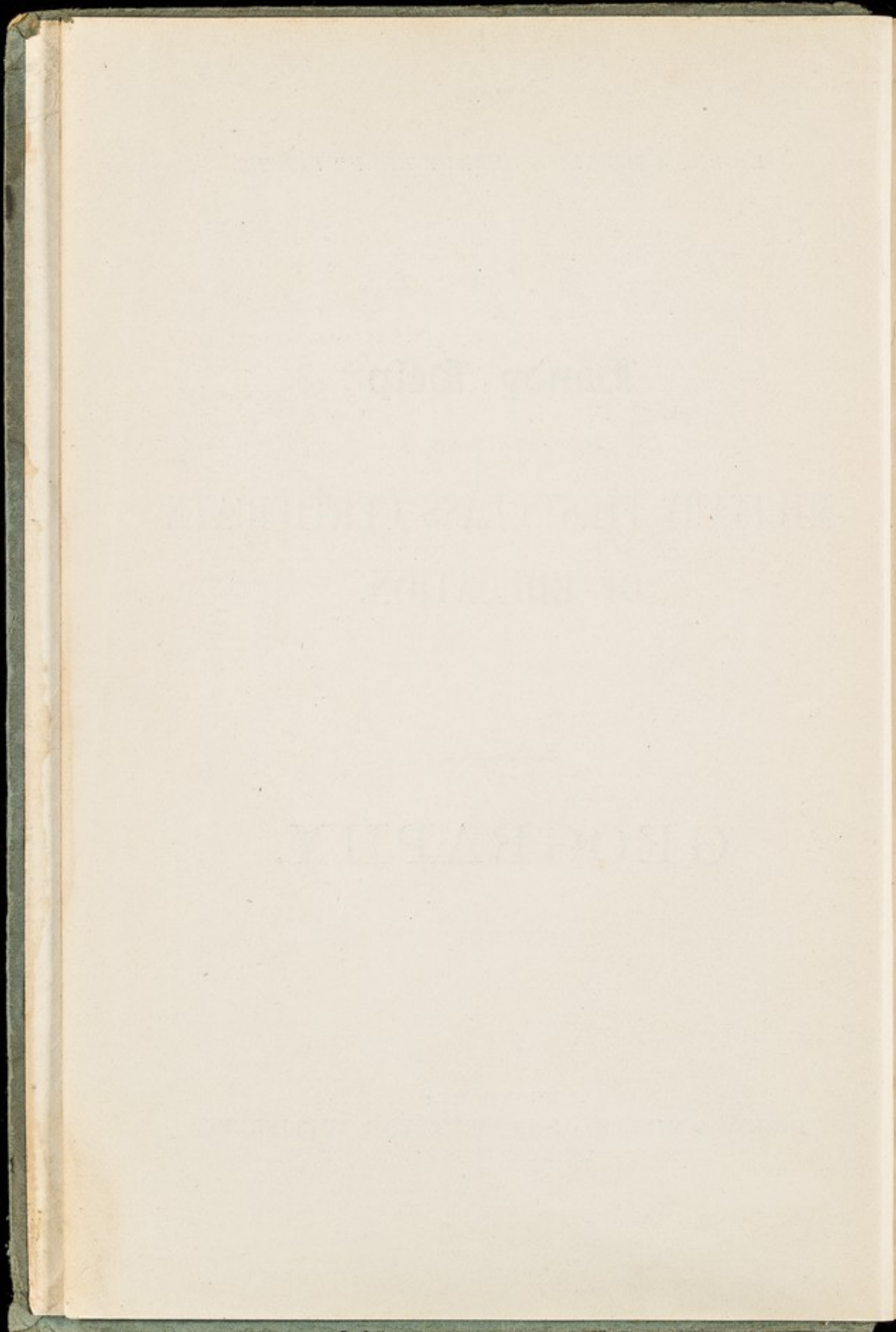
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# GEOGRAPHY.

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## PREFACE.

GEOGRAPHY is, perhaps, the least attractive of the five subjects to be studied for a First Class Certificate of Education, and its imaginary difficulty deters many from attempting Group II. The author has endeavoured to make the subject interesting by a concise treatment, with suitable questions based on the work of each chapter, and useful sketches which, it is hoped, will allay to some extent the dread with which Geography is regarded.

An atlas must always be used when studying this book (every statement made being compared with the atlas for verification). "The eye should also be trained to observe on the map the general outline of a country, especially the coast line, so that the student may be able to draw outline maps from memory, and subsequently to fill in the more important physical features and places, etc."

The making of separate lists of bays, capes, etc., has been avoided, the various coast features being given in order as they occur. Special attention has been given to the British Empire and to the various phases of Mathematical Geography. Special chapters dealing with Military Geography, and illustrated by maps, have been added to this edition, which, with recent Examination Papers, will embrace the new requirements in Geography.



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There are numerous questions on the work of each chapter.



## I. *Mathematical Geography.*

### THE SHAPE OF THE EARTH.

The earth on which we live is a **globe** or **sphere**. It is not a perfect sphere, but an **oblate spheroid**; that is, it differs slightly from a sphere in being a little flattened at the two poles.

There are many proofs of the earth's **rotundity** :—

(a) If we watch a ship moving from the shore, the hull disappears from sight first, the tops of the masts last. The hull is hidden by the curve of the earth. If the earth were flat, the hull, being the largest part of the vessel, would remain longest in sight.

(b) When the moon is eclipsed, the sun throws the shadow of the earth upon the bright face of the moon. The edge of this shadow is always round.

(c) If the earth be round there is a limit to our range of sight. The **horizon** that bounds our view is always circular.

(d) The earth is a **planet**, and as all the other planets are round, it can be assumed that the earth is also round.

(e) The earth has been circumnavigated, and men have travelled round it by rail and sea. By going onward in the same direction east or west, they have returned to the place from whence they started.

Trace the following two routes on a map of the world :—

**Sea Route.**—London to Sydney *viâ* Suez and Colombo; thence across the Pacific, round Cape Horn, and northward in the Atlantic Ocean to London.

**Sea and Rail.**—London to New York; then by rail to San Francisco; by sea to Vladivostock; then by rail to Calais, and finally to London.

### THE SIZE OF THE EARTH.

The earth is larger than the moon, but many times smaller than the sun. The sun and moon appear to be of the same size, but it must be remembered that the sun is about 93,000,000 miles away from the earth, and the moon 240,000 miles.

The **circumference** of the earth is the distance *round* it. The *greatest* circle that can be drawn round the earth is the **equator**, which is nearly 25,000 miles long.

The **equator** is an imaginary line drawn round the earth midway between the two poles, dividing the earth's surface into two equal parts or hemispheres.

The **diameter** of the earth is the distance *through* it, and is nearly 8,000 miles long. The diameter of the *sun* is more than 100 times longer, but that of the *moon* is only a quarter as long.

The *equatorial diameter* is 7,926 miles, but the *polar diameter* is 27 miles less, due to the earth being flattened at each pole.

The **axis** is that diameter of the earth upon which it turns. The *ends* of this imaginary line are the *Poles*, the **North Pole** and the **South Pole**.



### LATITUDE AND LONGITUDE.

**Distances** on the earth's surface are measured by **circles**. All circles are divided into 360 equal parts, called **degrees**. The length of a degree is the equatorial circumference of the earth divided by 360, and is **69·2 English miles**. Each degree is also divided into **60 minutes** or **geographical miles**, and each minute into **60 seconds**. 15 degrees, 35 minutes, 30 seconds would be written thus— $15^{\circ} 35' 30''$ .

A **geographical mile** is the *sea mile*, called the *knot*; hence a knot is equal to 69·2 miles divided by 60, that is 1·15 miles.

To determine the position of any place, it is necessary to have *two sets of lines* or circles cutting each other at right angles; and each set must be measured from a *fixed position*.

The two fixed positions are (1) the equator, and (2) a circle or meridian drawn though Greenwich cutting the equator at right angles. A place must either be on the equator, or north or south of it. Also it must either be on the Greenwich meridian, or east or west of it. The two sets of circles are called **Lines of Latitude** and **Lines of Longitude**. When the line of latitude and the line of longitude of a place are known, its exact position will be where the two lines *intersect* or cut each other.

**Latitude** (breadth) and **Longitude** (length) were names given by the ancients. They thought the earth extended further east and west than north and south. Hence the *length* of the earth was measured from east to west, and the *breadth* from north to south.

---

**Latitude** is the distance of any place north or south of the equator, and is measured by circles drawn parallel to it. Hence the term **Parallels of Latitude**.

The greatest distance north or south of the equator is one quarter of the circumference. Therefore the greatest latitude a place can have is  $90^{\circ}$  N. or S. of the equator, which is marked  $0^{\circ}$ . A place on the 40th parallel north of the equator would be in 40 degrees N. Latitude, and one on the 40th parallel south of the equator would be in 40 degrees S. Latitude.

There are five **great circles** of latitude—the **Equator** ( $0^{\circ}$ ), the **Tropic of Cancer** ( $23\frac{1}{2}^{\circ}$  N.), the **Tropic of Capricorn** ( $23\frac{1}{2}^{\circ}$  S.), the **Arctic Circle** ( $66\frac{1}{2}^{\circ}$  N.), the **Antarctic Circle** ( $66\frac{1}{2}^{\circ}$  S.). The two latter are drawn  $23\frac{1}{2}^{\circ}$  from the N. and S. pole respectively.

Places near the equator are said to be in **low latitudes**, and those far from it, in **high latitudes**.

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**Longitude** is the distance of any place east or west of the Greenwich meridian, and is measured by circles, called **Meridians**, which pass through the poles and cut the equator at right angles.

A **Meridian** is so called because it connects all places which have mid-day at the same time.

The meridian of Greenwich is marked  $0^{\circ}$ . If two men set out, one travelling east, the other west, at the same rate, they would meet half way round the earth, that is, at  $180^{\circ}$ . Therefore the greatest longitude is  $180^{\circ}$  E. or W. Longitude  $180^{\circ}$  E. is the same as longitude  $180^{\circ}$  W. The *Fiji Islands* are  $180^{\circ}$  E. or W. A place on the 50th meridian E. of



Greenwich would be in 50° E. longitude, and a place on the 50th meridian W. of Greenwich would be in 50° W. longitude.

When the meridian (or half meridian really) is brought opposite the sun, it is noon, and it is then termed the post-meridian (p.m.). The corresponding half meridian is called the ante-meridian (a.m.).

Learn the latitude and longitude (approximate) of the following places :—

	Latitude	Longitude		Latitude	Longitude
London ..	51° 30' N.	0° 5' W.	Cork ..	51° 45' N.	8° 30' W.
Rome ..	42° N.	12° 30' E.	New York..	40° 45' N.	74° W.
Cairo ..	30° N.	31° 30' E.	New Orleans	30° N.	90° W.
Bombay ..	19° N.	72° 45' E.	Winnipeg ..	50° N.	97° W.
Singapore	1° 15' N.	104° E.	San Francisco	37° 45' N.	122° 30' W.
Sydney ..	34° S.	151° 15' E.	Rio de Janeiro	23° S.	43° W.
Cape Town	34° S.	18° 30' E.	Buenos Ayres	34° 30' S.	58° 30' W.

The **Antipodes** (feet to feet) is the name given to two points on the earth's surface which are opposite to each other at the extreme ends of a diameter. The nearest land to the antipodes of Greenwich would be in 51° 30' S. lat. and 180° E. or W. long. This is a group of islands called the *Antipodes Islands*, lying to the south of New Zealand. The antipodes of Bermuda 32° N. lat. and 64° W. long., will be 32° S. lat. and 64° W. + 180° E. = 116° E. This will be near Perth (West Australia).

DEGREES OF LATITUDE AND LONGITUDE.

**Latitude** being the distance of a place N. or S. of the equator, must be measured *along lines of longitude*. But all circles of longitude, or meridians, are of equal circumference; consequently the  $\frac{1}{360}$  part of each meridian will always be the same. **Therefore degrees of latitude are always of the same length.**

**Longitude** being the distance of a place east or west of Greenwich, must be measured *along parallels of latitude*.

At the equator a degree of longitude will be equal to a degree of latitude, as there is very little difference between the circumference of the equator and that of a meridian. But north or south of the equator a degree of longitude is  $\frac{1}{360}$  of a parallel of latitude. It is easily seen that these parallels decrease in size as we proceed from the equator to either pole. The *length* then of a degree of longitude will decrease as we leave the equator.

Learn the following table :—

The number of *English miles* in a degree of longitude (approximate) in

Lat. 0° = 69.2		Lat. 50° = 44½	25
" 10° = 68	1	" 60° = 34½	35
" 20° = 65	4	" 70° = 23½	46
" 30° = 60	9	" 80° = 12	54
" 40° = 53	16	" 90° = 0	

Bear in mind that the *number* of degrees will always be the same between two meridians in any latitude. It is only the length in *English miles* that differs.

EXAMPLE.—The following question will now be easily understood. A ship in lat. 40° N. sails 12° due north. How many geographical miles will



she sail? The course is then altered, and she sails due west for  $20^\circ$ . How many English miles will she sail?

A degree of latitude = 60 geographical miles, and  $12^\circ$  will be 720 *geo.* miles. The ship is now in  $52^\circ$  N. lat., and she then sails 20 degrees of longitude. But a degree of longitude in  $52^\circ$  N. lat. is equal to about  $42\frac{1}{2}$  English miles (see table). Therefore the vessel will sail  $42\frac{1}{2} \times 20 = 850$  miles.

### LONGITUDE AND TIME.

As the earth rotates from west to east, each meridian is brought opposite the sun at 12 o'clock, and in the 24 hours the whole circuit of  $360^\circ$  will have passed opposite the sun.  $360^\circ$  in 24 hours =  $15^\circ$  in one hour =  $1^\circ$  in 4 minutes.

As we get time from the sun, meridians that are  $15^\circ$  apart, will have a difference of one hour in their times. The earth turning eastward, a place that lies  $15^\circ$  east of another will have its time one hour *in advance* of the other; that is, when it is noon at the former place, it will be 11 a.m. at the latter. When it is noon at Greenwich, all places in *east longitude* have had noon, and their times will be **p.m.**; places *west* of Greenwich have not yet had noon, and their times will be **a.m.**

EXAMPLE.—It is noon at Greenwich. What is the time at (a) St. Petersburg  $30^\circ 20' E.$ , and at (b) Dublin  $6^\circ 20' W.$ ?

(a)  $30^\circ 20' = 30\frac{1}{3}^\circ$ . Allowing 4 minutes of time to a degree, the difference in time equals  $30\frac{1}{3} \times 4 = 121\frac{1}{3}$  min. = 2 hrs. 1 min. 20 sec. St. Petersburg lies east of Greenwich, so the time there will be 1 min. 20 sec. past 2 p.m.

(b) A difference of  $6\frac{1}{3}^\circ$  will make a difference in time of  $6\frac{1}{3} \times 4 = 25\frac{1}{3}$  min. Dublin lies west of Greenwich, and therefore the time will be  $25\frac{1}{3}$  min. before 12, that is 11.34 a.m. roughly.

In the same way it will be found that when it is noon at Greenwich, it is (approximately) 1.6 p.m. at Vienna ( $16^\circ 30' E.$ ); 4.51 p.m. at Bombay ( $72^\circ 45' E.$ ); 7.37 p.m. at Hong Kong ( $114^\circ 15' E.$ ); 10.5 p.m. at Sydney ( $151^\circ 15' E.$ ); 11.26 a.m. at Cork ( $8^\circ 30' W.$ ); 7.15 a.m. at Quebec ( $71^\circ 0' E.$ ); 3.48 a.m. at New Westminster ( $123^\circ W.$ ); 1.28 a.m. at Honolulu ( $158^\circ W.$ ). These times should be verified, working as above.

While studying this question of longitude and time, the student will observe the truth of the saying, "The sun never sets upon the British Empire." It will be seen that as successive meridians pass opposite the sun in the 24 hours, the sun is never absent from some part of the British Empire. Trace the British possessions, commencing at  $180^\circ E.$  and travelling west, that successive meridians pass through at intervals of 15 degrees.

### GAINING AND LOSING A DAY.

For every  $15^\circ$  a ship sails to the *east* the clock must be advanced one hour. The putting forward of the clock each day must have been noticed by all who have sailed to Malta, Egypt, or India. When a ship has made a whole circuit of the earth in an easterly direction, the clock will have been advanced 24 hours, and on arriving at her starting point, the crew will find that they are a day *in advance* of the local date.

This error is corrected when the ship arrives at  $180^\circ E.$  To avoid gaining



a day, a captain on arriving at  $180^\circ$  E., say, Monday, 25th December, will call the next day Monday, 25th December also, thus having two Christmas days in the year.

Proceeding *westward* the clock will be put back one hour for every  $15^\circ$ , and when a whole circuit of the earth has been made, the clock will have been put back 24 hours; and on arriving at the starting point, the crew will find they are a day *behind* the local date.

To pull up the loss of a day, the captain, on arriving at  $180^\circ$  W., say Monday, 24th December, will call the next day Wednesday, 26th, and so the crew will miss their Christmas day.

### TO FIND LONGITUDE AT SEA.

A navigator can easily ascertain his longitude by means of the *sun* and a good *chronometer*.

A *chronometer* always records Greenwich time, the time at the zero meridian.

The local, or ship's time, as it is called, is taken at *noon*, when the sun reaches its highest point in the heavens. The difference between the local time and that at Greenwich is converted into degrees, *allowing four minutes of time to a degree*. If the local time (noon) be *earlier* than Greenwich time, the ship must be in *west* longitude. If the local time (noon) is *later* than Greenwich, then the ship will be in *east* longitude.

EXAMPLE.—At ship's time (noon) the chronometer showed 2.30 p.m. What is the longitude of the ship? Ten days later the chronometer indicated 11.15 a.m. at ship's time. What longitude is the ship in now?

(a) A difference of  $2\frac{1}{2}$  hours or 150 minutes is due to a difference of  $150 \div 4 = 37\frac{1}{2}$  degrees. As the local time is earlier than Greenwich time, the ship must be in longitude  $37^\circ 30'$  West.

(b) A difference of 45 minutes is due to a difference of  $45 \div 4 = 11\frac{1}{4}$  degrees. As the local time is later than Greenwich time, the ship must now be in longitude  $11^\circ 15'$  East.

### THE MOTIONS OF THE EARTH.

1. **The Diurnal or Daily Motion.**—The earth is constantly turning round in a direction from west to east upon the imaginary line called the *Axis*.

The earth rotates once in 24 hours, and causes **Day and Night**, but not the variation of day and night. The sun can only shine upon one half of the earth at a time. In that half it is *day*, and it is *night* in the other half where the sun is not shining. But as the earth turns round, all parts of it, one after the other, come opposite the sun, and then turn away from it, in the 24 hours.

All parts of the earth do not move at the same speed. At the equator the rate is over 1,000 miles an hour, but the rate gradually decreases as we go from the equator to the poles, which are stationary.

2. **The Annual Motion.**—The earth, besides rotating on its axis, also revolves round the sun once a year. The path of the earth round the sun is called its **orbit**. It is oval in shape.

The earth's orbit is also called the *ecliptic*. It is the apparent path of



the sun, and is so called because eclipses only take place when the sun or moon is near this path.

The sun is not in the centre of this oval or ellipse.

The **Perihelion** is the point in the orbit where the earth makes its *nearest* approach to the sun.

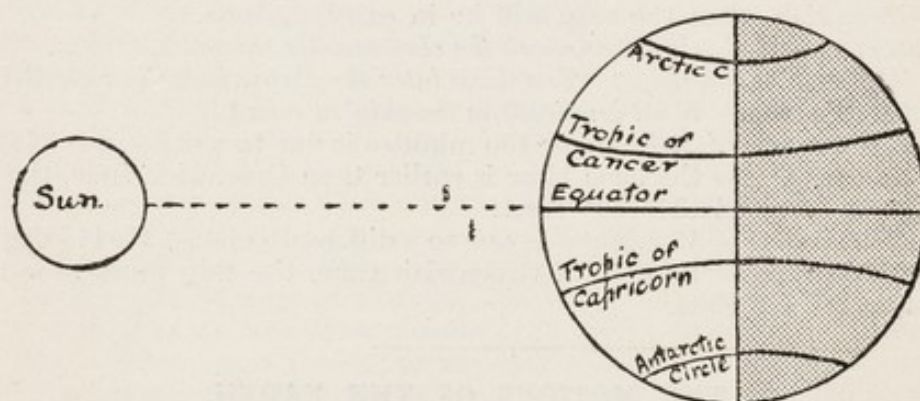
The **Aphelion** is the point in the orbit where the earth is *farthest* from the sun.

The earth is about 3,000,000 miles *nearer* the sun in December than in June.

3. **Inclination of the Axis.**—The axis of the earth is not vertical to the orbit. If it were so, day and night would be of equal duration throughout the year, as the sun's rays would just reach from pole to pole. Also there would be no seasons. It would always be summer around the equator, winter in the north and south, and spring in the regions between.

The axis, however, is inclined at an angle of  $23\frac{1}{2}^{\circ}$  from the vertical, and this, combined with the annual revolution round the sun, causes the seasons and the variation of day and night.

4. **Vernal Equinox.**—We say Spring commences about the 21st March. The sun is then vertical to the equator and the rays or the sun spread from pole to pole. This is the time of the *Spring* or **Vernal Equinox** (equal night), when there is equal day and night all over the world—12 hours day and 12 hours night.



### Equinox - Equal Day and Night.

The earth moves on. When the sun is vertical to  $1^{\circ}$  north of the equator, the sun's rays will extend  $1^{\circ}$  beyond the North Pole and be cut off  $1^{\circ}$  from the South Pole; and so, daily, as the northern hemisphere *turns* slowly *towards* the sun, it receives more heat, and the days get longer and the nights shorter; while in the southern hemisphere, which is gradually turning away from the sun, the reverse is taking place.

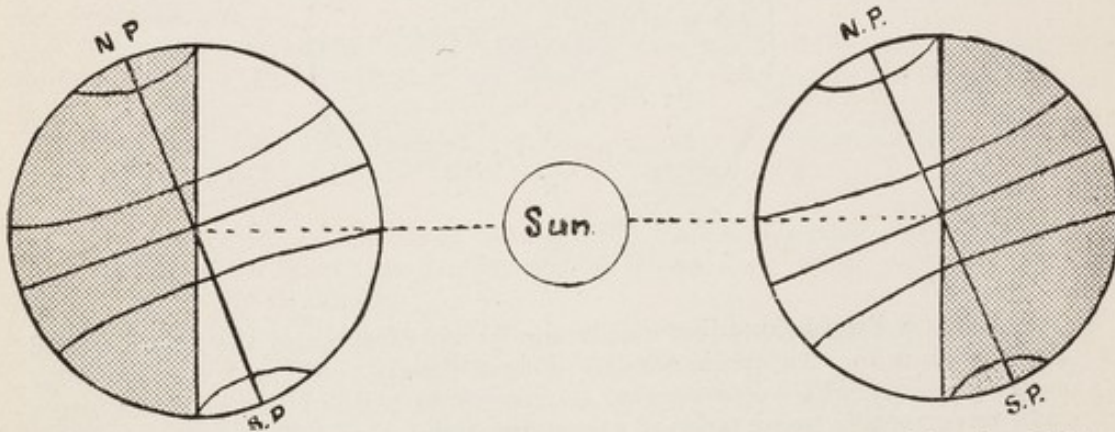
5. **Summer Solstice.**—About the 21st June the vertical sun will now reach the end of its apparent northward journey  $23\frac{1}{2}^{\circ}$  N. The **Tropic of Cancer** has been drawn to mark this limit. **Tropic** means to turn, and this line is so called because the sun now appears to turn and commence an apparent southern movement towards the equator. This time of the year is known



as the **Summer Solstice** (sun stands). The 21st June is our longest day and shortest night. The sun's rays now extend  $23\frac{1}{2}^{\circ}$  beyond the North Pole, while they are cut off  $23\frac{1}{2}^{\circ}$  from the South Pole. For some time before and after the Summer Solstice, the region around the North Pole has no night, while that round the South Pole has no day. The summer is not warmer because the earth is nearer to the sun (as before stated, the earth is nearer by 3,000,000 miles to the sun in winter than in summer), but it is due to the *inclination of the sun's rays*. When the rays are vertical they give more heat than those not vertical (oblique). In London at mid-summer the sun's rays are only  $30^{\circ}$  from the vertical, but in mid-winter, owing to the position of the sun in the southern hemisphere, the rays are  $75^{\circ}$  from the vertical, and thus give less heat.

6. **Autumnal Equinox.**—The earth continues its journey round the sun, and gradually the northern hemisphere will *turn away* from the sun. The days will begin to get shorter in the northern and longer in the southern hemisphere, until the sun is once more vertical to the equator. This occurs about the 21st September, the period being known as the **Autumnal Equinox**. Day and night are again equal all over the world.

7. **Winter Solstice.**—From the 21st September the greater part of the southern hemisphere gradually turns towards the sun. About the 21st December the vertical sun in its apparent journey has reached its southern limit. The **Tropic of Capricorn**,  $23\frac{1}{2}^{\circ}$  S., has been drawn to mark this boundary. We in the northern hemisphere call this the **Winter Solstice**. It is our shortest day and longest night. Our short Christmas day will be spent mid winter snow and frost, while the colonist in Australia, New Zealand, and Cape Colony will enjoy the long day in summer heat.



1. Northern Winter and Southern Summer.

2. Northern Summer and Southern Winter.

SOLSTICES.

The South Pole now rotates in continued light, while the sun never rises above the horizon at the North Pole.

It will be noticed that each pole has this continuous light for six months, followed by continuous darkness for six months. Regions within  $23\frac{1}{2}^{\circ}$  of the poles share this long day and night for shorter periods. The Arctic and Antarctic Circles have been drawn  $23\frac{1}{2}^{\circ}$  from the poles to mark the boundary of those regions rotating in continual light and darkness.



8. Thus it has been shown that the—

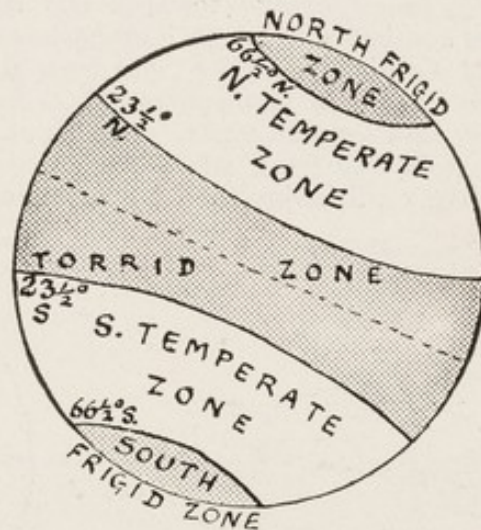
**Daily Motion** of the earth causes (1) Day and night; (2) A difference in time of one hour between places  $15^\circ$  of longitude apart, by which the longitude of a place can be ascertained.

**The Annual Motion** causes (1) The Seasons; (2) The *variation* in the length of day and night; (3) Opposite seasons to take place at the same time in the northern and southern hemispheres. The sketches above should always be drawn to illustrate (1), (2), and (3).

### THE ZONES.

The tropics and the two polar circles divide the earth's surface into five belts or zones. There are one *torrid* zone, two *temperate* zones, and two *frigid* zones.

The **Torrid Zone** lies between the Tropic of Cancer on the north, and the Tropic of Capricorn on the south, extending  $23\frac{1}{2}^\circ$  on each side of the equator. This zone is often called the **tropics**. Torrid means burning, and, taken as a whole, this is the hottest part of the globe, for the sun's rays are always vertical to some part of it. It is the noon shadowless region of the earth.



The **North Frigid Zone** lies within the Arctic Circle, and the **South Frigid Zone** within the Antarctic Circle. Frigid means cold, and these regions have extreme cold. For several successive months in the year the sun's rays never reach them, and at other times the rays fall so obliquely that little heat is received.

The **North Temperate Zone** lies between the Tropic of Cancer and the Arctic Circle. The **South Temperate Zone** lies between the Tropic of Capricorn and the Antarctic Circle.

These zones are neither so hot as the Torrid nor so cold as the Frigid Zones, but have a temperate climate.

### MAPS.

A **Map** is a representation of the earth, or some part of it, drawn to a scale, which varies according to the extent of surface to be represented.



Maps show the size of the country, as well as the physical features, etc. The greater the scale the more detail can be shown.

A map may be represented on a globe or a flat surface. It is more correctly shown on a globe. Since the earth is round, no flat surface can represent accurately any *large* part of its area.

On every map there will be a **Scale**, by which distances between two places on the ground can be reckoned from the distance between the same two places on the map.

**Mercator's Projection** is a map of the world on a flat. It shows the earth as it would appear on a cylinder round a globe. For instance, put a sheet of paper round a globe so that it will only touch the equator. It will be impossible to copy exactly on the paper what is represented on the globe. The lines of latitude and longitude will have to be projected as straight lines, and then the outline drawn. The northern and southern parts will thus be very much out of proportion.

The world is also shown on a flat by means of two hemispheres—the *Eastern Hemisphere* and the *Western Hemisphere*.

#### QUESTIONS.

1. What is the exact shape of the earth? Give its dimensions and proofs of its rotundity.

2. How does the earth move? Describe the motion of the earth which causes day and night.

3. How do you account for the variation in the length of day and night? Illustrate your answer by a sketch.

4. Explain how the annual revolution of the earth round the sun causes the four seasons.

5. "During successive weeks the sun's rays are wholly absent from these regions." What parts of the world does this refer to? Why is it so?

6. How is it that Christmas time occurs during the hottest time of the year in Australia? In what other parts of the British Empire is this the case?

7. In what region of the earth does the sun cast no shadow at mid-day? In what latitudes does this happen on or about July 22nd and October 22nd? Show by a sketch.

8. Define axis, ecliptic, aphelion, perihelion, equator, orbit, horizon, zenith, meridian, parallel of latitude, tropics, great circle.

9. Explain *equinox* and *solstice*. State when they occur, and show by sketches what changes take place in the length of day and night.

10. The earth is nearer the sun in December than in June. Why, then, in England is the weather cold in the former month and warm in the latter?

11. What are the Tropics of Cancer and Capricorn, and how are their positions determined? What countries and oceans do they intersect?

12. Explain the method of measuring distances on the earth by means of circles.

13. What is the difference between latitude and longitude? What is the length of a degree of latitude and longitude at the equator, and how is it obtained?

14. Give to the nearest degree (1) The *latitude* of Lisbon, Chicago,



Jamaica, Pretoria, Dunedin, Adelaide; and (2) The *longitude* of St. Petersburg, Glasgow, Madras, Kimberley, Vancouver, and Valparaiso.

15. What towns are near the intersection of the following:  $35^{\circ}$  S.,  $56^{\circ}$  W.;  $13^{\circ}$  N.,  $45^{\circ}$  E.,  $39^{\circ}$  N.,  $77^{\circ}$  W.;  $0^{\circ}$ ,  $79^{\circ}$  W.;  $6^{\circ}$  N.,  $0$ ;  $15^{\circ}$   $30'$  N.,  $33^{\circ}$  E.;  $52^{\circ}$   $45'$  N.,  $8^{\circ}$   $45'$  W.;  $33^{\circ}$  S.,  $28^{\circ}$  E.;  $7^{\circ}$  N.,  $80^{\circ}$  E.;  $54^{\circ}$   $45'$  N.,  $3^{\circ}$  W.;  $37^{\circ}$  S.,  $174^{\circ}$   $45'$  E.

16. Explain the terms E. Longitude and W. Longitude, and by what means the longitude of a ship can be ascertained.

17. How does longitude affect time? When it is noon at Greenwich, what are the times in longitude  $15^{\circ}$  E.,  $22^{\circ}$   $30'$  E.,  $90^{\circ}$  E.,  $140^{\circ}$   $45'$  E.,  $30^{\circ}$  W.,  $75^{\circ}$  W.,  $102^{\circ}$   $30'$  W.,  $122^{\circ}$   $15'$  W.?

18. In latitude  $41^{\circ}$  N., when it is noon at Greenwich, at what places is it respectively 11.26 a.m., 12.57 p.m., 6.10 a.m., 12.9 p.m., 1.56 p.m., 7.4 a.m.?

19. In latitude  $35^{\circ}$  S., when it is noon at Greenwich, at what places was it respectively 7.52 p.m., 8.8 a.m., 9.14 p.m., 11.36 p.m.?

20. What is the difference in time between two places, one in  $52^{\circ}$   $30'$  W., and the other in  $37^{\circ}$   $15'$  E.? When it is noon at Greenwich it is 5.20 p.m. at Colombo, and 6 a.m. at New Orleans; what is the longitude of these places?

21. What is the difference in time between London and Glasgow; Vancouver and Winnipeg; Bombay and Calcutta; Madras and Barbados; Fiji and St. Helena; New York and Peking; Brisbane and Durban; Odessa and Durban?

22. Show that degrees of longitude vary in length in different latitudes. How many Eng. miles from London ( $51\frac{1}{2}^{\circ}$  N.) is a place lying due east in longitude  $30^{\circ}$ , and another due south in latitude  $21^{\circ}$ ?

23. Under what conditions might a British sailor say he had enjoyed two Christmas days in one year? The difference in time between London and Leipzig is 49 minutes; how many miles are they apart?

24. A soldier on arriving at Gibraltar found that his watch, which was correct on leaving London, was 21 minutes fast. He put it back to the local time, but on arriving at Malta, four days later, at mid-day, he found that his watch only recorded 10.41 a.m. What is the longitude of Gibraltar and Malta respectively?

25. At ship's time (noon) in latitude  $34^{\circ}$  S., the chronometer showed 1.55 a.m. What was the longitude of the ship, and near what port was it sailing? Fifteen days later, when in lat.  $37^{\circ}$  N., the chronometer indicated 8.8 p.m. at ship's time. What longitude is the ship in now, and what port is it about to enter?

26. A ship left port in lat.  $30^{\circ}$  N., the local time being noon, but the chronometer indicated 6 p.m. A fortnight later it arrived at its destination in lat.  $53^{\circ}$   $30'$  N. at 10 a.m. (local time), the chronometer recording 9.20 a.m. Name and give the longitude of the two ports.

27. A person travels by rail from Vancouver ( $123^{\circ}$  W.) to Winnipeg, *almost due east* ( $50^{\circ}$  N. and  $97^{\circ}$  W.). If he starts at 9 a.m. Friday, and the train travels at an average speed of 25 miles an hour, what will be the approximate local time on his arrival at his destination?

28. A ship sails at noon *due east* in lat.  $34^{\circ}$  S. from Port Elizabeth ( $25^{\circ}$  E.) to Albany (West Australia)  $118^{\circ}$  E. Find the distance (a) in English miles; (b) in knots. If the average rate of sailing was 419 knots daily,



how long did the voyage take, and what alteration had to be made in the time when the clock indicated noon the next day after starting?

29. The Indian standard time for railways is  $5\frac{1}{2}$  hours in advance of Greenwich. (i) Name towns in India where the local time almost agrees with the railway time. (ii) By how much does the local time at Madras and Calcutta differ from the railway time? (iii) What time (local) must a man arrive at the station in Bombay to just catch a train which is shown in the *railway time table* as leaving at 15.39?

30. Draw a circle and show the inclination of the earth's axis, and the position of the zones. How do the latter derive their various names, and how is the exact position of their boundaries to be accounted for?

ANSWERS.

14. (i)  $39^\circ$  N.;  $42^\circ$  N.;  $18^\circ$  N.;  $26^\circ$  S.;  $46^\circ$  S.;  $35^\circ$  S.; (ii)  $30^\circ$  E.;  $4^\circ$  W.;  $80^\circ$  E.;  $25^\circ$  E.;  $123^\circ$  W.;  $72^\circ$  W.

15. Monte Video; Aden; Washington; Quito; Accra; Khartoum; Limerick; East London; Colombo; Belfast; Auckland.

17. 1 p.m.; 1.30 p.m.; 6 p.m.; 9.23 p.m.; 10 a.m.; 7 a.m.; 5.10 a.m.; 3.51 a.m.

18. Oporto, Naples, Chicago, Barcelona, Constantinople, Brooklyn.

19. Albany, Buenos Ayres, Adelaide, North of New Zealand.

20. 5 hrs. 59 min.;  $80^\circ$  E.,  $90^\circ$  W.

21. 17 min.; 1 hr. 44 min.; 1 hr. 3 min.; 9 hrs. 20 min.; 12 hrs. 15 min.; 12 hrs. 42 min.; 8 hrs. 10 min.; none.

22. 1290 miles; 2110 miles.

23. (b)  $12\frac{1}{4} \times 43 = 527$  miles.

24.  $5\frac{1}{4}^\circ$  W.;  $14\frac{1}{2}^\circ$  E.

25. Sydney ( $151\frac{1}{4}^\circ$  E.); San Francisco ( $122^\circ$  W.).

26. New Orleans ( $90^\circ$  W.); Hamburg ( $10^\circ$  E.).

27. 9 a.m. Sunday.

28. 5301 Eng. mls.; 4609 knots; 11 dys. Clock was advanced 34 min.

29. (i)  $82\frac{1}{2}^\circ$ ; Allahabad, Benares; (ii) Calcutta 24 min. later and Madras 9 min. earlier than railway time; (iii) 3 p.m., as railway time is 39 min. in advance of local time.



## II. *Physical Geography.*

### DEFINITIONS OF LAND.

1. The earth's surface consists of **Land** and **Water**,—three quarters being water and one quarter land.

The equator, or any meridian, will divide the earth into two **hemispheres**. We can speak of—

(a) A *Northern* and a *Southern* hemisphere.

(b) An *Eastern* and a *Western* hemisphere.

(c) A *Continental* and an *Oceanic* hemisphere.

The Northern and Eastern hemispheres contain more land than water. The Southern and Western hemispheres contain more water than land.

The Continental hemisphere has England for its centre, and contains the greater portion of the land surface.

The Oceanic hemisphere, which is opposite, has New Zealand for its centre, its surface being chiefly water.

2. The **Land** has been divided into five large masses called **Continents**. They are *Europe, Asia, Africa, Australia, and America*.

Europe and Asia (sometimes called *Eurasia*) are separated by the Ural Mountains. Africa is connected with Asia by the Isthmus of Suez.

Australia and the numerous islands near it are called **Australasia** or **Oceania**. These four continents are found in the **Eastern Hemisphere**, which is known as the **Old World**.

The **Western Hemisphere** contains America, which is divided into two parts, North and South America, connected by the Isthmus of Panama. America was discovered by Columbus in 1492, hence it is known as the **New World**.

3. A **Country** forms part of a continent. Countries are further divided into **Counties** or **Shires** in England; **States** in the United States; **Colonies** in Australia and South Africa; **Provinces** in India; **Departments** in France; **Cantons** in Switzerland.

The **Coast** or **Shore** is the land washed by the sea. If it is *indented* or broken, there will be numerous islands, peninsulas, capes, inlets and harbours. The strip of land along the shore is sometimes called the **Maritime Region** or the **Littoral**. The **Beach** is that part of the shore alternately covered and uncovered by the tide.

An **Island** is a piece of land surrounded by water. A large group of islands is sometimes called an **Archipelago**, as the *East Indies*. **Continental** islands are those that at one time were part of the adjacent continent, as the *British Isles, the West Indies*. **Oceanic** islands lie far out in the ocean, as *St. Helena, the Azores*. Some are of coral formation. Coral islands enclosing a lagoon are called **atolls**.

A **Peninsula** is a piece of land nearly surrounded by water. It is a peculiarity of peninsulas that they always run from north to south, there being only two pointing northwards—*Jutland* and *Yucatan*. Those of Europe—*Spain and Portugal, Italy, Balkan Peninsula, Morea, Norway and Sweden*, correspond to those of Asia—*Arabia, India, Indo-China, Malay, Kamschatka*.



An **Isthmus** is a narrow neck of land joining two larger portions, as those of *Suez*, *Panama*, and *Corinth*.

A **Cape** is a piece of land jutting out into the sea. Other names for capes are *Bill*, *Butt*, *Foreland*, *Head*, *Ness*, *Naze*, *Mull*, *Point*, *Promontory*.

A **Promontory** is a bold, rocky cape, as *Beachy Head*.

A **Plain** is a level tract of country at no great height above the sea. The continent of Europe, extending from the north of France to the Ural Mountains, is a great plain. A **Desert** is a vast sandy plain, as the *Sahara*. An **Oasis** is a fertile spot in the desert where there are trees and water.

These are the various names for plains:—

(a) The **Landes** are *sandy plains* in the S. W. of France.

(b) The **Steppes** are open *treeless plains* in Russia and Central Asia.

(c) The **Tundras** are the *marshy plains* of Siberia, along the coast of the Arctic Ocean.

(d) The **Savannahs** are *grass-covered plains* in North America. Others are called **Prairies**.

(e) The **Llanos** are *grassy plains* which are flooded by the Orinoco in South America.

(f) The **Selvas** are the *forest plains* of the Amazon.

(g) The **Pampas** of the La Plata are *grassy pastures* covered with *thistle growths*.

(h) The **Karoos** are the *terrace-like plains* of Cape Colony.

(i) The **Fens** is the *marshy district* around the Wash.

A **Tableland** or **Plateau** is a level tract of country lying high above the level of the sea. Well-known tablelands are those of *Tibet*, and the *Deccan* in India.

A **Hill** is a high mass of land under 1000 feet.

A **Mountain** is higher than a hill, being over 1000 feet. The top is called the *summit*, the *foot* or *base* is at the bottom, and the sides are called the *slopes*. An isolated mountain is called a **Peak**, as *Mount Everest*, *Snowdon*. Several peaks together form a **Group**, as the *Cumbrian Group*. If extended in a line they form a **Chain** or **Range**, as the *Pennine Range*, the *Himalayas*.

A **Valley** is the land lying between mountains and hills. There may be a wide and gentle depression, as a *Vale*, *Dale*, *Strath*; or it may be narrow and steep, due sometimes to the action of a rapid river, as a *Glen*, *Gorge*, *Cañon*, *Ravine*, or *Pass*.

A **Volcano** is an opening into the earth's crust from which *lava*, *ashes*, *steam*, *dust*, etc., are thrown. The summit is called the **crater**. **Active** volcanoes have frequent eruptions, while those that have ceased to act are said to be **extinct**. The chief volcanic zone extends along the south of Europe, through the East Indies and the islands of the Pacific and over Central America, the north of S. America, and the West Indies. *Vesuvius*, *Etna*, *Fusi-yama*, *Cotopaxi*, and *Popocatepetl*, are well-known volcanoes.

An **Earthquake** is a trembling or an upheaval of the earth's surface due to volcanic action.

**Geysers** are natural hot springs which are to be found in *N. America*, *New Zealand*, and *Iceland*.

#### THE OCEANS.—DEFINITIONS OF WATER.

The **Ocean** is the large mass of water on the earth's surface. It has been divided into five parts—**Atlantic**, **Pacific**, **Indian**, **Arctic**, and **Antarctic Oceans**.



### THE ATLANTIC OCEAN.

1. This ocean lies between America on the *west*, and Europe and Africa on the *east*. It extends from the Arctic Ocean to the Antarctic Ocean, a distance of 10,000 miles. Its broadest part is nearly 4000 miles; at the 50th parallel N. latitude it is about 2200 miles. Its area is half the size of the Pacific Ocean.

Owing to its extensive coast line, the numerous large rivers which flow into it, and the important ports on its coasts, it has more commerce than any other ocean. It forms the chief highway between the New and Old Worlds.

2. **West Coast.**—The *countries* in America which border the Atlantic are Canada, United States, Mexico, Central America, Colombia, Venezuela, Guiana, Brazil, Uruguay, and Argentina.

The chief parts of the ocean are Hudson Bay, Gulf of St. Lawrence, Gulf of Mexico, and the Caribbean Sea.

The *islands*, as a rule, lie close to the coast. The most important are Newfoundland, Anticosti, Prince Edward Island, Long Island, the Bermudas, the West Indies, Falkland Islands, and Tierra del Fuego.

The *rivers* pour a great volume of water into the ocean, and include the St. Lawrence, Mississippi, Rio Grande, Orinoco, Amazon, and La Plata.

The principal *ports* of call are **Quebec, Montreal, and Halifax** in Canada; **Boston, New York, Philadelphia, and New Orleans** in the United States; **St. Thomas, Barbados, and Kingston** (Jamaica) in the West Indies; **Rio de Janeiro and Buenos Aires** in South America.

3. **East Coast.**—The European *countries* washed by the Atlantic are—Norway, Denmark, Germany, Holland, Belgium, the British Isles, France, Spain, and Portugal.

The *inland seas* of Europe—the Baltic, North, Mediterranean, and Black—are connected with the Atlantic. Other large indentations are the Bay of Biscay, and the Gulf of Guinea, in Africa.

Several *island groups* are adjacent to the coast. They are the British Isles, the Madeira, Canary, and Cape Verde Islands. In mid-ocean are Iceland, Faroe Islands, the Azores, Ascension, and St. Helena.

The *rivers* of Europe flowing directly, more or less, into the ocean are the Elbe, Rhine, Seine, Severn, Shannon, Loire, Garonne, Douro, Tagus, Guadiana, and Guadalquivir. In Africa the Niger, Congo, and Orange, flow west into the Atlantic.

The chief Atlantic *ports* in Europe trading with America are—**London, Liverpool, Southampton, Bristol, Glasgow, Queenstown, Hamburg, Antwerp, and Cherbourg**. On the African coast **Freetown, Lagos, and Cape Town** are noted ports.

### THE PACIFIC OCEAN.

1. This ocean is the largest of the five, and lies between America on the *east*, and Asia and Australia on the *west*. On the north it is connected by Behring Strait with the Arctic Ocean. Towards the South it broadens out and its waters merge into those of the Antarctic and Indian Oceans. The Pacific is 10,000 miles long and 12,000 miles broad, with an area of nearly 70 million square miles.



The chief characteristic of the Pacific is the countless number of islands and island groups that are scattered over its vast area.

2. **West Coast.**—The western coast comprises the shores of Siberia, Japan, China, the Malay Archipelago, Queensland, New South Wales, and New Zealand.

A feature of the coast of Asia is the number of *inland seas*, enclosed by island groups, viz., Behring Sea, Sea of Okhotsk, Japan Sea, Yellow Sea, and China Sea. The chief *island groups* are those of Japan, the Philippines, the Malay Archipelago, and Melanesia.

Fewer *rivers* flow into the Pacific than into the Atlantic. The Amour, Hoang-ho, Yang-tse-Kiang, Canton, and Mekong are rivers of Asia. The Murray is the chief river of Australia.

At one time there was little communication between its opposite shores, but its commerce is improving, and will most likely be increased when the Panama Canal is constructed. The chief *ports* on the west side of the Pacific are **Vladivostock, Yokohama, Shanghai, Hong-Kong, Manilla, and Sydney.**

3. **East Coast.**—The *countries* of America washed by the Pacific are Alaska, British Columbia, United States, Mexico, Central America, Colombia, Ecuador, Peru, and Chile.

The west coast of America affords a great contrast to that of Asia, the only important indentation being the Gulf of California. Owing, too, to the Rocky Mountains and the Andes being close to the coast, there are very few rivers—the Fraser, Columbia, and Colorado, being small and unimportant when compared with those of other continents. In South America there are no rivers on its western side to record.

The chief *ports* of the Pacific on the American coast are **Vancouver, Victoria, San Francisco, and Valparaiso.** Honolulu in the Sandwich Islands is a port of call midway between America and Asia.

The numerous island groups are embraced under the name **Polynesia.**

### THE INDIAN OCEAN.

1. This ocean lies south of Asia, with Australia on the *east* and Africa on the *west*, having no connection with the Arctic Ocean. It is one-third of the size of the Atlantic. It has extensive commerce, as all ships traverse it in proceeding to India, China, Japan, and Australia. This ocean is also remarkable as being the region of the *Monsoons.*

2. The *countries* washed by the Indian Ocean are numerous. In *Africa*—Cape Colony, Natal; Portuguese, British and German East Africa, and Somaliland. In *Asia*—Arabia, Persia, Baluchistan, India, Burmah, Malay Peninsula, Sumatra, Java, and other islands of the East Indies. The coast of *Australia* is occupied by West Australia.

Connected with the Indian Ocean are the Mozambique Channel, Red Sea, Persian Gulf, Arabian Sea, and Bay of Bengal.

3. The chief *islands* and island groups are Madagascar, Mauritius, Bourbon, Seychelles, Socotra, Laccadive Islands, Maldiv Islands, Ceylon, Andaman Islands, Nicobar Islands, Sumatra, and Java.

Many important *rivers* flow into the Indian Ocean. In *Africa* the Limpopo and Zambesi flow east. From *Asia*, the Euphrates and Tigris flow into the Persian Gulf. The Indus, Tapti, Nerbudda, Khrishna, Godavery, Mahanuddy, Ganges, Brahmaputra, and Irrawadi flow directly



into the ocean. The Swan river is the most important river of *West Australia*.

The principal *ports* are—**Durban, Lorenzo Marquez, Zanzibar, Mozambique, Aden, Karachi, Bombay, Colombo, Madras, Calcutta, Rangoon, Singapore,** and **Freemantle.**

The **Arctic Ocean** lies within the Arctic Circle. It is joined to the Atlantic by two passages, a wide one between Norway and Greenland, and a narrow one through Baffin Bay and Davis Strait. The communication with the Pacific is through the narrow channel of Behring Strait.

The **Antarctic Ocean** is really the southern portions of the Pacific, Atlantic, and Indian Oceans. Unlike the Arctic, there is very little inhabited land in it, and it is seldom visited.

A **Sea** is a part of an ocean generally enclosed by land—as the *Mediterranean, Baltic, and Red Seas.*

**Inlets** are openings into the land. A **Gulf** is a long and narrow opening, as the gulfs of *California* and *Bothnia*. An **Estuary** is the long, narrow mouth of a river. A **Bay** is a wide opening, as *Cardigan Bay, Bay of Biscay*. A **Bight** has a wider bend than a bay, as the *Great Australian Bight*, and the bights of *Benin* and *Biafra* on the west coast of Africa. Other names for openings are—**Fjords** in Norway; **Firths** in Scotland; **Loughs** in Ireland; **Haffs** (shallow openings) in Germany. Those openings that afford shelter for ships are called *Harbours, Ports, Havens, Creeks,* or *Coves.*

A **Strait** is a narrow portion of water connecting two larger bodies, as the straits of *Dover, Gibraltar, and Babel-el-Mandeb.* A strait is sometimes called a **Sound**, as the sounds of *Jura* and *Mull* in Scotland. A **Channel** is a very wide strait, as the *English Channel*. A **Roadstead** is a safe anchorage for ships lying, generally, near the coast, as the *Downs* off Kent, *Spithead, Yarmouth Roads.*

A **Lake** is a piece of water surrounded by land. Some have an outlet by means of a river; those that have not are more or less salt. Others again are only expansions of rivers. A lake situated high among hills is called a **Tarn**. In *Ireland* lakes are called **Loughs**; in Scotland **Lochs**. A **Lagoon** is the shallow water enclosed by coral islands or atolls, or a shallow lake of salt water near the sea coast, as the **Haffs** of Germany.

A **River** is a stream of fresh water draining the land. Most rivers flow into the sea; others empty themselves into lakes, as the rivers flowing into the *Sea of Aral*, in Asia, and many others in Australia. They are termed **Continental** rivers.

The **Source** of a river is where it begins, generally in a spring. A **Spring** is an outflow of the water which has collected below the surface of the ground. The **Mouth** is where a river ends. A wide mouth is an **Estuary**. The **Course** is the direction a river takes as it flows to the sea. The land on each side forms the **Banks**; the **Right Bank** is on the right of a person facing the mouth; that on the left being the **Left Bank**. The bottom of a river is its **Bed**. A **Tributary, Affluent, or Feeder** is a stream flowing into a river; where the two flow together is called the **Confluence**.

The **Basin** is the land drained by a river and its tributaries, as *Yorkshire*



is the basin of the Ouse ; the *Punjab* is part of the basin of the Indus. A **Watershed** is the high land separating two river systems, which flow from each side. The *Pennine Range* separates those rivers of the north of England which flow to the *east* from those that flow to the *west*. Other watersheds are the *Alps*, the *Rocky Mountains*. A **Cataract** or **Waterfall** is a steep descent in the bed of a river, causing a fall of water over rocks. A **Canal** is an artificial river. A **Glacier** is a river of ice slowly moving down a mountain side. Rivers remove large quantities of soil which is deposited to form fertile plains—called **alluvial** plains. Much of the alluvial soil is carried down to the mouth of the river, where new land is formed—called a delta. A **Delta** is the land lying between the many mouths of a river ; the *Ganges* and *Nile* have large deltas.



### III. *Movements of the Air and Water ; Climate, etc.*

#### WINDS.

1. **A Wind** is air in motion. Winds are caused by differences in temperature. When the air is heated, it expands, becomes lighter and rises ; cooler air at once rushes in to take its place. Winds are named according to the direction from which they blow.

2. There are three kinds of winds—**Constant, Periodical and Variable.**

The chief **Constant Winds** are the **Trade Winds**, so called because of the assistance they render in the navigation of merchant sailing vessels. The hot air at the equator is constantly rising, and cooler air from the north and south is always flowing in to take its place. If the earth did not rotate they would be north and south winds, but as the earth turns from west to east, these winds, coming from a slower to a more rapidly revolving part of the earth, seem to lag behind and come from the *north-east* and *south-east*. Hence they are called the **N.E. and S.E. Trade Winds.**

**Variable Winds** are mostly found in temperate regions. In the N. Temperate Zone the prevailing wind (being really the heated air from the tropics) is from the S.W., while it is a N.W. wind in the S. Temperate Zone. These warm and moist winds blow during the greater part of the year.

The chief **Periodical Winds** are **Monsoons** and **Land and Sea Breezes.**

3. The **Monsoons** are most prominent in the Indian Ocean. There are two—the *S.W. Monsoon*, which blows from April to September, and the *N.E. Monsoon*, from October to March.

The warmest time in the N. Hemisphere is from April to September. During the summer the great land mass of Asia in the north gets much warmer than the sea. Thus a movement of cool air blows from the S.W. This is the S.W. Monsoon, which, blowing across the Indian Ocean, brings a large rainfall to India.

From October to March it is summer in the Southern Hemisphere. The ocean soon gets much warmer than the land mass of Asia, which causes the dry, cold air to blow from the tablelands of Asia towards the ocean. This is the N.E. Monsoon.

4. **Land and Sea Breezes** are monsoons on a small scale. The land in the *day-time* gets much warmer than the sea, hence cool winds will blow from the sea and form a **sea breeze**. At *night* the land cools very quickly, and the sea remains warmer than the land. A cool wind or **land breeze** will therefore blow towards the sea.

Some winds derive their names from the strength or force with which they blow. These stormy winds generally move forward in a circular manner, and are called **Cyclones**. They are mostly encountered in the Tropics. In Asia they are termed **Typhoons**, and **Hurricanes** or **Tornadoes** in the West Indies.

Various local names are also applied to winds. The hot wind which



blows to the north from the Sahara desert is called the **Solano** in Spain; the **Sirroco** in Italy; and to the east, the **Simoon** in Arabia and the **Khamsin** in Egypt. On the west coast of Africa it is called the **Harmattan**. Winter gales, which drive ice needles before them instead of flakes of snow, are called **Blizzards** in the United States.

### OCEAN CURRENTS.

1. A **Current** is water in motion. Like winds they are caused by differences in temperature at the equator and the polar regions. The warm water at the equator rises and flows towards the poles, while at the same time there is an *under* current of cold water flowing in from the north and south to take its place. This **Constant Current** is most noticeable in the Southern Hemisphere, where it is known as the **Antarctic Drift Current**.

Currents are altered in their course by (a) the rotation of the earth, (b) the shape of the coast, (c) by prevailing winds.

2. **Currents of the Atlantic.**—The **Antarctic Drift Current** flows towards the S.W. coast of Africa, and follows the coast as far as the Gulf of Guinea, where it is forced westward by the rotation of the earth and the strength of the S.E. Trade Wind. It is now called the **Equatorial Current**, and off the coast of S. America it divides into two parts, the **Brazilian Current** flowing south, while the northern branch enters the Gulf of Mexico, where it is considerably heated, and receives the name of the **Gulf Stream**.

The **Gulf Stream** flows through the Florida Channel, its width then being 30 miles, its depth a quarter of a mile, and its temperature about  $90^{\circ}$ . It follows the coast of N. America as far as  $40^{\circ}$  N., when it begins to turn to the N.E. Off Newfoundland it meets a cold current from the Arctic, thus causing the dense fogs of this locality. As it flows across the Atlantic it becomes wider and parts slowly with its heat, until off the Azores it divides into two parts; that going north washes the shores of Western Europe, and raises the temperature of the British Isles and Norway considerably. The southern branch is swept again by the Trade Wind into the Equatorial Current.

The currents from the **Arctic** on each side of Greenland bring the immense icebergs which prove dangerous to the shipping in the N. Atlantic.

Owing to the Gulf Stream making a circular movement off the Azores, much floating matter, chiefly seaweed, is accumulated. This ocean eddy is known as the **Sargasso Sea**.

3. **Currents of the Pacific.**—The **Antarctic Drift Current** flows toward the west coast of S. America. Off Peru it is called the **Peruvian** or **Humboldt's Current**, which, being very cold, lowers the temperature of that country. As in the Atlantic, the current now flows to the west as the **Equatorial Current**, until the shores of Asia and Australia are reached. Here it divides: the part flowing north is the **Japanese Current** or **Black Stream**, which is similar in every way to the Gulf Stream. Both currents in the north and south make a circular movement towards the Equatorial Current again.

A cold current comes from the Arctic through Behring Strait.

4. **Currents of the Indian Ocean.**—The **Antarctic Drift Current** flows towards Australia, and turns west as the **Equatorial Current**, which divides off Madagascar, the two parts circulating again into the Equatorial Current.



### TIDES.

1. A **Tide** is the regular rise and fall of the waters of the ocean.

Tides are caused by the attraction of the earth and moon, and in a less degree (due to its great distance from the earth) by the sun. Where the moon raises the water *five* feet, the sun will only raise it *two* feet.

At the sea it will be noticed that the *flood tide* flows in for about six hours, until *high tide* is reached, and then the water returns or *ebbs* for six hours, till *low tide* is reached.

2. **Two tides a day.**—When the waters of the earth come directly opposite the moon, they are drawn into a heap. At the same time the earth is drawn away from the waters at the opposite side of the earth, and so these waters also become heaped up. Thus there is high tide on both sides of the earth at the same time, and as the earth rotates, every place on its surface will have two tides a day.

The tides, however, do not occur at regular intervals of twelve hours. Owing to the moon having moved on in its path round the earth, the high tide each day will be 50 minutes *later* than on the day before. This will make the time between each high tide 6 hours 25 minutes.

3. **Spring Tides.**—These tides occur twice a month at New and Full Moon, when the sun and moon are on the same or opposite sides of the earth. In each case the moon forms a tide which is *increased* by the attraction of the sun. Thus a very high or spring tide is produced.

**Neap Tides.**—These also take place twice a month, when the moon is in its First and Last Quarter. The sun and moon are then at right angles to each other. The tide produced by the moon is *decreased* by the sun forming a tide at another place on the earth's surface. Thus the tides are lower than usual, and are called neap (nipped) tides.

4. **Tidal Wave.**—The tidal wave is the heaping up of the waters as the earth rotates. If the surface of the earth were entirely water, the wave would travel round it, following the moon. The tidal wave is not felt in mid-ocean. It is only when it is near the land, that the narrow openings and estuaries cause it to become a rapidly-advancing wave, and make the tide rise to a great height. It is then called a **Bore**. In the Bay of Fundy the tide rises 70 feet, and at Chepstow on the Bristol Channel, 40 feet. Bores occur in the estuaries of the *Yang-tse-Kiang*, *Hoogly*, *Amazon*, and *Severn*.

Inland seas, like the Mediterranean Sea and the Baltic have little or no tides.

### PHASES OF THE MOON.

The **Moon** shines by the light it receives from the sun. It revolves round the earth in about twenty-nine days, which period is called a Lunar month.

By the **Phases of the Moon** is meant the appearance which the bright face of the moon presents to us during her revolution round the earth.

**1st Phase.—New Moon.**—The moon is now between the earth and the sun, and its dark side is towards the earth, consequently the moon is invisible.

**2nd Phase.—Crescent Moon.**—The illuminated face gradually turns to us in the western sky. Every evening the crescent grows broader, and the moon rises and sets later.

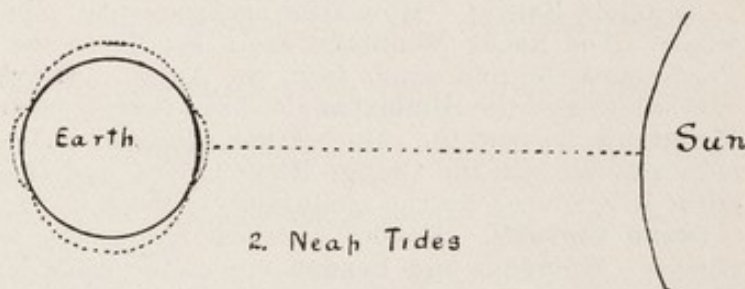
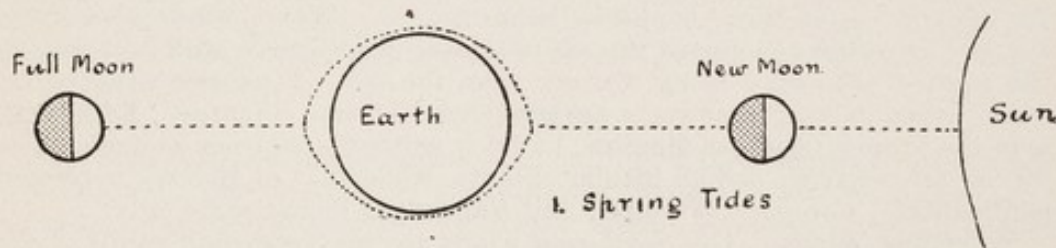


**3rd Phase.—Half Moon (*First quarter*).**—When the moon has made one quarter of her revolution, about seven days after new moon, one-half of the bright face will be seen in the form of a semicircle. The moon will now set six hours after sunset.

**4th Phase.—Gibbous Moon.**—The word “gibbous” means hump-backed. The moon is so called because it is more than half lighted up.

**5th Phase.—Full Moon.**—The earth is now between the sun and the moon, the whole of the illuminated face being visible. One half of the moon’s revolution has been made.

**6th Phase.—Gibbous Moon.**



**7th Phase.—Half Moon (*Last quarter*).**

**8th Phase.—Crescent Moon.**

When the moon is changing from *New* to *Full*, it is said to be **waxing** (growing). The changes are reversed after *Full Moon*, when the moon is said to **wane** (lessen).

At the last quarter the moon rises about six hours before the sun, and sets about mid-day. Thus the moon is often visible during the day when it is waning.

### CLIMATE.

By **climate** we mean the kind of weather that prevails in a country from season to season. It is said to be **extreme** when the heat of summer and the cold of winter are intense; when there is very little difference between summer and winter it is said to be **equable**.



**Climate is chiefly determined by Latitude.** Places near the equator are warmer than those more remote. Egypt is warmer than Italy, Italy than England, England than Norway.

Other causes which **vary the climate** of places in the **same latitude** are :—

**Elevation.**—The higher we ascend the colder it gets, the thermometer falling  $1^{\circ}$  for every 333 ft. of rise. Hence the **Deccan**—a tableland—is cooler than *Bengal*, the **Transvaal** than *Cape Colony*. **Quito**, although at the equator, is 9,500 ft. above sea level, and has an equable climate.

**Nearness to the Sea.**—Water takes in more heat than land, and parts with it more slowly; therefore we find that the sea has a moderating influence on the climate of those countries near the sea. Warm winds blow from the sea in winter, owing to the sea retaining its warmth, and cool ones in the summer, the land being warmer than the sea. Countries situated far from the sea in temperate zones are subject to extreme climates. **Edinburgh** is in the same latitude as **Moscow**, but it is neither so hot nor so cold. The former has what we call an **insular** climate, while that of Moscow is termed **continental**. Compare **Winnipeg** and **Vancouver** in the same way.

**Prevailing Winds.**—The *South-west* winds are the prevailing winds of the British Isles. They bring warmth and moisture from the Atlantic. The *East* winds are cold and dry. The *monsoons*, the prevailing winds of India, modify its climate considerably. Notice also the effect of the winds from the Sahara on the climate of Southern Europe.

**Mountain Ranges.**—Mountains are frequently a barrier to cold and warm winds. The **Rocky Mountains** are a barrier to the warm winds from the Pacific and the cold winds from the Arctic. The **Alps** protect Italy from cold winds, and the **Himalayas** also keep them from India. The **Drakenberg Mountains** prevent the rain-bearing winds from the S.E. from carrying a large rainfall into the Orange River Colony and the Transvaal. A similar effect is produced by the mountains in the S.E. of Australia.

**Ocean Currents.**—Besides assisting navigation, ocean currents modify climate. **Labrador** and **London** are in the same latitude, yet the former place is a frozen waste, being washed by a cold current from the Arctic. For the same reason **New York** often has extreme cold, while **Rome**, two degrees farther north, enjoys a genial climate all the year round. The western shores of **Scandinavia** are always free from ice, being washed by the Gulf Stream, while the eastern coast is frozen for several months in the year.

#### RACES OF MANKIND.

There are five great races of mankind, differing from each other in colour, features, language, and character.

1. The **Caucasian**, or **White Race**, inhabit nearly the whole of *Europe*, *North Africa*, *Arabia*, *Persia*, and *India*. Their features are a fair skin, an oval face, long wavy hair, and a straight forehead. This race is highly civilized and energetic. The white race number over 750 millions, and they have colonised *North and South America*, *South Africa*, *Australia*, and *New Zealand*.

2. The **Mongolian**, or **Yellow Race**, inhabit *Eastern Asia*. Included in this race are the *Turks* of Turkey, the *Finns* of Finland, the *Lapps* of Lapland, the *Magyars* of Hungary, and the *Eskimos* of North America. The Mongolians have a yellow skin, long coarse black hair, narrow slanting eyes, high cheek bones, little or no beard, and are of diminutive stature.



3. The **Malay, or Tawny Race**, are found in the *Malay Peninsula*, the *East Indies*, *Australia*, *New Zealand*, and *Polynesia*. They have tawny or brown skins, their eyes and foreheads are similar to the Caucasian, the hair is long, black and frizzy. They are in a low state of civilization.

4. The **Negro** (Ethiopian), or **Black Race**, inhabit the whole of *Africa*, and also *North and South America*, where they are the descendants of those who were carried there as slaves. They have a broad, flat nose, thick lips, short, woolly black hair, and a black skin.

5. The **Indian, or American Race**, are distinguished by a red or copper-coloured skin, a prominent nose and high cheek-bone, and a stature above the average. There are several tribes, such as the *Sioux*, *Chippeway*, *Apache*, in N. America, and the *Gaicho* and *Patagonian* in S. America.

#### QUESTIONS.

1. Name the continents and oceans, and give their relative positions.
2. Explain the meaning of the following geographical terms, and give an example of each in Europe: peninsula, mountain-chain, plateau, steppes, volcano, isthmus, estuary, channel, polders, glacier.
3. Explain the meaning of the following, and give an example of each in the New World: strait, lake, river-basin, delta, prairies, geysers, cyclone, affluent, archipelago, lagoon.
4. Define the following, and give an example of each in the Old World: desert, littoral, watershed, lough, continental river, confluence, cataract, bight, bore, canal.
5. Define monsoon, climate, savannahs, trade wind, current, spring tides, alluvial plain.
6. What is the difference between a plain and a plateau? Give plains which are distinguished by special names.
7. Name in order from north to south the countries and chief seaports on each side of the Atlantic Ocean.
8. Compare the east side of the Pacific Ocean with the west side. Name four of the chief island groups in mid-ocean.
9. Compare the Atlantic and Pacific Oceans as to size, river drainage, inland seas and islands, currents and commerce.
10. Give some of the chief features connected with the Indian Ocean. What countries of Asia and Africa are washed by it?
11. How are currents caused? and how do you account for an equatorial current in each of the great oceans?
12. Describe the Gulf Stream. What effect has this current on the climate and products of Ireland?
13. Name the chief currents of the Pacific Ocean.
14. What is a tide? How are tides caused? Explain why there are two a day.
15. Distinguish between Spring and Neap Tides.
16. What are the chief factors that govern the variation of climate, and show, with examples, how places in the same latitudes may have great differences of climate.
17. What is the effect of the climate on the industry and productions of the tropical countries, and on the character of the races inhabiting them?
18. What is the difference between an *insular* and a *continental* climate? Why is the former the more temperate?



19. Give instances of mountain ranges making the climate (*a*) colder, (*b*) warmer; also examples of climate modified by (*c*) winds, (*d*) currents.
20. What are monsoons, and how are they caused? What are their general effects on the climate and productions of India?
21. What is the difference between a gulf and a bay, a tide and a current, land and sea breezes, a firth and a fiord, loch and lough, ebb and flood tide?
22. Explain the Trade Winds. What is their direction in the Southern Ocean, and why?
23. Describe a journey from Liverpool, across Canada to Japan. How long would it take?
24. A party recently came from Singapore to London, travelling by sea to Vladivostock, thence by rail through Moscow to Rotterdam. Describe their route, naming the seas, countries, etc., passed through, and the chief places probably called at.
25. Trace the different routes by which New Zealand could be reached from London, stating seas and countries passed through.
26. Name and locate: (1) Three lofty mountain ranges in Asia; (2) The three longest rivers in South America; (3) The three largest lakes in Africa; (4) Three remarkable peninsulas in Europe; and (5) Three prominent straits in Australia and New Zealand.
27. Name the five races of mankind, and say where each is principally found. Give the characteristic features of each race.
28. How do we know that the moon moves round the earth? Explain New and Full Moon. What phenomena happen at their occurrence?
29. What is understood by the Phases of the Moon? Explain the terms gibbous, waxing, waning, as applied to the moon.
30. Name the chief countries, oceans, rivers, lakes and islands crossed by the Equator.



## IV. *The British Isles.*

The British Isles consist of Great Britain and Ireland, and the numerous adjacent islands. They also form the United Kingdom. Great Britain is the largest island in Europe, being 600 miles long. It consists of Scotland in the north (North Britain), England in the south (South Britain), and Wales in the south-west. Ireland is an island lying to the west of England. The British Isles extend from Lat.  $50^{\circ}$  to  $60^{\circ}$  N., and from Long.  $2^{\circ}$  E. to  $10^{\circ}$  W. The area of England is 51,000, Wales 7,000, Scotland 30,000, Ireland 32,000 square miles. Total area 121,000 square miles. The shores of the United Kingdom are washed by the Atlantic Ocean.

### ENGLAND AND WALES.—PHYSICAL.

1. **Boundaries and Extent** : on the **North** by Scotland; on the **East** by the North Sea; on the **South** by the English Channel; on the **West** by the Atlantic Ocean, St. George's Channel, and the Irish Sea.

The **Length** from Berwick-on-Tweed to Lizard Point is 420 miles; the **Breadth** from Lowestoft Ness to Land's End is 360 miles. The narrowest part of England, from the Tyne to the Solway Firth, is 60 miles wide. The Area is 58,320 square miles.

2. **Coast**.—The coast-line is about 2,000 miles long. No part of the country is more than seventy miles from the sea.

The **Western** coast is more irregular and rocky than the eastern and southern coasts, being open to the force of the Atlantic waves. There are many natural openings with good harbours.

The **Eastern** coast is low and sandy. The numerous sandbanks that abound are dangerous to shipping.

The **Southern** coast between Dover and Portland is low generally, with a few chalk cliffs. The remaining portion is similar to that of the western coast.

The coast of Suffolk and Essex is gradually being washed away, but on the other hand, land has been extended around the Wash, at the mouth of the Dee, and along the coast of Kent and Sussex.

The advantages of an extensive coast-line are :—

1. It helps to extend the trade with other countries, as it is easy to send abroad our products and to receive other products in return.
2. Carriage by water is much cheaper than by land.
3. The climate is modified (*see* "Climate").
4. It brings health and pleasure to the people of our great towns, who are carried to the sea at little cost.

Describe a coasting voyage round England, mentioning in order the counties, physical features, river mouths, and ports, as below :—



## THE EAST COAST.

1. NORTHUMBERLAND.  
*River Tweed*—Berwick.  
**Holy Island.**  
**Farne Islands.**  
*River Tyne*—Tynemouth, New-castle.
2. DURHAM.  
*River Tyne*—South Shields.  
*River Wear*—Sunderland.  
Hartlepool.  
*River Tees.*
3. YORKSHIRE.  
*River Tees*—Middlesbrough.  
Whitby, Scarborough.  
**Flamborough Head.**  
**Holderness.**  
**Spurn Head.**  
*River Humber*—Hull.
4. LINCOLNSHIRE.  
Great Grimsby.  
**The Wash.**  
*River Witham.*  
*River Welland.*  
*River Nen.*
5. NORFOLK.  
*Great Ouse.*—King's Lynn.  
Cromer.  
*River, Yare*—Yarmouth.
6. SUFFOLK.  
Lowestoft.  
**Lowestoft Ness.**  
*River Orwell*—Ipswich.
7. ESSEX.  
*River Stour*—Harwich.  
**The Naze.**  
*River Colne*—Colchester.  
*River Chelmer.*  
**Thames Estuary**—Tilbury.
8. KENT.  
Gravesend.  
*River Medway*—Chatham.  
**Sheppey Isle**—Sheerness.  
**Isle of Thanet**—Margate, North Foreland, Ramsgate.  
**The Downs.**  
**Goodwin Sands.**

## THE SOUTH COAST.

1. KENT.  
**South Foreland.**  
Dover, Folkestone.  
**Dungeness.**
2. SUSSEX.  
Hastings.  
**Beachy Head.**  
*River Ouse.*  
Brighton.  
*River Arun.*  
**Selsey Bill.**
3. HAMPSHIRE.  
**Spithead**—Portsmouth.  
**Southampton Water.**  
*River Itchen.*  
**The Solent.**  
**Isle of Wight**—The Needles,  
Ryde, Cowes.  
*River Avon.*
4. DORSET.  
**Poole Bay.**  
*River Frome.*  
Weymouth.  
**Portland Bill**—Portland
5. DEVONSHIRE.  
*River Exe.*  
**Tor Bay**—Torquay.  
**Start Point.**  
**Plymouth Sound**—Plymouth  
and Devonport.  
*River Tamar.*  
**Eddystone Lighthouse.**
6. CORNWALL.  
**Falmouth Harbour**—Falmouth.  
**Lizard Point.**  
**Mount's Bay**—Penzance.  
**Land's End.**  
**Scilly Islands.**



## THE WEST COAST.

- |  |   |
|--|---|
| <p>1. CUMBERLAND.<br/>Solway Firth.<br/><i>River Eden.</i><br/>Whitehaven.<br/>St. Bee's Head.</p> <p>2. LANCASHIRE.<br/>Walney Island.<br/>Barrow-in-Furness.<br/>Morecambe Bay.<br/><i>River Lune.</i><br/>Fleetwood, Blackpool.<br/><i>River Ribble.</i><br/><i>River Mersey</i>—Liverpool.</p> <p>3. CHESHIRE.<br/>The Wirral.<br/>Birkenhead.<br/><i>River Dee</i>—Chester.</p> <p>4. FLINT.</p> <p>5. DENBIGH.</p> <p>6. CARNARVON.<br/>Llandudno.<br/>Gt. Orme's Head.<br/>Menai Strait.<br/>Isle of Anglesey—Holyhead.<br/>Braich-y-pwll.<br/>Bardsey Island.</p> <p>7. MERIONETH.</p> | <p>8. CARDIGAN.<br/>Cardigan Bay.<br/><i>River Teify</i>.—Cardigan</p> <p>9. PEMBROKE.<br/>Fishguard.<br/>St. David's Head.<br/>St. Bride's Bay.<br/>Milford Haven—Pembroke.</p> <p>10. CARMARTHEN.<br/><i>River Towy.</i><br/>Carmarthen Bay.<br/>Bristol Channel.</p> <p>11. GLAMORGAN.<br/>Worm's Head.<br/>Swansea Bay—Swansea.<br/><i>River Taff</i>—Cardiff.</p> <p>12. MONMOUTH.<br/>Mouth of the Severn.</p> <p>13. GLOUCESTER.<br/><i>River Avon</i>—Bristol.</p> <p>14. SOMERSET, DEVON, CORN-<br/>WALL.<br/><i>River Parret.</i><br/>Barnstaple Bay.<br/>Lundy Island.<br/>Hartland Point.<br/>Land's End.</p> |
|--|---|

The **Humber** is the estuary of the Ouse and Trent, and is navigable as far as Hull.

The **Downs**, between the Goodwin Sands and the coast of Kent is a roadstead, or a harbour of refuge, where ships can ride in safety. It is about ten miles long and six miles broad. Other similar roadsteads are the *Solent* and *Spithead*.

The Isles of **Sheppey** and **Thanet** are now almost joined to the mainland, the narrow channels becoming filled with sand.

The **Isle of Wight** is sometimes called the Garden of England on account of its fertility and climate. The capital is **Newport**, and other towns are *Cowes*, *Ryde*, *Ventnor*.

The **Channel Islands** lie to the south of England, off the N.W. coast of France. They consist of **Jersey**, **Guernsey**, **Alderney** and **Sark**, and many other smaller groups, the most important being the *Casquets*, the scene of many wrecks. **St. Helier** is the capital of Jersey. The climate is mild and genial, and the soil fertile. The islands send large quantities of early



potatoes, tomatoes, and fruit to England. They are also noted for a very fine breed of cows. The government is similar to that of a Crown Colony, being controlled by a Governor and a Legislative Assembly. The people are mainly of French extraction.

The **Scilly Islands** lie 25 miles S.W. of Land's End. There are over 100 islands, but only a few are inhabited. The largest is *St. Mary*. Owing to the mild climate, large quantities of spring flowers and early vegetables are grown for the London markets.

**Milford Haven** extends inland for 17 miles, and is the finest and most completely sheltered harbour in Great Britain. At the head of the inlet are the naval dockyards of *Pembroke*.

The **Isle of Man**, in the Irish Sea, is over 30 miles long and 10 miles broad. The surface is hilly, the chief peak being *Snaefell*, 2000 feet high. In the interior are valuable lead mines. The principal towns are **Douglas**, (the capital), *Ramsey* and *Peel*. The island is chiefly used as a holiday resort. The government is vested in a Governor, a Council, and an elected assembly called the House of Keys, the laws being published in the Manx language.

### SURFACE OF ENGLAND.

The surface is mountainous in the north, west, and south-west, the east being comparatively flat. The **Pennine Range** in the north runs down the centre from the Cheviot Hills to the Peak in Derbyshire. South of the Peak district extends the **Central Plateau**, lying at an average height of 500ft. To the south of this there are various ranges of hills extending in all directions, the **Cotswold Hills** and the **Devonian System** to the south-west, and a region of chalk hills to the east and south-east. The whole of Wales is hilly, the **Cambrian Range** running from North to South.

The position of the mountains will account for the great manufacturing districts being in the north and west, and the agricultural industry in the east. Later it will be seen that this geographical situation has also an effect on the climate.

**PENNINE CHAIN**.—135 miles long, forms the main water-parting of the North of England: **Cross Fell** (2900 ft.) in Cumberland; **Wherside**, **Penygant** and **Ingleborough** in Yorkshire; and **The Peak** in Derbyshire.

**CUMBRIAN GROUP** in Cumberland, Westmoreland, and Lancashire: **Scafell** (3206 ft.), **Helvellyn** and **Skiddaw** in Cumberland.

**CAMBRIAN MOUNTAINS**, in Wales; **Snowdon** (3571 ft.) in Carnarvon; **Cader Idris**, in Merioneth; **Plynlimmon**, on the borders of Cardigan and Montgomery; **Brecknock Beacon**, in Brecknock.

**DEVONIAN RANGE**, in Devonshire and Cornwall: **Yes Tor** (2000 ft.), on Dartmoor; **Dunkerry Beacon**, on Exmoor, in Somersetshire; **Brown Willy**, in Cornwall.

### HILLS

Mendip Hills	..	in Somerset.
Malvern Hills	..	in Worcester.
The Wrekin	..	in Shropshire.
Cotswold Hills	..	in Gloucester.
North Downs	..	Kent, Surrey and Berkshire.
South Downs	..	Kent, Sussex and Hampshire.



Chiltern Hills	..	Oxford and Buckinghamshire.
East Anglian Heights		Cambridge, Norfolk.
The Wolds	..	Lincolnshire and Yorkshire.

## PLAINS AND TABLELANDS.

Plain of York, in the valley of the Ouse.

The **Central Plain**, bounded by the Pennine Range, Lincoln Wolds, Chiltern Hills, North Downs, Cotswold, and Malvern Hills.

The **Eastern Plain**, in Norfolk, Suffolk, and Essex.

The **Weald**, a woody district lying between the North and South Downs.

**Salisbury Plain**, in Wiltshire.

**Dartmoor**, a rugged tableland in Devonshire.

The **Fens**, a marshy district around the Wash.

The **Valley of the Thames**.

The **Valley of the Severn**.

## RIVERS.

The watershed formed by the Pennine Range and the Central Plateau divides the rivers into three groups: (1) Those draining the east side, and flowing into the North Sea; (2) Those draining the west side, and flowing into the Irish Sea or Atlantic Ocean; (3) Those draining the south into the English Channel. The watershed being nearer the west than the east coast, the rivers flowing into the North Sea will be longer.

*From the Pennine Range.*

Flowing into the Irish Sea:—

Eden	..	..	Carlisle and Appleby.
Lune	..	..	Lancaster.
Ribble	..	..	Preston.
Mersey	..	..	Liverpool and Birkenhead.
Dee	..	..	Chester.

Flowing into the North Sea:—

Tyne	..	..	Newcastle and Gateshead.
Wear	..	..	Sunderland and Durham.
Tees	..	..	Middlesbrough and Stockton.
Ouse	..	..	York, Selby, and Goole.
Trent	..	..	Nottingham and Burton.

*Others Flowing East:—*

Witham	..	..	Lincoln.
Welland	..	..	Stamford.
Nen	..	..	Peterborough.
Great Ouse	..	..	Huntingdon, Bedford, and Ely.
Yare	..	..	Yarmouth.
Orwell	..	..	Ipswich.
Stour	..	..	Harwich.
Colne	..	..	Colchester.
Chelmer	..	..	Chelmsford.
Thames	..	..	London.



*Flowing into the English Channel :—*

Ouse	..	..	Lewes.
Arun	..	..	Arundel.
Itchin	..	..	Winchester and Southampton.
Avon	..	..	Salisbury.
Frome	..	..	Dorchester.
Exe	..	..	Exeter.
Dart	..	..	Dartmouth.
Tamar	..	..	Plymouth and Devonport.

*Flowing into the Bristol Channel :—*

Taw	..	..	Barnstaple.
Parret	..	..	Bridgewater.
Avon	..	..	Bristol and Bath.
Severn	..	..	Gloucester and Worcester.
Wye	..	..	Monmouth.
Usk	..	..	Chepstow.
Taff	..	..	Cardiff.
Towy	..	..	Carmarthen.

The **Thames** is the most important river in Britain. It rises in the Cotswold Hills, and flows, after a winding course, into the North Sea. It is navigable for the largest vessels to Deptford, and for smaller craft over 100 miles above London. It separates Gloucestershire, Oxford, Buckingham, Middlesex, and Essex on the north, from Wiltshire, Berkshire, Surrey, and Kent on the south. The tributaries are *Thamè*, *Colne*, *Brent*, and *Lea* on the left bank, and *Kennet*, *Wey*, *Mole* and *Medway* on the right bank. The chief towns are *Gravesend*, *Woolwich*, *Greenwich*, *London*, *Richmond*, *Kingston*, *Windsor*, *Reading*, *Oxford*; *Guildford* on the *Wey*, *Chatham* on the *Medway*.

The **Severn** rises in Plynlimmon, in Wales, and flows N.E. through Montgomery, S.E. through Shropshire, S. through Worcester, and S.W. through Gloucester, into the Bristol Channel. The tributaries are *Stratford Avon* and *Bristol Avon* on the left bank, and *Teme*, *Wye*, and *Usk* on the right bank. The chief towns are *Gloucester*, *Worcester*, *Shrewsbury*, *Welshpool*; *Rugby*, and *Warwick* on the *Stratford Avon*.

The **Trent** rises in N.W. Staffordshire, and flows in a N.E. direction into the Humber. It drains the counties of Stafford, Derby, Leicester, Nottingham, and the N.W. of Lincoln. The tributaries are *Dove* and *Derwent* on the left bank, and *Tame* and *Soar* on the right bank. The chief towns are *Stoke*, *Burton*, *Nottingham*, *Gainsborough*; *Derby* on the *Derwent*, *Leicester* on the *Soar*.

The **Yorkshire Ouse** is formed by the junction of the *Swale* and *Ure*. It receives many streams from the Pennine Range and flows into the Humber. The tributaries are *Derwent* on the left bank, and *Nidd*, *Wharfe*, *Aire*, *Calder* and *Don*, on the right bank. The chief towns are *York*, *Selby*, *Goole*; *Leeds* on the *Aire*; *Wakefield* on the *Calder*; *Doncaster* on the *Don*.

The **Mersey**, although only 70 miles long, is important on account of the trade of Liverpool and Manchester. It rises in the Pennine Range and flows into the Irish Sea by means of a large estuary. It has two tributaries,



the *Irwell*, on which Manchester stands, and the *Weaver*, which drains Cheshire.

**LAKES.**—The lakes are small and are mostly situated in the Cumbrian Group, which is known as the **Lake District**. The lakes are chiefly noted for their scenery, but many of them are now important because large cities draw their water supply from them.



**Windermere**, the largest and finest, lies between Westmoreland and Lancashire. It is 10 miles long.

Other lakes in Cumberland are **Ulleswater**, **Derwentwater**, **Buttermere**, and **Thirlmere**. The only important lake in Wales is **Bala**, in Merionethshire.



**CLIMATE.**

The climate of England is *moist, mild, and healthy*. Owing to the surrounding sea, the extremes of temperature to which continental countries in the same latitude are exposed are unknown; there is no oppressive heat and no excessive cold, enabling work and sport to be carried on all the year through. The British Isles lie in the same latitude as Central Russia. While the latter has greater heat in summer, its winters are much colder than those experienced in Britain. The winds which blow during the greater part of the year are the warm and moist winds from the Atlantic, the presence of the Gulf Stream increasing their warmth. Thus the west coast is warmer and has a larger rainfall than the east, the mountain ranges in the west causing the winds to discharge their moisture as rain. Hence the east, being dry, is suited for agriculture, and the west for pasturage. Most rain falls in Cumberland, while the driest parts are Lincoln and Cambridge. The east, too, is subject to the cold east winds which blow from continental Europe.



## V. England and Wales—Political.

### INDUSTRIES.

England is chiefly a manufacturing and a commercial country. Until about one hundred years ago agriculture was the chief industry. A few manufactures were carried on in the south and east, in the forest region, where supplies of charcoal could be obtained. But owing to the discovery of large masses of coal and iron in the north, and the application of steam to machinery, the industrial centres have been transferred to the coal districts. England now ranks first among the nations of the world as regards the extent of her manufactures and the amount of her trade. She is regarded as the "workshop of the world."

### MINING.

**Coal and Iron** are the most important of Britain's mineral resources and the foundation of Britain's manufactures and commerce. There are extensive deposits of coal, of which only a comparatively small quantity is exported. All the manufactures are carried on in the coalfields, which are also covered with a network of large and densely-populated towns.

*The Six largest Coalfields, their Industries, and the Towns engaged therein.*

COALFIELD.	INDUSTRIES.	TOWNS ENGAGED.
Northumberland and Durham.	Coal Mining, Shipbuilding.	Newcastle, N. Shields, Tynemouth, Gateshead, S. Shields, Jarrow, Sunderland, Hartlepool.
W. Riding of Yorkshire.	Woollen Goods, Cutlery & Steel.	Leeds, Bradford, Huddersfield, Halifax, Sheffield and Rotherham.
S. Lancashire.	Cotton Goods. Chemicals, etc.	Manchester, Bury, Bolton, Preston. Wigan, Rochdale, Oldham.
The Black Country.	Mining. Smelting. Hardware.	Birmingham, Coventry (Warwickshire). Wolverhampton, Walsall (S.Staffs.). Dudley, Redditch (Worcestershire).
The Potteries (N. Staffs.)	Earthenware.	Hanley, Burslem, Stoke.
South Wales (Glamorgan)	Mining and Smelting.	Merthyr Tydvil, Swansea, Cardiff.



Other coalfields are to be found in **Cumberland, Shropshire, and Gloucester**. From the South Wales coalfield is obtained the smokeless coal used by the navy and large ocean liners.

**Iron** comes next to coal in importance. It is found on all the coalfields, but a fine variety is obtained from the **Cleveland** district in N. Yorkshire (chief town, **Middlesbrough**) and in the **Furness** district in N. Lancashire (chief town, **Barrow**). The supply of iron is becoming limited, and much is now imported from Spain and Sweden. **Copper** and **Tin** are worked in **Cornwall** and **Devon**. Much copper ore is imported from South America to Swansea to be smelted.

**Lead** is found in **Cumberland, Derbyshire, N. Wales, and the Isle of Man**.

**Salt** is obtained from **Nantwich**, in Cheshire, and from **Droitwich** in Worcester. It is dug from mines, and obtained from brine springs.

**Slate** is quarried in Wales at **Penrhyn**, and also in **Cumberland**.

**Building Stone**.—The best is found in **Yorkshire**. The limestone of **Portland** is valuable. A little **granite** is obtained from **Cornwall** and **Devon**.

### MANUFACTURES.

**THE COTTON TRADE**.—The cotton industry is carried on in the Lancashire coalfield, owing to the dampness of the atmosphere being favourable to the spinning of yarn, and Liverpool being a convenient port for receiving the raw material from the United States. There are two phases of work in all textile industries: (1) **Spinning**, and (2) **Weaving**. Woven cloth consists of a number of threads, called yarn, closely interlaced at right angles to each other. These threads must first be prepared and spun into yarn from the raw material.

Four-fifths of the raw cotton imported comes from the **United States**, the best variety being the sea-island cotton grown along the coast of Georgia. **Egypt** also sends a small quantity. That grown in India is used by Japan, Germany, and France. An association has been formed to promote the growth of cotton in the British Empire, to broaden the basis of supply, so that we shall not be wholly dependent on foreign countries. In every British Colony something has been attempted, but the chief efforts have been confined to the West Indies, West Africa (Nigeria), East Africa Uganda, and Queensland. The sea-island cotton grown in the West Indies is said to be superior to that of the American variety.

**Manchester** is the centre of the cotton industry, and is the largest manufacturing town in England. Other towns are **Blackburn, Bolton, Bury, Burnley, Preston, Wigan, Oldham, Rochdale**. To facilitate the trade of Manchester the **Ship Canal** was constructed, so that sea-going vessels can now discharge their cargoes there, and not at Liverpool.

**THE WOOLLEN TRADE**.—The Woollen industry was carried on in the West Riding of Yorkshire before the discovery of coal, owing to many sheep being reared in the county, and the presence of water power for the mills, derived from the streams that flow from the Pennine Range.

There is a large home supply of raw wool obtained from **Lincolnshire, Devon, and the Downs**, but a great quantity is imported, chiefly from our colonies, **Australia** supplying four-fifths, and **South Africa** a smaller quantity.

From the raw wool is spun two kinds of yarn, *woollen* and *worsted*, and



both are woven into cloth. **Leeds** is noted for woollen yarns and cloth. **Bradford** and **Huddersfield** for worsted and worsted cloths. **Saltaire** for alpaca, the wool coming from S. America. **Dewsbury** and **Batley** make shoddy goods, and **Halifax** blankets.

These towns are connected by rail, river or canal with **Hull**, the chief port, and other large towns.

The woollen trade is also an important industry in the S.W. of England, the famous *broadcloth* being made at **Bradford** in Wiltshire, **Frome** in Somerset, and **Stroud** in Gloucestershire.

**THE IRON TRADE.**—There are two great industries connected with the iron trade: (a) Smelting, to get pig iron, wrought iron, and steel; (b) The manufacture of iron or hardware goods.

(a) **Smelting.**—The iron ore is put into large furnaces and melted, or *smelted*, as it is called. The iron in a molten state runs off into moulds of sand in the shape of bars. When solid they form bars of *pig iron*, which is very brittle. Pig iron contains many impurities, and to get rid of these it goes through the *puddling* process (melted, drawn out, and hammered), and the finished product is called *wrought iron*.

*Steel* may be obtained from the ore, wrought iron, or pig iron. It is mostly made from pig iron, the general process being to melt the iron with charcoal.

Steel, on account of its hardness, is used for armour plates, and rails for railroads, and being elastic and able to take a sharp edge, it is made into knives, razors, tools, scythes, swords, etc.

The chief **smelting** districts are the **Black Country**, **South Wales**, **Sheffield**, the **Cleveland District** (Middlesbrough), the **Furness District** (Barrow-in-Furness), **Newcastle**.

(b) **Hardware.**—It is impossible to mention all the articles that are made of iron and steel which England supplies to all parts of the civilized world.

We need for our—

<b>Railways</b>	..	Engines, boilers, steel rails and bridges.
<b>The Navy</b>	..	Armour plates, guns, torpedoes, machinery.
<b>The Army</b>	..	Rifles, swords, bayonets, ammunition.
<b>Agriculture</b>	..	Farming implements, wire, ploughs, threshing machines.
<b>Buildings</b>	..	Galvanized iron sheets, beams, pipes, locks, screws, nails, stoves, cisterns.
<b>The Home</b>	..	Cutlery, electro plate, keys, pens, buttons, needles, sewing-machines, cycles, motor cars.

The chief hardware district is the **Black Country**, the centre of the trade being **Birmingham**, which makes almost everything in the metal line from a pin to a steam engine. Other towns in the district are **Wolverhampton**, **West Bromwich**, **Walsall**, **Wednesbury**, and **Bilston** in Staffordshire; **Dudley** in Worcestershire; **Coventry** in Warwickshire.

**Cutlery**, **tools**, and **electro plate** are made at Sheffield and Birmingham; **machinery** at Birmingham, Leeds, Sheffield, Manchester; **guns**, **rifles**, etc., at Newcastle (Armstrong Works), Birmingham (Small Arms Factory), **Woolwich**, and **Enfield**; **cycles**, **sewing machines** at Coventry and Notting-



ham; **nails** at Dudley; **needles** and **fishing tackle** at Redditch; **tinware** in the Black Country; **agricultural implements**, Grantham, Lincoln, Ipswich, and Norwich.

**Railway Works.**—Crewe (L. & N.W.R.), Swindon (G.W.R.), Derby (M.R.), Doncaster (G.N.R.), Darlington (N.E.R.).

**Shipbuilding.**—On the Tyne (Newcastle), Wear (Sunderland), Tees (Middlesbrough), Thames (London), Mersey (Birkenhead, Liverpool). Naval vessels are constructed at Chatham, Portsmouth, and Devonport.

**EARTHENWARE.**—The manufacture of earthenware is carried on in the **Potteries**, as the district in North Staffordshire is called. The clay is not found locally, but is obtained from the south of England. There are three kinds of clay—*china clay*, used for crockery; *pipe clay*, for tobacco pipes; and *fire clay*, used for bricks to line vessels which are to be strongly heated. China clay is found in Cornwall and Devon, and fire clay in Worcestershire. We export much clay and bricks, but import earthenware and chinaware from Germany and France.

The chief towns in the Potteries are **Hanley, Burslem, Stoke, and Longton**. China goods are also made at **Derby** and **Worcester**, and pottery at **Lambeth**, in London.

**Minor Manufactures.**—*Linen*: Barnsley and Leeds; *Silk*: Spitalfields (London), Macclesfield (Cheshire), Derby; *Lace*: Nottingham, Honiton (Devonshire); *Hosiery*: Nottingham and Leicester; *Leather*: Southwark and Bermondsey (London), Bristol, Leeds; *Boots and Shoes*: Northampton, Stafford, Leicester, Norwich; *Straw Plaiting*: Luton and Dunstable (Bedfordshire); *Carpets*: Kidderminster (Worcester), Halifax; *Blankets*: Halifax, Witney (Oxon), Welshpool (Montgomery); *Ribbons*: Coventry; *Gloves*: Worcester, Yeovil (Somerset), Woodstock (Oxon); *Chemicals*: Swansea, Newcastle, Widnes, St. Helens; *Glass*: Newcastle, St. Helens, Bury; *Paper*: Kent, Lancashire, Durham; *Soap*: Port Sunlight, Leeds, Bristol, London; *Sugar*: Bristol, London, Liverpool; *Biscuits*: Reading, London; *Brewing*: Burton, London; *Cocoa*: Bristol, Bournville, York, London; *Mustard*: Norwich; *Tobacco*: Bristol.

**Farming.**—The chief agricultural districts are in the south and east. The chief objects cultivated are *wheat, oats, barley, potatoes, turnips, beans, and peas, hops, fruit*.

*Wheat* is grown in the southern and eastern counties; *barley* in the eastern counties; *oats* in the northern and midland counties and the Fen districts; *potatoes* in Lincolnshire, Leicestershire and Cheshire; and *turnips* in Norfolk. *Hops* are grown in Kent, Surrey, Hereford and Worcester; *apples and pears* in Devonshire and Hereford. Much fruit is also grown in Kent.

The chief forests are the **New Forest**, in Hampshire; **Sherwood Forest**, in Nottinghamshire; **Epping Forest**, in Essex; **Forest of Dean**, in Gloucestershire.

The rearing of live stock is chiefly carried on in the west, where are the best pasture lands.



**Horses** are reared in Yorkshire, Lincoln, and Suffolk. **Cattle rearing** is carried on in Devonshire and Hereford. **Sheep rearing** in Yorkshire, Leicester, Lincoln, Dorset, and on the Downs. **Pigs** in Yorkshire, Cambridge, and Suffolk.

**Dairy produce** is obtained from Oxfordshire, Cheshire (Stilton), Somerset, Dorset, Devonshire, and Buckinghamshire (Aylesbury).

**Fishing.**—The fisheries are very important. The North Sea fishery at the Dogger Bank employs a large number of men from the ports of *Grimsby*, *Hull*, *Yarmouth*, and *Lowestoft*. **Cod** and **herring** are mostly caught. Off the coasts of Devon and Cornwall **mackerel** and **pilchard** are taken; the **haddock**, **sole**, **plaice**, and **halibut** are also caught. The chief **oyster** fisheries are at the mouth of the Thames, the finest coming from *Whitstable*.

### COMMERCE.

The commercial greatness of the British Isles is due to:—

#### 1. Its Geographical Situation.

(a) The British Isles lie near the centre of the land hemisphere, and are thus admirably situated for trading with all parts of the world.

(b) There is an extensive coast-line with fine harbours, the importance of which is increased by the navigable rivers and numerous railways which connect them with the trading centres of the interior. Thus the imported raw material can be quickly sent to the manufacturing centres, whilst manufactured goods are readily exported to their respective markets.

(c) Being situated in the North Temperate Zone, the climate enables work to be carried on continuously throughout the year. Therefore there is a constant production of goods. Britain's insular position and the presence of the Gulf Stream increase the temperature, so that the shores and ports are free from ice all the year round.

#### 2. Its Mineral Wealth and Manufactures.

There are abundant deposits of coal and iron, the discovery of which changed the country from an agricultural to a manufacturing one. Iron provides the material for the enormous amount of machinery required, and the motive power is derived from coal. The ships engaged in the vast trade of Britain, and the Navy which chiefly protects the commerce of the country, all consume great quantities of coal.

England is the leading manufacturing nation, and her goods are exported to every civilized country. The ships that carry these goods do not return empty, but bring back large supplies of raw material and food.

#### 3. Its Vast Possessions.

As noted elsewhere, there is an interchange of productions between the mother country and her colonies. Her possessions are spread all over the earth's surface, so that Britain's commerce is extended to every part of the globe.

**Imports and Exports.**—Imports are of three kinds: (1) **Raw materials** for manufactures; (2) **Manufactured Goods**; (3) **Articles of food and luxury**.

(1) The chief **raw materials**, etc., imported are: **cotton** from United States, Egypt, and Brazil; **wool** from Australia and Cape Colony; **flax**,



**jute**, and **hemp** from Russia, Belgium, and India; **silk** and **silk goods** from China, Japan, France, and India; **hides and skins** from India, Cape Colony, Belgium, Russia, Argentine; **leather** from United States, India, Russia; **timber** from Norway, Sweden, Russia, Canada, United States, Ceylon; **petroleum** from United States, Russia, Burma; **oil seeds** from India and West Africa; **gold** from United States, Transvaal, Australia, British Columbia; **silver** from Spain, Chili, Mexico, and United States; **iron ore** from Spain, Sweden, and United States; **copper** from Australia, Cape Colony, Canada, Newfoundland, Spain; **furs** from Canada, Russia and United States; **rubber** from Brazil, Strait Settlements, Gold Coast, Nigeria, and the Congo.

(2) **Manufactured Goods**.—Silk goods from France and Japan; **watches** from United States and Switzerland; **toys** from Germany and France.

(3) **Articles of Food**.—**Wheat** and **flour** from United States, Russia, Canada, India; **sugar** from Brazil, Guiana, West Indies, India, Mauritius; **beet sugar** from Germany, Holland, France, Belgium; **dairy produce** from Holland, Denmark, France, Germany, United States, Canada; **live stock** from United States, Canada, Germany, Denmark, Argentine; **frozen meat** from United States, New Zealand, Australia, Argentine; **fish** from United States, Canada, Newfoundland, Russia; **fruits** from Spain, Italy, Greece, Turkey, West Indies, Tasmania; **wines** from France, Portugal, Spain, Australia, Cape Colony; **tea** from India, Ceylon, China; **coffee** from Brazil, India, Ceylon, West Indies; **cocoa** from West Indies, Ceylon, Guiana, Brazil, Holland; **tobacco** from United States, Turkey, India, East Indies; **spices** from East and West Indies, Ceylon.

The chief **Exports** are: cotton goods, woollen goods, hardware, leather goods, cutlery, coal, chemicals, earthenware, fancy goods, toys, paper, stationery, watches, rubber goods, beer and spirits.

About a quarter of the trade is carried on with British Possessions, chiefly *India, Australia, and Canada*. Other countries that trade largely with England are *United States, France, Germany, Holland, Russia, and Belgium*.

**Ports**.—**London** on the Thames is the greatest port in the world, trading with all countries. Being the termini of all the great railways, its foreign and colonial imports are easily distributed over the country.

**Liverpool**, on the Mersey, is the port of Lancashire. It trades chiefly with Ireland, United States, Canada, the West Indies, and South America. The chief imports are raw cotton, wheat, meat (beef, mutton, bacon, hams), tobacco and sugar, while the exports consist of cotton, iron and steel goods, coal and chemicals. Important mail steamers leave Liverpool for all American ports.

**Hull**, on the Humber, is the port of Yorkshire. Trade is carried on with Belgium, France, Germany, and the Baltic ports. The imports are raw wool from Germany, timber from Sweden and Russia, and dairy produce from Denmark and Holland. The exports are woollen goods, steel and cutlery, coal and machinery.

**Bristol**, on the Avon, has little export trade. Dairy produce is imported from Ireland and America, and fruit from Jamaica. The new Avonmouth docks have just been opened.

Other ports are: **Newcastle** (coal), **Grimsby** (fish), **Harwich** (for Holland),



**Dover** (for Calais and Ostend), **Southampton** (for America, India, and South Africa), **Plymouth** (for South Africa), **Swansea** and **Cardiff** (coal), **Holyhead** (for Dublin), **Birkenhead** (Shipbuilding). **Fishguard**, on the south shore of Cardigan Bay, is a rapidly rising port. Several American liners now land passengers and mails here, shortening the time taken between New York and London by five hours.

#### MEANS OF COMMUNICATION.

**Railways.**—The great railway lines run from London in all directions over the country. The reader should note the counties through which each railway passes, and anything of importance attached to the towns mentioned.

**London and North Western :** from London (Euston), through Rugby, Stafford, Crewe, Warrington, Wigan, Preston, and Lancaster to Carlisle, where it joins the *Caledonian Railway*. This is the **West Coast Route** to Scotland. Branches from Crewe to Holyhead for Dublin ; to Birmingham and South Wales ; to Liverpool and Manchester.

**Midland :** from London (St. Pancras), through Bedford, Leicester, Derby, Sheffield, Leeds and Appleby to Carlisle, where it joins the *Glasgow and South Western Line*. There are connections with Bristol, Birmingham, Liverpool and Manchester.

**Great Northern :** from London (King's Cross), through Huntingdon, Peterborough, Grantham, to Doncaster and Leeds. From Doncaster the **North Eastern** line runs through York, Darlington, Durham and Newcastle to Berwick, where it connects with the *North British* to Edinburgh. This is the **East Coast Route** to Scotland.

**Great Central :** from London (Marylebone), through Aylesbury, Rugby, Leicester and Nottingham to Sheffield, where branches run to Grimsby, Manchester and Liverpool.

**Great Western :** from London (Paddington), through Reading, Swindon, Bath, Bristol, Taunton, Exeter and Plymouth to Penzance. Branches from Bristol, through the Severn Tunnel to Newport, Cardiff, Swansea and Carmarthen to Milford and Fishguard ; and from Reading through Oxford Warwick, Birmingham, Wolverhampton, Shrewsbury and Chester to Birkenhead and North Wales.

**London and South Western :** from London (Waterloo), through Woking, Basingstoke, Salisbury, Yeovil and Exeter to Plymouth. Branches to Portsmouth and Southampton.

**Great Eastern :** from London (Liverpool Street), through Cambridge, Ely and Norwich to Yarmouth and Cromer ; and through Colchester, Ipswich and Lowestoft to Yarmouth. Branch to Harwich, also to Doncaster and York.

**South Eastern and Chatham :** from London (Charing Cross), through Ashford to Folkestone and Dover ; from *Victoria*, through Chatham and Canterbury to Dover. Branches to Sheerness, Ramsgate and Margate.

**London, Brighton and South Coast :** from London (Victoria or London Bridge) to Brighton, Hastings, Newhaven and Portsmouth.

**Canals.**—Nearly all the important rivers are connected by canals, but as most of them are owned by the railway companies, they are used very little, and are now in a neglected state.



The **Grand Trunk**, or the Trent and Mersey Canal, connects these two rivers with the Thames.

The **Manchester Ship Canal**, 36 miles long, connects Manchester with the estuary of the Mersey.

The **Grand Junction Canal** joins the Thames and Trent.

The **Leeds and Liverpool Canal** joins the Yorkshire Ouse and the Mersey.

The **Birmingham Canal**; the **Shropshire Union Canal**.

**Continental Routes.**—Hull and Newcastle to Baltic ports; Harwich (G.E.R.) to Rotterdam; Dover (S.E. & C.R.) to Calais and Ostend; Folkestone to Boulogne; Newhaven (L.B. & S.C.R.) to Dieppe; Southampton (L. & S.W.R.) and Weymouth (G.W.R.) to the Channel Islands and Cherbourg.

To Berlin *via* (1) Ostend, Brussels and Hanover; (2) Queenborough, Flushing and Hanover.

To Constantinople *via* Ostend, Cologne, Frankfort, Nuremburg, Vienna, Buda Pesth, Belgrade and Sofia.

To St. Petersburg *via* Berlin, Konigsberg and Wilna.

To Moscow *via* Berlin and Warsaw, thence to Vladivostock.

To Madrid *via* Paris, Orleans, Bordeaux, Bayonne and Burgos.

**Routes to India:** (a) London to Dover, through Calais, Paris, Mont Cenis Tunnel, Turin, and Bologna to Brindisi; thence by sea to Port Said.

(b). London to Dover, through Ostend, Brussels, Cologne, Strasburg, Basle, Mt. St. Gothard Tunnel, Milan and Bologna to Brindisi.

(c). London to Calais or Dieppe, through Paris and Lyons to Marseilles; thence by sea to Port Said.

#### THE COUNTIES.

England contains forty counties and Wales twelve. The largest county is Yorkshire, which is divided into three parts, called *Ridings*: North Riding, East Riding, West Riding. Rutland is the smallest county.

**Six Northern Counties:** Northumberland (Newcastle), \*Durham, \*Yorkshire, Cumberland (Carlisle), Westmoreland (Appleby), Lancashire, (Lancaster).

**Five Eastern Counties:** \*Lincoln, Norfolk (Norwich), Suffolk (Ipswich), Essex (Chelmsford), \*Cambridge.

**Ten Southern Counties:** Kent (Maidstone), Surrey (Guildford), Sussex (Lewes), Hampshire (Winchester), Berkshire (Reading), Wiltshire (Salisbury), Dorset (Dorchester), Somerset (Taunton), Devon (Exeter), Cornwall (Bodmin).

**Five Western Counties:** \*Gloucester, \*Monmouth, \*Hereford, Shropshire (Shrewsbury), Cheshire (Chester).

**Seven South Midland Counties:** \*Oxford, Buckingham (Aylesbury), \*Bedford, \*Huntingdon, \*Hertford, \*Northampton, Middlesex (Brentford),

**Seven North Midland Counties:** \*Derby, \*Stafford, \*Nottingham, \*Leicester, \*Warwick, \*Worcester, Rutland (Oakham).

**North Wales (six):** Anglesey (Beaumaris), \*Carnarvon, \*Denbigh, Flint (Mold), Merioneth (Dolgelly), \*Montgomery.

**South Wales (six):** \*Cardigan, \*Pembroke, \*Carmarthen, \*Glamorgan, Brecknock (Brecon), Radnor (Presteign).

\* The county town is the same name as the county.



**Watering Places :—**

*East Coast.*—Whitby, Scarborough, Yarmouth, Lowestoft, Margate, Ramsgate.

*South Coast.*—Folkestone, Hastings, Brighton, Eastbourne, Bournemouth, Torquay, Penzance.

*West Coast.*—Ilfracombe, Llandudno, Southport, Blackpool, Douglas.

*Inland.*—Harrogate (Yorkshire), Buxton and Matlock (Derbyshire), Leamington (Warwick), Bath (Somerset), Cheltenham (Gloucester), Malvern (Worcester), Tunbridge Wells (Kent).

**Military Centres :** Aldershot, London, Bulford, Woolwich, Colchester, Chatham, Dover, Portsmouth, Devonport, York, Chester.

**Naval Centres :** Chatham, Sheerness, Portsmouth, Devonport, Portland.

**QUESTIONS.**

1. Draw a map of the six northern counties, showing the Pennine Range with the rivers that rise in it. Mark a town on each river.
2. Name in order from north to south the counties, openings and capes on the west coast of England.
3. Locate the chief islands and straits around the coasts of England.
4. Sketch the country south of the Thames, marking the general positions of the counties and the chief physical features. Also insert the chief military and naval centres in this part of the country.
5. Briefly describe (with a sketch) the physical features of the basin of the Yorkshire Ouse, and its tributaries and chief towns. What conditions are most favourable to the trade of a commercial river ?
6. Describe the physical features and industries of the country lying between the Thames and Trent.
7. Draw a map of Wales, and insert Menai Strait, River Severn, River Dee, Snowdon, Plynlimmon, Worms Head, Great Ormes Head, Milford Haven, Cardiff, Swansea, Newport, Fishguard, Llandudno, Chester, Merthyr Tydvil, Wrexham, Holyhead.
8. Describe the Trent, Severn, or Thames under the heads of source, general direction, counties drained, tributaries, towns on the banks, commercial importance. Illustrate your answer by a sketch map.
9. Compare the surface of the east and west of Great Britain. How are the drainage and climate of the country thereby affected, and how do these conditions affect the industries ?
10. Describe the general surface of England and Wales, and state the position of the chief ranges of mountains and hills.
11. Write short notes about the following : The Lake District, the Fens, Dartmoor, the Goodwin Sands, the Downs, the Weald, the West Riding, Spithead, Channel Islands, the Broads, the North Sea, the Wolds, Holderness.
12. What are the chief characteristics of English rivers ? Name those flowing into (a) the Wash, (b) the English Channel, and give a town on each.
13. Name the largest coalfields of England, the industries carried on in each, with the chief towns engaged therein.
14. Give the various phases of the iron industry. Write down the situation of the most important smelting districts.



15. From what parts of the country are obtained iron, copper, tin, lead, salt, slate, clay, bricks, and building stone ?

16. Name districts and towns engaged in the cotton, woollen and ship-building trades. How do you account for these industries being carried on in the localities you mention ?

17. From what places are the materials obtained for barrack construction, such as stone, deals, slate, cement, grates, nails, glass, firebricks, and drain-pipes ?

18. Where are the following articles of a soldier's equipment made : boots, socks, shirts, razor, needles, thread, buttons, rifle, bayonet.

19. What industries are carried on at Manchester, Hull, Birmingham, Liverpool, Newcastle, Swansea, Barrow, Leeds, Birkenhead, Sheffield, Chatham, Grimsby, and Merthyr Tydvil ? How has the position of these towns determined their prosperity and importance ?

20. Name towns occupied in the production of coal, carpets, lace, paper, porcelain, cocoa, linen, chemicals, tin, silk goods, salt, beer, and dairy produce.

21. Locate and state some important industry connected with Sunderland, Hanley, Rochdale, Barnsley, Coventry, Redditch, Luton, Ipswich, Leicester, Devonport, Truro, Penrhyn, Workington, Macclesfield, Witney, Yeovil, Middlesbrough, Crewe, St. Helens, Dudley, Bristol.

22. Into what three classes may the *imports* be divided. Name countries which supply grain and flour, wool, dairy produce, sugar, tea, wine, timber, gold, iron ore, frozen meat.

23. Enumerate the chief ports of England, with situation and nature of trade.

24. Give the situation and some interesting facts concerning Colchester, Scarborough, Oxford, Canterbury, York, Fishguard, Harrogate, Stratford-on-Avon, Woolwich, Windsor, Cowes, Rugby, Matlock, Okehampton, Shoeburyness, Dover, Yarmouth.

25. Describe a railway journey from London to Edinburgh, with special reference to the centres of industry and places of historical interest on or near the route you select.

26. Describe the western railway route from London to Glasgow, naming in order the chief towns on the main line.

27. Name three railways that have a terminus on the south coast, and describe one of them in detail.

28. An officer is returning from leave from Manchester to Egypt *via* Paris and Brindisi. Sketch the route he would be likely to take, and write short notes about the principal places he would pass through.

29. Name railway systems which have steamship communication with the Continent. Give the port of embarkation and the port of call in each case.

30. By what different routes can a person proceed from London to Ireland ?



## VI. Scotland.

Scotland is the northern part of the island of Great Britain, and is sometimes called *North Britain*.

**Boundaries.**—On the *north and west* by the Atlantic Ocean; on the *east* by the North Sea; on the *south* by the Cheviot Hills and Solway Firth.

**Size.**—The **length**, from Dunnet Head to Mull of Galloway, is 288 miles. The **breadth**, from Buchan Ness to Ardnamurchan Point, is 150 miles. The narrowest part of Scotland, between the Firths of Forth and Clyde, is only 30 miles wide.

**Area.**—30,000 square miles, being one-half of the area of England and Wales.

**Coast.**—The western coast is very rocky and deeply indented, being open to the full force of the Atlantic waves. The sea has washed away the soft soil, leaving a bold and rugged coast line. The long arms of the sea, called **lochs**, are similar to the **fiords** of Norway. The eastern coast has several large openings called **firths**.

Trace the following from a map of Scotland:—

### THE EAST COAST.

- |   |  |
|---|--|
| 1. CAITHNESS.<br>Pentland Firth.<br>Duncansby Head.<br>Wick.                    | 9. KINCARDINE.<br>Stonehaven.                                      |
| 2. SUTHERLAND.<br>Dornoch Firth.  | 10. FORFAR.<br>Montrose.<br>Firth of Tay.<br>Dundee.               |
| 3. ROSS AND CROMARTY.<br>Tarbet Ness.<br>Moray Firth.                           | 11. FIFE.<br>Fife Ness.<br>Firth of Forth.<br>Kircaldy.<br>Rosyth. |
| 4. INVERNESS.<br>Caledonian Canal.<br>Fort George.                              | 12. LINLITHGOW.  |
| 5. NAIRN.   | 13. EDINBURGH.<br>Leith.<br>Forth Bridge.                          |
| 6. ELGIN.   | 14. HADDINGTON.<br>Dunbar.<br>Bass Rock.                           |
| 7. BANFF.   | 15. BERWICK.<br>St. Abbs Head.<br>River Tweed.                     |
| 8. ABERDEEN.<br>Peterhead.<br>Buchan Ness.<br>River Don.<br>River Dee—Aberdeen. |  |



## THE NORTH COAST.

- |                                 |  |
|---------------------------------|--|
| 1. ORKNEY AND SHETLAND ISLANDS. | 2. CAITHNESS.<br>Dunnet Head.<br>Thurso. |
|                                 | 3. SUTHERLAND.<br>Cape Wrath.            |

## THE WEST COAST.

- |  |   |
|--|---|
| 1. ROSS AND CROMARTY.<br>The Hebrides.<br>Butt of Lewis.<br>The Minch.<br>Loch Broom | Mull, Jura, Islay.<br>Loch Linnhe.<br>Fort William.<br>Mull of Cantyre.<br>Loch Fyne. |
| 2. INVERNESS.<br>Harris, N. and S. Uist, Skye.<br>Little Minch.<br>Sound of Sleat.   | 4. BUTE.<br>Arran.<br>Firth of Clyde.<br>River Clyde.                                 |
| 3. ARGYLESHIRE.<br>Ardnamurchan Point.<br>Sound of Mull.                             | 5. AYR.<br>Ailsa Crag.  |

## THE SOUTH COAST.

- |   |   |
|---|---|
| 1. WIGTOWN.<br>Mull of Galloway.<br>Luce Bay.<br>Wigtown Bay. | 2. KIRCUDBRIGHT.<br>Solway Firth.<br>River Dee. |
|   | 3. DUMFRIES.<br>Rivers Nith, Annan and Esk.     |

## ISLANDS.

1. The **Hebrides**, or Western Isles, lie off the west coast, and consist of two groups—the **Outer Hebrides** and the **Inner Hebrides**, which are separated by the two channels *The Minch* and *Little Minch*.

The Outer Hebrides contain **Lewis** and **Harris** (one island) **N. and S. Uist**, **Benbecula**, and **St. Kilda**.

The Inner Hebrides are separated from the mainland by the narrow sounds of Sleat, Mull, and Jura, and consist of many islands, the chief being **Skye**, **Mull**, **Jura**, **Islay**, **Iona**, and **Staffa**. Skye is the largest, and contains **Portree**, the most important town.

Iona in early times was the home of a flourishing Christian church under St. Columba.

Staffa is noted for its *Fingal's Cave*, which is supported by regular and beautifully shaped columns.

All the islands are rugged, mountainous, and very picturesque. The inhabitants live chiefly by fishing, fowling, cattle rearing, and distilling. In Harris are made the famous tweeds of that name.

2. The **Orkney** and **Shetland Islands** are two groups lying to the north of



Caithness. Only a few of the islands are inhabited, fishing being the chief occupation. The chief town in the Orkney Islands is **Kirkwall**; in the Shetland Islands, **Lerwick**. The Shetlands are noted for a breed of small ponies.

**Arran and Bute**, in the Firth of Clyde, form the county of Bute. The islands are frequented as a holiday resort by the people of Glasgow.

The **Bass Rock** lies at the entrance to the Firth of Forth, and the **Bell Rock** near the Firth of Tay.

### SURFACE.

The surface of Scotland is very mountainous. There are two districts—the **Highlands** and the **Lowlands**.

The Highlands consist of lofty mountains composed chiefly of granite, with very little vegetation upon them. Among them lie many lakes with romantic scenery, while from the hill sides run rapid streams which are useless for navigation.

These mountains are divided into two parts—**The Northern Highlands** and the **Grampians**—which are separated by the **Valley of Glenmore**, through which the *Caledonian Canal* passes. The Northern Highlands run due north and south, while the Grampians extend from Argyle to Aberdeen, across the centre of the country.

The surface of the Lowlands is undulating, being crossed by several hill ranges. These hills differ from those of the Highlands, as they are covered with grass or heather, while in many places the hillsides are cultivated. The Lowlands are separated from the Grampians by the **Valley of Strathmore**.

**Northern Highlands**, containing **Ben More** in Sutherland; **Ben Wyvis**, **Ben Dearg** and **Ben Attow** in Ross and Cromarty.

**The Grampians** contain **Ben Nevis** (4,406 ft.), **Cairngorm** and **Cairntoul** in Inverness; **Ben Macdhui** in Aberdeen; and **Ben Lomond** in Stirling.

#### The Lowland Ranges :—

<b>Cheviot Hills</b>	..	between England and Scotland.
<b>Lowther Hills</b>	..	(with Broad Law) in Dumfries and Peebles.
<b>Lammermuir Hills</b>	..	in Haddington.
<b>Moorfoot Hills</b>	}	.. in Edinburgh.
<b>Pentland Hills</b>		
<b>Campsie Fells</b>	..	in Stirling.
<b>Ochill Hills</b>	..	in Perth.
<b>Sidlaw Hills</b>	..	in Forfar.

**Plains** : **Glenmore**, **Strathmore**, **Plain of the Forth and Clyde**, and the **Carse of Gowrie** (lying between the Sidlaw Hills and the Firth of Tay). There are many dales in the south, which take their names from the rivers that drain them.

### RIVERS AND LAKES.

1. Scotland is a land of streams and lakes, which are noted for the grandeur of their scenery. While in England the rivers are slow and navigable, and pass through fertile plains, those of Scotland are short, rapid, and unfit for navigation. They abound in salmon and trout. The general slope of the country is from west to east, therefore the majority of the rivers flow towards the North Sea.



**Rivers.**—Tweed, Forth, Tay, Dee, Don and Spey flowing into the North Sea.

The Clyde flowing into the firth of Clyde.

Dee, Nith, Annan and Esk flowing in a southerly direction into the Solway Firth.

The **Tay** (105 miles) is the largest river of Scotland. It rises in Loch Tay and flows into a wide estuary called the Firth of Tay. In its upper course it flows through picturesque scenery, and in its lower course it drains the fertile region of Strathmore. Its basin includes the counties of Perth, Fife and Forfar. The tributaries on the *left* bank are the Tummel and Islay; on the *right* bank, Almond and Earn. The chief towns are Dunkeld, Perth and Dundee.

The **Forth** rises near Loch Lomond, in the Trossach district. It is a short river, but it has a fine estuary fifty miles in length. It drains the counties of Stirling, Clackmannan, Perth, Fife, Linlithgow, Edinburgh and Haddington. The tributaries on the *left* bank are the Teith and Allan. The chief towns are Stirling, Alloa, Grangemouth, Edinburgh, Leith and Kircaldy.

The **Clyde** is the most important river of Scotland. It rises in the Lowther Hills, and flows in a N.W. direction into the Firth of Clyde, after draining the counties of Lanark, Renfrew and Dumbarton. In its upper course occur several waterfalls. It then flows through an important coalfield and manufacturing district, of which Glasgow is the centre. On its estuary there are immense shipbuilding yards. The river is navigable for the largest vessels to Glasgow. On the right bank are the Calder and Leven, and the Douglas and Avon are on the left. The chief towns on the Clyde are Hamilton, Glasgow, Renfrew, Port Glasgow, Greenock, Dumbarton.

2. **Lakes.**—The lakes are found in the deep hollows high up in the mountains. In some the bare rugged mountains descend to the water's edge, giving the whole scene a gloomy aspect. Others, however, are made more picturesque by trees and grassy slopes. The lakes are called **lochs**.

**Loch Lomond**, between Dumbarton and Stirling, is the largest lake in Great Britain, being about 24 miles long. It has beautiful scenery.

**Loch Awe** is in Argyle, **Loch Maree** in Ross, and **Loch Shin** in Sutherland. **Loch Lochie** and **Loch Ness**, in Inverness, are connected by the Caledonian Canal.

**Loch Katrine**, **Loch Tay** and **Loch Rannoch** are in Perth. The woody district around Loch Katrine is known as the **Trossachs**, and is frequently visited by tourists.

**Loch Leven** is in Kinross. On an island stood a castle where Mary Queen of Scots was imprisoned.

#### CLIMATE.

The climate of Scotland is a little colder than that of England. The west coast has much rain and mist. The east is comparatively dry.

#### INDUSTRIES.

1. **Agriculture.**—Only a quarter of the area is under cultivation, chiefly in the Lowlands, the Highland region being suitable for pasture only. The chief crops are **oats**, **potatoes**, **turnips**, **barley** and **wheat**. In the south,



too, there are many dairy farms. Sheep and cattle are reared in Ayr, Wigtown and Aberdeen.

2. **Fisheries.**—Fishing is the chief industry of the East coast, the Orkney and Shetland Islands, and the Hebrides. It is carried on chiefly in the North Sea, where large quantities of **herring, cod, plaice, sole, mackerel** and **whiting** are caught. The chief fishing towns are *Dundee, Montrose, Aberdeen, Peterhead, Wick, Thurso, Lerwick* and *Stornoway*.

Vessels also leave *Dundee* and *Peterhead* to engage in the **whale** fishery in Arctic Seas.

The Scottish rivers are noted for their **salmon**

3. **Mining.**—The only important coalfield lies between the rivers Forth and Clyde, occupying the counties of *Lanark, Renfrew* and *Stirling*. **Iron** is found with coal. Much coal is exported from *Grangemouth* and *Glasgow*.

**Granite** is obtained from the *Aberdeen* quarries.

**Marble** and **slate** are found in the Highlands.

**Lead** is obtained from the *Lowther Hills*.

4. **Manufactures.**—**Woollen goods** are manufactured in the Lowlands at *Galashiels* (Selkirk), *Hawick* (Roxburgh) and *Glasgow*. **Cotton goods** at *Glasgow* and *Paisley*. **Linen goods** and **jute** in the east coast towns of *Dundee, Arbroath* and *Montrose* in Forfar, and *Kircaldy* and *Dunfermline* in Fife.

**Iron smelting** and the making of **hardware** employ many hands at *Glasgow, Coatbridge, Hamilton* and *Motherwell* in Lanark, and at *Falkirk* (Carron Works) and *Stirling*.

**Shipbuilding** is carried on at the mouth of the Clyde at *Glasgow, Port Glasgow, Greenock* and *Dumbarton*.

**Carpets** at Kilmarnock (Ayr) and Dundee; **shawls** and **thread** at Paisley; **tartans** at Bannockburn; **gloves** at Dundee; **paper** and **printing** at Edinburgh and Aberdeen; **ale** at Alloa (Clackmannan) and Edinburgh; **whisky** at Glasgow, Campbeltown (Argyle) and Glenlivet (Banff).

## COMMERCE.

The **Imports** are similar to those of England.

The chief exports are cotton, linen, and jute goods, coal, iron, granite, fish, ale, and whisky.

**Glasgow** on the Clyde is the chief port of Scotland and the second city of the United Kingdom. It trades with all parts of the world, chiefly with America. It exports all kinds of textile goods, machinery, coal and whisky. On the river are huge shipbuilding yards.

**Leith**, on the Firth of Forth, is the port of Edinburgh, and has a large trade with Holland, Belgium, Germany, Norway and Sweden.

**Dundee**, on the Tay, is the chief port on the east coast. It imports large quantities of jute from India, and is the centre of the linen industry. It also sends vessels to the whale fishery.

**Aberdeen**, on the Dee, exports linen, fish, and granite. It is also engaged in shipbuilding.

Other ports are: **Wick, Peterhead, Montrose, Grangemouth** and **Dunbar** on the east coast. **Greenock, Irvine** and **Girvan** on the west coast.

**Stranraer** is a packet station for Larne in Ireland.



## RAILWAYS AND CANALS.

1. **The North British** : from Berwick, through Dunbar, Edinburgh and Falkirk to Glasgow. Also from Edinburgh over the Forth and Tay Bridges to Dundee and Aberdeen.

The *Waverley Route* runs from Berwick to Edinburgh through Melrose and Galashiels.

**The Caledonian** : from Carlisle to Glasgow through Carstairs, and thence through Stirling, Perth, Forfar and Stonehaven to Aberdeen. Branches to Edinburgh and Oban (Argyle), and from Perth to Dundee.

**The Glasgow and South Western** : from Carlisle through Dumfries, Kilmarnock and Paisley to Glasgow. Branch to Stranraer for Ireland.

**The Highland Railway** : from Perth through Dunkeld, across the Grampians, to Inverness, Dingwall, Tain, Wick and Thurso.

**Great North of Scotland** : from Aberdeen to Elgin, Nairn and Inverness ; from Aberdeen to Ballater for Balmoral Castle.

## 2. Canals :—

**The Caledonian Canal** (60 miles), through Glenmore from Loch Linnhe to Moray Firth, connecting Lochs Lochie and Ness.

**The Forth and Clyde Canal** runs from Renfrew on the Clyde to Grangemouth on the Firth of Forth.

**The Crinan Canal**, across the Kintyre Isthmus, connects Loch Fyne with the Sound of Jura.

## COUNTIES.

1. Scotland is divided into 32 counties. The largest is **Inverness**. **Clackmannan** is the smallest. **Lanark** is the most populous. **Ross and Cromarty** form one county, as do the **Orkney and Shetland Islands**. *Lewis* belongs to Ross and Cromarty ; *Harris, N. and S. Uist* and *Skye* to Inverness ; *Mull, Jura* and *Islay* to Argyle.

**Highland Counties** : Orkney and Shetland (Kirkwall and Lerwick), Caithness (Wick), Sutherland (Dornoch), Ross and Cromarty (Dingwall), \* Inverness, \* Nairn, \* Elgin, \* Banff, \* Aberdeen, Argyle (Inverary), Bute (Rothesay).

**Midland Counties** : Kincardine (Stonehaven), \* Forfar, Fife (Cupar), \* Kinross, \* Clackmannan, \* Perth, \* Stirling, \* Dumbarton.

**Southern Counties** : \* Linlithgow or Westlothian, \* Edinburgh or Midlothian, \* Haddington or Eastlothian, \* Selkirk, \* Peebles, \* Lanark \* Renfrew, \* Ayr, \* Wigtown, \* Kircudbright, \* Dumfries, Roxburgh (Jedburgh), Berwick (Duns).

2. **Largest Towns** : Glasgow, Edinburgh, Dundee, Aberdeen, Paisley, Leith, Greenock, Coatbridge, Perth, Kircaldy, Hamilton, Kilmarnock.

**Edinburgh** is the capital of Scotland. It has a beautiful situation and contains many fine buildings. The Castle and Holyrood Palace are of historic importance. The city possesses a university, and it is a large publishing centre.

3. **Watering Places** : Oban in Argyle, Rothesay in Bute, Stonehaven, Dunbar and North Berwick.

**Universities** : Edinburgh, Glasgow, Aberdeen, St. Andrew's.

**Historical Towns** : **Bannockburn** in Stirling, where Robert Bruce defeated Edward II, 1314. **Killiecrankie** in Perth, where Viscount Dundee was slain, 1689. **Sheriffmuir** in Perth, the scene of a battle between the



Jacobites and Royalists, 1715. **Preston Pans** in Haddington; Sir John Cope defeated by the Young Pretender, 1745, who was finally overthrown by the Duke of Cumberland at **Culloden Moor** in Inverness, 1746.

### QUESTIONS.

1. Sketch the east coast of Scotland, marking the general positions of the counties, the chief physical features and principal ports.

2. What is the character of the western coast, and to what is it due? Describe the island groups on this coast.

3. Describe the surface of Scotland. Name the ranges embracing the Highlands, with the chief peaks

4. Compare the Highland and Lowland regions of Scotland. Name the chief ranges of hills in the Lowlands, with the county each is situated in.

5. Name the rivers of Great Britain that fall into the North Sea, with a town on each. What comparison can you make between the English and Scottish rivers?

6. Sketch the river Clyde. Write a short description of the river under the heads of source, direction, tributaries, towns on its banks and commercial importance.

7. Locate the most important lakes. For what are they chiefly noted? Compare the climate with that of England.

8. Name in order the counties (with the capital of each) that would be passed in sailing from the Bristol Channel to the Caledonian Canal. What ports would also be passed?

9. Name the counties drained by the Forth and Clyde. Give the chief industries of this part of Scotland, with the towns engaged.

10. Give the situation and some industry connected with Galashiels, Kilmarnock, Greenock, Dundee, Aberdeen, Dunfermline, Wick, Falkirk, Alloa, Leith, Paisley, Perth, Stirling.

11. Write short notes concerning Glenmore, the Shetlands, Pentland Firth, Trossachs, Caledonian Canal, Loch Lomond, Firth of Forth, Ben Nevis, Strathmore, Staffa, Carse of Gowrie, the North Channel.

12. Describe a journey from Liverpool to Aberdeen, with special reference to the centres of industry through which you would pass.

13. Describe the eastern route from York to Aberdeen, naming in order the chief towns and objects passed on the main line.

14. Locate and state any interesting facts about the following: Edinburgh, Bannockburn, Balmoral, Rosyth, Culloden, Ayr, Abbotsford, Glencoe, Preston Pans, Sheriffmuir, Oban, Stranraer.

15. Name the chief ports of Scotland, with the nature of their trade. How do you account for the prosperity and importance of Glasgow?



## *VII. Ireland.*

Ireland lies to the west of Great Britain, being separated from it by the North Channel, Irish Sea, and St. George's Channel. Its north, south and west coasts are washed by the Atlantic Ocean.

Between the Mull of Cantyre in Scotland and Fair Head in Ireland the distance is only 14 miles.

**Size.**—The length from Fair Head to Mizen Head is 300 miles. The breadth from Howth Head to Slyne Head is 200 miles. The area is 32,000 square miles, a little larger than Scotland.

**Coast.**—The west coast of Ireland, like Scotland, is very much indented, owing to the heavy roll of the Atlantic waves. There are numerous natural harbours affording fine anchorage for ships. The east coast is more even, with fewer harbours. The length of coast is over 2,000 miles.

### *NORTH COAST.*

1. **DONEGAL.**

Lough Swilly.  
Malin Head.

2. **LONDONDERRY.**

Lough Foyle.

3. **ANTRIM.**

The Giant's Causeway. Rathlin Island.

### *EAST COAST.*

1. **ANTRIM.**

Fair Head.  
Belfast Lough.  
*River Lagan.*

4. **MEATH.**

*River Boyne.*

5. **DUBLIN.**

Howth Head.  
Dublin Bay.  
*River Liffey.*

2. **DOWN.**

Strangford Lough.  
Dundrum Bay.  
Carlingford Lough.

6. **WICKLOW.**

Wicklow Head.

3. **LOUTH.**

Dundalk Bay.

7. **WEXFORD.**

Wexford Harbour.  
Tuskar Rock.

### *SOUTH COAST.*

1. **WEXFORD.**

Carnsore Point.  
Hook Head.

Great Island—Queenstown.

Spike Island.  
Kinsale Harbour.

2. **WATERFORD.**

Waterford Harbour.  
Youghal Harb ur.

Cape Clear.

Mizen Head.

Bantry Bay.

Bear Island.

3. **CORK.**

Cork Harbour.

Bearhaven.



## WEST COAST.

- |  |   |
|--|---|
| <p>1. KERRY.<br/>         <b>Kenmare River.</b><br/>         <b>Valentia Island.</b><br/>         <b>Dingle Bay.</b><br/>         <b>Tralee Bay.</b></p> <p>2. CLARE.<br/>         <i>River Shannon.</i><br/>         <b>Loop Head.</b></p> <p>3. GALWAY.<br/>         <b>Galway Bay.</b><br/>         <b>Isles of Aran.</b><br/>         <b>Slyne Head.</b></p> | <p>4. MAYO.<br/>         <b>Clare Island.</b><br/>         <b>Clew Bay.</b><br/>         <b>Achil Island.</b><br/>         <b>Achil Head.</b><br/>         <b>Erris Head.</b></p> <p>5. SLIGO.<br/>         <b>Sligo Bay.</b></p> <p>6. DONEGAL.<br/>         <b>Donegal Bay.</b><br/>         <b>Bloody Foreland.</b><br/>         <b>Tory Island.</b></p> |
|--|---|

**Valentia Island** is the terminus of the Atlantic Cable from Newfoundland. **The Giant's Causeway** is composed of many thousands of basaltic columns, most of them containing six sides. They are of the same formation as the Fingal's Cave.

**Bearhaven**, in Bantry Bay, is used largely by the navy as an anchorage.

## SURFACE.

The mountains of Ireland lie all round the coast, the centre being low and flat, with extensive bog-lands, the best known being the Bog of Allen. The bogs furnish *peat*, which is used for fuel.

The *Southern* ranges consist of the **McGillicuddy's Reeks** in Kerry, with *Carran Tual* (3,400 ft.), the **Knockmeledown** and **Galtee Mountains** in Tipperary and Waterford.

On the *East* are the **Wicklown Mountains** in Wicklow, and the **Mourne Mountains** in Down.

The *Northern* Highlands include the mountains of **Antrim** and **Donegal**.

In the *West* are the **Nephtin Beg Mountains** in Mayo, and the **Connemara Mountains** in Galway.

The Great Central Plain is crossed by the **Slieve Bloom Mountains**.

## RIVERS.

Ireland is well watered, but the rivers are little used for navigation.

The **Shannon** (224 miles) is the longest river in the British Isles. It rises in Cavan, flows south and south-west, and then empties itself into the Atlantic by a long and narrow estuary, 60 miles in length. The river expands in three places, forming **Loughs Allen, Ree and Derg**. For the greater part of its course it separates Leinster from Connaught. The tributaries are the *Inny* and *Brosna* on the **left** bank, and the *Suck* on the **right** bank. The chief towns are Carrick-on-Shannon, Athlone and Limerick.

The **Bandon, Lee and Blackwater** rise in Kerry, and flowing to the east parallel to each other, empty themselves into the harbours of Kinsale, Cork and Youghal respectively.



The **Barrow**, which is joined by the **Nore** and **Suir**, flows into Waterford Harbour.

On the east coast the **Slaney** flows into Wexford Harbour, the **Liffey** into Dublin Bay, the **Boyne** into Drogheda Bay, and the **Lagan** into Belfast Lough.

On the north the **Bann** drains Lough Neagh and the **Foyle** flows into Lough Foyle.

#### LAKES.

The lakes of England and Scotland lie among the mountains, but those of Ireland lie upon the plains, and are only expansions of the rivers. They are called **loughs**.

The chief lakes are: **Lough Neagh** (153 square miles) in Ulster, the largest lake in the British Isles; **Upper and Lower Erne**, drained by the River Erne in Fermanagh; **Allen, Ree and Derg**, the expansions of the Shannon; **Corrib** in Galway, and **Mask** in Mayo.

The most famous lakes of Ireland are the three lakes of **Killarney**, which are situated in the mountains of Kerry, and are visited for their beautiful scenery.

#### CLIMATE.

The climate is very mild, which is due to the warm currents and winds of the Atlantic. Much rain falls, which is favourable to the growth of grass. This has caused Ireland to be known as the Emerald Isle. The climate is more uniform than that of England, the winters being warmer and the summers cooler.

#### INDUSTRIES.

**Agriculture.**—Ireland is chiefly an agricultural country. **Potatoes** and **oats** are chiefly grown, the climate being too moist for the production of wheat and barley. **Flax** is cultivated in Ulster.

Dairy farming is carried on in the west and south, where there is much pasture. Horses, cattle, sheep, pigs and poultry are reared. These are exported, as well as large quantities of butter, hams, bacon and eggs.

**Fishing.**—Fishing is carried on all round the coast, **mackerel** and **herring** being largely caught. **Salmon** and **trout** are obtained from many of the rivers, especially from the Erne, Bann, Shannon and Blackwater.

**Mining.**—Ireland has no great beds of coal or iron. A little *coal* is found in Kilkenny, and *iron* in Antrim. *Copper* and *lead* are obtained from the Wicklow Hills. *Marble* is quarried in Galway and Connemara. *Peat* for fuel is cut from the bogs.

**Manufactures.**—Owing to the absence of coal the manufactures are few. Most of the manufacturing towns are in Ulster and on the east coast.

**Linen goods** are made at Belfast, Londonderry, Newry and Armagh. Belfast also has large **shipbuilding yards** and **distilleries**. Dublin manufactures **poplins, lace, and stout**. **Lace** is also made at Limerick.

#### COMMERCE.

Ireland trades chiefly with Great Britain through the ports of Bristol, Liverpool and Glasgow.

The chief exports are linen and linen goods, live cattle, sheep, pigs, dairy produce, whisky, stout, salmon and marble.



The chief ports are **Belfast, Dublin and Wexford** on the east; **Waterford, Cork and Queenstown** on the south; **Limerick and Galway** on the west; **Londonderry** on the north.

### MEANS OF COMMUNICATION.

There are fine roads and the railway communication is good.

#### 1. Railways :—

The **Great Southern and Western** : from Dublin, through Kildare to Cork and Queenstown. Branches to Waterford and Limerick.

The **Midland and Great Western** : from Dublin, through Mullingar and Athlone to Galway.

The **Great Northern** : from Dublin, through Drogheda and Dundalk to Belfast.

The **Belfast and Northern Counties** : from Belfast through Antrim to Londonderry.

#### 2. Canals :—

The **Grand Canal** runs from Dublin, through Tullamore to the Shannon.

The **Royal Canal**, also from Dublin, through Mullingar to the Shannon.

The **Ulster Canal**, connecting Lough Erne with Belfast.

The **Newry Canal**, from Lough Neagh to Carlingford Lough.

3. **Shipping Lines** : from **Larne** in Antrim to Stranraer in Scotland; **Belfast** to Fleetwood; **Dublin** to Holyhead; **Wexford** to Fishguard; **Waterford** and **Cork** to Milford, Bristol and Plymouth.

Mail steamers from Liverpool for New York call at **Queenstown**, and those from Liverpool for Quebec call at **Moville** on Lough Foyle.

### POLITICAL DIVISIONS.

Ireland is divided into **four provinces** : **Ulster** in the *north*, **Leinster** in the *east*, **Munster** in the *south*, and **Connaught** in the *west*.

There are 32 counties : *nine* in Ulster, *twelve* in Leinster, *six* in Munster, and *five* in Connaught.

**Ulster** : Antrim (Belfast), \* Londonderry, Donegal (Lifford), Tyrone (Omagh), Fermanagh (Enniskillen), \*Cavan, \* Monaghan, \* Armagh, Down (Downpatrick).

**Leinster** : Louth (Dundalk), Meath (Trim), Westmeath (Mullingar), \* Longford, King's County (Tullamore), Queen's County (Maryborough), Kildare (Athy), \* Dublin, \* Wicklow, \* Kilkenny, \* Carlow, \* Wexford.

**Munster** : Tipperary (Clonmel), \* Waterford, \* Cork, Kerry (Tralee), \* Limerick, Clare (Ennis.).

**Connaught** : \* Galway, Mayo (Castlebar), \* Sligo, \* Roscommon, Leitrim (Carrick-on-Shannon).

**Largest Towns** : Dublin, Belfast, Cork, Limerick, Londonderry, Waterford.

**Dublin**, on the Liffey, is the capital of Ireland. It has broad streets, handsome buildings, and a beautiful park. Its castle is the residence of the Lord Lieutenant. The mail-boats run from **Kingstown**, at the entrance to the bay.

**Belfast**, at the head of Belfast Lough, is the most important commercial town in Ireland. It has manufactures of linen and whisky, as well as ship-building yards. It trades with Liverpool, Glasgow and America.



**Cork**, at the mouth of the Lee, has a very good harbour. It exports large quantities of dairy produce to Bristol and Liverpool.

**Limerick**, on the Shannon, is the largest town in the west. It exports lace, salmon and dairy produce. It was besieged by General Ginkel in 1691.

**Londonderry**, on the Foyle, exports linen goods. The town is noted for the defence made during the siege of 1689.

**Armagh** is the seat of an Archbishop of the disestablished Church of Ireland.

**Maynooth** has a Roman Catholic College.

The chief military stations are **The Curragh** in Kildare, Dublin, Cork, Belfast, Birr, Fermoy, Athlone, Limerick, Enniskillen, Mullingar, Newbridge, and Kilworth Camp in Tipperary.

#### QUESTIONS.

1. Draw a map of Munster, and mark the counties and chief physical features.

2. Give in order from the north a list of the most important openings on the *west* coast of Ireland, with the county each is situated in.

3. Name the counties (with the capital of each) and the chief physical features passed in sailing from Belfast to Cork.

4. Describe the surface of Ireland. Name the most important ranges and the county each is situated in.

5. Enumerate the rivers of Ireland. Give their general direction and a town on each.

6. Name the lakes of Ireland, and compare them with those of Scotland. Draw a rough map of the Shannon.

7. What are the general industries of the country, and how are they affected by the climate? Give a list of the chief exports.

8. Into what divisions is Ireland divided? Name the counties of Ulster, with the capital town of each. How do you account for the prosperity of this part of the country?

9. Locate and state what industries are carried on in the following towns: Belfast, Limerick, Dublin, Cork, Newry, Waterford, Larne, Coleraine, and Kingstown.

10. Name the counties of Leinster, with the capital of each. What counties border Tipperary?

11. Name and give the situation of the most important military centres in Ireland.

12. What railways have their terminus in Dublin? Describe one of them in detail.

13. By what various routes would troops travel from London to (a) Belfast, (b) The Curragh, (c) Cork.

14. Name the chief ports of Ireland, with situation and nature of trade.

15. Where are the following, and state some interesting facts, historical or otherwise, about them: Athlone, Queenstown, Valentia, the Boyne, Coleraine, Enniskillen, Londonderry, Maynooth, Bearhaven, Kilworth, Killarney, Giant's Causeway, Armagh, Moville.



## VIII. *The British Empire.*

1. **The British Empire** consists of the "United Kingdom of Great Britain and Ireland, and of the British Dominions beyond the Seas." It is the greatest and most powerful empire in the world, embracing a greater variety of peoples and governments than any other.

The **area** of the British Empire is 12,000,000 square miles—an area equal to **one-fifth** of the entire surface of the globe. The Russian Empire is 9,000,000 square miles; but it is a solid land mass, whereas the British Empire extends all over the world. The sun never sets on the British Empire.

The following are the areas of the chief States or Colonies, in order of their size:—

Canada	..	..	..	..	3,745,000 sq. miles.
Australia	..	..	..	..	2,974,000 ..
Indian Empire	..	..	..	..	1,766,000 ..
South African Colonies	..	..	..	..	1,238,000 ..
West African Possessions	..	..	..	..	486,000 ..
East Africa and Uganda	..	..	..	..	398,000 ..
Newfoundland and Labrador	..	..	..	..	162,000 ..
United Kingdom	..	..	..	..	121,000 ..
New Zealand	..	..	..	..	104,000 ..

2. The **population**, which numbers over 400,000,000, is equal to **one-fourth** of the world's population. About 50,000,000 are white, the remaining 350,000,000 being black or brown. There is a mixture of races among whites and blacks. At the Cape there is the Dutchman, as well as the Kaffir, Hottentot, Hindoo and Chinaman. In Canada there are 1½ millions of Frenchmen, with a colony of the Yellow race in the west. In India the number of races is more remarkable.

In order of total population the most important States of the Empire stand as follows:—

Indian Empire	..	..	..	..	300,000,000
United Kingdom	..	..	..	..	44,800,000
West Africa	..	..	..	..	16,500,000
East Africa and Uganda	..	..	..	..	7,500,000
South Africa	..	..	..	..	6,400,000
Canada	..	..	..	..	6,250,000
Australia	..	..	..	..	4,400,000
Ceylon	..	..	..	..	4,000,000
West Indies	..	..	..	..	1,574,000
New Zealand	..	..	..	..	900,000

**Greater Britain** is the name given to that part of the Empire over-seas, excluding the United Kingdom.

### THE GROWTH OF THE EMPIRE.

There are several causes which have led to the foundation and extension of the Empire:—



1. **Exploration and Settlement.**—Our colonial empire may be said to have commenced in the beginning of the 16th century. To those famous navigators of the Tudor period—*Cabot, Raleigh, Gilbert, and Hudson*, from their love of adventure, we owe the discovery and peaceful settlement of **Newfoundland, Virginia** (our first colony), **Hudson's Bay Territory, Bermuda, Barbadoes**, and other **West Indian** islands. Many years after, the famous explorers *Cook, Bass, Flinders, and Sturt* laid the foundation of the great colonies of **Australia** and **New Zealand**, which are now peopled by settlers from the mother-country.

2. **By Conquest and Treaty.**—The rivalry between England on the one hand, and France, Spain, and Holland on the other, during the reigns of George I. and George II., led to the acquisition of much territory. Through the genius and military skill of *Clive* at *Plassey*, 1757, **Bengal** was obtained. **Canada** was won by *Wolfe's* great victory at *Quebec*, 1759. During the wars with Napoleon our empire was also extended by the capture of **Ceylon**, 1796; **Trinidad**, 1797; **Malta**, 1800; **Cape Town**, 1806; and **Mauritius**, 1810. Places which were gained by conquest were subsequently ceded to us by treaty. By treaty with Germany in 1889, a large part of the continent of Africa was obtained.

3. **By Purchase.**—Some possessions have been obtained by purchase or by negotiations with the native rulers. In this way **Singapore** was ceded to Britain in 1819, and **Sierra Leone** acquired as a settlement for freed slaves in 1787. **Guiana** was purchased from Holland in 1814.

4. **By a Desire for Wealth.**—Many vast territories have been added by various Chartered Companies, formed for the purpose of gaining wealth by trade. It was the *East India Company* who first brought to light the valuable resources of **India**. The *Royal Niger Company* developed **Nigeria** to some extent; the *British South Africa Company* have opened up **Rhodesia**, and a similar company controls the large area of **British East Africa**. One of the oldest of these companies was the *Hudson's Bay Company*, founded in 1670 for the purpose of taking part in the fur trade of N. America.

The "gold fever," too, has increased the population and extended the colonies of Australia, the Transvaal, and British Columbia.

### THE GOVERNMENT OF THE EMPIRE.

1. There are many systems of government in the Empire, owing to the varied races that inhabit it. Those parts peopled chiefly by Britons will have a responsible government and a parliamentary system similar to that of the mother-country; while the various places where the natives form the greater part of the population will be governed according to their state of civilization.

The British Empire consists of **Colonies** and **Dependencies**.

A **Colony** is a country peopled chiefly by settlers from the mother country.

A **Dependency** is a foreign possession mainly peopled by the natives. India is our largest dependency.

2. The British Empire is divided into (1) **The Colonies**, (2) **Crown Colonies**, (3) **Protectorates**, (4) **Hinterlands** and **Spheres of Influence**.

The affairs of the Indian Empire are so important that they are controlled by the **India Office** in London. At its head is the Secretary of State for



India, who is assisted by a council, and to whom the Governor General and the Governors in India are responsible.

The **Colonial Office** deals with the colonies and dependencies except India. It is presided over by the Colonial Secretary, who receives reports and gives advice. The colonies are represented in London by a High Commissioner or Agent-General. It is his duty to make known the views of his colony, and to give information to emigrants and others.

The **Foreign Office** governs some of the Protectorates, and enquires into all disputes concerning boundaries, fishing rights, etc., which may occur between a British possession and a foreign country.

3. The **Colonies** of Canada, Australia, New Zealand, Cape Colony, Newfoundland, Natal, Transvaal, Orange Free State, etc., have **Responsible Government**, and are called the **Self-governing Colonies**. The Governors are appointed by the Crown, but their Legislative Assemblies are elected by the people. They make their own laws, the royal assent being given by the Governor. The Imperial Parliament has the right to veto any bill or action of a self-governing colony, but it is rarely exercised.

4. **Crown Colonies** are ruled directly by the Imperial Government through their respective governors. They are of two kinds: (1) Those possessing *Representative Government*, the *Legislative Assembly* being partly elected by the people, and partly nominated by the Governor. Examples of this class are *Malta, Ceylon, Bermuda, Sierra Leone, Guiana, Hong Kong*, and most of the *West Indian* possessions. (2) Those which are maintained chiefly for military and naval purposes and have no representative institutions being controlled solely by the Governor appointed by the Crown. *India* is the most important of this class, which also includes *Gibraltar, St. Helena* and *Labuan*.

5. **Protectorates** are areas more or less under British control, having their own native rulers, who are not allowed to have any dealings with other foreign countries. Most of them have been formed by Chartered Companies. The chief Protectorates are those of *British East Africa, Uganda, Zanzibar, Basutoland, Bechuanaland, Nigeria* and *Cyprus*.

**Spheres of Influence** nominally belong to Britain, but they are either not yet occupied, or not yet brought under authority. For instance, Great Britain owns many possessions on the west coast of Africa, but her sphere of influence extends many miles inland. The island groups of the Pacific have been divided into three spheres of influence, British, German and French. The whole of the Malay Peninsula is a British sphere of influence.

The **Hinterland** is the region beyond a colony or dependency, which is considered to belong to it by right, so as to admit of its growth and expansion. The term has originated owing to the desire of Germany, France, and other powers to extend their colonies in Africa. We speak of the *Hinterland* of the *Gold Coast—Ashantee*; of *Aden* and *Somaliland*; of *British East Africa—Anglo-Egyptian Soudan*.

#### FEDERATION.

By Federation we mean the union of independent states under one government. Australia and Canada consist of several colonies, each possessing their own government. But there is also a parliament for the whole **Commonwealth of Australia**, each colony sending representatives to what is called the *Federal Parliament*. The Colonies of Canada, in the



same way, have local government, and are also represented in the *Federal Parliament* of the **Dominion of Canada** at *Ottawa*. The colonies of South Africa have formed a union with one parliamentary system for the whole. Another and still more extensive scheme is that of combining the whole British Empire into a Federation, with an Imperial Parliament having general control over every part.

#### THE ADVANTAGES OF HAVING A COLONIAL EMPIRE.

1. The self-governing Colonies are useful, as they afford **homes for our surplus population**. Emigrants usually prefer to settle in a colony, rather than in a foreign country. It will be noticed that the great colonies are all situated in temperate regions, and so the emigrant will find the climate and other conditions similar to that of the mother-country.

2. The co-operation of Greater Britain gives additional strength to the defence of the Empire. Many of the colonies make a contribution to the cost of Imperial defence. Lately, several colonies have made offers of ships to the British Navy, and a conference was recently held to decide as to the best means of strengthening the navy for the defence of the Empire. The presence of colonial contingents during the late war in South Africa proved that **the possession of colonies is a source of strength** to the mother-country.

3. There is an **exchange of productions** between India, the Colonies and Great Britain. The principal productions of a colony are raw materials for manufactures and food products, and these are the chief imports of the mother-country. The latter exports in return manufactured goods, and these are the chief imports of our colonies. Thus Britain and her colonies are mutually dependent on each other in the exchange of productions. As the Empire extends, **new markets for trade** are continually being opened.

4. A great number of our **Dependencies** are useful as **Coaling Stations** and **Naval and Military Stations**. They have been acquired for the defence of our commerce along the great trade routes, and therefore many are strongly fortified, and some have large naval dockyards. Along the route to the *East* we have the coaling and naval stations of **Gibraltar, Malta, Aden, Singapore** and **Hong-Kong**.

Passing round the *Cape* there are naval stations at **Freetown, Simon's Town, and Mauritius**.

On the route to *America* we find similar stations at **Halifax, Bermuda** and **Jamaica**.

In *Australia* there are **Sydney, Albany** and **Port Darwin**, and *New Zealand* has **Auckland** and **Wellington**.

5. Another class are **Trading Stations** or **Emporiums**, to which the produce of the surrounding countries is taken, and from which British goods are distributed, as **Singapore, Hong-Kong, Zanzibar**.

#### THE UNITY OF THE EMPIRE.

1. The symbol of unity of the whole Empire is shown in the acknowledgment of the authority of the Sovereign. But there are other ties which bind the colonies to the mother country. There is the *close affection* arising from common names, common interests and kindred blood.

Many of our colonies are adjacent to powerful foreign states, as Canada



to the United States, Australia to Japan, but they know that while under the protection of the mother country they are secure, having confidence in Britain's command of the sea. Their prosperity and security depend largely on the prosperity and security of the whole Empire, which can only be attained by showing a united front to the world. Thus the colonies show a desire to share the responsibilities of the Empire as well as its privileges.

Our possessions are scattered all over the globe, and yet through the extension of commerce and the constant stream of emigrants that flows over-seas, they have been brought closer by the growth of facilities for cheap and rapid means of communication.

The advent of the steamship, with the amazing development of the turbine engine, the linking up of all parts of the Empire by cable, the construction of trans-continental railways—as the Canadian and Pacific Railway—have all tended to draw the Empire into closer union.

The many native races have also come to regard the English rule as beneficial in many ways. The various internal quarrels of the natives have ceased; life and property have been made secure; the condition of the people has been improved, and there has been no interference with their laws, customs and religion. Liberty, freedom and justice have been extended to all, and where possible the native has been given a part in the government of the country.

2. But much remains to be done to bring the colonies into closer union. Colonial conferences have been held to forge new links between the colonies and the mother country. Some of the points that have been discussed are:—

**Imperial Federation**, that is, the creation of an Imperial Parliament, to be attended by representatives from the most important colonies and dependencies.

**Imperial Defence**.—Each of the great colonies and dependencies to make contributions according to some fixed scale, towards the cost of the defence of the Empire. At present the total amount paid by the colonies and India is very small. Some of the colonies wish to form small navies of their own, which in time of war could amalgamate with the home fleet.

**Preferential Trade**.—The colonial ministers agreed to grant preferential treatment, that is, exemption from, or a reduction of duties on British goods imported into the colonies, provided that the British Government extended the same treatment to the products and manufactures of the colonies. They declared, "That the principle of preferential trade between the United Kingdom and His Majesty's dominions beyond the seas would stimulate and facilitate mutual commercial intercourse, and would, by promoting the development of the resources and industries of the several parts, strengthen the whole Empire."

#### EUROPE.

<i>Possession.</i>	<i>Capital.</i>
Channel Islands .. .. .	St. Helier
Gibraltar .. .. .	—
Malta .. .. .	Valetta



## ASIA.

<i>Possession</i>				<i>Capital.</i>
Cyprus .. .. .	..	..	..	Nicosia
Aden—				—
Perim, Socotra, Kuria Muria Islands				—
Bahrein Islands .. .. .	..	..	..	—
Indian Empire .. .. .	..	..	..	Calcutta
Ceylon .. .. .	..	..	..	Colombo
<b>Straits Settlements :—</b>				
Penang .. .. .	..	..	..	Georgetown
Wellesley Province				—
Malacca .. .. .	..	..	..	Malacca
Singapore .. .. .	..	..	..	Singapore
Federated Malay States, Cocos Island, Christmas Island				—
<b>Borneo :—</b>				
Sarawak .. .. .	..	..	..	—
Brunei .. .. .	..	..	..	—
British North Borneo				—
Labuan .. .. .	..	..	..	Victoria
Hong-Kong .. .. .	..	..	..	Victoria
Kowloon				—
Wei-hai-Wei .. .. .	..	..	..	—

## OCEANIA.

<i>Possession.</i>				<i>Capital.</i>
<b>Australia :—</b>				
Victoria .. .. .	..	..	..	Melbourne
New South Wales				Sydney
Queensland .. .. .	..	..	..	Brisbane
South Australia .. .. .	..	..	..	Adelaide
West Australia .. .. .	..	..	..	Perth
Tasmania .. .. .	..	..	..	Hobart
New Zealand .. .. .	..	..	..	Wellington
<b>Polynesia :—</b>				
New Guinea, Fiji Islands, Friendly Islands, Cook Islands, Solomon Islands, Gilbert Islands .. .. .	..	..	..	—

## AFRICA.

<i>Possession.</i>				<i>Capital.</i>
<b>West Africa :—</b>				
Gambia .. .. .	..	..	..	Bathurst
Sierra Leone .. .. .	..	..	..	Freetown
Gold Coast .. .. .	..	..	..	Accra
and Ashantee .. .. .	..	..	..	Coomassie
Lagos .. .. .	..	..	..	Lagos
Nigeria .. .. .	..	..	..	Old Calabar.



**South Africa :—**

Cape Colony .. ..	Cape Town
Basutoland	
Bechuanaland	
Walfish Bay	
Natal .. ..	Pietermaritzburg
Zululand	
Orange River Colony .. ..	Bloemfontein
Transvaal .. ..	Pretoria
Rhodesia .. ..	Salisbury
Nyassaland .. ..	Blantyre
<b>British East Africa</b> .. ..	Mombasa
Uganda .. ..	Mengo
Pemba and Zanzibar .. ..	Zanzibar
Somaliland .. ..	Berbera
Anglo-Egyptian Soudan .. ..	Khartoum

**Islands :—**

Ascension .. ..	Georgetown
St. Helena .. ..	Jamestown
Tristan d'Acunha .. ..	—
Mauritius .. ..	Port Louis
Seychelle Islands	
Amirante Islands	

**NORTH AMERICA.**

<i>Possession.</i>	<i>Capital.</i>
<b>Dominion of Canada</b> .. ..	Ottawa
Quebec .. ..	Quebec
Ontario .. ..	Toronto
Nova Scotia .. ..	Halifax
Prince Edward Island .. ..	Charlottetown
New Brunswick .. ..	Fredericton
Manitoba .. ..	Winnipeg
Saskatchewan .. ..	Regina
Alberta .. ..	Edmonton
{ British Columbia .. ..	New Westminster
{ Vancouver Island .. ..	Victoria
Newfoundland .. ..	St. John's
The Bermudas .. ..	Hamilton
The Bahamas .. ..	Nassau
<b>The West Indies :—</b>	
Jamaica .. ..	Kingston
Leeward Islands .. ..	St. John's (Antigua).
Windward Islands .. ..	Bridgetown (Barbados).
Trinidad .. ..	Port of Spain
British Honduras .. ..	Belize

**SOUTH AMERICA.**

<i>Possession.</i>	<i>Capital.</i>
British Guiana .. ..	Georgetown
Falkland Islands .. ..	Stanley



## QUESTIONS.

1. Explain the terms : British Empire, British Isles, United Kingdom, Great Britain, Greater Britain, British.
2. Compare the British and Russian Empires with regard to extent, population, resources, and condition of the people.
3. Compare the resources of the British and German Empires as possible rivals for naval supremacy, with reference to the geographical position, climate, harbours, sea borders, coal supply and maritime population.
4. Name and locate the chief Protectorates and Chartered Companies of the British Empire. What is the meaning of "Spheres of Influence" and "Hinterlands."
5. Name parts of the world colonized by people of British extraction. How are these colonies governed ?
6. Explain the difference between a Colony and a Dependency. Give examples of each.
7. Into what classes are Crown Colonies divided ? Distinguish between the India Office, the Colonial Office and the Foreign Office.
8. Describe the system of government in New Zealand, India, Gibraltar, Manitoba, Natal, Hong Kong, Ceylon, Malta, St. Helena, Jamaica, New South Wales, Newfoundland and Tasmania.
9. Of each of the following, state (a) the situation, (b) the capital, and (c) how obtained : Malta, Hong Kong, Bengal, New South Wales, Cyprus, Newfoundland, Transvaal, Manitoba, British East Africa, Jamaica, Cape Colony, Ceylon, Aden, Strait Settlements, New Zealand, Natal, Guiana, Sierra Leone.
10. Name British Possessions which (a) are useful as fields for emigration, (b) have been acquired by conquest.
11. Name some of the chief uses of the foreign possessions of the United Kingdom.
12. Enumerate places in various parts of the world which are useful to Britain in the protection of her commerce, giving reasons in each case.
13. Name important places defending the trade route to (a) India, (b) Cape Town, (c) West Indies, (d) New Zealand.
14. Name in their relative positions the British Colonies and Protectorates in South Africa, and state how they are respectively governed.
15. State the provinces constituting the Dominion of Canada, with the chief town of each.
16. What do you understand by the term "Commonwealth of Australia" ? Name the chief colonies, with capitals.
17. Make a list of the British Possessions which lie on or near the sea route from London to Japan.
18. Classify the chief possessions that lie in the southern hemisphere.
19. Explain the statement that "the sun never sets on the British Empire." Show possessions which lie in longitude  $180^{\circ}$ ,  $165^{\circ}$ ,  $150^{\circ}$ ,  $135^{\circ}$  East, and so on at intervals of  $15^{\circ}$ , until a circuit of the earth has been made.
20. Although the various possessions of the Empire are scattered all over the world, under what circumstances has the Empire "been knitted or welded into one homogeneous whole" ?
21. In what possessions will you find a great number of Hindoos, French, Dutch, Spanish and Chinese ? Give reasons for their presence.



22. Explain the terms: Dominion of Canada, Imperial Federation, Preferential Trade, Free Trade, Imperial Defence.

23. Locate the following towns of the British Empire: Melbourne, Montreal, Valetta, Pietermaritzburg, Cape Town, Buluwayo, Peshawur, Winnipeg, Sydney, Delhi, Kingston, Victoria, Colombo, Johannesburg, Singapore, Georgetown, Lagos, Lucknow, Bloemfontein, Adelaide, Karachi, Quebec, Wellington, Vancouver, Port Elizabeth, Toronto, Kimberley, Dunedin, Freetown, Pretoria, Durban, Halifax, Quetta.

24. For what are the following famous in the annals of the British Empire: Sir W. Raleigh, Cabot, Wolfe, Lord Clive, Havelock, Captain Cook, Warren Hastings, Sir Arthur Wellesley, Sir George Rooke, Sir Eyre Coote, Lord Gough, Lord Roberts, Livingstone, Lord Cromer?

25. What historical events connected with the extension and defence of the British Empire are associated with Plassey, Gibraltar, Quebec, Lady-smith, Trafalgar, Nile, Arcot, Assaye, Sobraon, Lucknow, Khartoum, Malta, Bombay, Coomassie?



## IX. *British Possessions in Europe.*

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### GIBRALTAR.

**Gibraltar**, 1,300 miles from London, is a rocky promontory in the south of Spain, rising to a height of 1,400 feet. It is very strongly fortified, the whole rock being honeycombed with hidden batteries. On account of its position and strength it has been called the "Key of the Mediterranean." At the southern extremity stands the lighthouse marking Europa Point. The barracks accommodate a garrison of 6,000 men. The climate is temperate during the greater part of the year, and even in the summer months the excessive heat is tempered by a refreshing sea breeze. Gibraltar is an important coaling and naval station, and is used as a depot and place of call. It is under the control of a Governor, who is also the Commander-in-Chief of the forces.

The fortress was captured by Sir George Rooke in 1704. The Spaniards have made several attempts to retake it, the most determined attack being made from 1779 to 1782, when it was gallantly defended by General Elliott.

### MALTA.

**Malta** lies 60 miles to the south of Sicily and 980 miles from Gibraltar. It is the largest of a group of islands, the next in size being **Gozo** and **Comino**. Malta is the headquarters of the British Mediterranean Fleet, and is also an important coaling station. The capital is **Valetta**, which has a fine harbour, with a naval arsenal and many fortifications.

In the winter the climate is delightful, but the heat of the summer is somewhat trying to the garrison, owing to the hot *sirocco* winds which blow from the desert of Africa. The chief productions of the island are cotton, grapes, figs, corn, potatoes, and honey.

Malta is a Crown Colony, with a Governor, and a Legislative Council which is partly elective. It was taken from the French in 1800.



## *British Possessions in Asia.*

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Nearly all the British Possessions in Asia lie along the sea-route to the Far East, and have been obtained to use as coaling stations, or for the protection of our commerce.

### CYPRUS.

**Cyprus**, in the *Levant*, is not in the line of steamers passing to and from India, but it is important on account of its position in regard to the Suez Canal. The island is a British Protectorate, as it nominally belongs to Turkey, who leased it to us in 1878. The area is about half the size of Wales. The centre and north are mountainous. The climate is very hot in summer, and Europeans suffer much from malaria. Cyprus produces cotton, tobacco, wine, raisins and sponges. Its capital is **Nicosia**, and other ports are **Larnaka**, **Limasol**, and **Famagusta**.

### ADEN.

**Aden**, 1300 miles from Suez and 1650 miles from Bombay, is situated on the south-west coast of Arabia, near the entrance to the Red Sea. It stands on a rocky peninsula, which is joined to the mainland by a sandy isthmus. Aden has a fine harbour, and all P. and O. vessels call here. It is also an important cable station, and a depot for the produce of Arabia, the exports consisting of coffee, gum, spices, ostrich feathers and pearls.

The climate is hot but not unhealthy. The town is built in the crater of an extinct volcano, and as rain seldom falls, there is little vegetation. Water is stored in huge tanks, and when the supply fails the garrison have to depend on what is condensed from sea water.

Aden was taken in 1839, and is included in the government of Bombay.

**Perim**, a dependency of Aden, is situated in the Strait of Bab-el-Mandeb, and is the site of a lighthouse.

The **Kuria Muria** islands, off the coast of Arabia, are noted for guano.

The **Bahrein Islands**, in the Persian Gulf, are the centre of a pearl-fishing district.

### CEYLON.

**Ceylon** lies to the south of India, from which it is separated by Palks Strait, across which is a ridge of small islands and sandbanks called *Adam's Bridge*. The island has an area of 25,000 square miles, being half as large as England. The centre and south are mountainous, the chief height being *Adam's Peak* (7000 feet). This district is also well watered and suitable for tea growing. Plumbago is an important mineral production, and rubies, sapphires, and other precious stones are found.

The climate is tropical near the coast, but the interior is much cooler. The heavy rains of the monsoons make Ceylon one of the most fruitful countries in the world. All the beverages are cultivated, tea being the



chief production. The exports are tea, coffee, cocoanuts, cocoa, cinnamon, cinchona, timber, ivory, and pearls. The pearl fishery is carried on in the Gulf of Manaar. The natives are called *Singalese*.

The chief town is **Colombo**. It is an important place of call for vessels sailing to and from China and Australia. **Kandy**, the old capital, has a famous Buddhist temple. **Point de Galle** is a port in the extreme south. **Trincomalee** is the largest town on the east coast.

Ceylon is not a part of the Indian Empire, but is a **Crown Colony**, ruled by a Governor and a Legislative Council under the Colonial Office. It was taken from the Dutch in 1796.

#### THE STRAIT SETTLEMENTS.

The **Strait Settlements** include the possessions on the Malay Peninsula and in the Malacca Strait. They consist of **Penang** (capital, Georgetown), **Wellesley Province**, **Malacca** and **Singapore**. The British sphere of influence, however, extends to the whole southern portion of the Malay Peninsula, including the native states of *Perak*, *Johore*, and *Pahang*. The Strait Settlements form a Crown Colony. The government is vested in a Governor and Legislative Council.

**Singapore** is an island of 200 square miles at the extremity of the Malay Peninsula. It is an important coaling and naval station, and commands the commercial channel to the East. It has great trade, as it collects all the produce of the surrounding countries, and is therefore one of the great "warehouses of the Empire." Its exports are numerous, including tin, sugar, spices, sago, gutta-percha, india-rubber, gum, camphor, coffee, tobacco, rice and rattans.

The town of **Singapore** was founded in 1819 by Sir Stamford Raffles, and sold to the British by the Sultan of Johore in 1824.

The **Cocos** and **Christmas Islands** in the Indian Ocean are included in the Government of the Strait Settlements.

#### BRITISH BORNEO.

The whole of the northern coast of the island of Borneo has passed into our possession.

**Sarawak** is ruled by Rajah Brooke, an Englishman, under British protection. The district has an area of 50,000 square miles.

**Brunei** is a native state and British protectorate.

**British North Borneo** is controlled by the British North Borneo Company.

**Labuan**, a small island off the coast, is a coaling station, with its own coal deposits.

The exports of these possessions are tobacco, coffee, spices, timber, rice, rubber, gutta-percha and edible bird-nests. Much of the produce is sent to Singapore.

#### HONG KONG.

**Hong Kong** is an island at the mouth of the Canton River. Its area is 29 square miles, and it is separated from the mainland of China by a narrow strait. The capital, **Victoria**, has a very fine harbour, with a sheltered area of 10 square miles and many spacious docks.

The trade of Hong Kong is immense, and it ranks as one of the chief ports of the world. All the great shipping lines from Europe, America,



Australia and Japan meet here. The harbour, too, is crowded with thousands of Chinese *junks*, for it is the central mart for all the trade with the mainland. The chief trade is in tea and silk. The climate is hot, but is much cooler on the range of hills in the interior, where many of the principal Europeans possess summer residences.

Hong Kong was ceded to England after the Chinese War of 1841. It is now a Crown Colony, with a Governor and Legislative Council. **Kowloon**, a small peninsula on the Chinese coast, opposite Hong Kong, was ceded in 1860.

**Wei-hai-wei** is a port on the Shantung Peninsula in the north-east of China, and opposite to Port Arthur.



## X. *India.—Physical.*

### SHAPE AND SIZE.

In general outline India forms a great irregular triangle, stretching southwards from Asia into the Indian Ocean. Its base rests upon the Himalaya Mountains; its western side is washed by the Arabian Sea, and its eastern side by the Bay of Bengal. The southern extremity is Cape Comorin.

The **length** of India from north to south is about 2000 miles, extending from 8° to 37° N. lat.; that is, from the hottest region of the tropics to far within the temperate zone. The **breadth**, extending from Gwatar (long. 61° E.) in Baluchistan to the Mekong River (long 101° E.), is over 2500 miles. The total **area**, including Burma, is about 1½ million square miles—almost eighteen times larger than Great Britain, or as large as Europe, omitting Russia. The inhabitants number three hundred millions, which is nearly eight times greater than the population of the United Kingdom.

### THE COAST.

The coasts of India are not indented to any extent. There are few good harbours, and in many places it is difficult to land. On the north-west coast are the **Gulfs of Cutch and Cambay**. Between Ceylon and India are the **Gulf of Manaar**, noted for its pearl fishery, and **Palk Strait**, 60 miles wide. The eastern coast is washed by the **Bay of Bengal**. Two groups of islands—the **Laccadive and Maldive**—lie off the western coast. They are mostly of coral formation. In the Bay of Bengal are the **Andaman and Nicobar Islands**, which are used as penal settlements.

The coasts of India have various names:—

The **Malabar Coast**, between Goa and Cape Comorin.

The **Coromandel Coast**, from Palk's Strait to the Kistna.

The **Golconda Coast**, from the Kistna to the Godaveri.

The **Orissa Coast**, from the Godaveri to the Ganges.

### SURFACE.

1. If the entire surface could be viewed from a sufficient elevation, we should find that India consists of three separate and well-defined tracts. The first includes the gigantic **Himalaya Range**, which shuts out India from the rest of Asia. The second region stretches southward from the base of those mountains, and comprises the **Plains of the Ganges and Indus**. The third region in the south consists of a three-sided tableland, called the **Deccan**.

The **Vindhya Mountains**, running across the centre of the country, separate Northern or Continental India from Southern or Peninsula India.

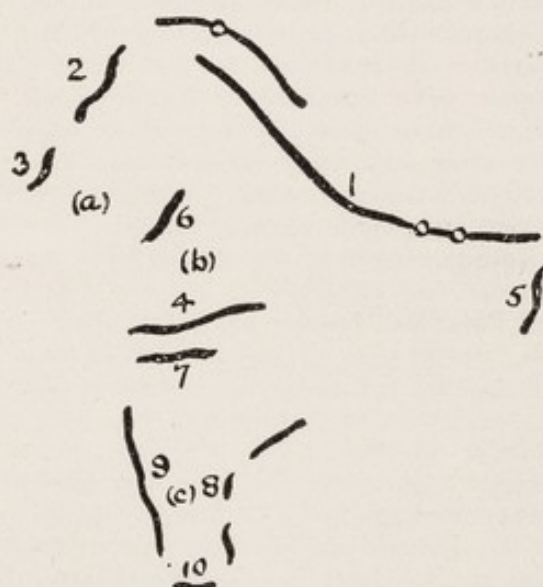
2. **Continental India** is enclosed by (1) the **Himalaya Mountains** on the north, (2) the **Suliman** and (3) **Hala Mountains**, separating India from Afghanistan, on the west, (4) the **Vindhya Mountains** on the south, and



(5) the **Patkoi Mountains** on the east. Across the centre of Rajputana lie the (6) **Aravulli Mountains**, dividing the (a) **Great Indian Desert** from the fertile (b) **Tableland of Malwa**.

3. **Peninsula India** encloses the (c) **Tableland of the Deccan**, which is bounded on the north by the **Vindhya** and (7) **Satpura Mountains**, on the east by a broken chain of heights called (8) the **Eastern Ghauts**, on the west by the higher range of the (9) **Western Ghauts**, and in the south, connecting the two Ghauts, by the (10) **Nilgherry Hills**.

4. **The Himalayas** (abode of snow) branch off from the Pamir Plateau in a south-easterly direction, and consist of a system of ranges, the highest and grandest in the world. They extend for 1500 miles (with a breadth varying from 150 to 200 miles) along the northern frontier of India, from Cashmere to Assam, and form an impenetrable wall of defence between India and Tibet.



The ascent is not by a uniform slope, but by a succession of ridges, with deep, narrow, intervening valleys. The first range rises from the plains to a height of 9,000 or 10,000 feet. Here are found most of the hill stations for Europeans—*Murree, Simla, Mussoorie, Naini Tal* and *Darjeeling*. Beyond this range there are several crowned with perpetual snow, and which are remarkable for the number of lofty peaks they contain. Near the centre, in Nepaul, is **Mount Everest**, 29,000 feet, or nearly  $5\frac{1}{2}$  miles high, the highest measured peak in the world. Close by is **Kunchinjinga**, 28,000 feet. In Cashmere, in the Karakorum branch, is **Mount Godwin-Austen**, which has been found to reach over 28,000 feet.

The Himalayas also collect and store up water for the great rivers of Northern India, upon which the agriculture of the country depends so much. The water is derived from the melting snows and from the rains carried to the mountains by the south-west monsoon.

At the foot of the Himalayas is the **Terai**, a dark stretch of marshy lowland, with great forest trees and fever-breeding jungle, inhabited only by wild beasts and a feeble race.



5. **The Western Ghats** form a continuous mountain wall close to the coast, and reach a height of 7000 feet. Like the Himalayas they collect the rainfall brought by the south-west monsoon, which is poured down into the great rivers that drain the Deccan. This range is also covered with magnificent teak forests.

**The Eastern Ghats** are much lower than the Western. They rise at a greater distance from the coast of the Bay of Bengal, and give access by wide openings into the interior. Through these gaps the great rivers reach the ocean.

6. **MOUNTAIN PASSES.**—The Suliman Mountains on the north-west frontier have several openings which form the gateways between India and Afghanistan. They are used as highways for trade, and as they are the only routes which can be used by an invading force, they are strictly guarded and strongly fortified.

**The Khyber Pass** is a narrow defile, 33 miles in length, near Peshawur, and leading to Cabul. At *Jamrud* it is 450 feet wide; at the fort of *Ali Musjid*,  $9\frac{1}{2}$  miles farther on, it is only 40 feet wide. The summit of the pass, 1700 feet higher than *Jamrud*, is *Lundi Kotal*. The pass winds between mountains, which in many places are sheer walls of rock. Through this defile conqueror after conqueror in past ages has invaded India. It was forced by the British troops during the Afghan Wars of 1839–42 and 1878–80, and in recent campaigns against the Afridis.

The **Kurum** and **Gomul** passes, to the south, form parts of the route from the Punjab to Ghuznee and Cabul.

The famous **Bolan Pass**, still farther south, reaches a height of over 5000 feet. It leads from Shikarpur, in India, to Kandahar, through **Quetta**, which strongly commands the pass. A military railway has been laid from Sibi to Quetta, and beyond to Chaman. In case of emergency it can easily be extended to Kandahar.

The **Malakand Pass**, to the north of Peshawur, leads to Chitral in Cashmere, and the **Karakorum Pass** from Cashmere to Chinese Turkestan.

The passes over the Himalayas are few and difficult. They are used only by traders passing from India to Cashmere and Tibet. All transport has to be drawn by the yak and Tibetan goat. The **Khatmandu Pass** from Nepaul, and the **Jeylap Pass** from Darjeeling, are important, as they lead to Lhasa in Tibet.

7. **Plains and Tablelands.**—The **Great Northern Plain** comprises the basins of the Ganges and Indus, and being composed of alluvial soil, forms one of the most fertile districts in the world.

**The Thur**, or **Great Indian Desert**, lies between the Aravulli Mountains and the Indus, occupying an area 400 miles long and 100 broad. It is described by the Hindoos as the "Valley of Death."

The **Tableland of Malwa**, lying between the Aravulli and Vindhya Ranges, is a fertile district, opium and cotton being extensively cultivated.

The **Maritime Plains** include the **Carnatic** in Madras, about 60 miles wide, and the deltas of the Godaveri and Mahanadi. These are alluvial plains maintained by the great rivers.

#### DRAINAGE.

1. Continental India is watered by three distinct river-systems; namely, the **Indus**, the **Brahmaputra**, and the **Ganges**. The two former rise near *Lake*



*Mansarowar* on the northern side of the Himalayas. The Indus breaks through the northern end of the range, and the Brahmaputra through the southern end. The Ganges, with the Jumna, rises on the southern slope, being joined by the Brahmaputra at its delta. These rivers and their tributaries collect the drainage of the northern and southern slopes of the Himalayas.

2. Peninsula India is drained by the **Mahanadi**, drawing its waters from Central India, and by the **Godaveri**, **Kistna**, and **Cauvery**, which rise in the Western Ghats and drain the Deccan. All these rivers flow into the Bay of Bengal. Two rivers, the **Tapti** and **Nerbudda**, drain the district between the Malwa plateau and the Deccan, and flow westward into the Gulf of Cambay. The rivers of Southern India afford scarcely any navigation. During the monsoon rains they descend with great velocity, and sudden and tremendous floods often occur.

Burma is drained by the **Irrawaddi** and **Saluen** rivers.

3. The **Indus** (1800 miles long) rises in Tibet, and flows in a northerly direction into Cashmere, between the Himalaya and Karakorum Ranges. The rapid stream dashes down ravines and wild mountain valleys, and is subject to tremendous floods. The Indus enters India by a wonderful gorge, said to be 14,000 feet in depth. It then drains the Punjab and the North-west Frontier Province. Near Attock it is joined by the **Kabul River** from Afghanistan, and 470 miles below Attock it receives through a single channel the combined waters of the **Jhelum**, **Chenab**, **Ravee**, **Beas** and **Sutlej**, which give the name of Punjab, the "Land of Five Rivers," to the district they drain. The Sutlej is the largest feeder, and joins the Indus after a course of 900 miles.

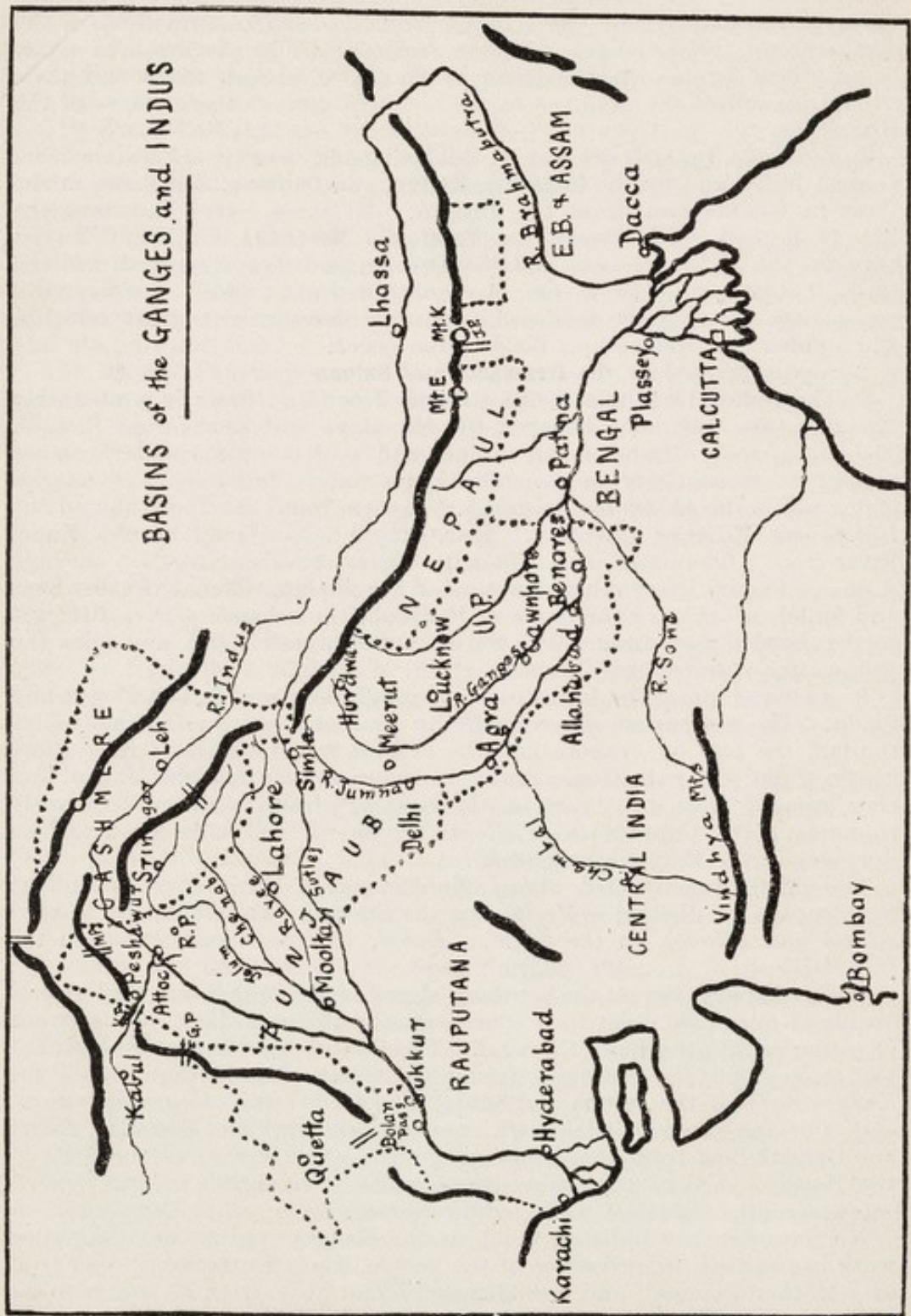
In its lower course the Indus passes through the Great Indian Desert and Sindh. The volume of water gradually becomes less, due to the scanty rainfall, the loss by evaporation, the lack of tributaries, and the supply drawn from it by irrigation. Owing to the enormous deposits of sand and clay brought down by the river, the streams of the delta are constantly changing. The importance of the Indus lies in its value for irrigation purposes in the Punjab and Sindh.

The chief towns are *Leh*, *Attock*, *Sukkur* and *Hyderabad*, on the Indus; *Srinagar* on the Jhelum; *Mooltan* on the Chenab; **Lahore** on the Ravee; *Aliwal* and *Sobraon* on the Sutlej; *Kabul*, *Peshawur* and *Attock* on the Kabul River.

4. The **Ganges** rises on the southern slopes of the Himalayas, and after a course of over 1500 miles in a south-easterly direction, falls by a network of estuaries into the Bay of Bengal. The delta begins 300 miles from the sea, and extends for 200 miles along the coast. On its right bank the Ganges receives the **Jumna** and **Sone**. The former is its largest tributary, and joins the river at Allahabad. On the left bank the **Goomtee**, **Gogra** and **Gandak** flow from the Himalayas. The chief stream of the delta is the **Hoogly**. Unlike the Indus, the Ganges is navigable; large vessels can proceed to Calcutta, while lighter vessels can go up to Cawnpore.

No river benefits India so much as the Ganges, and its unflinching good work has earned the reverence of the people, who affectionately refer to it as "Mother Ganges," and consider every foot of it, from its source to the sea, as holy. The Ganges begins to fertilise the fields as soon as it reaches the plains. Tapped by canals, it distributes an immense quantity of







water every hour in irrigation, and the diminished volume of water is always being replenished by the inexhaustible supply from its great feeders.

The basin of the Ganges is the most populous part of India. The chief towns are *Calcutta*, *Plassey* and *Moorshedabad* on the Hoogly; *Patna*, *Benares*, *Allahabad*, *Cawnpore* and *Hurdwar* on the Ganges; *Delhi* and *Agra* on the Jumna; *Lucknow* on the Goomtee.

The **Douab** is the land lying between the Ganges and Jumna.

The **Sunderbunds** is a marshy jungle district at the mouths of the Ganges.

5. The **Bramaputra** rises near the Indus and Sutlej, and under the name of Sanpu, flows eastward for 800 miles along the north of the Himalayas. It then twists round and enters Assam, and afterwards merges into the delta of the Ganges, bringing down an immense volume of water and alluvial soil. Its annual floods replenish the land, so that in its basin in India much tea, rice, jute, and oil seeds are grown. *Dacca* and *Gowhati* are situated on the river.

6. The **Irrawadi** is formed by the union of two streams that rise in the extreme north of Assam. The river then flows in a general southerly direction for 1500 miles, and empties itself by an extensive delta into the Bay of Bengal. It is navigable for small boats as far as *Bhamo*, and forms the chief highway for trade. Large quantities of rice are grown around the delta. The chief towns are *Rangoon* and *Bassein* on the delta; *Prome*, *Mandalay* and *Bhamo* higher up the river.

7. **Irrigation**.—The periodical supply of water renders artificial means of storing and conveying it absolutely necessary in many parts of India. Many districts suffer from a want of rain, and cultivation can only be carried on by storing the water that falls during the rainy season. The waters of the swollen rivers must also be drawn off at the time of flood; for what is a torrent then, will be almost a dry channel later on.

The general system of watering the land is by **wells** and **tanks**, which are found more or less all over the country. The latter are reservoirs, in some cases hollows in the ground, partly excavated. They are fed sometimes by rivers, sometimes by the rainfall, and vary in size from ponds irrigating a few acres, to lakes several miles in circumference.

Some very fine canals have been constructed in the Ganges basin: the **Ganges Canal** (Upper and Lower), the **Eastern Jumna Canal**, and the **Western Jumna Canal**. This system forms the greatest irrigation works in the world. There are several canals in the Punjaub, utilising the waters of the Sutlej, Ravee and other tributaries, the most important being the **Sirhind Canal**. At the head of the deltas of the Godaveri and Khistna, great dams are thrown across the rivers, and the water is diverted into irrigation canals, the **Great Buckingham Canal** being the largest.

### CLIMATE.

The climate of India is hot, but it varies according to elevation, the Deccan, for instance, though within the tropics, being much cooler than the northern plains. There is generally a cool, a hot, and a rainy season. The cool season extends from November to the close of February; the dry hot season follows, and continues till the end of May; the rainy season succeeds, and lasts till October. The greatest heat prevails in Central India and in the Great Indian Desert. In the cool season the heat is still



great by day, though slight frosts occur in elevated districts for an hour or two before sunrise, and a thin ice is formed.

The monsoon winds modify the climate. The **south-west monsoon**, which blows from April to September, brings on the rainy season to the Malabar coast and the Ganges plain. The **north-east monsoon** follows with less decided features, and brings a rainy season to the Coromandel coast. The quantity of rain received by different parts of the country varies considerably. The parts of India most liable to insufficient rainfall include the west and south of the United Provinces, the west and north of Rajputana (the Indian desert), and the Bombay district north of the Nerbudda, including Sindh. Most rain falls along the Western Ghats and the Himalayas, and in Assam and Cashmere.

In the hot season Europeans flock to the hill-stations or sanatoria of *Simla*, *Darjeeling*, etc., in the Himalayas; to *Mount Abu* in the Aravalli Range; to *Mahabaleshwar* from Bombay; and from Madras to *Ootacamund* in the Nilgherry Hills.

### PRODUCTIONS.

**ANIMAL.**—The forests, with the jungle of the plains, are tenanted by vast numbers of wild animals, birds and reptiles; and many human beings and cattle are destroyed yearly by wild beasts and snakes. Man suffers most from the **cobra** and other poisonous snakes, while herds are ravaged chiefly by the **tiger** and **panther**. Other large wild animals are the **bear**, **wild boar**, **rhinoceros** and **elephant**. The maneless **lion** is found in Gujerat, and the rivers are frequented by the **alligator**. **Deer** and **antelopes** abound in many varieties, and the **monkey** is very common.

The birds are numerous and of splendid plumage. India is the native country of the **peacock**; other notable birds are the **pelican**, **flamingo**, **tailor-bird**, **adjutant**, **vulture**, **parrot**, **pigeon**, and **jungle-fowl**.

Of insects there are myriads of **mosquitoes**, **locusts**, **beetles**, **spiders**, **ants**, **bees**, **butterflies**, **fireflies**, **centipedes** and **scorpions**.

The domestic animals include **oxen**, the **buffalo**, **sheep**, **goat** and **camel**.

**MINERAL.**—The mineral wealth of India has been utilized from early times. Coal is the only mineral that was not used, although in many places it is found near the surface. The first English **coal** mine was opened at *Raniganj*, north-west of Calcutta, and now there are English coal and **iron** works in the same neighbourhood at *Burdwan* and *Barakhar*. There are also coalfields in the Central Provinces and the Nizam's Dominions.

**Gold** is found in some of the rivers and rocks of India. In Mysore are the *Kolar* goldfields.

**Diamonds** were once obtained from the Nizam's Dominions, the famous Koh-i-noor being cut at *Golconda*. The only mines worked now are at *Punna*, south-east of Jhansi. **Rubies** are obtained from Burma.

**Tin** is mined in the Tenasserim province of Burma.

**Salt** is obtained by mining in the Punjab, and by evaporation from the salt lakes of Rajputana.

**Petroleum**, or kerosene oil, is chiefly produced in Burma and Assam.

**Building stone** is found in various parts of the country.

**VEGETABLE.**—India is chiefly an agricultural country, divided into millions of small farms.

In some places the soil is so rich, and the water so plentiful, that large crops are raised in spite of the poor method of cultivation. In other places



the rainy season is anxiously looked for, for upon its timely occurrence depends the growth of the crops. Owing to important irrigation works the area of cultivation has been extended on all sides, the crops are very much larger, and the harvest more certain.

**Rice** is the staple food of the people, and is extensively cultivated in Bengal, along the deltas of the east coast, and in Burma. Several varieties of **millet** and **pulse** are also produced.

**Cotton** is grown in the province of Bombay and on the Malwa and Deccan tablelands.

**Wheat** is raised in the Punjaub, chiefly for export.

**Tea** is largely cultivated in the hill districts of Assam, and also in the Nilgherry Hills.

The **Poppy**, from which opium is obtained, can only be grown around Patna and Benares, and in the Malwa district.

**Oil-seeds** and **indigo** are grown largely and exported.

**Jute** cultivation is extensively carried on in Eastern Bengal and Assam.

**Coffee** and **tobacco** are chiefly produced in Southern India.

The **sugar cane** is grown as an article of food, and not for export.

The slopes of the Himalayas and the Western Ghauts are covered with forests of *teak*, *deodar*, *bamboo*, *banyan*, *tamarind*, *mango*, *palm* and *sandal wood*.

On all the native farms are large herds of cattle, sheep and goats. They are, however, small and weak, and no care is taken to improve the stock.

### MANUFACTURES.

The textile manufactures of India were famous in centuries past throughout the civilized world. The Indian princes did much to encourage the production of beautiful works of art. They had wood carvers, weavers, embroiderers, jewellers, ornamental workers in metals and ivory, makers of gold and silver brocades, muslins, shawls and carpets. The introduction of steam power in Europe has also affected Indian manufactures, and factories have been built all over the country.

There are now many **cotton** mills in Bombay, producing a cheap, inferior cloth, but largely purchased by the natives. In Bengal much **jute yarn** is made. **Woollen** mills have also been erected in Cawnpore. From the wool of a goat the famous Cashmere shawls are made. Formerly hides and skins were exported in a raw state to be tanned into **leather**, but there are now many tanneries at work in India, one of the largest being at Cawnpore. Other manufactures include **indigo**, **potteries**, **iron** and **brass** foundries, **rope** works and **soap** factories.

### IMPORTS AND EXPORTS.

**EXPORTS.**—**Raw Cotton** is the principal export. Indian cotton is inferior to American and Egyptian cotton, and is chiefly bought by France, Germany, and Belgium. Cotton cloth is also sent to Egypt and China.

**Jute** has raised the value of the export trade considerably. Raw jute is sent to Dundee, Germany, and the United States, and manufactured jute to all parts of the world.

**Rice** is exported to Egypt and the Strait Settlements. Burma produces more rice than it can consume.



**Wheat** from the Punjaub is sent through Bombay and Karachi to England and France.

**Oil Seeds**, such as castor oil, linseed, rape, and ground nut are exported to most European countries and the United States.

**Opium**, which is a Government monopoly, is mostly sent to China and the Strait Settlements.

**Tea** now forms one of the chief exports, most of it being taken by England, while France takes large quantities of **coffee**.

Other exports include **hides and skins, indigo, wool, timber, spices, silk goods.**

**IMPORTS.**—Cotton goods and yarn, apparel, metal ware and machinery, sugar, petroleum, chemicals, liquors, provisions, coal, salt, glass, paper, stationery, toys, clocks and watches, soap, umbrellas.

**PORTS.**—Through **Calcutta** all the produce of the Ganges basin passes.

**Bombay** is the outlet for the products of Western India, the Deccan, and Central Provinces.

**Karachi** is the port for the Punjaub.

**Rangoon** is the chief port of Burma, exporting rice and teak.

**Madras** is the only port on the east coast.

Other ports are **Surat, Calicut, Bassein and Moulmein.**



## XI. India. — Political.

### GOVERNMENT.

The supreme authority in India is the **Viceroy and Council**, the latter consisting of six members who divide between them the work of the several departments. For the purpose of making laws the Council is enlarged by additional members. The various provinces are ruled by **Governors, Lieutenant-Governors, and Chief Commissioners**. The provinces are divided into districts under a **Collector or Deputy Commissioner**, who is also the chief magistrate. These districts are again subdivided under the control of Assistant Collectors.

Above the Government of India, and responsible to Parliament, is the **Secretary of State for India**, who is assisted by the **Council of India**, consisting of twelve members.

The **Native States** are ruled by native princes, who retain the ancient titles held by their predecessors. They are under the protection of the British Government, and enjoy a limited independence. The government may regulate the strength of their forces, interfere to check misrule or rebellion, and settle disputed successions. Many of the states pay an annual tribute and are occupied by British troops, while a British Resident is attached to their courts to advise the native ruler and to check misrule. The smaller states, as in Rajputana, are grouped under one political officer called the **Agent to the Governor-General**.

### PROVINCES AND TOWNS.

India is divided politically into :—

1. **British Provinces.**
2. **Feudatory or Native States.**
3. **French and Portuguese Possessions.**

PROVINCES.	CHIEF TOWNS.	GOVERNMENT.
Bengal (110)	Calcutta, Howrah, Barrackpore, Moorshedabad, Patna, Darjeeling	Lieut.-Governor
Eastern Bengal and Assam (101)	Dacca, Gowhati, Manipur, Chittagong	" "
United Provinces of Agra and Oudh (107)	Allahabad, Lucknow, Agra, Benares, Cawnpore, Meerut, Bareilly, Fyzabad, Mirzapore, Muttra, Naini Tal, Mussoorie, Roorkee, Dehra Dun	" "



PROVINCES.	CHIEF TOWNS.	GOVERNMENT.
Punjaub (97) ..	Lahore, Amritsar, Delhi, Rawul Pindi, Mooltan, Umbala, Simla, Sialkote, Murree	Lieut.-Governor
N.W. Frontier Province (16)	Peshawur, Chitral, Dera Ismail Khan	Chief Commissioner
Bombay and Aden (123)	Bombay, Poona, Karachi, Surat, Ahmedabad, Hyderabad, Belgaum, Mahabaleshwar	Governor and Council
Madras (142) ..	Madras, Trichinopoli, Calicut, Bellary, Tanjore, Ootacamund, Wellington	" "
Central Provinces and Berar (100)	Nagpore, Jubbulpore, Kampti, Khandwa, Saugor	Chief Commissioner
Burma (237) Upper Lower	Mandalay, Shwebo, Bhamo, Rangoon, Bassein, Prome, Moulmein	Lieut.-Governor

There are also the smaller provinces of Ajmere, British Baluchistan, Coorg, and the Andaman and Nicobar Islands.

The number in brackets represents the area in thousands of square miles.

#### TRIBUTARY STATES.

The **Rajputana Agency** consists of many states, the most important being those of *Jeypore*, *Jodhpore*, *Bikanir* and *Alwar*. The British Agent-General resides at *Ajmere*.

The **Central India Agency** includes two states ruled by descendants of the old Mahratta chiefs, Holkar of *Indore*, and Scindia of *Gwalior*. *Mhow* is the British cantonment near Indore, and *Jhansi* near Gwalior.

The **Nizam's Dominions** occupy a large area of the Deccan. The capital is **Hyderabad**: near by is the military station of Secunderabad.

**Mysore** is a native state in Southern India. The capital is **Mysore**. **Seringapatam** was once an important fortress. **Bangalore** is the British cantonment.

**Cashmere** is an important native state in the north. It is noted for its beautiful climate and charming scenery. The capital is **Srinagar**. Other towns are *Jammu*, *Leh*, *Chitral* and *Nowshera*.

**Nepaul**, though really independent, receives a British Resident. The capital is Katmandu. The country is very mountainous, containing Mount Everest and other high peaks. The inhabitants, called Goorkas, make very fine soldiers.

There are many other native states, including the **Kathiawar Agency**



and **Baroda** in the west, **Travancore** in the south, **Manipur** in Assam, and **Sikkim** between Nepal and Bhotan.

**Bhotan** is an independent state in the Himalayas, the ruling chief receiving an annual subsidy from the Government of India.

The French possessions consist of **Chandernagore**, 20 miles above Calcutta, **Pondicherry**, south of Madras, and **Mahe** on the Malabar Coast.

The Portuguese own **Goa**, south of Bombay, and **Diu**, an island south of the Cutch peninsula.

#### CHIEF TOWNS.

**BENGAL and ASSAM.**—**Calcutta**, on the left bank of the Hoogly, is the capital, and the most populous city in India. It is a flourishing port, being connected by rail and river with many of the largest towns of India. It contains the winter residence of the Viceroy and many other fine buildings. Across the river is **Howrah**, a manufacturing suburb, with jute, cotton, and sugar mills. **Patna**, on the Ganges, is the centre of the Behar district, growing large quantities of rice, opium and indigo. **Barrackpore**, 15 miles north of Calcutta, is a military station, and contains a country seat of the Viceroy. **Darjeeling** is the centre of a tea district, and is an important sanatorium. **Dacca** has large jute factories, and is connected by river with the tea districts around **Gowhati** and **Shillong**.

**UNITED PROVINCES.**—**Allahabad**, at the junction of the Jumna and Ganges, is noted for its annual religious fair. It is also an important railway junction. **Benares**, on the left bank of the Ganges, is a holy city of the Hindus. It is also known for its diamonds, shawls, and metal work. **Cawnpore**, on the right bank of the Ganges, has large cotton, woollen, and leather factories. A massacre of Europeans occurred here during the Mutiny. **Agra**, on the Jumna, is an ancient city, containing many old palaces and temples. The famous mausoleum, the Taj Mahal, attracts many visitors. It is also a large military station. **Meerut**, situated on the Douab, was where the Mutiny commenced 1857. It is the largest military centre of the province. **Lucknow**, on the Goomtee, the old capital of Oudh, is the largest town in the province. The city contains many fine buildings. It was besieged in 1857. **Roorkee** has the chief engineering college in India. **Muttra**, **Bareilly** and **Fyzabad** are military cantonments.

**PUNJAUB.**—**Lahore**, near the Ravee, the capital of the Punjaub, is an ancient city, and also an important railway junction. **Amritsar** is the sacred city of the Sikhs. **Delhi**, on the Jumna, was the capital of the Great Mogul, and contains many fine buildings, including the Fort. It was held by the rebels for many weeks during the mutiny of 1857. **Simla**, on the slopes of the Himalayas, 7000 feet above the sea, is a favourite resort of Europeans during the hot season, and contains the summer residence of the Viceroy. **Rawul Pindi** is the largest arsenal and military station in India. Other military stations in the Punjaub are **Jullundur**, **Sialkote**, **Mooltan**, **Umbala**, **Mian Mir** and **Ferozepore**.

**Peshawur** is situated eighteen miles from the Khyber Pass, and is of great strategic importance.

**BOMBAY.**—**Bombay**, the second city of India, is connected with Salsette Island and the mainland by a causeway and railway. On account of its



western situation it has become one of the most important ports in the East. It has a fine harbour, and exports large quantities of cotton and wheat. **Poona**, the old Mahratta capital, is a large military station. Being situated on the Ghauts it has a cooler climate than Bombay. At **Surat**, on the Tapti, the first English settlement was made in India, 1612. **Karachi**, near the mouth of the Indus, is the capital of Sindh and the chief port for Northern India. It exports wheat in great quantities. **Baroda** and **Ahmedabad** are large native cities. **Ahmednuggur**, near Poona, and **Belgaum**, in the south, are important military stations.

**MADRAS**.—**Madras**, although it has no natural harbour, ranks among the leading ports of India, and exports coffee, cotton, tobacco and rice. **Trichinopoli**, on the Cauvery, is noted for its fields of rice and tobacco. **Calicut**, on the west coast, was where Vasco de Gama landed after sailing round the Cape of Good Hope in 1498. It was at one time noted for its calico cloths. **Hyderabad** is the capital of the Nizam's Dominions, and adjoining are **Secunderabad**, an important military station, and **Golconda**, once famous for its diamonds. To the north-west is **Assaye**, where Sir A. Wellesley gained a victory over the Mahrattas in 1803. **Bangalore**, in Mysore, is one of the healthiest towns in India. There is a large European settlement. It is a depot for the produce of the Deccan.

**BURMA**.—**Rangoon**, on the Irrawadi, 20 miles from the sea, is the chief port of Burma. Immense quantities of rice and teak are exported. **Mandalay**, the old capital of Burma, is 386 miles from Rangoon, and has famous Burmese pagodas. **Bhamo** is a frontier town trading with China. **Moulmein**, at the mouth of the Saluen, is a timber port, and **Bassein** exports a great deal of rice.

**CENTRAL PROVINCES**.—**Jubbulpore**, midway between Bombay and Calcutta, is a great trading centre, and collects all the produce of the Central Provinces. **Kampti** is the military cantonment near **Nagpore**. **Khandwa** is an important railway junction for Rajputana and Central India.

#### MEANS OF COMMUNICATION.

When the English arrived in India there were scarcely any means of communication. Now all this is changed. Apart from the water highways of the great rivers and their feeders, communication between the great cities of India has been made by fine roads, navigable irrigation canals, and a splendid railway system; so that now the uttermost parts of the land have been made accessible to the trader and the tourist, and for the marching of troops.

#### RAILWAYS.

There is a series of great trunk lines traversing the length and breadth of the peninsula, and connecting all the important cities and military cantonments.

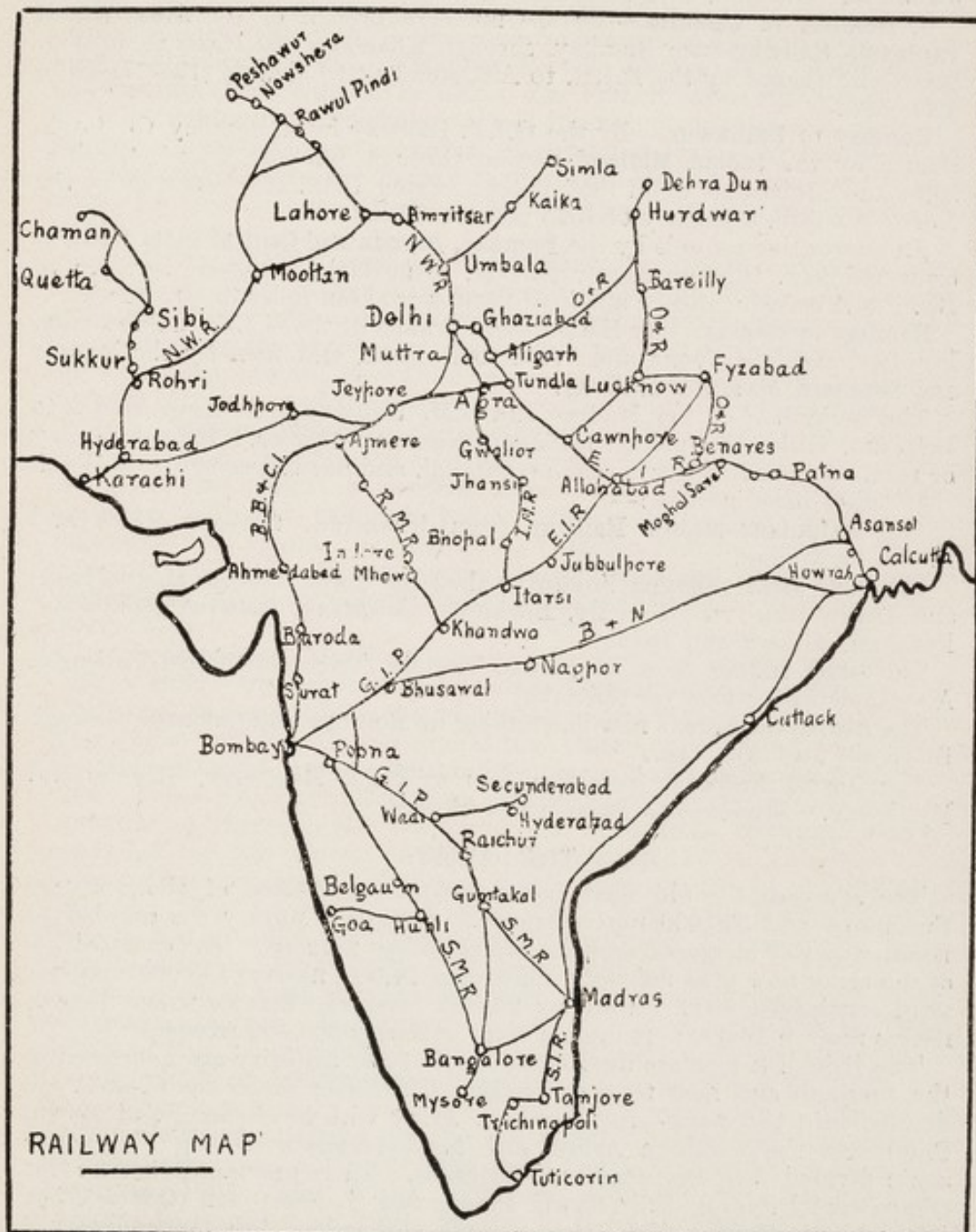
1. **Calcutta to Peshawur**.—The **East Indian Railway** from Calcutta (Howrah), through Burdwan, Asansol, Patna, Dinapore, Mirzapore, Allahabad, Cawnpore, Tundla (for Agra), Aligarh and Ghaziabad to Delhi (900 miles).

The **North-Western** system continues the line from Delhi, through Umbala, Jullundur, Amritsar, Lahore, Rawul Pindi, Attock and Nowshera to Peshawur. The whole journey of 1491 miles is performed in 57 hours.

2. **Karachi to Peshawur**.—The **North-Western** branch line from Karachi



through Hyderabad, Rohri and Mooltan to Lahore, thence north to Peshawur (1060 miles in 40 hours).



**Karachi to Calcutta.**—From Karachi to Hyderabad, thence across Rajputana, through Jodhpore and Jeypore to Agra (780 miles); then by the E.I.R. to Calcutta (1572 miles in 70 hours).



**Karachi to Quetta.**—By the North-Western system from Karachi to Hyderabad and Rohri; thence north through Sukkur, Shikarpore, Jacobabad and Sibi, to Quetta and Chaman.

3. **Bombay to Calcutta.**—By the northern branch of the **Great Indian Peninsula Railway** from Bombay, through Khandwa and Itarsi to Jubbulpore; and thence by the E.I.R. to Allahabad and Calcutta (1350 miles in 40 hours).

**Bombay to Peshawur.**—By the G.I.P. Railway from Bombay to Itarsi; thence by the **Indian Midland** section through Bhopal, Jhansi, Gwalior, Agra and Muttra to Delhi (957 miles). From Delhi to Peshawur by the North-Western, a journey of 1545 miles in 57 hours.

An alternative route is by the **Bombay, Baroda and Central India Railway** from Bombay, through Surat, Baroda, Ahmedabad, Ajmere, Jeypore to Delhi (850 miles); thence north to Peshawur (1440 miles in 60 hours).

**Bombay to Madras.**—By the southern branch of the G.I.P. Railway from Bombay, through Poona and Wadi to Raichur, and then by the **Madras and Southern Mahratta Railway**.

The main line of the Madras and S.M. Railway runs from Poona to Belgaum, Hubli, Bangalore, Seringapatam, and Mysore. Bangalore may be reached from Raichur through Guntakal, and Secunderabad from Wadi.

4. Other lines include:—

The **Rajputana-Malwa Railway** from Khandwa, through Mhow and Indore to Ajmere.

The **Oudh and Rohilcund**, linking up the large towns between Moghal Sarai and Dehra Dun, viz., Bareilly, Lucknow, Cawnpore, Benares, Allahabad, Fyzabad, Aligarh and Delhi.

The **South Indian**, from Madras to Tanjore, Trichinopoli and Tuticorin. A steamer leaves here for Colombo.

The **Bengal Nagpore**, a new line linking up Bombay and Calcutta, through Bhusawal and Nagpore.

The **Burma Railway**, from Rangoon to Pegu, Mandalay, Shwebo and Myitkyina. Branches to Bassein and Prome.

#### THE ARMY.

The army of the old East India Company consisted of about 40,000 Europeans and 350,000 native troops. After the Mutiny the number of Europeans was increased and the native troops reduced. The composition of the army now is as follows: Europeans 74,000, natives 155,000. Hyderabad contingent 8000, volunteers 26,000. Imperial Service troops 18,000, native reserve 16,000; making a total of nearly 300,000 troops.

The British troops are distributed so that the majority are quartered in the Punjab and near to the frontier. The forces under the C.-in-C. are divided into two parts—the Northern Army with headquarters at Rawul Pindi, and the Southern Army, with headquarters at Poona. These are again divided into Divisions and Brigades. There are ten divisions: 1st (Peshawur) Division, 2nd (Rawul Pindi), 3rd (Lahore), 4th (Quetta), 5th (Mhow), 6th (Poona), 7th (Meerut), 8th (Lucknow), 9th (Secunderabad) and the Burma Division.

#### HISTORY—THE ENGLISH IN INDIA.

The first European to land in India was *Vasco da Gama*, who, leaving



Lisbon in 1497, doubled the Cape of Good Hope, and after a protracted voyage of eleven months, landed at Calicut in 1498. The East India Company was formed in 1600, for the purpose of trading with the East Indies, but owing to the opposition of the Dutch, they were forced to retire to India. They made their first settlement at **Surat** in 1612. Later they established factories at **Madras** (Fort St. George) 1639, **Bombay** 1668, and **Calcutta** (Fort William) in 1696. The French, following their example, made a settlement at **Pondicherry**, and the two companies soon came into collision. In 1744 the war between England and France extended to India, and so powerful were the French that in 1746 Madras surrendered to them without a blow, but the Treaty of **Aix-la-Chapelle** in 1748 restored it again to the Company.

The success of the French inspired **Dupleix**, the Governor of Pondicherry, with the ambition of founding a French empire in India. The occasion arose when there was a quarrel between various native princes as to who should occupy the thrones of **Hyderabad** and the **Carnatic**. Both sides solicited European aid, and Dupleix was successful in placing nominees of his own in power, and for a time was regarded as the virtual ruler of the Deccan. **Robert Clive** now came forward, and taking up the cause of *Mahomed Ali*, the defeated claimant for the Carnatic throne, he captured and held **Arcot** against a superior force, 1751. This heroic feat spread the fame of English valour in India. After a long series of operations, Mahomed Ali became the ruler of the Carnatic, and the power of Dupleix gradually declined. His successor, *Count Lally*, was finally defeated at **Wandewash**, 1760, by **Colonel Coote**, who succeeded also in taking **Pondicherry**, 1761.

In the meantime Clive had been called away to Calcutta to avenge the "Black Hole" tragedy, and had defeated **Surajah Dowlah** at **Plassey**, 1757. This event is regarded as the beginning of the British Empire in India. *Meer Jaffier* and *Meer Cossim* were in turn placed upon the throne of Bengal. The latter rebelled, and was defeated by *Major Munro* at **Buxar**, near Patna, 1764. When Clive returned from England in 1765, he became the first Governor of Bengal. He was succeeded by **Warren Hastings**, who was appointed the first Governor-General of India in 1774. His rule is noted for the First Mahratta War, during which their stronghold of **Gwalior** was reduced. Then followed the Mysore War. **Hyder Ali**, instigated by the French, had invaded the Carnatic and threatened Madras, but *Sir Eyre Coote* beat him at **Porto Novo**, 1781, and saved the city.

The period of **Lord Mornington's** rule as Governor-General (1798-1805) was most eventful. The French having promised assistance to **Tippoo**, Sultan of Mysore, he rebelled, but British troops invaded Mysore and took the stronghold of **Seringapatam**, Tippoo being among the slain, 1799. The Mahrattas then became troublesome, but they were also subjugated, **Sir Arthur Wellesley** defeating them in the south at **Assaye** and **Argaum**, while **General Lake** in the north captured **Delhi** and won victories at **Aligarh** and **Laswaree**, 1803. The British had now extended their territory from Calcutta to Bombay, and from Madras to Delhi, and by 1815 the northern boundary was the Sutlej river.

In 1845 the Sikhs invaded British territory, but under **Lord Gough** victories were secured at **Moodkee** and **Ferozeshah**, 1845, and **Aliwal** and **Sobraon**, 1846. These towns are situated along the right bank of the Sutlej.



War broke out again in 1849, and after further victories at **Mooltan**, **Chillianwallah** and **Gujerat** in the Punjaub, that province was annexed. The province of **Sindh** was added also after **Sir Charles Napier's** victory at **Meanee**, 1843.

**Lord Dalhousie**, in 1856, annexed the province of **Oudh**, owing to mis-government. After his retirement the Mutiny broke out at **Meerut** in 1857, which his successor, **Lord Canning**, was called upon to stem. The chief incidents occurred at **Cawnpore**, **Lucknow** and **Delhi**. The Mutiny sealed the fate of the East India Company, which was abolished, 1858, the government being transferred to the Crown. Since then there have been various wars on the frontier against the Afridis. The new *North-West Frontier Province* was formed in 1904, and Bengal partitioned in 1905.

The first war with **Burma** took place 1824-26, and at its close **Aracan** and **Tenasserim** were annexed. The second war in 1852 led to the annexation of **Pegu**, or Lower Burma. **Upper Burma** was added in 1886, and in 1897 Upper and Lower Burma were formed into one province under a lieutenant-governor.

#### QUESTIONS.

1. Name in order and give the situation of the British Possessions in Asia.
2. State fully the importance of Gibraltar, Malta, Aden, Singapore and Hong Kong.
3. What is included in the Strait Settlements? Give some account of their productions, government and commercial importance.
4. Write a short description of Ceylon or Cyprus.
5. Describe a coasting voyage from Karachi to Rangoon, naming the chief physical features and seaports one would pass. The question may be answered by means of a sketch.
6. Distinguish between Continental and Peninsular India, stating the general boundaries of each section, with the names and direction of the chief mountain ranges.
7. Name the countries that border India, with their chief towns. State by what passes India would be entered from each. What is the importance of these countries to India?
8. Draw a map of the Deccan, showing mountains, rivers, and chief ports. Name two native states in this district.
9. Describe the basin of the Ganges, giving its tributaries and chief towns. What are its principal productions, and how are they favoured by physical and artificial conditions? Illustrate your answer with a sketch map.
10. Through what countries does the river Indus flow, and what are its chief tributaries? Give the names of six important towns in the basin of the Indus, and name the mountain ranges and countries on the western borders of this region.
11. Write a brief geographical description of India under the following heads: (a) Position and boundaries; (b) Tablelands and plains; (c) Climate; (d) Divisions for purposes of government.
12. Describe briefly the basin of (1) the Bramaputra, and (2) the Irrawadi, giving its chief physical features, navigable extent, and important towns.



13. Describe and compare in general terms the course of the three great rivers which take their rise in Tibet.

14. What do you know of the following: Sunderbunds, Terai, the Maritime Plains, Great Indian Desert, Malabar Coast, Sirhind Canal, Mansarowar, Deccan, Malwa, Bolan, the Douab, Salsette, Andaman, Sindh, the Carnatic, the Nerbudda, Kunchinjinga, Runn of Cutch, the Nizam?

15. Describe Burma under the headings of rivers, climate, productions and towns.

16. What are monsoons, and how are they caused? State their general effects on the climate and productions of India. What are the climatic conditions for the successful production of tea and rice?

17. Name parts of India, including Burma, noted for the production of cotton goods, woollen goods, raw cotton, opium, coal, tea, rice, wheat, petroleum, jute, precious stones, fancy metal goods, shawls.

18. What do you understand by the term "irrigation?" Name parts of India where irrigation has altered the character of the country.

19. Into what three parts can the surface of India be divided? Describe the Himalaya Range.

20. Describe in general terms the climate of India. Name parts of India which have (a) a very hot climate, (b) a plentiful rainfall, (c) a scanty rainfall. How do you account for the Deccan being much cooler than Arabia in the same latitude.

21. How is India divided politically? Name the chief Feudatory States, with chief towns. On what conditions are they ruled by their native chiefs?

22. Name the British provinces of India, with their capitals, and describe their relative positions.

23. Draw a map of the Punjaub or Bombay province, and describe the chief towns.

24. Which is the most densely populated province? Name the largest towns, with situation and importance.

25. Write descriptions of Rajputana, Mysore, Cashmere and Nepaul.

26. Draw a rough map of India showing the railway systems from Bombay and Karachi to Peshawur, and from Calcutta to Lahore.

27. Describe the route of the North-Western Railway from Calcutta to Peshawur, giving the names of the provinces and chief towns passed through. What branch lines now add to its military importance?

28. A draft arrives at Bombay for Rangoon. By what routes, via Calcutta and Madras respectively, could they reach their destination.

29. Locate and give any historical facts in connection with Seringapatam, Lhassa, Ali Musjid, Meerut, Sobraon, Assaye, Surat, Kandahar, Cawnpore, Arcot, Delhi, Plassey, Lucknow, Madras, Gwalior, Pondicherry.

30. Write a short account of the way India is governed.

31. Describe geographically the progress of the British power in India to the middle of the 18th century, and show in what directions it was gradually extended.

32. Name twenty of the largest towns in India, giving situation and important facts concerning each.

33. Name the two commands and the various divisions into which the Indian Army is divided. Locate in each division the headquarters and one other military centre.



## XII. *The British Possessions in Africa.*

**British West Africa** includes **Gambia**, **Sierra Leone**, the **Gold Coast** and **Ashantee**, **Lagos** and **Nigeria**.

**British South Africa** consists of **Cape Colony**, **Natal**, **Orange River Colony**, **Transvaal**, **Rhodesia** and **Nyassaland**.

The **East African** possessions include the **Protectorates of British East Africa**, **Uganda**, **Zanzibar** and **Somaliland**.

The islands of Africa belonging to the British are **Ascension**, **St. Helena**, and **Tristan d'Acunha** in the Atlantic Ocean, and **Mauritius**, the **Seychelles**, **Pemba**, **Zanzibar**, and **Socotra** in the Indian Ocean.

### THE UNION OF SOUTH AFRICA.

The **South African Union** embraces the Colonies of *Cape Colony*, *Natal*, *Orange Free State Province* (its new name) and the *Transvaal*. Whereas **Canada** and **Australia** are federations, unions of colonies retaining a smaller measure of sovereignty, **South Africa**, like the **United Kingdom**, will be a unitary state governed solely by the **Union Parliament**. The **South African Constitution** has made a clean sweep of the old **Colonial Legislatures**. In their place will be elected provincial councils, resembling the **English county councils**, entirely subordinate to the **Union Parliament**. The seat of the Government of the Union is **Pretoria**, while **Cape Town** is the seat of the Legislature.

#### CAPE COLONY.

**Physical Features.**—Cape Colony is the southern portion of Africa, and extends from the coast to the **Orange Free State**, **Bechuanaland Protectorate** and **German West Africa** in the north. On the east it borders **Natal**. Its area is 221,000 square miles.

The coast line is very regular, the chief features being **St. Helena Bay**, **Table Bay**, **Cape of Good Hope**, **False Bay**, **Cape Agulhas**, and **Algoa Bay**.

**Surface.**—The interior may be described as a series of terraces, rising like steps from the sea, known as *Karoo*s. The **Great Karoo**, 70 miles wide, lies between the **Zwarte Berg Range** and the **Nieuwveld Mountains**. During the hot weather it presents a barren appearance, but when rain falls it is soon covered with verdure. The **Drakensberg Mountains** in the east extend along the boundary of **Natal** into the **Transvaal**, and reach a height of 10,000 feet. The range also curves into **Cape Colony**, and forms the **Stormberg** and **Nieuwveld Ranges**.

**Drainage.**—The rivers of **South Africa** are useless for navigation, being interrupted by falls or rapids, and are subject to violent floods and long periods of drought. The chief river is the **Orange** or **Gariiep**, which rises in the **Drakensberg Mountains**, and flows westward into the Atlantic Ocean. It has two tributaries—the **Vaal** and **Caledon**. The former is the northern boundary of the **Orange River Colony**, and the latter of **Basutoland**. The



**Modder** is an affluent of the Vaal. Other smaller rivers are the *Sunday*, *Great Fish River*, and *Great Kei*, all flowing south into the Indian Ocean.

**Climate and Soil.**—The climate on the whole is dry and healthy and suited to Europeans. The mornings and evenings are cold, but the days are very warm. January is the hottest month. The rainfall is scanty in the interior, for the wet winds in South Africa blow from the south and east, but their passage is checked by the mountains. The soil is fertile where it is well watered. There is no irrigation, owing to the absence of a mountain system, with a region of perpetual snow, which would continually supply the rivers.

**Industries.**—The chief occupations are agriculture (chiefly farming) and mining. South Africa is a great grazing country. On the uplands of the interior sheep are reared, as well as cattle and horses. The *Angora goat* has been introduced, and its hair or wool, known as mohair, is an important article of export. *Ostrich farming* is another profitable industry. The *vine* and *maize* are the chief objects of culture. The mineral wealth of the colony lies in the *diamond* fields of **Kimberley**. *Copper* is worked in the north-west and exported from **Port Nolloth**. The exports consist of gold (from the Transvaal), diamonds, copper ore, wool, ostrich feathers, hides and skins, wine, mohair.

The population is small for so large a country, being about 2½ millions, of whom 600,000 are whites, mostly English and Dutch. The latter are, however, the more numerous. The native races include Bushmen, Hottentots and Bantus (Kaffirs).

**Towns.**—**Cape Town**, the capital, is situated at the foot of Table Mountain. It is about 6000 miles from London. The bay is exposed to the north-west gales, but a good harbour and docks have been constructed. Cape Town has several beautiful suburbs, including Wynberg and Constantia, where the vine is cultivated. **Simon's Town**, on Simon's Bay, an inlet of False Bay, is an important naval station, owing to its sheltered position. There is excellent dockyard accommodation. Should the Suez Canal be blocked by an enemy, the strategic importance of Cape Town and Simon's Town would be increased. **Port Elizabeth**, on Algoa Bay, is the chief commercial port in the eastern part of the colony. It is a bustling seaport full of warehouses and stores containing wool, hides, and ostrich feathers from the interior farms. It is the port of **Grahamstown**. **East London**, near by, is the port of **King Williamstown**, the chief town in the fertile district of Kaffraria. **Kimberley**, in Griqualand West, is the centre of the diamond mining district. It was besieged by the Boers in 1899, and relieved by General French, 1900. **Graaf Reynet** is a picturesque inland town, noted for ostrich-farming and sheep rearing.

Cape Colony contains the Protectorates of Bechuanaland and Basutoland.

**Bechuanaland**, to the north of the Orange River, includes (1) a Protectorate in the north, and (2) a Crown Colony in the south. The latter is as large as England, and contains the towns of **Mafeking** and **Vryburg**. The surface comprises the *Kalahari Desert*.

**Basutoland** is well watered, and has a splendid climate, but it has a native population only. The capital is **Maseru**. The country produces grain, wool, and a breed of hardy ponies.



### NATAL.

**Natal** lies east of the Orange Free State, from which it is separated by the Drakensberg Mountains. The total area, including **Zululand** is 29,000 square miles.

The surface is hilly, and slopes gradually down from the Drakensberg Mountains to the sea-coast. As contrasted with Cape Colony, Natal is a well-watered country, but the rivers are short and rapid, and therefore unnavigable. The best known is the **Tugela**.

The climate of the coast district is semi-tropical, being washed by the warm Mozambique current. Here *sugar-cane, coffee, tea, cotton, bananas* and *arrowroot* are grown, but the chief crop is *maize*. Indian coolies have been introduced to work in this locality. The midlands are suitable for agriculture, and there is good pasture land. The uplands are the chief grazing grounds for sheep, cattle and horses, *wool* being the chief export. At **Newcastle** and **Dundee** are extensive coalfields.

The capital is **Pietermaritzburg**, and **Durban** its port. The latter is also a coaling station for the navy. **Ladysmith** has a military station. It was besieged for four months by the Boers, but the garrison under Sir George White made a gallant defence until relieved by Sir Redvers Buller (Feb. 28th, 1900).

### ORANGE FREE STATE PROVINCE.

The **Orange Free State** is bounded on the north by the Transvaal, on the south by Cape Colony, on the east by Natal, and on the west by Bechuanaland. The country, which lies between the Orange and Vaal rivers, has an area of 48,000 square miles.

The surface consists of undulating plains, with hills or "kopjes" dotted here and there, providing good pasture land for sheep and cattle. In the east the soil is fertile, being watered by the streams that flow from the Drakensberg Mountains. *Grain* is the chief cultivation. *Coal* is found around Kroonstad and *diamonds* at Jagersfontein. The exports are *wool, diamonds, hides* and *grain*.

The mean elevation is about 5000 feet, the climate being dry and healthy. The capital is **Bloemfontein**, which is connected by rail with Cape Town, Durban and Pretoria. Other towns are **Harrismith, Kroonstad, Heilbron, Ladybrand, Wepener** and **Jagersfontein**. Responsible government was recently granted to the Orange Free State.

### THE TRANSVAAL.

The **Transvaal** is bounded on the north by Rhodesia, from which it is separated by the Limpopo river; on the south by the Orange Free State and Natal, on the east by Portuguese East Africa, and on the west by Bechuanaland. The area is 119,000 square miles—half the size of Cape Colony.

The Transvaal is a plateau, and the climate is no warmer than that of Cape Colony. The country is suitable for grazing and agriculture, the *maize* and the *vine* being the principal objects of culture; but the chief source of wealth is *gold*, obtained from the districts around Johannesburg and Barberton. Chinese coolies were introduced in 1904 for employment in the mines, which gave rise to considerable agitation. *Coal, iron, copper,* and *diamonds* are also found. The famous Cullinan diamond, presented



to the King, was discovered near Pretoria. The exports are forwarded through Cape Town, Durban and Lorenzo Marques.

**Pretoria** is the capital, but **Johannesburg**, which has grown rapidly in a few years, is the largest town. The mining district, called the Rand, is densely populated. The largest goldfield is the *Witwatersrand*. There are garrisons at **Potchefstroom**, **Middleburg** and **Standerton**. **Koomatipoort**, on the Portuguese boundary, is the custom house for goods entering the country by rail from Lorenzo Marques. Other towns are **Pietersburg**, **Barberton**, and **Krugersdorp**. The Transvaal received self-government in 1903.

#### SOUTH AFRICAN RAILWAYS.

There are three great trunk lines running north from Cape Town, Port Elizabeth and Durban.

(1). **From Cape Town**, the line known as the "Cape to Cairo Railway" passes through De Aar, Hope Town, Kimberley, Vryburg and Mafeking to Buluwayo (1361 miles), thence over the Victoria Falls into Northern Rhodesia as far as Broken Hill. A branch joins Buluwayo with Salisbury; the latter is also connected with the port of Beira.

(2). **From Port Elizabeth**, the line passes through Graaf Reynet, Naauwpoort, Colesberg, Springfontein to Blomfontein, and then on through, Kroonstad to Johannesburg and Pretoria. A linking line runs from Naauwpoort to De Aar. Lines also connect East London and Springfontein, Pretoria and Lorenzo Marques, through Komatipoort.

(3). **From Durban** to Pietermaritzburg, Ladysmith, Newcastle, and Johannesburg. From Ladysmith a line runs through the Van Reenan's Pass to Harrismith in the Orange River Colony.

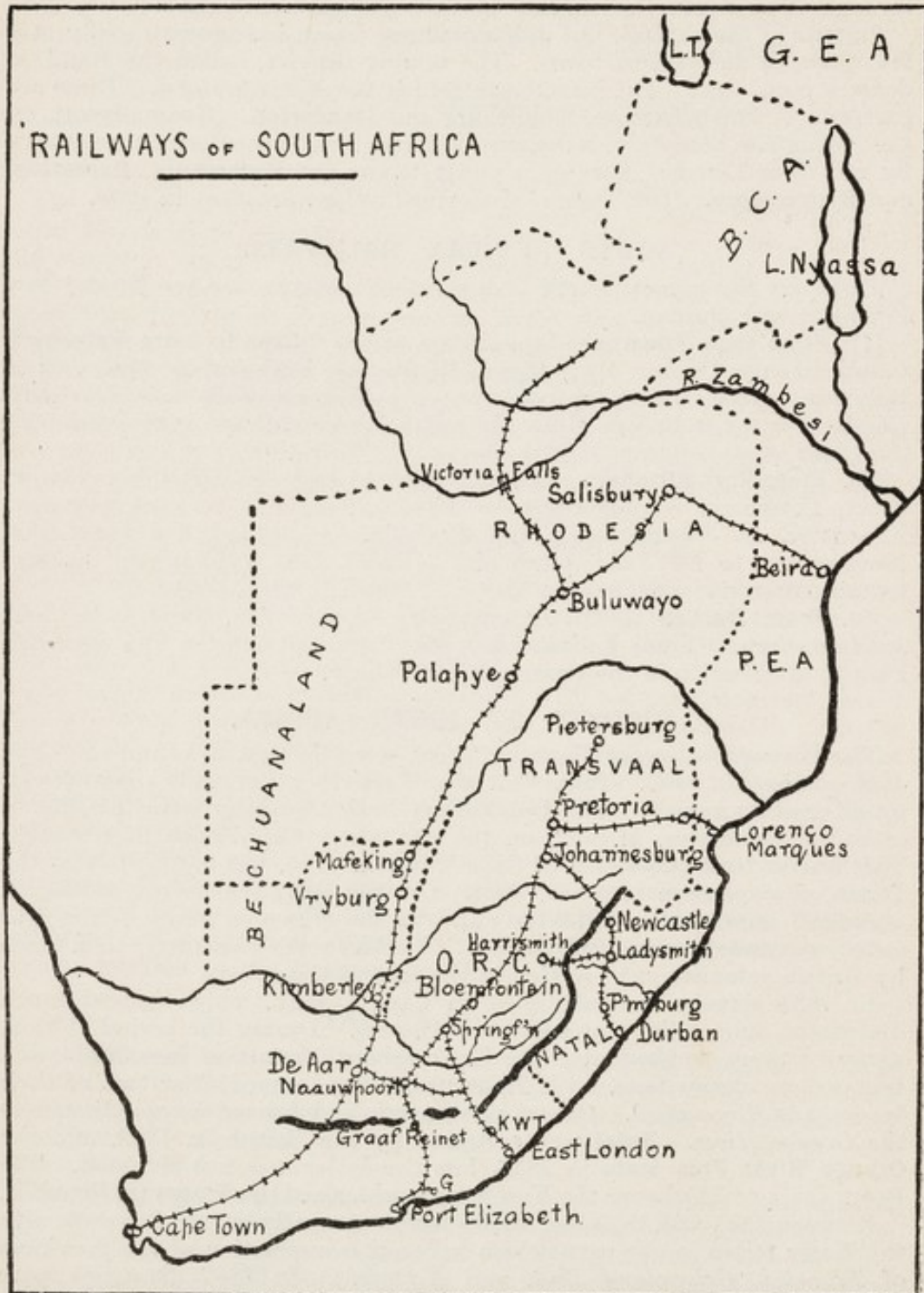
#### HISTORY OF SOUTH AFRICA.

The Portuguese, under *Vasco de Gama*, were the first to round the Cape of Good Hope in 1497. From that time Table Bay was made a port of call by all trading vessels. The Dutch East India Company were the first to establish themselves, in 1652, on the site where Cape Town now stands. The British took possession of Cape Town in 1795, but restored it to the Dutch on conclusion of peace, 1802. On war being renewed it was again occupied, 1806, and in 1814 the Cape, as the region in South Africa was called, was ceded to Britain by treaty. Various settlements were then made by British colonists, who settled in the east of the colony.

In 1834 slavery was abolished in Cape Colony, which caused much discontent among the Dutch farmers (Boers). During the period 1835-9, many of them trekked over the Drakensberg Mountains into Natal, and founded a colony there, with **Pietermaritzburg** (named after two of their leaders) as the capital. Others went north and formed a republic across the *Orange River*. **Natal** was occupied by the British in 1842, and the **Orange River Free State** in 1848, but the latter was not retained. The Boers again trekked over the Vaal river, and formed the **Transvaal Republic**.

Between 1811 and 1879 the British were constantly engaged in wars with the Kaffir tribes in the east, which led to the annexation of the provinces of *Transkei*, *Griqualand East*, and *Kaffraria*. In 1867 diamonds were discovered at Kimberley, and the province of *Griqualand West* was claimed and added to Cape Colony. Responsible government was granted to Cape Colony in 1872 and to Natal in 1893.







In 1877 the Transvaal was in danger from invasion by the Zulus, when the British annexed that republic, but after the *Zulu War* of 1879-80 the Boers regained their independence through securing a victory at *Majuba Hill*, 1881. Recent events which have influenced the history of South Africa have been the Jameson Raid of 1895; the annexation of Zululand to Natal, 1897; and the South African War, 1899-1902, which led to the two Boer republics becoming British territory. Both have since been granted self-government, and recently all the colonies in South Africa have united under one parliament.

### RHODESIA.

**Rhodesia** extends from Bechuanaland and the Transvaal in the south, to Lake Tanganyika in the north. It is divided by the River Zambesi into two parts—**Northern Rhodesia** and **Southern Rhodesia**. The latter consists of *Matabeleland* and *Mashonaland*. The total area is about 750,000 square miles, a vast territory as large as the combined areas of France, Germany, Austria and Italy.

Under the administration of the British South Africa Company the native tribes have been subdued and the country has settled down to steady progress. The country is elevated; near Buluwayo are the *Matoppo Hills*, where Cecil Rhodes is buried. The climate is not unhealthy. The **Zambesi** and its many tributaries drain northern and southern Rhodesia. In the river are the famous **Victoria Falls**.

**Lake Bangweolo**, in the north, is regarded as the source of the Congo. The most fertile districts lie south of the Zambesi, where *grain, sugar, rice, cotton* and *tobacco* flourish. *Gold* and *coal* are mined, and silver and copper also exist.

**Salisbury**, in Mashonaland, is the seat of government and the residence of the Administrator. It is connected by rail with Cape Town and Beira. **Buluwayo**, in Matabeleland, is the centre of the gold-mining district, and the chief commercial centre. Its progress has been remarkable.

### NYASSALAND.

**Nyassaland**, or the British Central Africa Protectorate, is a strip of country west and south of Lake Nyassa. The climate is tropical. *Coffee, cotton* and *tobacco* come to perfection, and are exported with *ivory* and *rubber*. **Lake Nyassa** is connected with the ocean by the **Shire** river, which flows into the Zambesi not far from its mouth. The chief trading centres are **Blantyre, Tomba, Port Johnson** and **Chinde**. The latter is situated at the mouth of the Zambesi, having been leased to Britain by the Portuguese.

### BRITISH EAST AFRICA.

1. The British possessions in Eastern Africa include the Protectorates of **East Africa, Uganda, Zanzibar** and **Somaliland**.

**British East Africa** extends from German East Africa in the south to the Juba river in the north, also inland to the Victoria Nyanza, the River Nile and Abyssinia. The British sphere of influence, however, extends along the Nile valley as far as the frontier of Egypt. The whole territory probably exceeds a million square miles, and was originally in the hands of a company,



but it was taken over by the Colonial Office in 1895. The result is that the country is being rapidly developed. A railway has been constructed from **Mombasa** on the coast to **Port Florence** on the Victoria Nyanza.

The surface in the interior is elevated, **Mount Kenia** being the chief peak. Along the coast *rice*, *cotton* and the *sugar cane* flourish, while dense forests with valuable timber clothe the interior. The exports consist of *rubber*, *ivory*, *cotton* and *oil-seeds*. The largest towns are **Mombasa** and **Nairobi**.

2. **Uganda** is a district of 140,000 square miles lying between the Victoria Nyanza and Albert Nyanza. The surface is a plateau with an average height of 6000 feet, and though on the line of the equator the heat is not very intense. The country, recently, has suffered severely from "sleeping sickness." North of the Albert Edward Nyanza Lake is **Mount Ruwenzori**, reaching a height of 19,000 feet. Uganda is well watered by the upper waters of the **Nile**. There are magnificent forests of *timber*, containing a variety of wild animals. The inhabitants are intelligent and industrious, though a race of pigmies and other lower types inhabit the forest region. The chief productions are *coffee*, *cotton*, *sugar*, *ebony*, *ivory*, *rubber*, *skins*. The native king resides at **Mengo**, but **Entebbe**, on Victoria Nyanza, is the British seat of government.

3. **The Zanzibar Protectorate** includes the islands of **Zanzibar** and **Pemba**, lying off German East Africa. They are ruled by a Sultan. The town of **Zanzibar** is the principal port of the east coast of Africa, being a great centre for trade. *Cloves*, *rice* and *cocoanuts* are the chief exports.

4. **British Somaliland** is the mountainous part of the Somali coast opposite to Aden. The country is barren and covered with scanty herbage of scrub and grass. The chief town is **Berbera**. There have been many military expeditions against the "Mad Mullah," a hostile Somali leader.

#### BRITISH WEST AFRICA.

The possessions of Britain on the west of Africa lie along the Guinea coast. The climate of all is hot and damp, and Europeans find it very unhealthy owing to the prevalence of malaria. The chief value of these possessions lies in their productions of *palm oil*, *kola nuts*, *ground nuts*, *rubber*, *timber*, *gold dust* and *ivory*.

**Gambia** is the oldest British possession in Africa, English merchants having established a trading station here in 1664. The colony consists of a strip of country extending for 200 miles along both banks of the Gambia river. The capital, **Bathurst**, is a port at the mouth of the river.

**Sierra Leone** lies between Senegambia and Liberia. It was acquired in 1787 as a settlement for freed slaves. The climate is hot and humid, but the conditions of living have so improved that it is almost a libel to call it the "White Man's Grave." The capital, **Freetown**, is an important coaling station, and is strongly fortified. Its harbour is the best on the west coast, which has made it a great trading station.

**The Gold Coast** extends for 350 miles along the coast of the Gulf of Guinea, between the French colony of the Ivory Coast and the German colony of Togoland. Inland it stretches to 11° N. lat., and includes the old native kingdom of **Ashanti**, which was annexed in 1901, after various wars with the natives in 1873, 1895 and 1900. The chief towns of the Gold Coast are the trading centres of **Accra** and **Cape Coast Castle**. **Coomassie** is the capital of Ashanti.



**Lagos** is a colony on the Bight of Benin, and consists of the island and town of **Lagos**, and a large territory on the mainland, between French Dahomey and Southern Nigeria. The port of Lagos has a fine harbour and considerable trade, being a depôt for the produce of the neighbouring colonies.

**Nigeria** is a vast territory occupying the lower part of the basin of the River Niger. It was originally under the control of the *Royal Niger Company*, but their rights were bought out by the British Government in 1900. The area is about 450,000 square miles. It extends inland to 14° N. lat. and to *Lake Chad*. On the east is the German Protectorate of the Cameroons, and on the west French Dahomey.

Nigeria is divided into two parts—**Northern Nigeria** and **Southern Nigeria**. The coast regions are humid and unhealthy, but inland is a plateau with forest and cultivation. *Cotton* has been introduced with good results. A railway is being constructed into the heart of the country, which will help to develop its resources. The largest towns are in Southern Nigeria, and include **Old Calabar**, the capital, **New Calabar**, **Asaba**, **Bonny** and **Benin**.

#### ISLANDS IN THE ATLANTIC OCEAN.

**Ascension Island**, in the South Atlantic Ocean, lies 800 miles N.W. of St. Helena. The island is used as a coaling and victualling station for the navy. The capital is **George Town**. Land crabs and turtles are caught in great numbers. The British took possession in 1815.

**St. Helena** is a volcanic island with high rocky coasts. The port and capital is **James Town**, which is used as a coaling station. St. Helena was occupied by the English East India Company in 1673, and used as a refreshing station on the route to India. Since the Suez Canal was opened its importance has decreased. Napoleon was a prisoner there, 1815-21. The island was also used as a prison for the Boers in 1902. The garrison has lately been withdrawn. It is under the control of a Governor.

**Tristan d'Acunha** is a solitary group of islands far south in the Atlantic Ocean. The population numbers about 70.

#### ISLANDS IN THE INDIAN OCEAN.

**Mauritius** lies 550 miles east of Madagascar. The island has a heavy rainfall and is subject to cyclones. The soil is fertile and much *sugar* is grown, as well as *cotton*, *coffee*, *rice* and *vanilla*. These and rum form the principal exports. **Port Louis** on the north-west coast is the capital and largest town. The European population is mainly French, and that language is commonly spoken. There are also over 200,000 Hindoos employed on the sugar estates. Mauritius is a Crown Colony, the Governor being assisted by a Legislative Council. The British took the island from the French in 1810.

**Rodriguez**, the **Chagos Archipelago**, and the **Amirante Isles** are dependencies of Mauritius.

The **Seychelles** are a group of islands 600 miles north-east of Madagascar. The chief island is **Mahe**. The islands are surrounded by coral reefs, and some of them possess giant tortoises. *Cocoanuts* and *tortoise-shell* are exported. The Seychelles were formerly a dependency of Mauritius, but became a separate colony in 1903 under the administration of a Governor.

**Socotra**, lying off Cape Guardafui, is a dependency of Aden. It has been a British possession since 1886. *Dates* and *gum* are produced and exported.



## QUESTIONS.

1. Name in order the British possessions passed in sailing along the west coast of Africa, with their capitals.
2. Name those that would be passed in sailing along the east coast, with their chief towns.
3. Name the chief British possessions on the mainland of Africa, with their capitals and ports.
4. Draw a sketch map of South Africa, marking the chief physical features, and the following places: Cape Town, Pretoria, Mafeking, Bloemfontein, Kimberley, Durban, Paardeburg, Port Elizabeth, Lorenzo Marques, Ladysmith, Johannesburg, Port Nolloth, Simon's Town.
5. Locate the places mentioned in Question 4, and state interesting facts concerning each.
6. Describe the surface of South Africa, and state how the climate and drainage of the country is affected by it. What races inhabit South Africa?
7. Name the most important industries and the chief vegetable and mineral productions of Cape Colony.
8. Write a short description of Natal or the Transvaal.
9. Draw a rough map of South Africa, showing the various railway systems.
10. What is the great drawback to the commerce of the Transvaal? By what routes would the various commodities reach the sea?
11. How is the vast district of Rhodesia controlled? Name some of its chief productions and towns, and give reasons for the rapid development of the southern part of the country. What two native districts does it include?
12. Name the possessions on the west coast of Africa north of the equator. What is the general character of the climate and productions?
13. Under what circumstances was the colony of British East Africa formed? How far does it extend inland? Give some of its chief productions and chief towns.
14. Write a short account of the situation, climate and resources of Uganda.
15. Locate the island possessions of Britain in Africa (with capitals), giving reasons for their acquisition.
16. Write short notes concerning Zululand, Nigeria, Basutoland, Bechuanaland and Somaliland.
17. Give the positions of chief Protectorates and Spheres of Influence under the control of Britain, and say how they are governed.
18. Describe geographically the progress of the British power in South Africa during the nineteenth century.
19. How do you account for the British occupation of Egypt. Show that under British guidance the prosperity and importance of that country, as well as the extension of territory, have increased.
20. Locate and say for what each of the following are noted: Freetown, Khartoum, Nairobi, Buluwayo, Accra, Walfish Bay, Matoppo Hills, Tugela, Victoria Falls, Fashoda, Mombasa, Port Louis, Lagos, the Great Karroc, the Vaal, the Drakensbergs, Coomassie, Berbera, Zanzibar, Zambesi, Juba, Bathurst, Cape Coast Castle, Salisbury, Shire River?



### XIII. *Australia and New Zealand.*

#### SIZE AND BOUNDARIES.

Australia is the largest island on the face of the globe. It lies to the south-east of Asia. Its greatest **length**, from Steep Point on the west to Cape Byron on the east, is almost 2500 miles; its greatest **breadth**, from Cape York on the north to Wilson Promontory on the south, is 2,000 miles.

Nearly one-half of the area is within the tropics, the Tropic of Capricorn passing almost through the centre. The extent of the island continent is nearly 3,000,000 square miles, being one-fifth smaller than the continent of Europe.

The northern shores are washed by **Torres Strait**, which separates Australia by a distance of 90 miles from New Guinea; by the **Gulf of Carpentaria**, the **Arafura Sea**, and the **Indian Ocean**.

It is bounded on the south by **Bass Strait**, separating Tasmania from Victoria, and by the **South Pacific Ocean**; on the east by the **South Pacific Ocean**, and on the west by the **Indian Ocean**.

#### COAST FEATURES.

The coast is compact, there being no remarkable indentations except the Gulf of Carpentaria in the north. Circumnavigating the coast from this gulf the following physical features will be passed: **Cape York**, the **Great Barrier Reef**, **Moreton Bay**, **Botany Bay**, **Cape Stowe**, and **Wilson Promontory** on the east.

On the south: **Bass Strait**, **Port Philip**, **Encounter Bay**, **St. Vincent Gulf**, **Spencer Gulf**, **Great Australian Bight**, and **King George's Sound**.

On the west: **Cape Leeuwin**, **Steep Point**, **Shark Bay**, **North-west Cape**.

On the north: **Cambridge Gulf**, **Cape Arnheim**, and the **Gulf of Carpentaria**.

The **Great Barrier Reef** is over 1000 miles long, and in some places is about thirty miles wide. The channel between the reefs and the mainland is thirty miles wide.

#### SURFACE.

The western half of the continent is a dry and barren tableland, sloping towards the centre, on which occur moderate elevations and shallow salt lakes, the latter being fed by the rivers only during the rainy season.

The highlands along the east coast form what is called the **Dividing Range**. It consists of several chains under various names: the **Australian Alps** in *Victoria*, **Blue Mountains** and **Liverpool Range** in *New South Wales*, and the **Great Dividing Range** in *Queensland*. The highest peak is **Mount Kosciusco**, 7000 feet, which is on the border between *Victoria* and *New South Wales*.

These mountains, though not very high, present on the eastern side scenes of wildness and grandeur. On the western side they form undulating grassy plains.

Tasmania is very mountainous, and consists of a plateau with an average height of 4000 feet.



### DRAINAGE.

A scarcity of fresh water, whether in the form of rivers or lakes, is one of the chief characteristics of Australia, as it is of South Africa. Few rivers of any size discharge themselves into the sea, many of them disappearing in the deserts of the interior and are dried up for the greater part of the year. The rivers that rise on the steep slopes of the eastern highlands are short and rapid, and are in general of the nature of mountain torrents.

The only important river is the **Murray**, with its tributaries the **Darling**, **Lachlan** and **Murrumbidgee**. These streams all rise on the western slopes of the eastern highlands and form continuous rivers all the year through. The Murray, for a greater part of its course, forms the boundary between Victoria and New South Wales. It discharges its waters into a shallow lake or lagoon, called **Lake Alexandrina**.

Other rivers are the **Paramatta**, **Brisbane** and **Burdekin**, flowing *east*, the **Flinders** and **Victoria** flowing *north*, and the **Murchison** and **Swan** flowing *west*. Not one river enters the Great Australian Bight on the south.

**Lakes** are numerous, but few are permanent. The largest are the salt lakes or swamps of the interior: **Amadeus**, **Torrens**, **Eyre** and **Gairdner**.

### CLIMATE.

The vast interior of Australia is noted for its long periods of drought. While these prevail the heat is intense; vegetation perishes, streams dry up, and thousands of cattle die from want of nourishment. The droughts are succeeded by heavy rains.

The climate of Victoria and New South Wales is more temperate, but these colonies suffer in summer from hot winds and dust storms. They receive the greater part of the rainfall borne by the prevailing south-east trade wind. The rain-bearing winds are cut off from the interior by the coast ranges.

Queensland, within the tropics, has great heat, but rain is more certain than in the interior. The climate of Tasmania is very near perfection. On the whole Europeans find the climate in the thickly populated parts healthy and pleasant.

### FLORA AND FAUNA.

The forests are found mainly on the eastern mountains, and the trees include various kinds of *eucalyptus* or *gum* trees, as well as *acacia* or *wattles*.

The animals are peculiar. There are many varieties of pouched animals, the chief being the *kangaroo*, *opossum* and *wombat*. The *dingo*, or native dog, is destructive to sheep; the *bandicoot* is a large species of rat; the *ornithorhyncus*, or *duck-bill*, has the body of a mole, the bill and feet of a duck, and lays eggs. The *emu*, similar to the ostrich, and *black swan*, are very common. There are also many *parrots*.

### GOVERNMENT.

The Crown is represented by a **Governor-General**. All the Australian Colonies have a **Governor** appointed by the Crown, and two **Houses of Parliament**. In New South Wales, Western Australia, and Queensland, the upper houses or assemblies consist of members appointed by the Crown for life, while those of the lower houses are chosen by the people. In



Victoria, South Australia and Tasmania, the members of both houses are chosen by the people.

The first day of the present century witnessed an important development, for then there came into existence the "**Commonwealth of Australia**," formed by the federation of the five colonies on the continent and Tasmania **Melbourne** is the temporary seat of the **Federal Government**.

THE COMMONWEALTH OF AUSTRALIA.

COLONIES.	AREA Sq. MILES.	TOWNS.
New South Wales	310,000	Sydney, Newcastle, Bathurst, Goulburn.
Victoria ..	87,000	Melbourne, Geelong, Ballarat
Queensland ..	668,000	Brisbane, Maryborough, Rockhampton
South Australia ..	903,000	Adelaide, Port Augusta, Palmerston
West Australia ..	975,000	Perth, Freemantle, Albany, Coolgardie
Tasmania ..	26,000	Hobart, Launceston.

NEW SOUTH WALES.

**New South Wales**, lying between Victoria and Queensland, is the oldest colony, having been founded in 1787. At one time it comprised the whole of the territory east of the 138th meridian. The area is now 310,700 square miles.

The colony is well watered, the rivers flowing east and west from the **Blue Mountains**. The former are short and rapid, and therefore un-navigable. The western part is drained by the **Murray** and its tributaries. The climate is temperate and healthy near the coast, but hot in the interior.

New South Wales is rich in minerals. Many seams of valuable *coal* are worked, the chief coal district being **Newcastle**. *Gold* has been worked since 1851, the principal mining towns being **Bathurst** and **Goulburn**. *Silver* is obtained from the **Broken Hill** mine. Besides these there are also deposits of *tin, copper, marble, slate* and *diamonds*.

But the colony is chiefly engaged in agricultural pursuits. There are many acres of *wheat* and *maize* under cultivation. The *vine* flourishes as well as *tobacco* and the *sugar cane*. Beyond the mountains are the rich pasture lands on which millions of *sheep* are reared, as well as *horses* and *cattle*.

**Sydney**, the capital, situated on Port Jackson, has a very fine harbour, and exports wool, gold, coal, hides, frozen meat, wheat and wine. It is the oldest town in Australia.

**Paramatta**, a few miles from Sydney, has large fruit gardens.

**Norfolk Island**, in the Pacific, is included in the Government of New South Wales.

VICTORIA.

**Victoria** lies to the south of New South Wales, from which it is separated by the Murray. On the west is South Australia. It is the smallest of the



colonies, but has a dense population. It became a colony in 1851. Its area is as large as Great Britain.

The climate is very pleasant, for in no part is there the scorching heat and the liability to drought. The **Australian Alps**, stretching from west to east in the interior, are noted for their beautiful scenery. The mining district is also found here, *gold* being worked at **Ballarat** and **Bendigo**. The industries are similar to those of New South Wales, *agriculture* being carried on along the fertile coast region, where *wheat* and the *vine* are grown; *mining* in the mountains, and *sheep* and *cattle rearing* beyond. The exports consist of *wool, gold, wheat, frozen meat* and *hides*.

**Melbourne**, on *Port Philip*, is the capital. It is well laid out with broad streets, and contains magnificent buildings. The port has considerable trade. **Geelong**, also on *Port Philip*, is a noted wheat port.

### QUEENSLAND.

**Queensland** lies to the north of New South Wales. The **Dividing Range** traverses the colony from north to south at a distance from 100 to 300 miles from the coast. The rivers are numerous and flow in all directions into the Pacific Ocean and Gulf of Carpentaria.

The eastern side is very fertile and the products are of a tropical character, including *sugar, wine, maize, coffee, cotton, tobacco* and *oranges*. The highlands to the west are large pasture lands, Queensland being noted for the great number of its stock farms. Thus *wool, meat, tallow* and *hides* are largely exported.

The **minerals**, which include *gold, silver, coal, tin,* and *copper*, are also valuable. The gold mining centres are at **Gympie, Mount Morgan** and **Charters Towers**. **Ipswich** is a coal-mining centre.

The climate in winter is mild, but the summer months (October to March) are hot. There are no hot winds, but the interior is subject to droughts. In the north the monsoon rains are very heavy.

**Brisbane** is the capital and chief port. Other ports are **Maryborough, Rockhampton** and **Townsville**. Off the coast of Queensland is the **Great Barrier Reef**.

### SOUTH AUSTRALIA.

**South Australia** is situated between Victoria, New South Wales and Queensland on the east, and Western Australia on the west. It extends through the heart of the island from the Pacific Ocean on the south to the Indian Ocean on the north. The **Northern Territory**, though politically a portion of South Australia, is really a distinct country in climate, soil, and general conditions.

The south coast is indented, the chief openings being **Spencer Gulf, St. Vincent Gulf** and **Encounter Bay**. Inland the **Flinders Mountains** extend from the coast to the lakes in the interior. Owing to extensive deserts only about one-tenth of the vast area is cultivated, chiefly in the south of the colony. Around Adelaide are large pastoral and agricultural districts, *wheat, wool,* and *wine*, as in the other colonies, being exported. The climate is particularly favourable to the growth of the *vine, orange, lemon,* and other fruits. *Copper* is most abundant in South Australia, the **Burra Burra** copper mines being the most famous.

The climate, although occasionally very trying, is one of the healthiest



in the world. The thermometer in summer often registers over 105°, but the nights are always cool. The rainfall is small in the summer months, the settlers inland suffering much from the great heat and drought.

**Adelaide**, on the Torrens River, is the capital. It is regularly laid out, with wide streets and beautiful parks and gardens. **Port Adelaide** and **Port Augusta** are the chief ports on the south. In the north the chief town is **Palmerston**, on *Port Darwin*, a very fine harbour.

#### WESTERN AUSTRALIA.

Western Australia is a vast territory to the west of South Australia, much of which has not yet been surveyed. Though the largest of the colonies, it is the least prosperous. The north is suited for tropical agriculture. In the south-west the soil is fertile, *wheat* and the *vine* coming to perfection. The arid districts along the eastern boundary are worthless for settlement. The prosperity of the colony has increased since the recent discovery of *gold* at **Coolgardie**. The forests yield the durable *jarrah-wood*, *kauri pine* and *sandal wood*. Off the coast there is a valuable fishery for *pearls*. The climate varies from the excessive heat of latitudes near the equator, to the temperate and cool atmosphere of the south.

**Perth**, on the Swan River, is the capital, and **Freemantle** at the mouth of that river is the chief port. Both towns are connected by rail with the gold diggings at **Coolgardie**, **Calgoorlie** and **Southern Cross** inland, and also with **Albany**, a port of call for ocean steamers on *King George's Sound*.

#### TASMANIA.

**Tasmania**, or *Van Dieman's Land*, as it was formerly called, has an area of 26,000 square miles. The whole island is noted for its remarkable beauty. It has many inlets and harbours; its rugged mountains are clothed with forests and the plains are rich pasture grounds. The mountains are rich in minerals, *tin* being the chief metal worked. *Gold*, *copper*, *iron ore* and *coal* are also produced. The island is also noted for its *orchards*, fruit being sent to Australia, New Zealand, and even to England. *Jam* making is a profitable industry. The climate is very healthy, being milder and more genial than the other colonies.

**Hobart**, on the *Derwent* river, is the capital and chief port in the south. It is connected by rail with **Launceston** in the north, famed for its tin mines.

#### HISTORY OF AUSTRALIA, ETC.

The Dutch were the first to discover the north of the continent, and by them the newly-found land was called **New Holland**. In 1642 *Tasman* discovered **Van Dieman's Land**, now called **Tasmania**, which was for more than a century believed to be part of Australia. He also explored the west coast of **New Zealand**. In 1688 *Dampier* visited and explored nearly 1000 miles of the north-west coast of Australia. The most important discoveries were made by *Captain Cook*. In 1769-70 he circumnavigated New Zealand, and also explored the east coast of Australia, which he called **New South Wales**.

The first English settlement was made in 1788, when *Captain Philip* formed a penal settlement at **Botany Bay**, and free settlers began to arrive in 1795. In 1798 *Bass* and *Flinders* surveyed the southern coasts and



proved Tasmania to be an island. **Port Philip** was discovered in 1802. Colonies were formed in **Tasmania** 1824, **Western Australia** 1829, and **South Australia** 1836. In 1835 a permanent settlement was made at **Melbourne**, whence the colony of **Victoria** sprang in 1837.

In 1851 the discovery of gold caused a great inrush of settlers, and the population increased so rapidly that New South Wales was partitioned. **Victoria** became a separate colony in 1851, and **Queensland** in 1859. **New Zealand** was constituted a colony in 1840, and received responsible government in 1852. On the 1st January, 1901, was formed the **Commonwealth of Australia**, a federation of all the colonies, *except New Zealand*.

### *Dominion of New Zealand.*

#### SIZE.

New Zealand lies 1200 miles south-east of Australia, and comprises two large islands, known as **North Island** and **South Island**, separated by **Cook Strait**, with a small island called **Stewart Island**, separated from South Island by **Foveaux Strait**. The area of North Island is 44,500 square miles, of South Island 58,500 square miles, and Stewart Island 665 square miles. Included in the Colony are several outlying groups in the Pacific, the *Antipodes, Bounty, Auckland, Chatham and Cook* groups.

#### COAST.

The coast is very much broken, and fine harbours are numerous. The coast features in *North Island* are **North Cape, Bay of Plenty, Hawke Bay, Cape Palliser** and **Cape Egmont**. In *South Island* **Tasman Bay, Pegasus Bay, Canterbury Bight, Foveaux Strait** and **Cape Farewell**.

#### SURFACE.

A chain of lofty snow-clad mountains extends through the whole of the central part of South Island and the south-east of North Island. The former range is called the **Southern Alps**, and its highest peak is **Mount Cook**, 12,000 feet high. To the east are undulating grassy plains sloping down to the sea, called the **Canterbury Plains**.

The mountains of North Island are of volcanic origin. Most of the volcanoes are extinct, but the district around **Lake Rotorua** abounds with hot springs forming beautiful geysers. These send off clouds of steam and are further evidence of volcanic action. Earthquake shocks are of frequent occurrence. The chief peaks are **Mount Egmont**, 8000 feet high, and **Mount Ruapehu**.

#### DRAINAGE.

The country is well watered with innumerable never-failing streams and rivers, which are, however, short and rapid, and therefore unnavigable. The largest rivers in North Island are the **Waikato**, which drains **Lake Taupo**, and the **Wangani**. Both rise on the slopes of **Mount Ruapehu**.

In South Island there are several elongated lakes in the deep mountain valleys, drained by rivers flowing in a south-easterly direction. The **Clutha** and **Waitaki** are the two largest rivers, and the lakes include **Wakatipu, Wanaka, and Pukaki**.



### CLIMATE.

The climate, though varied, is bracing, being considerably warmer and more equable than that of Great Britain. North Island is warmer than South Island, for snow and frost are rare. There is always an abundant rainfall.

### RESOURCES.

New Zealand is well suited for pastoral and agricultural pursuits. The grazing grounds, especially those of the province of *Canterbury*, afford pasture all the year round, and stock farms are therefore numerous. *Wheat*, *maize*, and other grains have been successfully introduced by the colonists. There is much mineral wealth, *gold* and *coal* being mined. The celebrated *kauri pine* of North Island yields *timber* and the *kauri gum*, and the native *flax* produces fibre. The chief exports are *wool*, *frozen meat*, *gold*, *wheat*, *dairy produce*, *flax*, *timber* and *gum*.

### TOWNS AND GOVERNMENT.

**Wellington**, in *North Island*, has been made the seat of government on account of its central position. **Auckland**, the largest town in the colony, is situated on a fine harbour, and is an important naval station. **Dunedin** is the largest town in *South Island* and the capital of the province of Otago. It is an important commercial port. **Christchurch** stands on the edge of the famous *Canterbury Plains*, and is a charming town. Other ports in *South Island* are **Nelson** and **Invercargill**.

New Zealand is governed by two Houses of Parliament, elected as in New South Wales. The Governor is appointed by the Crown.

### FIJI ISLANDS.

The **Fiji Islands** form a group of 200 to 250 islands in the *South Pacific Ocean*, about 1200 miles north of *New Zealand*. The total area is about 7000 sq. miles, as large as *Wales*. The two largest islands are **Viti Levu** (*Great Fiji*) and **Vanua Levu** (*Great Land*). The climate is equable and healthy for Europeans. Vegetation is luxuriant, the chief productions being *bread-fruit tree*, *banana*, *plantains*, *yams*, *cocoanut*, *sugar cane*, *tea*, *cotton*, *maize* and *tobacco*. The natives have been weaned from cannibalism and are now peaceful and industrious, many of them being Christians. The Governor is appointed by the Crown, and is assisted by a Legislative Council partly elected.

### BRITISH NEW GUINEA.

**British New Guinea**, now called **Papua**, comprises the southern and south-eastern shores of the island, an area of 90,000 square miles, the remainder being shared by *Holland* and *Germany*. The climate is excessively hot and humid. The chief settlement is at **Port Moresby**, which exports *beche de mer* (sea-slugs), *ebony*, *sandal-wood*, *india-rubber* and *pearls*.

Other groups in the Pacific Ocean belonging to Britain are: **Tonga** or **Friendly Islands**, the **Cook Archipelago**, **Gilbert Islands**, **Ellice Islands**, part of the **Solomon Islands**, and other groups adjacent to New Zealand.



## QUESTIONS.

1. Draw a map of Australia showing the divisions and chief towns. Write some notes on the mineral productions, exports and imports, plants and animals.
2. Describe a coasting voyage from Brisbane to Freemantle, naming the chief physical features and seaports passed.
3. (i.) What is the general character of the coast line of Australia? (ii.) Name the chief river of the continent with its tributaries. (iii.) Mention two great seaports on the south coast, giving the situation of each, with the nature of its trade.
4. Which parts of Australia are fertile and which infertile? Account for the difference, and describe the climate, explaining why the seasons are the reverse of those in England.
5. Locate three towns in each of the colonies that form the Commonwealth of Australia, stating the reasons for the importance of each town.
6. Describe the interior of Australia. What effect does a heavy rainfall produce upon it? In what way would prolonged drought affect the export trade of Australia?
7. Write a short description of Tasmania.
8. Compare the surface and drainage of Australia with that of South Africa.
9. What are the principal industries and productions of Australia, and how are they influenced by climate and physical formation?
10. Compare Victoria and Queensland in regard to its area, surface and drainage, and productions. When and under what circumstances were these two colonies formed?
11. Write a short account descriptive of the history of New South Wales. Give details of its mineral wealth.
12. What and where are the following: Great Barrier Reef, Bass, Amadeus, Kosciusco, Carpentaria, Torres, Coolgardie, Ballarat, Port Darwin, Burra Burra, Broken Hill, Botany Bay, Blue Mountains, Hobart, Albany, Mount Morgan?
13. Name the three largest islands forming the Dominion of New Zealand, with their geographical positions. Name the large towns, with their situation and reasons of importance.
14. Illustrate the statement that New Zealand is a land of magnificent mountains, charming rivers, beautiful lakes and rolling plains.
15. New Zealand is often styled the "Great Britain of the South." Explain this statement, setting forth as many points of analogy and resemblance between the two countries as you can.
16. Draw a map of New Zealand, marking physical features and the following towns: Wellington, Dunedin, Auckland, Christchurch, Invercargill, Nelson.
17. Give some particulars of the climate and productions of New Zealand. What are the chief occupations of the people?
18. Write a few notes about the Fiji Islands and New Guinea.
19. Show the various routes by which New Zealand can be reached from London.
20. Give an account of the way Australia and New Zealand are respectively governed.



## XIV. *The British Possessions in America.*

### NORTH AMERICA.

Dominion of Canada	..	..	Ottawa.
Newfoundland	..	..	St. John's.
The Bermudas	..	..	Hamilton.
The West Indies	..	..	—
British Honduras	..	..	Belize

### SOUTH AMERICA.

British Guiana	..	..	George Town.
Falkland Islands	..	..	Stanley.

### THE DOMINION OF CANADA.

**History.**—Canada was discovered by **Sebastian Cabot** in 1497, but the French took possession of the country in 1534. The first settlement was made at Quebec by *Champlain* in 1608. By the **Treaty of Utrecht** in 1713 England obtained possession of **Acadia** (Nova Scotia and New Brunswick). In 1759 **Quebec** surrendered to the British forces under **General Wolfe**, and in 1763, by the **Treaty of Paris**, the whole territory of Canada became a British possession. The U.S. declared war against England in 1812, and their troops invaded Canada, but were driven back. In 1837 a rebellion occurred in Upper and Lower Canada, for the purpose of securing responsible government, which was granted in 1841. The **Dominion of Canada** was formed in 1867, the provinces of **Canada** (Ontario and Quebec), **Nova Scotia** and **New Brunswick** being united. In 1870 the province of **Manitoba** was admitted into the Dominion. The same year the **North-West Territory**, administered since 1670 by the *Hudson Bay Company*, was taken over by the Canadian Government for a payment of £300,000. **British Columbia** joined the Federation in 1871, on condition that a trans-continental railway to connect that province with the east was constructed. The result was the *Canadian Pacific Railway*, completed in 1886. In 1905 the four districts of *Alberta*, *Assiniboia*, *Saskatchewan*, and *Athabasca*, were formed into the two provinces of **Alberta** and **Saskatchewan**, and admitted into the Dominion. In 1907 the territory of **Yukon** was annexed to the province of Quebec.

### SIZE AND BOUNDARIES.

Omitting Alaska and Newfoundland, the *Dominion of Canada* consists of the northern part of the continent of North America. The Dominion is fast becoming one of the greatest countries of the world, and no limit can be set to its resources and development. It occupies an area of more than 3½ million square miles, being nearly as large as Europe, and forty times the size of Great Britain.

Its boundaries are : on the north by the Arctic Ocean ; on the east by the Atlantic Ocean ; on the south by the United States ; and on the west by the Pacific Ocean and Alaska.



The southern boundary line is the **49th parallel of N. latitude** as far as the Lake of the Woods; it then passes through the centre of four of the great lakes. Afterwards it follows the St. Lawrence and the 45th parallel as far as the Croix River, by which it is continued to the Bay of Fundy. From ocean to ocean this line is 3000 miles long.

### COAST FEATURES.

On the Atlantic side the chief indentations are the **Bay of Fundy** (noted for its high tides), the **Gulf of St. Lawrence**, **Hudson Bay** (350,000 square miles), which also includes **James Bay**. The Pacific coast is broken up into many narrow openings resembling the fiords of Norway.

The principal islands are: on the east, **Newfoundland**, **Prince Edward Island**, **Cape Breton**; on the west, **Vancouver Island**, **Queen Charlotte Islands**; on the north there are numerous islands in the Arctic Ocean, all bound by perpetual ice.

### SURFACE.

The surface may be divided into three regions:—

1. The elevated or **woodland**, extending from the Gulf of St. Lawrence to the great lakes.
2. The middle or **prairie**, from Lake Superior to the Rocky Mountains.
3. The **mountainous** region in the west.

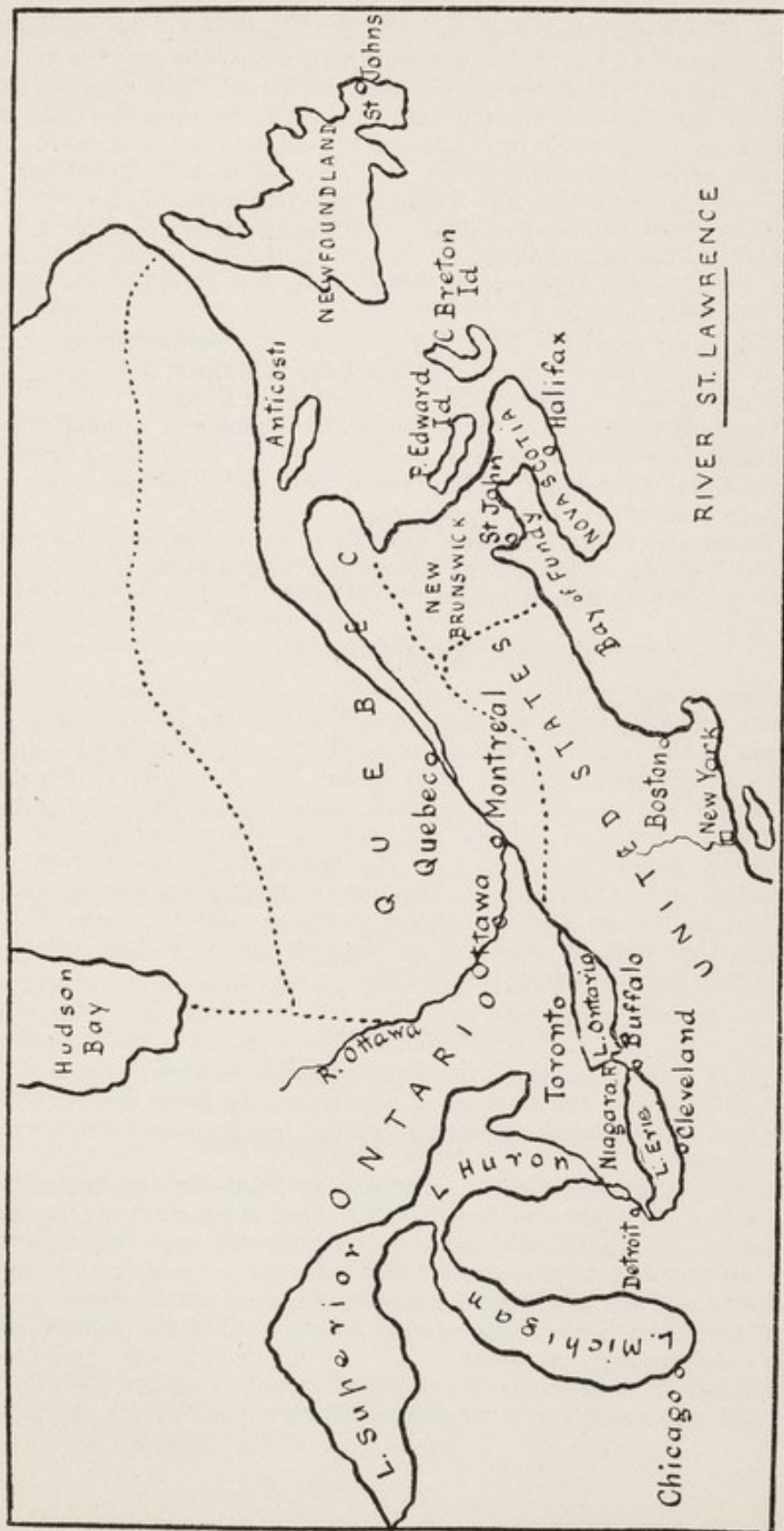
A range of mountains runs from the Labrador coast, up the north side of the Ottawa River to the Arctic Ocean, a length of 3500 miles. In the west the **Rocky Mountains**, running from north to south, containing **Mount Brown**, **Mount Hooker** and **Mount Murchison**, all 15,000 feet high. Between the Rocky Mountains and the Pacific intervene the **Selkirk** and **Cascade Ranges**. In the far north-west, near Alaska, are three lofty peaks, **Mount St. Elias**, **Mount Fairweather**, and **Mount Logan**, the latter being 20,000 feet high. East of the Rocky Mountains stretches a vast level plain, an extensive grazing and wheat producing district, and now recognized as the great "fertile belt."

### WATER SYSTEM.

The most characteristic feature of Canada is its wonderful lake and river system. The length of the navigable rivers tells of a gently sloping surface of great extent from the Rocky Mountains to the Arctic Ocean and Hudson Bay. Their number indicates an abundance of moisture owing to a large rainfall, and the climate being so cool that the evaporation of the moisture is slow. In winter the moisture is stored in the deep snow which covers nearly the whole land, and which melts so slowly on the Rocky Mountains that in summer there is a continuous supply of water to the large rivers.

**St. Lawrence.**—The chief river is the St. Lawrence, which, with its chain of great lakes, forms the largest system of fresh water in the world. The river is 2000 miles long. Its source is a small stream flowing into **Lake Superior** (32,000 square miles). Then follow **Lake Huron** and **Lake Michigan**. The river **St. Clair**, issuing from the south of Lake Huron, runs into a small lake of the same name, which is connected with **Lake Erie** by the **River Detroit**. The waters of Lake Erie descend to **Lake Ontario** by the **Niagara River**, 33 miles long, which contains the celebrated falls, said to be the largest, though not the highest falls in the world.







The St. Lawrence now expands into a noble stream, its waters being studded with many islands. Near **Montreal**, where the river is two miles wide, it is joined by the **Ottawa River** from the north. After passing **Quebec** it broadens into a wide estuary and empties itself into the Gulf of the St. Lawrence. The river is navigable for the largest craft as far as Montreal, but in winter its waters are frozen and navigation interrupted for a few months. Numerous rapids also seriously interfere with the navigation, but this obstacle is overcome by canals. The **Rideau Canal** connects Kingston with Ottawa. The **Welland Canal** joins Lake Erie with Ontario, avoiding the Niagara Falls, and enabling ships from Chicago and Buffalo to reach the Gulf of the St. Lawrence.

The **Red River** from the United States, and the **Saskatchewan** from the Rocky Mountains, empty themselves into **Lake Winnipeg**, the surplus waters of which are carried to Hudson Bay by the **Nelson River**.

The **Mackenzie** consists of two streams, the **Peace** and **Athabasca**, which rise in the Rocky Mountains, and uniting, flow north, draining **Great Slave Lake** and **Great Bear Lake**. The river is practically useless, being closed the greater part of the year by ice.

The **Fraser** and **Columbia Rivers** are two short and rapid rivers rising on the western slopes of the Rocky Mountains and flowing into the Pacific Ocean. They abound in salmon.

#### CLIMATE.

Speaking generally, the climate is severe in the north but temperate in the south. The absence of mountain ranges running east and west leaves the whole of the central lowlands exposed to cold winds from the Arctic. Further, a cold ocean current from Baffin Bay flows down the coast of Labrador and reduces the temperature of the eastern coast. The heat of summer is greater than that of England, but the winter is colder. The air, however, is always dry and the sun shines daily, making the climate dry, bracing, and very healthy. The thermometer often falls as low as 30° below zero in winter, and sometimes rises to a temperature of 100° in summer. The west is milder than the east, owing to the warm ocean currents and moist winds of the Pacific.

#### INDUSTRIES.

Canada is mainly an agricultural and pastoral country; it is also largely covered with forests, the produce of which forms a great source of wealth. Fishing and mining are important industries, but manufactures are making great headway.

**Farming.**—Wheat growing is carried on in **Manitoba** and **Saskatchewan**. As a wheat-growing country Canada has attained to considerable prominence, and she is looking forward to the day when she can supply us with all the wheat we require. But the colonist is widening the range of his operations and is adding the raising of horses, cattle, sheep, hogs, and poultry, for which a profitable market exists. **Alberta** and **Saskatchewan** are the chief grazing provinces.

**Lumbering.**—The immense forests of pine and other trees supply much timber and give employment to many. **Ottawa** is the centre of the lumber trade.



**Fishing.**—The fisheries are the largest in the world, **British Columbia** and **Nova Scotia** taking the lead in this direction. The fisheries embrace thousands of miles of sea coast as well as the great lakes and innumerable rivers. *Cod, mackerel, lobster, herrings and salmon* are the most valuable fish.

**Mining.**—*Coal* is found in New Brunswick, Nova Scotia, and British Columbia. *Silver, copper, nickel, and tin* are found near Lake Superior. *Gold* is mined in Nova Scotia and British Columbia. Lately there have been large discoveries of gold in the Yukon region in the extreme north-west. *Petroleum* is obtained from the district near Lake Huron.

**Trapping.**—Canada is the chief fur-producing country in the world. The forests in the north and west are the home of the *beaver, bear, martin, otter, fox, lynx* and *ermine*. The *seal* is also noted for its valuable skin.

**Manufactures.**—In manufactures the Dominion is developing a multitude of industries. Ontario aims at becoming the "Birmingham of Canada," and the chief manufacturing province of the Dominion. *Wood-pulp* (for paper) and *beet sugar* are two important industries.

#### COMMERCE.

The commerce of Canada is increasing year by year. Most of the import trade is in the hands of Great Britain and the United States, while the former takes most of the exports.

**Imports.**—Tea, sugar, coffee, manufactured goods, iron and steel, wines and spirits.

**Exports.**—Timber, cheese, wheat, cattle, bacon, codfish, tinned lobster and salmon, coal, horses, hay, furs, silver, gold, and petroleum.

**Communications.**—Ocean steamers can go up the St. Lawrence to Montreal, and thence by lake and canal to Lake Superior. The rivers and lakes of Canada stretch across the whole breadth of the continent and furnish it with an almost unbroken series of water highways, so that it is possible to go almost entirely by water from the mouth of the St. Lawrence to the mouth of the Mackenzie. Canada has more than 20,000 miles of railway. The **Canadian Pacific Railway** connects the eastern railways with the Pacific. Branches connect the Canadian system with the United States system at various points. The Canadian Pacific Railway provides the shortest route from England to Japan and China, the length of the main line being 2906 miles. Canada's new line, the **Trans-Canadian Railway**, is to extend from Moncton on the Atlantic to Prince Rupert on the Pacific, 3500 miles.

#### GOVERNMENT AND PEOPLE.

The Dominion of Canada is a **federation of self-governing colonies** under a Governor-General appointed by the British Government, a Senate, and a House of Commons elected by the people. The Federal capital is **Ottawa**. Each of the provinces has a Lieutenant-Governor, appointed by the Governor-General, and a legislative assembly. The Federal Parliament deals with such matters as defence, trunk-railways, subsidies to encourage trade, customs and duties, etc.

The Canadians are mostly Protestants and of British descent, except in the province of Quebec, where the people are descended from French settlers and are Roman Catholics.



## DIVISIONS.

The following is a list of the Canadian provinces, with chief towns:—

1. Quebec	..	..	..	Quebec, Montreal.
2. Ontario	..	..	..	Toronto, Kingston.
3. Nova Scotia	..	..	..	Halifax, Sydney.
4. New Brunswick	..	..	..	Fredericton, St. John's.
5. Prince Edward Island	..	..	..	Charlottetown.
6. Manitoba	..	..	..	Winnipeg.
7. British Columbia	..	..	..	Victoria, New Westminster.
8. Alberta	..	..	..	Edmonton.
9. Saskatchewan	..	..	..	Regina.

The vast areas known as the North-West Territories, and including the districts of Yukon, Mackenzie, Keewatin and Ungava do not rank as a province.

**QUEBEC.**—This province occupies both sides of the lower St. Lawrence and its estuary. It is the oldest province, and its inhabitants are largely of French descent. The chief industries are agriculture and lumbering.

**Quebec**, a historic town, is the capital. It is strongly fortified, and is called the "Gibraltar of the West." General Wolfe defeated the French here in 1759.

**Montreal**, on an Island in the St. Lawrence, is splendidly situated for commerce. It is the largest city in Canada, the principal seaport and the main terminus of the Canadian Pacific Railway. The St. Lawrence here is crossed by the famous Victoria Tubular Bridge.

**ONTARIO** lies between Quebec on the east, Manitoba on the west, and the Great Lakes on the south. It has the largest population and is the most prosperous province in the Dominion, benefiting from its proximity to Chicago and the Great Lakes. Its settlers are mostly of British origin, pushful and energetic, and in strong contrast with the more quiet settlers of Quebec. Situated far from the sea, the winters are extremely cold. Between Lakes Huron, Erie and Ontario, the country is rich in minerals, waterways, railways and lake ports. The chief productions are *timber, iron, copper, nickel, petroleum*, and in the south, agricultural products.

**Ottawa** is the capital of the whole Dominion, with magnificent Parliamentary buildings. It is situated on the Ottawa River, which separates the province of Quebec. It is the centre of the lumber trade.

**Toronto**, the capital of Ontario, is situated on the north side of Lake Ontario. It is an important lake port, a manufacturing town, and a railway centre. Other important towns are **Hamilton, Kingston, and London.**

**NOVA SCOTIA** means New Scotland. Both are much alike in coast, mountains, rivers and climate. **Cape Breton Island** is really an extension of Nova Scotia, the Gut of Canso between being formed by the action of tides and currents. The harbours are of importance to the commerce of Canada, as they are the only ones open throughout the year. The province has excellent deposits of *coal* and *iron-ore*. *Gold* is also mined. The orchards of Nova Scotia are important, *apples* being largely exported. The *cod* and *lobster* fisheries are also valuable.

**Halifax**, the capital, has a very fine harbour. It is the winter port of



Canada, and headquarters of the British fleet during the summer months. It has direct railway communication with the Pacific.

**Sydney** and **Louisburg** are the chief towns of Cape Breton Island.

**NEW BRUNSWICK** is on the mainland opposite Nova Scotia, from which it is separated by the Bay of Fundy. It has much forest land, and lumbering and fishing are the chief industries. **Fredericton** is the capital, on the St. John's river. **St. John's** is the commercial centre, and its harbour remains open during the winter. Its chief industry is shipbuilding.

**PRINCE EDWARD ISLAND** is a great grazing and fruit-growing district. *Cattle, dairy produce, and apples* are a source of wealth. *Oysters and lobsters* are exported in great quantities. In summer the island is frequented by tourists. **Charlottetown** is the capital.

**MANITOBA** is situated in the centre of the continent, being midway between the Atlantic and the Pacific Oceans. The province is well watered, and it is one of the richest *wheat-growing* areas in the world. The climate is extreme and the soil is rich, so that it is especially suitable for the growth of wheat. The rapid advance of Manitoba in population and production is remarkable.

**Winnipeg**, the capital, is situated on the Red River. It is a great railway centre and a central market for all the produce of Manitoba, Saskatchewan, and Alberta. The growth of this city has been very rapid.

**BRITISH COLUMBIA** lies between the Rocky Mountains and the Pacific, and extends as far north as the 60th parallel. It is English in climate and character, and much milder than eastern Canada. The whole surface is mountainous and covered with valuable timber. The coast, which is much indented, has valuable fisheries, as well as the rivers, which swarm with *salmon and trout*, especially in the Fraser River. But minerals form the chief wealth of the province, *gold and coal* being produced. After mining, lumbering, fishing and agriculture form the chief industries. British Columbia is a country which is bound to prosper on account of its climate and resources. The province also includes **Vancouver Island**.

**Victoria**, on Vancouver Island, is the capital, and the headquarters for vessels engaged in the seal fishery.

**Esquimault**, near Victoria, is the naval station of the British fleet in the Pacific.

**Vancouver**, on the mainland, is the Pacific terminus of the Canadian Pacific Railway. A regular service of steamers connects Canada with Japan, China, Australia, and New Zealand.

**New Westminster**, on the Fraser River, has extensive saw mills and a salmon-canning industry.

**ALBERTA** and **SASKATCHEWAN**, the newly formed provinces, include the old districts of Athabasca and Assiniboia. Both extend from the 49th to the 60th parallel of N. latitude. These provinces are noted for wheat growing and stock raising. Cattle ranches are spread all over the vast prairies, on which the bison is now rarely seen. The climate of Alberta is milder than that of Saskatchewan, being sheltered by the Rockies.

**Edmonton** is the capital of Alberta, but **Calgary**, on the Canadian Pacific Railway, is the largest and most important town.

**Regina**, the capital of Saskatchewan, is also on the same railway.



**YUKON**, included in the government of Quebec, contains the **Klondike** district, noted for its gold. The rush of miners has led to the growth of **Dawson City**.

#### NEWFOUNDLAND.

**Newfoundland** has an area of 42,000 square miles, and is a rocky island, deeply indented, lying at the entrance to the Gulf of St. Lawrence. It does not form part of the Dominion of Canada, the Governor being appointed by the Crown. There is also a Legislative Council and a House of Assembly.

The climate is not so extreme as that of Canada. Towards the south-east is the peninsula of **Avalon**. This is the only portion with any degree of population. *Cod-fishing* in summer and *seal-hunting* in winter are the chief occupations of the people. The cod-fishery on the Banks of Newfoundland, a shallow area to the east of the island, is the most important in the world. The fogs here are caused by the cold currents and icebergs which condense the warm moist air over the Gulf Stream. In the interior are pine forests, and many minerals exist, chiefly *copper ore*. The making of *wood pulp* for the manufacture of paper is becoming an important industry.

**St. John's** is the capital, and is entirely engaged in fish curing.

The coast of **Labrador** is a dependency of Newfoundland.

The Atlantic cables from Europe terminate in **Trinity Bay**.

**History**.—Newfoundland was discovered by **Cabot** in 1497, and is the oldest of our colonies. It was taken possession of for Great Britain by *Sir Humphrey Gilbert* in 1583. Settlements, however, were not made for some time. The French were always contending with us for its possession, but the island was finally assigned to us by the **Treaty of Utrecht**, 1713. To the south of Newfoundland lie the islands of **St. Pierre** and **Miquelon**, which were given to France with fishing rights on the south shore (called the French shore). As these rights were guarded by armed vessels, they were always a source of danger. In 1904, in consideration for access to the Gambia (West Africa) and some 8000 square miles of land near Lake Chad, France gave up these rights.

#### THE BERMUDA ISLANDS.

**The Bermudas**, or Somers Islands, are a cluster of about 365 small islands, only a few of which are inhabited. They are situated 580 miles off the east coast of the United States in 32° N. and 64° W. They were first colonised by Admiral Sir George Somers, who was shipwrecked here in 1609 on his way to Virginia. The climate is very mild, so that Bermuda is visited by the fleet during the cold of the Canadian winter and heat of the West Indian summer. The islands are also patronised by American tourists. Bermuda possesses a strongly fortified dockyard, where the British squadron refits. For the repair of large ships a huge floating dock has been erected. *Potatoes* and *onions* are extensively grown. The Government is administered by a Governor, who is also Commander-in-Chief of the military forces. There is also a nominated Legislative Council and an elective House of Assembly.



## THE WEST INDIES.

The West Indies consist of many islands and islets, extending from 10° to 27° N., and from 60° to 85° W. They are divided into:—

1. **The Bahamas.**
2. **The Greater Antilles—Cuba, Hayti, Porto Rico and Jamaica.**
3. **The Lesser Antilles—Leeward Islands and Windward Islands.**

The total area is about 95,000 square miles, the Greater Antilles occupying about 83,000 square miles. Britain owns about 13,000 square miles.

All the islands are more or less mountainous, and several contain active volcanoes, which recently have been in a state of eruption. The climate is hot and moist, and hurricanes and earthquakes are frequent. The vegetable productions are varied and abundant, the principal articles of commerce including sugar, maize, coffee, cocoa, cotton, arrowroot, spices (ginger, pimento, vanilla), tobacco, aloes, fruits (orange, lemon, banana, pineapple, cocoanut, pomegranate).

For some time the islands remained in the undisputed possession of Spain, but during the wars of the 18th century they were frequently captured by England, France, and Holland. They are now divided as follows:—

**British.**—Jamaica, Turks and Caicos Islands; all the Bahamas; Antigua, Montserrat, St. Nevis, Dominica, and some of the Virgin Islands in the *Leeward Group*; Grenada, St. Vincent, St. Lucia, Barbadoes, Tobago and Trinidad in the *Windward Group*.

**France.**—Martinique, Guadeloupe, and St. Bartholomew.

**Dutch.**—Curacoa Islands.

**Danish.**—Santa Cruz and St. Thomas.

**United States.**—Porto Rico.

**Independent.**—Hispaniola (Hayti and San Domingo) and Cuba.

## JAMAICA.

**Jamaica** is the largest and most important of the West Indies belonging to Britain, its area being 4,200 square miles—about three-fifths of the size of Wales. The centre of the island is crossed by the *Blue Mountains*, containing beautiful scenery, and which are used as a sanatorium by Europeans. The *sugar* industry is declining, that of fruit (*banana* and *pineapple*) taking its place, but *rum* and *molasses* are largely produced. Other exports are *spices*, *coffee*, *cocoa*, and *dye-woods*. **Kingston**, on the south coast, is the capital. Its harbour, **Port Royal**, is one of the finest in the West Indies, and is used as a naval station. **Spanish Town** was once the capital.

Jamaica was discovered by *Columbus* in 1494. The Spaniards took possession of it and used it as a slave depot. It was captured from them by Admiral Penn, 1655. The island is now ruled by a Governor and Legislative Council, who also control the Turks and Caicos Islands. Should the Panama Canal be completed, the importance of Jamaica will be increased, as it will lie in the direct sea-route from Europe to Australia and China.

## THE BAHAMAS.

The **Bahamas** are the most northerly of the West Indies, and consist of a chain of about 500 islands and rocks of coral formation, very few of which are inhabited. The most important is **New Providence**, on which



**Nassau** the capital stands. The chief products are *sponges, salt, native hemp, fruit, and turtles*. The islands have become a favourite resort for invalids. **San Salvador**, or Cat Island, is supposed to be the first land discovered by Columbus on his voyage in 1492.

#### THE LEEWARD ISLANDS.

This colony extends from the Virgin Islands to Dominica. Each island has a local council, and there is a Federal Council and Government for the whole group. **St. John's**, in Antigua, is the federal capital. **Montserrat** is noted for the cultivation of limes.

#### THE WINDWARD ISLANDS.

The colony extends from St. Lucia to the Grenadines.

**Barbadoes**, the most important island, is as large as the Isle of Man. It is one of our oldest possessions in the West Indies, the first settlers arriving about 1625. The capital, **Bridgetown**, is the capital town of the whole group, and seat of government.

#### TRINIDAD.

**Trinidad**, close to the coast of South America, has an area of 1800 square miles. It produces *sugar, cocoa, rum, etc.*, but the chief production is *pitch*, taken from a lake in the interior. **Port of Spain** is the capital. The island was taken from Spain by Sir Ralph Abercrombie in 1797. Trinidad (with Tobago) is not included in the government of the Windward Islands.

#### CUBA.

**Cuba** is the largest island in the West Indies, and has an area of 43,000 square miles. The majority of the people are Spanish by descent, and the island remained in the possession of Spain until the war with the United States in 1898, when it was annexed along with Porto Rico. The island is very fertile, and produces *sugar, tobacco, maize, coffee, and cotton*. **Havana**, the capital, is the largest town in the West Indies. Columbus was buried in its cathedral. **Santiago** is another large town. Cuba was declared a Republic in 1902, but it is really a dependency of the United States.

**Hispaniola** includes the two Negro Republics of **Hayti** (capital *Port-au-Prince*) and **San Domingo** (capital *San Domingo*).

**Porto Rico** belongs to the United States. Its capital is *San Juan*.

#### BRITISH HONDURAS.

**British Honduras** is on the mainland of Central America, lying between Guatemala and Yucatan. Its area is equal to that of Wales. The coast is low and marshy, and fever therefore prevails. The forests of the interior produce such valuable timbers as *mahogany, logwood, india-rubber* and *cedar*. There are also vegetable productions similar to those of the West Indies. The capital is **Belize** on the Belize river. The early English settlers were constantly striving with the Spaniards for possession, but in 1798, when Spain declared war against England, the British annexed the entire territory.



### BRITISH GUIANA.

**British Guiana** is the only territory Britain possesses on the mainland of South America. Its area is more than twice the size of England. The country is well watered by the rivers *Essequibo*, *Demerara*, and *Berbice*, which drain the provinces of the same names. The climate along the coast is tropical and very trying to Europeans, especially during the rainy seasons, for the heat and the rainfall are excessive. The wealth of the colony is derived from the *sugar* industry, which is extensively cultivated along the sea-coast and the banks of the rivers. Coolie labour, chiefly immigrants from India and China, are employed on the sugar plantations. There are valuable forests of *timber* and *gold* mines in the interior.

**George Town**, the capital, is situated on the river Demerara. It is intersected with canals, which take the place of roads. The colony is under a Governor, appointed by the Crown, and a Court of Policy consisting of nine members. British Guiana was captured in 1803, and ceded to England by Holland in 1814.

### THE FALKLAND ISLANDS.

These islands lie over 300 miles to the east of the Straits of Magellan. The colony consists of two large islands, **East Falkland** and **West Falkland**, and about 200 smaller islands. Sheep and cattle rearing is the chief industry, and wool exported. The islands are also used as a refreshing station for the southern whale fishery. The chief town is **Stanley**.

### QUESTIONS.

1. Classify the British possessions in America, giving their geographical situation.
2. What provinces are included in the Dominion of Canada? Give the capital of each.
3. Give as accurately as you can the southern boundary of the Dominion of Canada, and compare the east and west coasts.
4. Give a description and sketch of the River St. Lawrence.
5. Compare Canada and Australia in regard to surface, water system, and climate.
6. The great lakes of Canada form a semi-circular chain from the Arctic Ocean to the Atlantic. Name in order the principal lakes in the chain, and give the rivers which carry their surplus waters to the ocean.
7. Describe the Rocky Mountains, showing how their position affects the climate and industries of the colony.
8. Compare the climate of British Columbia, Manitoba and Nova Scotia, giving reasons for the variation.
9. Name the most important industries, and the chief vegetable and mineral productions of Canada.
10. Write a description of the country that lies between Lake Superior and the Rocky Mountains.
11. Describe from the map the route of the Canadian Pacific Railway from Vancouver. Show (a) how it facilitates the internal trade of Canada, and (b) how it has brought England nearer to Japan.
12. Give a descriptive account of the industries and chief towns of Ontario, Quebec, or Manitoba.



13. Where are the Maritime Provinces? Name them, and give the chief towns and productions in each province.

14. Under what circumstances was the colony of British Columbia formed? Show that with its valuable resources and climate it is bound to be a prosperous colony.

15. Locate and say what the following are: Belleisle, Anticosti, Vancouver, Niagara, Keewatin, St. Elias, Hudson, Fundy, Klondike, Saskatchewan, Michigan, Fraser, Welland, St. Clair, Miquelon, Ungava, the Great Banks?

16. Give the situation and any interesting facts concerning Winnipeg, Montreal, Halifax, Esquimaux, Edmonton, Dawson City, Vancouver, Toronto, Ottawa, Quebec, Victoria, Regina, New Westminster, St. John, St. John's.

17. Into what districts are the North-West Territories divided? What are the chief occupations of the people in these regions.

18. How do you account for the presence of French settlers in Quebec? Describe the progress and development of Canada during the last century.

19. Describe Newfoundland under the heads of (1) position and extent, (2) climate, (3) productions, (4) history of the colony.

20. Give the geographical position of the Bermudas, Jamaica, and British Honduras. Of what importance are these places to Britain?

21. Classify the islands of the West Indies and give a list of their general productions.

22. Define, as accurately as you can, the position of the West Indies. Name (1) three of the islands which belong to Britain with the chief town of each, (2) two islands belonging to Denmark, and (3) two to France.

23. Write short notes concerning Cuba, Barbados, Trinidad, and the Bahamas.

24. Describe as fully as you can the situation of British Guiana. Name its chief rivers, productions, and towns.

25. What and where are the following: Belize, Kingston, Port of Spain, George Town, Falkland Islands, Nassau, Havana, Curacoa, Spanish Town, Bridgetown, St. Lucia.



## XV. Europe.

### SIZE AND BOUNDARIES.

The Continent of Europe forms the north-western part of the Old World, or Eastern Hemisphere.

The extreme points of the mainland are : from Cape Nordkyn in Norway to Cape Tarifa in Spain, the **length** is 2,400 miles ; from Cape Roca in Portugal to the Kara River, north-east of Russia, the **breadth** is 3,400 miles.

Europe is the smallest of the continents, its area being about  $3\frac{3}{4}$  million square miles. It is a little larger than Canada or the United States, and twice as large as the Indian Empire.

The boundaries are : on the *north* by the Arctic Ocean ; on the *west* by the Atlantic Ocean ; on the *south* by the Mediterranean Sea, Black Sea, and Caucasian Mountains ; and on the *east* by the Ural River and Ural Mountains.

### COAST FEATURES.

1. The coast line is greater in proportion to its area than that of any other continent. This is due to the large number of inland seas and peninsulas. The coast line is very irregular, and contains many fine harbours. The total length is 20,000 miles.

The **Arctic Ocean** washes the northern shores of Russia and Norway, the largest opening being the **White Sea**. In this ocean lie the islands of **Spitzbergen** and **Nova Zembla**. **North Cape** and **Nordkyn** are two capes in the north of Norway.

The **Atlantic Ocean** washes the western shores of Europe. The coast of Norway is broken up into long and deep inlets called *fiords*. Off the coast are the **Lofoden Islands**. The **Naze** is the most southerly point of Norway.

2. The **Baltic Sea** is approached by two wide channels, called the **Skagerack** and **Cattegat**, and entered by three straits—the **Sound**, the **Great Belt**, and **Little Belt**. The Baltic washes the shores of *Sweden*, *Russia*, *Germany*, and *Denmark*, and includes the **Gulfs** of **Bothnia**, **Finland**, and **Riga**. Owing to the great quantity of fresh water poured into it, its waters are very brackish. It is also frozen for several months in the year. The chief islands are **Zealand**, **Funen**, **Laaland**, and **Falster** (forming part of Denmark), **Bornholm** and **Gothland** (Sweden), and **Aland Islands** (Russia). The chief ports of the Baltic are *Stockholm*, *St. Petersburg* on the Neva, *Riga* on the Dwina, *Reval*, *Stettin* on the Oder, and *Kiel*.

3. The **North Sea** lies between Norway and Denmark on the east, the Netherlands and Germany on the south, and Great Britain on the west. In the north it is open to the Atlantic. The coasts of Holland and Belgium are very low and sandy, and parts like the **Zuyder Zee** have been over-run by the sea. The waters of the North Sea are very shallow. In the centre is the important fishing area called the **Dogger Bank**. Chief ports : *Hamburg* on the Elbe, *Bremen* on the Weser, *Rotterdam* on the Rhine, *Antwerp* on the Scheldt, *London* on the Thames, *Hull* on the Humber, *Dundee* on the Tay, and *Christiania*.

4. The **English Channel** separates England from France. Across the **Strait**



of **Dover** it is only 21 miles wide. The chief coast features of France are **Cape Griz Nez**, **Cape La Hogue**, and the cape and island of **Ushant**.

The **Channel Islands** lie in the **Bay of St. Malo**. The chief ports on the French coast are *Calais*, *Havre*, and *Cherbourg*.

The **Bay of Biscay** fills the big bend between the west coast of France and the north coast of Spain. The ports on this bay are *Brest*, *Nantes*, *Bordeaux*, and *Bilbao*.

Along the coast of the *Iberian Peninsula* a vessel passes **Cape Ortegal**, **Cape Finisterre** (Land's End), **Cape Roca**, **Cape St. Vincent** and **Cape Tarifa**. The ports of call would be *Corunna*, *Oporto*, *Lisbon* and *Cadiz*.

5. The **Mediterranean Sea**, 2,300 miles long, and nearly one million square miles in area, washes the shores of Southern Europe and Northern Africa. The eastern end, called **The Levant**, washes part of Asia. Like the Baltic, it is almost tideless, its only outlet to the Atlantic being the **Strait of Gibraltar**, only eight miles wide.

Along the coasts of France and Italy are the **Gulf of Lions** (on which is the important seaport of *Marseilles*), the **Gulf of Genoa**, and the **Bay of Naples**.

Off the coast of Spain are the **Balearic Islands** (*Majorca*, *Minorca*, and *Iviza*).

West of Italy are two islands, **Corsica** (belonging to France) and **Sardinia**, which are separated by the **Strait of Bonifacio**.

At the toe of Italy is **Sicily**, the **Strait of Messina** intervening.

The southern extremity of Sicily is called **Cape Passaro**, and the *Peninsula of Italy* terminates in **Cape Spartivento**. Sixty miles south of Sicily lie the **Maltese Islands**.

The **Tyrrhenian Sea** lies west of Italy, and the **Adriatic Sea** on the east separates Italy from the **Balkan Peninsula**.

The **Ionian Islands** are to the west of Greece, the southern part of which forms the **Morea Peninsula**, which is connected with the mainland by the **Isthmus of Corinth** and terminates in **Cape Matapan**.

North of the island of **Candia**, or *Crete*, is the **Ægean Sea**, washing the shores of Greece, Turkey and Asia Minor. The numerous islands form the **Archipelago**, which are divided into two groups: the **Cyclades**, belonging to Europe, and the **Sporades**, belonging to Asia.

The **Dardanelles** is a strait leading into the **Sea of Marmora**, which is connected with the **Black Sea** by the **Bosphorus**.

The **Black Sea** washes the shores of the **Balkan Peninsula**, **South Russia**, and **Asia**. The **Sea of Azov**, east of the **Crimea Peninsula**, is connected with the **Black Sea** by the **Straits of Yenikale**.

#### SURFACE.

1. The surface of Europe consists of a great central plain extending from the **Bay of Biscay** to the **Ural Mountains**. In this tract there are no large areas rising above 600 feet, except the **Valdai Hills** in **Russia**. These, though not very high, form an important watershed. South of the great plain lies a highland region, occupying **Southern Europe** and extending into **Spain**, **Italy** and the **Balkans**. The north-west of Europe is also mountainous in **Scandinavia** and **Scotland**.

The *Southern Highlands* consist chiefly of the **Pyrenees**, the **Alps**, the **Apennines**, the **Carpathians** and the **Balkan Mountains**.



2. The Alps form the highest and most important mountain system in Europe. They encircle the north of Italy, dividing that country from France, Switzerland, and Austria. They have a total length of about 700 miles, with a breadth varying from 80 to 160 miles. About two-thirds of the area of Switzerland is covered with these lofty mountains.

The system is divided into the **Western, Middle and Eastern Alps**.

The **Western Alps** lie between Italy and France, and contain the **Maritime Alps** and **Cottian Alps**, the chief peak being **Mont Cenis**.

The **Middle Alps** are the most lofty and extensive. They consist of two chains—the **Pennine Alps** and the **Bernese Alps**—and contain **Mont Blanc** (15,781 feet), just within the French border, **Mont Rosa** and **Jungfrau**. In the centre of this mountain mass is **Mount St. Gothard**, which forms an important watershed—the Rhine, Rhone, Po, and streams that feed the Danube all flowing from it.

The **Eastern Alps** extend into Austria, and form a confused network of mountains under the name of the **Carnic Alps**. The **Julian** and **Dinaric Alps** run south-east, parallel to the Adriatic Sea.

The Alps are crossed by the **Simplon Pass**, **Great St. Bernard Pass**, **St. Gothard Pass**, and the **Splügen** and **Brenner Passes**. The tunnels are those of **Mont Cenis** ( $7\frac{1}{2}$  miles), **St. Gothard** ( $9\frac{1}{4}$  miles), and **Simplon** ( $12\frac{1}{4}$  miles).

3. The **Pyrenees** form a natural boundary between France and Spain. The range is 350 miles long and has an average height of 11,000 feet. **Maladetta** is the chief peak.

The **Apennines** branch off from the Alps and run down the centre of Italy, sweeping round to the Strait of Messina.

The **Carpathians**, an extensive mountain system, form a great curve 800 miles in length, and enclose Hungary.

The **Balkan Mountains** are really a continuation of the Carpathians. They are a confused mass running in several directions; but the Balkans proper is a range running from east to west between Bulgaria and Turkey.

Other minor ranges are the **Black Forest Range** and **Harz Mountains** of Germany; the **Bohmer Wald**, **Erzgebirge**, **Riesengebirge** and **Sudetes**, enclosing the tableland of Bohemia; the **Auvergne** and **Cevennes Mountains** in France; the **Cantabrian Mountains**, **Mountains of Castile**, **Mountains of Toledo**, **Sierra Morena**, and **Sierra Nevada** in Spain; **Valdai Hills** in Russia.

4. The **Scandinavian Mountains** extend from Cape Nordkyn to the Naze, and contain the **Thulian Mountains** in the south, the **Dovre Feld** in the centre, and the **Kiolen Mountains** in the north. As the mountains reach a height of 8000 feet, there are many snowy peaks and glaciers which feed the innumerable mountain streams of Norway and Sweden.

5. **Plains and Tablelands**.—The **Great Central Plain**, embracing France, Belgium, Holland, Prussia, and the whole of Russia.

The **Plain of Lombardy** in Northern Italy, including the fertile basin of the Po.

The **Plain of Hungary**, watered by the Danube and Theiss.

The tablelands include those of **Bohemia** and **Spain**.

**Volcanoes**.—The chief volcanoes are **Vesuvius** near Naples, **Stromboli** in the Lipari Islands, **Etna** in Sicily, and **Hecla** in Iceland.

#### RIVERS AND LAKES.

Many of the large rivers rise in the low plateau of central Russia. The main watershed of Europe extends from the **Pyrenees**, through the **Alps**



to the *Carpathians*. **Mount St. Gothard** is the centre of this watershed, from which rivers radiate in all directions. Owing to the size of Europe and its irregular coast line, the rivers are not so long as those of other continents. The longest are found in the east, but they flow into unimportant seas or are impeded by obstructions. The most important watercourses for trade and commerce are the **Rhine, Danube, and Elbe**. Many of the rivers of Europe are connected by canals.

## DRAINING THE NORTHERN SLOPE.

<i>River.</i>	<i>Flows through.</i>	<i>Towns.</i>	<i>Flows into.</i>
N. Dwina .. ..	Russia	Archangel	White Sea
Neva .. ..	Russia	St. Petersburg	Baltic Sea
S. Dwina .. ..	"	Riga	"
Vistula .. ..	Russia, Prussia	Warsaw	"
Oder .. ..	Prussia	Breslau, Stettin	"
Elbe .. ..	Germany and Bohemia	Dresden, Hamburg,	North Sea
Weser .. ..	Germany	Bremen	"
Rhine .. ..	Switzerland, Germany, Holland	Basle, Strasburg, Metz, Rotterdam	"
Scheldt .. ..	Belgium	Antwerp	"
Seine .. ..	France	Paris, Rouen, Havre	English Channel
Loire .. ..	"	Nantes	Bay of Biscay
Garonne .. ..	"	Bordeaux	"
Douro .. ..	Spain	Oporto	Atlantic Ocean
Tagus .. ..	"	Lisbon	"
Guadiana .. ..	"	Badajos	"
Guadalquivir .. ..	"	Seville	"

## DRAINING THE SOUTHERN SLOPE.

<i>River.</i>	<i>Flows through.</i>	<i>Towns.</i>	<i>Flows into.</i>
Ebro .. ..	Spain	Saragossa	Mediterranean
Rhone and Saone .. ..	Switzerland, France	Lyons	"
Tiber .. ..	Italy	Rome	"
Po .. ..	"	Turin	Adriatic Sea
Adige .. ..	"	Verona	"
Danube .. ..	Germany, Austria, Balkans	Vienna, Buda Pesth, Belgrade	Black Sea
Dniester .. ..	Russia	—	"
Dnieper .. ..	"	Kiev	"
Don .. ..	"	Taganrog	Sea of Azov
Volga .. ..	"	Astrakhan	Caspian Sea







The *Rhine*, *Rhone*, *Po*, and *Adige* rise in the *Alps*.

The *Danube*, *Elbe*, and *Weser* in the Mountains of Germany.

The *Volga*, *Don*, *Dnieper*, *S. Dwina*, in the great central plain of Russia.

The *Vistula* and *Dniester* in the *Carpathians*.

The **Danube**, second to the *Volga* in length, rises in the *Black Forest Mountains*, in Germany. It is divided into three parts: (a) The **Upper Danube**, from the source to *Pressburg*; (b) The **Middle Danube**, from *Pressburg* to the *Iron Gate* at *Orsova*; (c) The **Lower Danube**, from *Orsova* to the *Black Sea*.



The *Danube* flows in an easterly direction from *Bavaria* into *Austria*, through the towns of **Vienna** and **Pressburg**. It then flows south through **Buda Pesth** to its confluence with the *Drave*, when it again assumes an easterly course. After passing **Belgrade** and **Orsova** it leaves *Hungary* through the *Iron Gate*, a narrow gorge about 70 miles in length. The Lower *Danube* forms the boundary between *Roumania* and *Bulgaria* as far as **Silistria**, where it is forced north; but at **Galatz** it again turns east



and empties itself into the *Black Sea* by three streams. The chief tributaries are the **Inn**, **Drave**, and **Save** on the right bank, all flowing from the Alps. On the left bank are the **March** and **Theiss** (the latter draining Hungary), **Sereth** and **Pruth**. The Danube is an important international waterway, affording communication between many countries, provinces, and towns, and it provides an outlet to the Mediterranean *via* the Black Sea.

The **Rhine** rises in *Mount St. Gothard* and flows through *Lake Constance* and thence to **Basle**, where it enters *Germany*. It passes through the important towns of **Strasburg**, **Mayence**, **Coblentz**, **Bonn** and **Cologne**, into *Holland*, where, uniting with the **Meuse**, a large delta is formed, the various channels forming a network of watercourses. The tributaries on the right bank are the **Neckar** and **Main**. The **Moselle**, on the left bank, rises in France, enters Germany near **Metz**, and joins the river at Coblentz. The banks of the Rhine present some fine river scenery; high hills clothed with forests, or gentle slopes laid out as vineyards or cornfields. The trees of the forests are felled, and floated down the river after being formed into huge rafts. The Rhine is the chief waterway from the North Sea to the interior of Europe.

**Lakes.**—The lakes may be divided into two classes:—

1. **Alpine Lakes.**
2. **Lakes of the Plain.**

The **Alpine Lakes** are surrounded by the most varied and beautiful scenery, and include:—

- (a) **Geneva** (the largest, 230 square miles), **Constance**, **Zurich**, **Lucerne**, and **Neuchatel** in *Switzerland*.
- (b) **Maggiore**, **Garda**, and **Como** in *Italy*.
- (c) **Balaton** or **Platten See** in *Austria*.

The **Lakes of the Plain** include those of *Sweden*, *Finland*, and *Northern Russia*. They are very large, and in many cases are but shallow expansions. Their shores are dreary and desolate.

In *Russia* are **Ladoga** (7000 square miles), the largest lake in Europe; **Onega**, **Peipus** and **Ilmen**.

In *Sweden* are **Wener**, **Wetter**, and **Maelar**.

#### CLIMATE.

The climate of Europe is less extreme than countries in the same latitude in North America or Asia. Much of Europe is in the *North Temperate Zone* and in the same latitude as Siberia and British North America, but the climate is not so rigorous. The **Mediterranean Countries** are warm, being sheltered by the southern highlands which, running east and west, keep out the cold winds from the north. **Western Europe** comes under the influence of the *Gulf Stream* and the *Atlantic Ocean*, and has therefore an *insular* climate. The sea-coast of the British Isles, Norway, and Denmark remains open all the year round, while the Baltic Sea and the rivers of Germany and Russia are often frozen. Thus Western Europe has cooler summers and milder winters than Eastern Europe. The climate in the north of Europe is arctic in character, and therefore subject to extremes of heat and cold.

More rain falls in Southern Europe than in its middle portions. The west, owing to its proximity to the Atlantic, has a greater rainfall than the east.



### PRODUCTIONS.

1. **Animal.**—*Wild* animals are rare, except in the great forests, where the *bear, wild boar, wolf, and deer* abound. Among wild birds are the *eagle and vulture*.

The *domestic* animals are most useful, and include the *sheep, goat, ox, pig, horse, ass, dog, and reindeer*.

The *fisheries* are valuable. The chief fish found are the *herring, mackerel, pilchard, cod, tunny, salmon, and sturgeon*.

2. **Mineral.**—Europe has an abundance of minerals. Nearly all the countries have ample supplies of *coal and iron*, especially Great Britain, Belgium, and Germany. *Tin and copper* are found in Cornwall; *salt* chiefly in Great Britain, Austrian Poland, and Russia; *lead* in Great Britain, Spain, and Austria; *quicksilver* in Spain; *sulphur* in Italy. The Ural Mountains contain *gold, silver, and platinum*.

**Vegetable.**—The soil is well watered and very productive.

The principal cereals are *rye and oats* in the north, *wheat* in Central Europe, and *maize and wheat* in the south. The *vine* is cultivated in *France, Germany*, and the countries bordering on the Mediterranean. The *sugar-beet* is grown in France, Belgium, and Germany. *Flax* is produced in Germany and Russia. *Fruits*, chiefly *oranges, lemons, and figs* are grown in Southern Europe, *mulberry trees* are general, and grown for the production of silk. *Timber* is plentiful in Norway, Sweden, and Russia.

### PEOPLE.

The population of Europe now numbers about **400 millions**, being over **100** inhabitants to the square mile. *Belgium* has the densest population for its size, there being nearly 700 to the square mile. Europe is mainly peopled by the **Caucasian** branch of the **Aryan** race from Asia.

There are four divisions:—

**Teutonic** in England, Holland, Norway, Sweden, and Germany.

**Romanic** in France, Italy, Spain, Portugal, and Greece.

**Slavonic** in Russia, Poland, Servia, Bulgaria, and Bohemia.

**Celtic** in Ireland, Scotland, Wales, and parts of Western Europe.

Other races include the **Magyars** of Hungary; the **Basques** of the Pyrenees; the **Turks, Lapps, and Finns**.

The **Roman Catholic** religion prevails in the Southern countries; the **Greek Church** in the Eastern countries; **Protestant** in the Central and Northern countries. The *Turks* are **Mohammedans**.



## XVI. Countries of Europe.

### FRANCE.

**Physical.**—The French Republic is washed by the sea on three sides. It is separated from *Italy* by the Alps, from *Switzerland* by the Jura Mountains, and from *Spain* by the Pyrenees. The *Belgian* and *German* frontiers are protected by a strong line of fortresses.

The centre of the country is hilly, embracing the **Auvergne** and **Cevennes** mountains, the land sloping away to the sea coasts on three sides. The chief rivers are the **Somme** and **Seine** flowing into the *English Channel*, the **Loire**, **Garonne**, and **Dordogne** into the *Bay of Biscay*, and the **Rhone** into the *Gulf of Lions*.

The climate is temperate, but the south is sunny and warm; the west is milder than the east. The productions include the cultivation of the **vine** for *wine* and *brandy*, the **beet-root** for *sugar*, and the **mulberry** for rearing the *silkworm*. **Wheat** is also extensively grown, and **tobacco** is a government monopoly. Of minerals, **coal** and **iron** are widely diffused.

**Political.**—France is divided into 89 Departments. The chief towns include **Paris**, the beautiful capital of France, on the River *Seine*. It is strongly fortified, and has a population nearly reaching three millions. It is recognised as the great centre of fashion and luxury. **Versailles**, ten miles out, is noted for its palace and gardens. **Sevres**, also a suburb, is renowned for its beautiful porcelain. **Lille**, near the Belgian frontier, is a great industrial centre, producing cotton, woollen, and linen goods. **Calais**, **Boulogne**, and **Dieppe** are ports on the *English Channel* connected with railway systems in England. **Rouen**, on the *Seine*, is the chief cotton manufacturing town. It has a splendid cathedral. Its port, **Havre**, trades chiefly with America. **Crecy** and **Agincourt** are the scenes of English victories over the French in 1346 and 1415 respectively. **Cherbourg** and **Brest** are important naval ports. **Nantes** and **Rochefort** are ports on the *Bay of Biscay*.

**Bordeaux**, on the *Garonne*, is the centre of the brandy and claret trade. **Toulouse** manufactures arms. Here Wellington defeated Soult, 1814. **St. Etienne** has large coal and iron works. **Lyons**, at the junction of the *Rhone* and *Saone*, is the centre of the silk industry. Other towns similarly engaged are **Nimes** and **Avignon**. **Toulon** is the naval port on the *Gulf of Lions*. **Marseilles** is the chief commercial port of France. It is connected by lines of steamships with other Mediterranean ports and with the East. **Nice**, in the *Riviera*, is a winter resort. **Monaco** is a small independent principality. **Ajaccio** is the capital of Corsica and birthplace of Napoleon.

The colonial possessions of France are extensive, chiefly in Africa. They are as follows:—

*Africa.*—**Algeria**, **Tunis**, **French West Africa** (*Senegal*, *French Guinea*, *French Soudan*, *Ivory Coast*, *Dahomey*, *French Sahara*), **French Congo**, **Madagascar**, **French Somaliland**.

*Asia.*—**Pondicherry** and **Chandernagore** in India, **French Indo-China** or **Anam**.



*America.*—**St. Pierre** and **Miquelon** off Newfoundland, **Martinique** and **Guadaloupe** in the West Indies, **French Guiana** or **Cayenne**.

*Oceania.*—**Society Islands**, **New Caledonia**, **New Hebrides**, **Loyalty Islands**, **Marquesas Islands**.

### BELGIUM.

**Physical.**—Belgium is the smallest but most populous country in Europe for its size. It is bounded on the *north* by Holland, on the *east* by Germany, on the *south* by France, and on the *west* by the North Sea. The coast-line, 42 miles long, is low, the land being protected from inundation by **dunes** or sand-hills.

The surface is flat, except in the east, where the **Ardennes**, about 2000 feet high, are covered with natural forests. The country is drained by the **Maas** and **Scheldt**, which enter Holland. The climate is similar to that of England.

Belgium is rich in **coal** and **iron**, which provide for important manufactures. Agriculture is in a state of perfection, *corn*, *flax*, *hemp*, *beetroot*, and *tobacco* being grown.

**Political.**—**Brussels**, the capital, situated in the centre, has manufactures of carpets, gloves, and lace. **Waterloo**, ten miles to the south, was the scene of Napoleon's last battle, 1815. **Liege** is the "Birmingham" of Belgium, situated in the centre of a large coalfield, and manufactures iron goods, especially firearms. **Namur** and **Mons** are similarly engaged. **Ghent** is the centre of the cotton industry. **Antwerp**, on the Scheldt, is one of the leading ports of Europe. It has large ship-building yards, and extensive foreign trade. **Ostend** is a packet station, having communication with Dover. **Bruges** is an ancient city.

Belgium being a "buffer" state, has been the scene of many important battles, and has been called the "cockpit of Europe." The following have been fought: *Steinkirk* (1692), *Landen* (1693), *Namur* (1695); *Ramillies* (1706), *Oudenarde* (1708), *Malplaquet* (1709); *Fontenoy* (1745); *Ligny*, *Quatre Bras*, *Waterloo* (1815); *Sedan*, on the border (1871).

The King of the Belgians is also ruler of the *Congo Free State*. Belgium has no other foreign possessions.

### HOLLAND.

**Physical.**—Holland, or the **Netherlands** (*Lower Lands*), once included Belgium, but the latter became independent in 1830. The *Grand Duchy of Luxembourg*, a German State, is included in Holland.

Holland is bounded on the *north* and *west* by the North Sea, on the *east* by Germany, and on the *south* by Belgium. The coast line is extremely low and sandy, and is protected by sand dunes and dykes. The **Zuyder Zee** is the result of the encroachment of the sea, the chain of islands to the north (*Texel*, etc.) marking the original coast line. Other districts have been reclaimed from the sea and are called **polders**. They are noted for their fertility.

The chief rivers of Holland are the **Maas**, **Rhine**, and **Scheldt**, their mouths forming a large number of islands. Besides the rivers there are numerous canals. The country has no minerals, but is famous for its farms and dairies, the produce of which is largely exported. Shipbuilding and distilling are the leading manufactures.



**Political.**—The Hague is the capital, being the seat of government. It has been called the "Conference Room of Europe." **Amsterdam**, on the Zuyder Zee, is the largest town. A canal connects it with the North Sea. It is an important commercial port, and is noted for its shipbuilding and diamond cutting industries. **Rotterdam** is a busy seaport on the delta of the Rhine and Maas. **Flushing** has steam packet communication with *Queenborough*, and the **Hook of Holland** with *Harwich*. **Utrecht** is a manufacturing town and possesses a fine university. The treaty which closed the War of the Spanish Succession was signed here, 1713. **Leyden** has a famous university.

The foreign possessions of Holland produce much colonial trade. She owns the greater part of the East Indies, including **Sumatra**, **Java**, **Celebes**, and parts of **Borneo** and **New Guinea**. In South America, part of **Guiana** and the island of **Curacao** off the coast of Venezuela belong to the Dutch.

#### DENMARK.

**Physical.**—Denmark consists of the peninsula of **Jutland** and the adjacent islands of **Zealand**, **Funen**, **Laaland**, **Falster**, and **Bornholm**. The coast line, though flat, is much broken, and includes the large lagoon, **Limm Fiord**. The **Skawe** is a prominent cape. The surface is flat, and the rivers, though numerous, are small. No minerals are found, agriculture being the chief employment of the people, the crops including *rye*, *oats*, and *barley*. Dairy work is also pursued, *butter*, *eggs*, and *cheese* being exported.

**Political.**—**Copenhagen**, on the island of Zealand and the Sound, is the capital and chief port. Nelson defeated the Danes here in 1801. **Elsinore** is a fortified town commanding the entrance to the Sound. **Odense** is the chief town of Funen.

Denmark also owns the **Faroe Islands**, 200 miles north-west of the Shetland Islands, and **Iceland**. The latter is noted for its volcanoes and geysers. Other foreign possessions include **Santa Cruz**, **St. Thomas**, and **St. John** in the West Indies, and the west coast of **Greenland**.

#### SWITZERLAND.

**Physical.**—Switzerland has no sea coast and is the most mountainous country in Europe. It is bounded on the *north* by Germany, on the *west* by France, on the *south* by Italy, and by Austria on the *east*.

In the south is the **Alpine System**, consisting of the **Pennine**, **Lepontine**, and **Bernese Alps**, and the **Jura Mountains** are on the western frontier. Between the two lies the **Swiss Plateau**, studded with beautiful lakes, the largest of which are **Geneva**, **Constance**, **Zurich**, and **Lucerne**. The sources of the **Rhine** and **Rhone** are in **Mont St. Gothard**. The **Aar** is a feeder of the Rhine, the **Inn** flows into the Danube, and the **Ticino** into the Po.

The climate varies, the elevated parts being colder than the valleys, where the **vine** grows freely. Switzerland is chiefly a pastoral country, herds of cattle and goats being bred, and dairy produce largely exported. The manufactures are numerous and varied.

**Political.**—**Berne**, on the Aar, is the capital and the seat of the Federal government. **Zurich**, the largest town, manufactures silk. **Geneva** stands on the Rhone where it leaves Lake Geneva, and has manufactures of jewellery and watches. **Basle**, on the Rhine, near the frontier of Germany,



is an important railway centre. It also makes silk ribbons. **Lausanne, Lucerne, Davos, Interlaken,** and the **Engadine** are much frequented by tourists.

In spite of great difficulty, engineering skill has overcome the natural defences of Switzerland. Communication with the neighbouring countries has been made by the construction of roads and railways, the former over high passes and the latter through tunnels of great length. The railway from Basle to Milan passes through the **St. Gothard Tunnel**. The **Simplon Tunnel**, recently completed, will allow of an alternative route from Paris through Lausanne to Milan, making the journey to Brindisi 125 miles less than the route through the Mont Cenis tunnel.

Switzerland is a **Federal Republic**, each **canton**, owing to geographical isolation, having its own separate constitution.

### THE GERMAN EMPIRE.

**Physical.**—The German Empire is made up of the **Kingdoms of Prussia, Saxony, Bavaria, and Wurtemberg**, and twenty-two other States, the largest of which are **Baden, Hesse, Mecklenburg-Schwerin, and Alsace-Lorraine**. At the head of this confederation is the King of Prussia, who is also German Emperor or Kaiser.

**Physical.**—The German Empire is bounded on the *north* by the North Sea, Denmark, and the Baltic; on the *south* by Switzerland and Austria; on the *east* by Russia, and on the *west* by France, Belgium, and Holland.

The sea-coast is low and sandy, the waters near the shore are shallow, and there are few good harbours. The land-locked lagoons on the Baltic coast are called *haffs*.

The northern part of Germany forms part of the **Central Plain** of Europe. The centre and south consist of a tableland interspersed with ranges of mountains. The **Hartz Mountains** lie south of *Hanover*. The **Bavarian Alps** are in the south. The **Bohmer Wald, Erz Gebirge, Riesen Gebirge** are on the frontiers of *Bohemia*. In the east are the **Black Forest, Vosges, and Jura Ranges**.

The chief rivers are the **Rhine, Weser, and Elbe** flowing into the *North Sea*, and the **Oder and Vistula** flowing into the *Baltic*. The **Danube** drains the south and flows east into *Austria*. The **Rhine and Elbe** are the chief waterways of the country.

The climate varies; the northern shores are damp and foggy, while the southern valleys are warm. The east, too, is colder and drier than the west.

Germany is rich in minerals, exporting large quantities of *coal* and *iron*. The chief coal-fields lie near the lower basin of the Rhine, in Saxony and Silesia. *Zinc, lead, salt, copper, and silver* are also produced. The northern plain is fertile, *rye, oats, wheat, barley, and flax* being cultivated. The *vine* flourishes in the southern districts along the Rhine.

Germany has made rapid progress in the development of her manufactures, and as an industrial country now ranks next to Britain. The chief manufactures are *woollen, linen, cotton, and silk goods, iron and steel, beet-sugar, glass, earthenware, pianos, toys, and beer*.

**PRUSSIA** forms two-thirds of the German Empire. It is divided into thirteen provinces. **Berlin** is the capital of Prussia and the German Empire.



It contains nearly two million inhabitants, and is a great industrial centre. Owing to its central situation it has important communication with eastern and western Europe. **Potsdam** and **Charlottenburg** are suburbs, the former being a large military station. **Magdeburg**, on the Elbe, has a strong fortress. **Breslau**, on the Oder, manufactures woollen and linen goods. It is the capital of Silesia. **Danzig**, **Memel**, **Konigsberg**, and **Stettin** are ports on the Baltic, exporting grain, flax, and timber. **Tilsit**, on the Niemen, is famous for the treaty between Napoleon and Alexander I. of Russia, 1807. **Barmen**, **Elberfeld**, and **Dusseldorf** in the west are noted for their textile manufactures, chiefly cotton and linen. **Aix-la-Chapelle** makes woollen goods and has mineral springs. Treaty 1748. **Crefeld** is noted for its silk industry. **Essen** contains the famous Krupp gun-works. **Cologne**, on the Rhine, is a railway centre, has a famous cathedral, and makes eau-de-cologne. **Frankfort-on-the-Main**, in western Germany, has a large banking business. **Frankfort-on-the-Oder** is noted for its fairs. **Coblentz**, at the junction of the Rhine and Moselle, is an industrial town. Opposite it is the famous fortress of **Ehrenbreitstein**. **Kiel** is the naval port on the Baltic, connected with the North Sea by the Kaiser Wilhelm Canal. **Wilhelmshaven** is the naval port on the North Sea. **Gottingen** and **Bonn** are university towns.

**SAXONY** lies between Prussia and Bohemia. It is the most densely populated state of Germany. **Dresden**, on the Elbe, is the capital, and has a fine collection of works of art. The famous china is made at **Meissen**, 15 miles away. **Chemnitz** is the centre of the cotton industry. **Leipzig** is famous for its fairs and book trade. It has an important university. Napoleon was defeated here in 1813.

**BAVARIA** ranks next to Prussia among the German States, and lies in the south-east. The capital, **Munich**, is on the Isar. It has fine buildings, a large university, and many breweries. **Nuremberg**, an ancient town, is noted for its toys and watches. **Blenheim** (1704) and **Dettingen** (1743) were the scenes of famous British victories.

**WURTEMBERG** lies between Bavaria and Baden. **Stuttgart** on the Neckar, is the capital, which has a large printing and publishing trade. **Ulm**, on the Danube, has a strong fortress. Victory of Napoleon, 1805.

**ALSACE-LORRAINE** lies west of the Rhine, and was taken from France in 1870. **Metz**, on the Moselle, has a strong fortress. **Strasburg**, on the Rhine, has considerable trade and a famous cathedral.

**Hamburg**, **Bremen**, and **Lubeck** are the Free Cities of Germany. The former is the greatest seaport on the continent. It owes its importance to its nearness to England, and to its position at the mouth of the Elbe. It trades chiefly with Britain and the United States.

The colonial possessions of Germany have all been acquired during the last thirty years. In *Africa* she has **German South-West Africa**; **German East Africa**; the **Cameroons** and **Togoland** on the *Gulf of Guinea*.

In *China* Germany has **Kiao-chau**, and in the *Pacific*, part of **New Guinea**, the **Bismarek Archipelago**, the **Marshall**, **Caroline**, and **Ladrone Islands**, and parts of the **Samoa** and **Solomon Islands**.

#### THE AUSTRO-HUNGARIAN EMPIRE.

Austria-Hungary consists of the **Austrian Empire**, the **Kingdom of Hungary**, and the provinces of **Bosnia** and **Herzegovina** in the south. The



whole country is ruled by the Emperor of Austria, who is also King of Hungary, but each State has its own constitution.

**Physical.**—Austria is bounded on the *north* by Germany and Russia, on the *east* by Russia, on the *south* by Roumania, Servia, and Montenegro, on the *west* by Bavaria, Switzerland, Italy, and the Adriatic Sea. Austria has only a small strip of sea-coast along the Adriatic. The surface consists of an extensive plain encircled by the **Carpathian Mountains**. The south-west and west (the Tyrol) are very mountainous, containing the **Rhœtian, Noric, Julian, and Dinaric Alps**, the chief peak being **Ortler Spitz**. The **Plateau of Bohemia** in the north-west is enclosed by mountains.

The country is drained by the **Danube** and its tributaries—the **March, Theiss, Drave, and Save**. The northern provinces contain the upper courses of the **Dniester, Vistula, and Elbe**. **Balaton or Platten See** is the only lake of importance.

Austria has very warm summers, but the winters are cold. It is one of the richest countries in Europe for minerals, producing *gold, silver, quick-silver, coal, iron, lead, and salt*. *Wheat and maize* grow in Hungary, which is extremely fertile, the *sugar-beet, hops, vine, and tobacco* also being produced. The manufactures are not so important; they comprise *linen, cotton, and woollen goods, glass, and paper*.

**Industries and Towns.**—**Vienna**, the capital of Austria, is situated on the right bank of the Danube. It is a handsome city, containing a valuable collection of paintings and other art treasures. **Buda-Pesth**, the capital of Hungary, is situated on both sides of the Danube. **Prague** is the capital of Bohemia, and has a university. **Trieste** is the chief port of Austria, standing at the head of the Adriatic. It is the headquarters of the Austrian-Lloyd Shipping Company. **Fiume**, to the south-east, is the Hungarian port. **Lemberg** is the capital of Galicia. **Cracow**, the ancient capital of Poland, is noted for its salt mines. **Brunn** makes woollen goods. Near it is **Austerlitz**, where Napoleon defeated the Austrians in 1805. **Pressburg**, on the Danube, was the former capital of Hungary. **Tokay**, on the Theiss, produces wine. **Gratz**, on the Drave, is the capital of Styria.

The provinces of Bosnia and Herzegovina, which formerly belonged to Turkey, were in 1878 occupied by Austria. **Bosna-Serai** is the chief town.

#### RUSSIA.

European Russia occupies about two-thirds of Europe, and is governed by the Czar, whose power is almost despotic.

**Physical.**—Russia is bounded on the *north* by the Arctic Ocean, on the *west* by the Baltic Sea, Germany and Austria, on the *south* by Roumania, the Black and Caspian Seas and the Caucasus Mountains, and on the *east* by the Ural Mountains and Ural River.

Russia has little coast, and the Baltic and Arctic seas are frozen over for several months in the year. Its surface is an immense flat plain, the **Valdai Hills** being the only elevation. The south is very fertile; the south-west is covered by grassy "**steppes**," while the northern parts consist of frozen wastes called **tundras**.

The Russian rivers are slow, but many are frozen for a greater part of the year. The **Dwina** flows into the White Sea, the **Neva** drains **Lakes Ladoga and Onega**. The **Dwina, Niemen, and Vistula** flow into the Baltic. The **Dniester and Dnieper** fall into the Black Sea, the **Don** into the Sea of



Azov, and the **Volga** (the largest river in Europe) and **Ural** into the Caspian Sea. Finland has many lakes.

The southern parts of Russia are warm, the northern parts cold, but the whole country is subject to great extremes of temperature. Russia produces large quantities of *wheat* and *rye*, much of the former being exported to England. *Flax* and *beetroot* are also grown. There are valuable forests of *timber* in the north. The minerals are important. Poland contains *coal*, *iron* and *salt*. The Ural Mountains produce *gold*, *copper*, *platinum*, and *iron*. In the Caucasus district are wells of *petroleum*.

**Industries and Towns.**—**St. Petersburg**, the capital, stands on the Neva, at the head of the Gulf of Finland. It was founded by Peter the Great. It is a city of wide streets and broad squares. **Kronstadt**, on an island to the west, is a naval arsenal and fortress guarding the approach to St. Petersburg. **Riga**, at the mouth of the Dwina, exports much hemp, flax, and timber to Britain. **Reval** is a naval port on the Gulf of Finland. **Moscow**, in the heart of the country, was the ancient capital of Russia. It has many picturesque buildings, the chief being the **Kremlin**. **Nijni Novgorod**, on the Volga, has a great annual fair. **Archangel**, on the Northern Dwina, is the chief port of Northern Russia. **Warsaw**, on the Vistula, in Poland, is a great railway centre. **Odessa** and **Khersov**, on the Black Sea, are noted wheat ports. **Sebastopol**, in the Crimea, is famous for its siege during the Crimean War, 1854–5. **Kiev** stands in the centre of the Dnieper basin. It has many sacred buildings. **Astrakhan**, at the mouth of the Volga, is the chief port on the Caspian Sea. It is noted for its furs and sturgeon fisheries. **Helsingfors** is the capital of Finland. **Perm** is a mining town west of the Ural Mountains.

### THE BALKAN PENINSULA.

**Physical.**—The Balkan Peninsula derives its name from the Balkan Mountains. The shores of the peninsula are washed on the *west* by the Adriatic and Ionian Seas, on the *south* by the Sea of Marmora, the Dardanelles, and the *Ægean* Sea, and on the *east* by the Black Sea and Bosphorus. The coast of Greece is very irregular, forming deep gulfs, the chief being the **Gulf of Corinth**, which cuts-off the **Morea Peninsula**, connected with the mainland by the **Isthmus of Corinth**. Off the east coast is the **Archipelago**, consisting of two island groups, the **Sporades** and **Cyclades**. **Candia**, or **Crete**, to the south, has recently been granted self government under the suzerainty of Turkey. Off the west coast of Greece are the **Ionian Islands**, the largest of which are **Corfu**, **Cephalonia**, and **Zante**.

The **Balkan Mountains** are a continuation of the Carpathians to the south and east. In the west are the **Dinaric Alps**, which extend into Greece under the name of the **Pindus Mountains**. The chief river is the **Danube**, which drains Servia, Roumania, and Bulgaria. The **Maritsa** flows into the *Ægean* Sea.

**SERVIA** lies west of Bulgaria and south of Hungary, from which it is separated by the Danube. It has no sea-coast. The industries are almost entirely pastoral and agricultural. *Maize* and *prunes* are largely grown, and *swine* are reared. The capital is **Belgrade**, at the junction of the Save and Danube. It is an important railway centre.

**ROUMANIA**, north of Bulgaria, occupies the delta and the lower basin of the Danube. The **Carpathians** separate it from Hungary, the **River**



**Pruth** from Russia, and the **Danube** from Servia and Bulgaria. The northern part is called **Moldavia**, the southern part **Wallachia**, and the eastern part the **Dobrudja**. The soil is very fertile, and large quantities of *wheat* and *maize* are grown. *Salt*, *timber*, and *petroleum* are also exported. *Cattle* and *sheep* rearing is an important industry. **Bucharest** is the capital and seat of government. **Galatz** on the Danube, is the port of Moldavia, and **Jassy** is its capital.

**BULGARIA** has recently overthrown the suzerainty of Turkey, and is now entirely independent. It also includes **Eastern Roumelia**. It is bounded on the north by Roumania, on the east by the Black Sea, on the south by Turkey, and on the west by Servia. *Maize* and *wheat* are grown in the Danube basin. *Tobacco*, *cotton*, *silk*, *wine* and *fruit* are also produced. *Pigs* and *horses* are reared. **Sofia**, in the south, is the capital, and has railway communication with Belgrade and Constantinople. **Varna**, on the Black Sea, is the chief port. **Rustchuk** and **Silistria** are fortresses on the Danube. **Philipopolis** is the capital of Eastern Roumelia.

**MONTENEGRO** is a small and mountainous principality about half the size of Wales. The inhabitants live chiefly by cattle rearing. The capital is **Cettinje**, and **Dulcigno** is the chief port.

**TURKEY** lies to the south of the above States. Owing to bad government the peasants are poor and ignorant, roads are bad, agriculture is neglected, and there are no important industries. Those worthy of note are articles in *morocco leather*, *cotton* and *silk goods*, and the manufacture of *attar of roses*. Fruits, chiefly *figs* and *raisins*, are exported. *Iron* and *lead* are abundant, but the mines are not worked.

**Constantinople** is the capital, on the Golden Horn, an inlet connected with the Bosphorus. The city, with its minarets and gilded domes, has a magnificent appearance. It is a great emporium for Eastern goods. **Salonica**, on a gulf of the same name, is the second seaport of Turkey. **Gallipoli**, on the Dardanelles, is the chief naval station. **Adrianople**, on the Maritsa inland, is a place of great military importance. The ruler is called the Sultan. A form of constitutional government now exists.

**GREECE** is a small kingdom lying to the south of Turkey. The climate is warm and delightful, its soil is fertile, but neglected. The Greeks are mostly pastoral. Fruits, including the *olive*, *orange*, *lemon*, *vine*, *fig*, and *mulberry*, are grown. *Sponges* are obtained from the sea.

**Athens**, the capital, is situated on the peninsula of Attica. It is renowned for its antiquity, and contains magnificent ruins. **Piræus** is the port of Athens. **Corinth** and **Sparta** are ancient towns. **Navarino**, in the south-west, was the scene of a naval battle, 1827. **Patras** exports currants. **Syra** is an important port in the Cyclades. **Nauplia** is the naval port.

#### ITALY.

**Physical.**—Italy is bounded on the *north* by Austria and Switzerland, on the *north-west* by France, on the *south-west* and *south* by the Mediterranean Sea, on the *east* by the Adriatic Sea. The coast line is extensive, very few places being more than 60 miles from it. The islands of **Siilly** and **Sardinia** belong to Italy.

The surface of Italy may be divided into (1) the **Plain of Lombardy** in the north, which is enclosed by the **Alps**, and (2) the **Apennine Mountains**, which traverse the whole length of the peninsula. The former is very



fertile, being drained by the rivers **Po** and **Adige**. Here are also the three beautiful lakes—**Maggiore**, **Garda**, and **Como**. The **Arno** and **Tiber** flow into the Mediterranean from the western slopes of the Apennines. A great plain, very unhealthy from the presence of malaria, stretches along the western coast south of Florence. Near Naples stands the volcano **Vesuvius**, and on the north-east of Sicily is **Etna**.

Italy, being protected by the Alps, and adjacent to the sea, has a warm climate. The southern districts are subject to the *sirocco*, a sultry wind from Africa. The vegetation of Italy embraces the *vine*, *olive*, *fig*, and *mulberry* among the fruits; *wheat*, *maize*, and *rice* are cultivated in the basin of the Po. The south of Italy yields *sulphur*. **Elba** furnishes *iron-ore*, and **Carrara** is renowned for its fine *marble*.

**Industries and Towns.**—**Rome**, the capital, and the most famous city in the world, contains splendid ruins. It is noted for its matchless arts, its cathedral Church of St. Peter, and the Vatican, the residence of the Pope. **Civita Vecchia** is the port of Rome. **Naples** is the largest city in Italy. The buried cities of **Pompeii** and **Herculaneum** are close to the bay. **Milan** is the capital of Lombardy, with a famous cathedral. It is an important railway and industrial centre, being the centre of the silk trade. **Turin**, on the Po, is close to the Mont Cenis tunnel. It has manufactures of cotton and silk, and a large university. **Genoa** is the leading port of Italy. Columbus was born here. **Spezzia** is a naval port. **Pisa** is noted for its leaning tower. **Leghorn**, a port, is engaged in straw plaiting. **Florence**, on the Arno, contains fine collections of paintings and sculpture. **Bologna** has a very old university. **Venice** is built on a number of islets at the head of the Adriatic. During the Middle Ages it was a thriving commercial town. It has splendid buildings and art treasures. **Verona**, on the Adige, has a strong fortress. **Ancona**, on the Adriatic, is a flourishing sea-port. **Brindisi**, on the coast of the Adriatic, is an important packet station on the overland route to India. **Palermo** is the capital of Sicily; **Messina**, in the north-east, has lately been destroyed by an earthquake. **Cagliari** is the chief town in Sardinia.

The foreign possessions in Africa include (1) **Eritrea**, which lies north-east of Abyssinia and along the Red Sea coast. The chief town is **Massowah**. (2) **Italian Somaliland**, a protectorate extending along the north-east coast.

### SPAIN AND PORTUGAL.

The peninsula includes the countries of Spain and Portugal. It is sometimes called the **Iberian Peninsula** or **The Peninsula**.

**Physical.**—The Peninsula is bounded on the *north* by France and the Bay of Biscay; on the *west* by the Atlantic Ocean; on the *south* by the Atlantic and Mediterranean, on the *east* by the Mediterranean.

The surface consists of an immense tableland, with an average elevation of about 2000 feet, traversed by high ranges of mountains called *sierras*, running parallel to each other, across the breadth of the peninsula. The principal ranges are: the **Pyrenees**, between France and Spain; the **Cantabrian Mountains**, **Castile Mountains**, **Mountains of Toledo**, **Sierra Morena**, and **Sierra Nevada**. The rivers, with one exception, flow westward between these ranges, through deep and rocky channels, which render them unfit for navigation at a distance from the sea. They are the **Douro**,



**Tagus, Guadiana, and Guadalquivir.** The **Ebro** drains the north-eastern part of the peninsula, flowing into the Mediterranean.

The climate is varied, but on the whole is warm, dry, and healthy. The north is temperate, the centre has scorching summers and severe winters owing to a deficient rainfall, and the south is very warm. The chief minerals of Spain are *lead* and *quicksilver*. *Iron* and *copper ore* is exported to Swansea to be smelted. Agriculture is in a backward state. *Wheat*, *maize*, and *rice* are grown, and in the south the *vine*, *olive*, *orange*, and *tobacco* exist. The *cork* tree grows in Spain and Portugal, and *esparto grass* is useful for the manufacture of paper.

**Industries and Towns.**—**Madrid**, on the *Manzanares*, a tributary of the Tagus, is the capital. It has extremes of climate. **Barcelona** is the capital of Catalonia and the chief port of Spain on the east coast. **Bilbao**, **Santander**, and **San Sebastian** are ports on the Bay of Biscay. **Saragossa**, on the Ebro, has a famous cathedral and has undergone several sieges. **Corunna** is a busy port in the north-west. Here Sir John Moore was killed, 1809. **Salamanca** has a university which was famous in the Middle Ages. **Toledo** was once noted for its sword manufacture. **Valencia**, a port on the east coast, exports silk and fruit. **Seville**, on the Guadalquivir, is the capital of Andalusia. It has a fine cathedral and large tobacco factories. **Cordova**, higher up the river, was the early capital of the Moors. It is noted for its leather. **Granada** is famous for the Alhambra and other Moorish specimens of architecture. **Cadiz** is an ancient town, a busy wine port, and is strongly fortified. **Xeres** produces sherry wine. **Malaga**, on the south coast, exports wine and raisins. **Gibraltar**, in the south, belongs to England. It is strongly fortified. **Ceuta**, opposite Gibraltar on the African coast, belongs to Spain. **Algeciras** is a port near Gibraltar. The **Balearic Islands** belong to Spain, and include **Majorca**, **Minorca**, and **Iviza**. The **Canary Islands**, off the north-west coast of Africa, form a province of Spain: the largest is **Teneriffe**. **Andorra** is a small republic in the Pyrenees.

**Lisbon**, on the Tagus, is the capital of Portugal. It has a splendid harbour. It was destroyed by an earthquake in 1755. **Oporto**, at the mouth of the Douro, has great trade in wine. **Coimbra** has a university. **Setubal** is a seaport, exporting wine, sardines, oranges, and cork. It also manufactures salt.

Places of historical interest during the Peninsular War: *Vimiera*, *Cintra* (1808); *Corunna*, *Talavera* (1809); *Busaco*, *Torres Vedras* (1810); *Fuentes d'Onoro*, *Albuera*, *Barossa* (1811); *Ciudad Rodrigo*, *Badajos*, *Salamanca* (1812); *Burgos*, *Vittoria*, *Pampluna* (1813).

**Foreign possessions.**—Spain has very few now, only a strip of **West Africa**, and the island of **Fernando Po** in the Gulf of Guinea.

The Portuguese have extensive possessions. The most valuable are **Angola**, in West Africa, **Portuguese East Africa**, the **Cape Verde**, and other African islands. **Goa** and **Diu** in India, **Macao** in China, and part of **Timor** in the Malay Archipelago. The **Azores** in the Atlantic and the **Madeira Islands** off the north-east of Africa, are included in Portugal.

#### NORWAY AND SWEDEN.

Norway and Sweden occupy the **Scandinavian Peninsula**. The two countries were united under one ruler in 1814, but in 1905 Norway broke the union and chose her own sovereign.



**Physical.**—The peninsula is bounded on the *north* by the Arctic, on the *east* by Russia, the Gulf of Bothnia, and the Baltic, on the *south* by the Baltic, the Sound, the Kattegat, and Skagerack, on the *west* by the Atlantic. The coast, especially on the west, is indented by narrow and deep *fiords*, skirted by many rocks and islets. The coast of Sweden, on the east, is frozen for several months, while that of Norway is always open.

A chain of mountains runs from the extreme north to the *Naze* in the south. The northern part is called the **Kiolen Mountains**, the centre **Dovre Feld**, and the southern range **Thulian Mountains**. The general slope of Sweden is towards the Baltic, and the country is drained by innumerable rapid rivers, the largest being the **Dal** and **Gota**. The **Glommen** is the largest river of Norway, flowing into Christiania Fiord. The low land in the south of Sweden contains Lakes **Wener**, **Wetter**, and **Maelar**.

The summer is short and warm, while the winter is long and severe. There are valuable forests of *pine* and *fir*, and rich deposits of *copper* and *iron*. The *fisheries* are also important. Agriculture is only carried on in the warm southern districts. **Timber**, **fish**, **iron**, **matches**, and **wood-pulp** are the chief exports.

**Industries and Towns (NORWAY).**—**Christiania**, the capital, is situated on a splendid harbour at the head of Christiania Fiord. It is the chief commercial town, and has a university. **Bergen**, on the west coast, is a large fishing town. **Trondheim**, on a splendid fiord, has an ancient cathedral, where the kings of Norway are crowned. **Hammerfest** is the most northerly town in Europe.

**SWEDEN.**—**Stockholm**, at the entrance to Lake Maelar, is the capital. Being built on rocky islands, it is sometimes called "The Venice of the North." **Gothenburg**, in the south-west, is the second commercial port of Sweden. **Upsala** has an ancient university. **Carlsrona**, in the south-east, is the principal naval station. **Malmo** is a seaport on the Sound.

#### QUESTIONS.

1. How do you account for the extensive coast line of Europe? Name the countries washed by the Baltic, and the chief rivers that flow into it.
2. Describe the route of a coasting steamer from St. Petersburg to Cadiz, and name the chief capes, countries, and ports that would be passed. What classes of goods would the cargo probably consist of on the outward and homeward voyages?
3. Describe a coasting voyage from Lisbon to Odessa, naming the various physical features passed and the ports likely to be visited.
4. Describe the Mediterranean, naming (a) the countries bordering it, (b) the chief ports, and (c) reasons for its commercial importance.
5. Name the chief peninsulas and inland seas of Europe. Give (a) the terminating cape in each peninsula, and (b) the strait by which the sea is entered.
6. Enumerate the islands and island groups in the Mediterranean, and state to what countries they belong. What rivers flow into this sea?
7. What and where are the following: Apennine, Messina, Biscay, Bothnia, Spitzbergen, Marmora, Harz, Ushant, Balaton, Rhine, Jutland, Zuyder Zee, Ladoga, St. Gothard, Vesuvius, Yenikale, Adriatic, Levant, Finisterre, Saone, Ebro, Morea, Corinth, Roca, Crete, Pyrenees, Crimea,



Dardanelles, Maggiore, Erzgebirge, Corfu, Bonifacio, Maladetta, Cenis, Azores, Faroe, Lipari ?

8. Compare the surface of central and southern Europe. Give the situation of the chief mountain ranges.

9. Describe briefly the great watershed of Europe and its mountain chains. What are the chief rivers draining its northern slopes ? Name the countries through which they flow, with a seaport at the mouth of each.

10. Write a description of the Alps, mentioning the chief ranges, peaks, passes, tunnels, and places of resort.

11. What countries are drained by the following rivers ? Give a town on each and state the sea into which each flows : Elbe, Tagus, Po, Rhone, Seine, Don, Glommen, Danube, Ebro, Scheldt, Volga, Oder, Mersey.

12. Describe, with a sketch, the River Rhine or Danube, naming the countries through which it flows, the chief towns on its banks, and reasons for its commercial importance.

13. Write an account of the mountain and river systems of France.

14. Enumerate the chief mountain ranges and rivers of Spain and Portugal. Give the general direction of each river, and name a town on each.

15. Classify and name the lakes of Europe. How do those of Russia differ from those of Switzerland ?

16. What are the different characteristics of continental and peninsular Italy ? Write a general description of the Plain of Lombardy.

17. Give, as accurately as you can, the geographical position occupied by each of the following countries, and name the capital of each : Portugal, Hungary, Holland, Bavaria, Switzerland, Bulgaria, Greece, Norway, Prussia, Montenegro, Roumania.

18. How does the climate of Europe compare with that of Asia ? Account for the difference in climate between London and Vladivostock, and Rome and New York.

19. Name countries of Europe which produce coal and iron, lead, salt, gold, wheat, wine, timber, silk, cork, and tobacco.

20. Name the various races of Europe and the countries they inhabit. Where are the Magyars, Finns, Basques, and Eskimos to be found ?

21. Classify the countries of Europe under the heads of Empires, Kingdoms, Republics, and Principalities. Name the "Great Powers."

22. Draw a map of France showing the direction of the chief rivers. Mark the Pyrenees, Alps, Gulf of Lions, Paris, Marseilles, Lyons, Rouen, Calais, Havre, Cherbourg, Brest, Bordeaux, Toulon, Lille, Nantes, and the Channel Islands. Select four of the above towns, and say for what each is noted.

23. Compare Holland and Belgium in regard to climate, industries, and foreign possessions. Name the chief towns and ports in each country.

24. Describe the surface of Switzerland, and state what countries border it. What are the chief occupations of the people ? Describe the chief towns and the system of government.

25. Of what does the Kingdom of Italy consist ? What countries and mountains are on its borders ? Enumerate its principal rivers and lakes, and name the chief seaport towns.

26. Draw a map of the Iberian Peninsula. Mark four rivers, four



mountain ranges, four capes, four inland and four seaport towns, and four battlefields. Write a few words about the climate and productions.

27. Describe the two great natural divisions of Germany. Name the chief rivers, stating where they rise and the sea into which each flows. Give a port at the mouth of each.

28. Name the principal independent states that form the German Empire. When and under what circumstances was this confederation formed?

29. Locate six of the largest manufacturing towns of Germany, naming their chief productions. Give some reasons for the rapid expansion of German trade.

30. Draw a map of Russia, showing its chief rivers, lakes, and mountains. Insert four seaport towns and four inland towns, and the position of the steppes. Give a list of the exports.

31. Describe the boundaries and surface of Austria-Hungary. What drawbacks are there to its foreign trade, and what are its commercial outlets? Locate four of its principal towns, and say for what they are noteworthy.

32. What kingdoms are included in the Scandinavian Peninsula? Write an account of the peninsula under the heads of surface, drainage, mineral, and vegetable wealth, exports, and chief towns.

33. What countries does the Balkan Peninsula comprise? Give the capital of each, and describe the characteristics of the various races that inhabit this part of Europe.

34. Locate the following towns, and state what particular industry is connected with each: Lille, Cologne, Prague, Astrakhan, Seville, Lyons, Leghorn, Dresden, Geneva, Cracow, St. Etienne, Bergen, Liege, Amsterdam, Brussels, Essen, Basle, Barcelona, Leipzig, Oporto, Florence, Valencia, Archangel, Nuremburg, Nijni Novgorod, Milan, Chemnitz, Munich, Rouen, Frankfort.

35. Give the situation of each of the following ports and the nature of its trade: Hamburg, Naples, Cherbourg, Odessa, Kiel, Riga, Marseilles, Cadiz, Constantinople, Reval, Brest, Genoa, Trieste, Antwerp, Stockholm, Spezzia, Bilbao, Rotterdam, Varna, Venice, Lisbon, Bremen, Bordeaux, Batoum, Toulon, Valetta, Patras, Havre, Flushing, Sebastopol, Brindisi, Cronstadt.

36. Where, and for what noted, are Monaco, Capri, Belgrade, Buda Pesth, Granada, Copenhagen, Moscow, Sofia, Turin, The Hague, Strasburg, Warsaw, Dulcigno, Salonica, Smyrna, Fiume, Simplon, Florence, Ostend, Upsala, Hammerfest, Wilna, Scutari, Palermo, Andorra, the Tyrol, Elsinore, Riviera, the Iron Gate, the Dobrudja.

37. Locate the following and give some historical fact concerning each: Waterloo, Gibraltar, Jena, Blenheim, Talavera, Dettingen, Corunna, Borodino, Austerlitz, Balaklava, Torres Vedras, Toulouse, Ligny, Metz, Vittoria, Oudenarde, Trafalgar, St. Vincent, Aboukir Bay, Crecy, Leipsig, Milan, Aix-la-Chapelle, Orleans, Copenhagen, Utrecht, Salamanca, Vimiera, Agincourt, Fontenoy, Tilsit, Sebastopol, Versailles, Camperdown, Navarino.

38. Name the colonial possessions of France, Germany, and Portugal.

39. Describe the route taken (a) from Dover to St. Petersburg (by rail), (b) from Dover to Brindisi.



## XVII. *Asia.*

### SIZE AND BOUNDARIES.

Asia is the largest of the continents, and forms the eastern part of the mass of land sometimes called Eurasia. The **length** from Behring Strait to the Suez Canal is 6700 miles, and its **breadth** from Cape Chelyuskin to Cape Roumania is 5300 miles. It contains an area of over 17 million square miles.

Asia is bounded on the *north* by the Arctic Ocean, on the *east* by the Pacific, on the *south* by the Indian Ocean, and on the *west* by the Red Sea, the Mediterranean, the Black Sea, and Europe.

### COAST FEATURES.

The *North Coast* is low and uninhabited, being ice-bound for the greater part of the year. **Cape Chelyuskin** is the most northerly point, and at the eastern end is **East Cape**. Here **Behring Strait** separates Asia from America. The coast is indented by the large estuaries of the **Obi** and **Yenesei**.

*East Coast.*—This coast is remarkable for the number of its inland seas, which are enclosed by chains of islands. In the north the **Behring Sea** is enclosed by the **Aleutian Islands**.

The peninsula of **Kamschatka**, ending in **Cape Lopatka**, and the **Kurile Islands** shut in the **Sea of Okhotsk**.

The **Sea of Japan** is within the **Island of Saghalien** and the **Japanese Islands**. The northern part is called the **Gulf of Tartary**. **La Perouse Strait** is between **Saghalien** and **Yezo**. Communication is made with the **East China Sea** by the **Corea Channel**. To the north is the **Yellow Sea**, including the **Gulf of Pe-chi-li**. The two seas are enclosed by the **Loo-Choo Islands**.

The **South China Sea** extends from the island of **Formosa** to **Cape Roumania** at the extremity of the **Malay Peninsula**. It is enclosed by the **Philippine Islands** and other islands of the **East Indian Archipelago**, and includes the **Gulf of Siam** and the **Gulf of Tonquin**. The island of **Hainan** is within the latter, and **Hong Kong** at the mouth of the **Canton River**. The **Sunda Strait** connects the **China Sea** with the **Indian Ocean**, and the **Malacca Strait** leads into the **Bay of Bengal**.

*South Coast.*—The **Bay of Bengal**, in which are the **Andaman** and **Nicobar Islands**, lies between **Burmah** and the east coast of **India**. The island of **Ceylon** is separated from the mainland by **Palk Strait**. The **Gulf of Manaar** intervenes between **Ceylon** and **Cape Comorin**, the southern extremity of **India**.

The **Arabian Sea** forms part of the **Indian Ocean**. The **Persian Gulf** is approached by the **Gulf of Oman** and entered through the **Strait of Ormuz**. The **Gulf of Aden** leads to the **Red Sea** through the **Strait of Bab-el-Mandeb**. Off the west coast of **India** are the **Laccadive** and **Maldive Islands**. **Ras-al-had** is the eastern point of **Arabia**.

The **Red Sea** is 1100 miles long. At its head are the **Gulfs of Suez** and **Akaba**, the **Sinai Peninsula** intervening. The **Suez Canal** is the connecting



channel between the West and East. The **Isthmus of Suez** joins Asia and Africa.

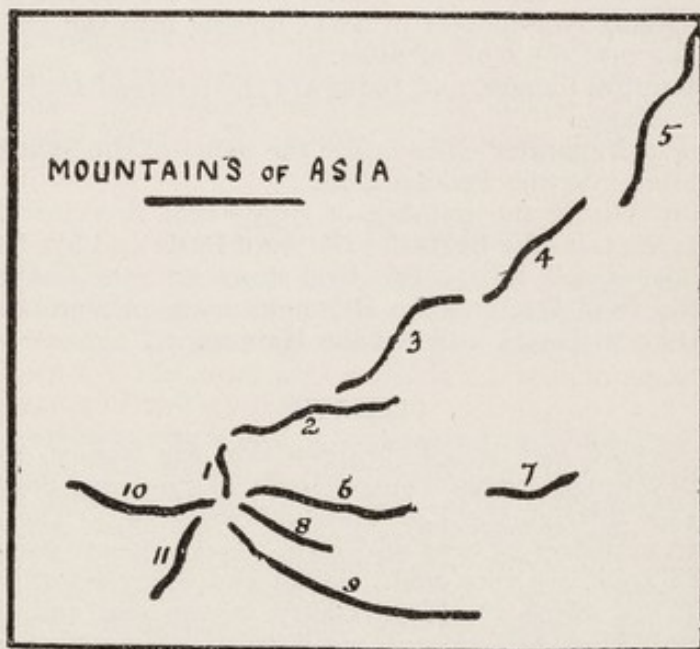
*West Coast.*—The **Levant** washes the coast of Syria. In it lies the island of **Cyprus**. Asia Minor has the **Mediterranean** on the south, the **Ægean Sea**, the **Dardanelles**, the **Sea of Marmora**, and the **Bosphorus** on the west, and the **Black Sea** on the north. In the west it terminates in **Cape Baba**.

The **Caspian Sea** washes **Caucasia** on the west, **Persia** on the south, and **Russian Turkestan** on the east.

### SURFACE.

Asia is noted for its high mountains and lofty tablelands. The mountain ranges branch off from (1) the **Pamir Plateau** (the Roof of the World), which lies to the north of India, between Russian and Chinese Turkestan, at an elevation of about 12,000 feet.

A continuous chain runs to the *north-east*, embracing (2) the **Thian Shan**, (3) **Altai**, (4) **Yablonnoi**, and (5) **Stanovoi Mountains**.



To the *east* are the (6) **Kuen-Lun Mountains**, forming the northern boundary of the **Tableland of Tibet**, and (7) the **In Shan Mountains** on the south-eastern edge of the **Gobi Desert**.

Running *south-east*, along the southern edge of the Tibetan plateau, is the (9) **Himalaya Range**, 1500 miles long. It contains the highest peaks in the world, **Mount Everest** just exceeding 29,000 feet. The **Karakorum Mountains** (8) run parallel to the Himalayas, north of the Indus.

To the *west* extends (the 10) **Hindu Kush Mountains** through Afghanistan, and to the *south-west* the (11) **Suliman Mountains**, between India and Afghanistan, forming the eastern side of the **Iran Plateau**, which occupies the greater part of Persia.

The **Deccan** is a tableland in Southern India, enclosed by the **Ghats** on the east and west.



The **Elburz Range**, south of the Caspian Sea, forms the northern edge of the Iran Plateau.

In Asia Minor are the **Mountains of Armenia**, with **Ararat** (17,000 feet), and the **Taurus Mountains**, close to the Mediterranean coast.

The **Caucasus Mountains** run from the Caspian to the Black Sea at an elevation of 18,000 feet. The **Ural Mountains** are between Europe and Asia.

The whole of Northern Asia is a vast plain, a continuation of the great central plain of Europe. Deserts are found in Mongolia, Arabia, Persia, Syria, and India.

#### DRAINAGE.

From the north-eastern chain, branching from the Pamirs, many rivers flow to the Arctic. The largest are the **Obi**, **Yenesel** (draining **Lake Baikal**), and **Lena**. These large rivers are frozen during the greater part of the year.

Rising in the eastern edge of the central plateau are the **Amur**, **Hoang Ho**, and **Yang-tse-Kiang** (the longest in Asia), flowing into the Pacific, and the **Mekong**, flowing into the Gulf of Siam.

The **Brahmaputra**, **Ganges**, and **Indus** are the rivers of India rising in the Himalaya Mountains.

The **Tigris** and **Euphrates** unite under the name of the **Shat-el-Arab**, and pour their waters into the Persian Gulf.

A feature of Asia is the number of rivers that flow into inland seas. One flows into the salt lake **Balkash**; the **Amu Daria** and **Syr Daria** into the **Sea of Aral**, also a salt lake. The **Ural** flows into the Caspian Sea, the **Jordan** into the **Dead Sea**, and the **Helmund** drains Afghanistan and loses itself in a swamp in Persia, called **Lake Hamun**.

#### CLIMATE.

The *south* part of Asia is hot, being within the tropics, the Tropic of Cancer passing through Arabia, Central India, Burma, and Southern China, and the Equator through the East Indian Archipelago. The *centre* is dry and subject to extremes of heat and cold. The *northern* parts, extending into the Frigid Zone, are very cold. Japan and the coast of China have a temperate climate owing to its proximity to the sea, and the effect of warm currents. Thus Asia experiences a great variety of climate.

Most rain falls in the south and south-east. The rainless tracts are the Gobi Desert, the Arabian and Iranian Plateaus, and a large part of Central Asia.

#### PRODUCTIONS.

**Animals.**—Asia is remarkable for the number and variety of its animals. Among domestic animals the chief are the *camel*, *elephant*, *horse*, *ass*, and *ox*. The wild animals include the *lion*, *tiger*, *leopard*, *hyæna*, *wolf*, *jackal*, and *monkey*. There are birds of brilliant plumage, and many kinds of poisonous snakes. In the north are fur-bearing animals, viz., *bear*, *badger*, *fox*, *wolf*, *ermine*, *sable*, *seal*, *otter*, and *marten*.

**Minerals.**—Asia furnishes most of the important minerals and precious stones. *Gold* and *silver* are found in Siberia; *coal*, *iron*, *lead*, and *copper* in various parts; *tin* in the East Indies; *salt* in India and China; *rubies*



and *sapphires* in Burma and Ceylon; *petroleum* from Baku on the Caspian Sea, and Burma.

**Vegetable.**—The southern countries produce great quantities of *rice*, *millet*, *maize*, and *wheat*. *Rice* is the staple food in these countries. *Tobacco*, *cotton*, *sugar*, *tea*, *coffee*, and *spices* are also cultivated. *Wheat*, *barley*, and *oats* are grown farther north; while near the Arctic Ocean there are only mosses and lichens. In the south are valuable forests of *teak*, *bamboo*, *ebony*, *sandalwood*, and *palms*.

### POPULATION.

It is estimated that more than one half of the people of the world live in Asia, the population reaching nearly 900 millions. The population is densest in China, Japan, and India.

The nations of Western Asia and India belong to the *White* or *Caucasian* race. The *yellow* or *Mongolian* race inhabit the eastern part of Asia. The inhabitants of the Malay peninsula and the East Indies belong to the *Malayan* race.

All the great religions of the world originated in Asia. *Buddhism* prevails chiefly in China, Japan, and Indo-China. *Hinduism* is followed by two-thirds of India. *Mohammedanism* exists in Arabia, Persia, Asia Minor, Afghanistan, and India. *Christianity* is spreading gradually.

### RUSSIA IN ASIA.

Russia in Asia is a continuation of Russia in Europe, and forms more than one-third of the continent of Asia. The principal divisions are **Siberia** in the north, **Russian Turkestan** in Central Asia, and the **Caucasian Provinces** in the south-west. The total area exceeds six million square miles, with only a population of twenty millions.

**SIBERIA.**—Siberia consists of a vast plain extending from the Arctic to the Altai Mountains, which is drained by the **Obi**, **Yenesei**, and **Lena** flowing north, and the **Amur** flowing east. The frozen plains bordering the Arctic are called "tundras." The climate is very severe. The winters are long and very cold, while the summers are short and hot. In the far north the ground remains frozen all the year round. In the south *wheat* and other grains are cultivated, and *cattle* are raised. The mines produce *coal* and *iron*, *lead*, *gold*, *silver*, and *copper*. Many of the people are also engaged in hunting animals for their furs.

The country is being developed by means of the Trans-Siberian Railway, which enters Asia from Moscow, and passes through **Omsk** and **Irkutsk** to **Vladivostock**, the naval station on the Pacific. **Irkutsk**, on Lake Baikal, has become the largest town. The chief trade is in furs. **Tobolsk** is the capital of Western Siberia.

**TURKESTAN.**—Russian Turkestan lies between the Caspian Sea and China, with Siberia on the north and Persia and Afghanistan on the south. It includes the *Trans-Caspian* provinces in the west, and the feudatory states of *Bokhara* and *Khiva*.

The surface is drained by the **Syr Daria** and **Amu Daria** flowing into the Sea of Aral. The heat and cold are extreme, and the soil on the whole is barren. There is very little rain. Where water is abundant crops of



wheat, rice, and cotton are grown, and fruits, such as apples, pears, plums, melons, peaches, apricots, and grapes are plentiful.

The northern parts are inhabited by Tartar tribes, who subsist on the produce of their flocks and herds. Commerce is carried on by means of caravans, the chief route being from Tashkend to Samarkand and Bokhara. Samarkand is also reached by rail from the Caspian Sea through Merv and Bokhara.

**Tashkend** is the capital and the seat of Russian administration. A railway to Orenburg connects it with Moscow and St. Petersburg. **Khiva** is situated in a very fertile oasis. It was renowned for its slave-market. **Bokhara** is a central market for the goods of Persia, Afghanistan, and India. **Samarkand** was the capital of Timur or Tamerlane (the Tartar conqueror of the 14th century). This city is rapidly rising in importance.

**CAUCASIA**.—Caucasia lies between the Black and Caspian Seas. The Caucasus Mountains, 700 miles in length, divide the province into two parts, the southern part being called Trans-Caucasia. The country is mountainous, but the soil is fertile, being well watered. The productions include the vine, mulberry, and cotton plants. **Tiflis**, on the River Kur, is the capital, and is connected by rail with **Batoum**, the chief port on the Black Sea. **Baku**, on the Caspian Sea, has a plentiful supply of petroleum, which is largely exported *via* Batoum. **Kars** is a historic fortress, taken from the Turks. **Erivan**, near Mount Ararat, is the old capital of Russian Armenia.

#### TURKEY IN ASIA.

Turkey in Asia includes the divisions of Asia Minor, Syria, Armenia and Kurdistan, Mesopotamia, and Arabistan or Turkish Arabia. The whole is subject to the Sultan of Turkey.

**ASIA MINOR** is a mountainous peninsula bounded by the Black Sea, the Ægean Sea, and the Mediterranean. The **Taurus Mountains** are in the south and **Mount Olympus** in the north-west. The largest river is the **Kizil Irmak**. Agriculture is backward, but the vine, fig, mulberry, olive, and orange are grown. There are manufactures on a small scale of silk and cotton fabrics, leather, and carpets. The Angora goat, famous for its hair (*mohair*), is bred in the interior. The climate is warm and genial. The country is crossed by caravan routes, which connect Damascus and Bagdad with the ports. **Smyrna**, on the Ægean Sea, is the largest city of Asia Minor, and is an entrepot for the commerce of the Levant. **Scutari**, on the Bosphorus, is a suburb of Constantinople. **Trebizond** and **Sinope** are the chief ports on the Black Sea. **Broussa**, at the foot of Mount Olympus, was the Turkish capital before the capture of Constantinople. **Angora**, in the centre, is engaged in the mohair trade. **Nicosia** is the capital of Cyprus. **Rhodes**, **Samos**, and **Mytilene** are important islands in the Archipelago.

**SYRIA**, including Palestine, occupies the eastern shores of the Mediterranean, and extends from the Taurus Mountains to the border of Egypt, and includes Palestine of sacred history. The country is peopled chiefly by wandering Bedouin Arabs. The **Mountains of Lebanon** extend from north to south. The **Jordan** flows from them to the Dead Sea. The eastern parts of Syria are sandy deserts. The coast regions produce fruits, tobacco, grain, and cotton. Wine and silk are manufactured. **Aleppo** is the chief city of northern Syria. It has extensive bazaars. **Damascus** is one of the



oldest cities in the world, in a district made fertile by the rivers Abana and Pharpar. It is the centre of caravan trade and a great emporium for all the produce of this part of the East. A railway, recently opened, connects it with Mecca. **Beyrout** is the chief port of Syria and is connected by rail with Damascus. **Latakia**, a port noted for its tobacco. **Jaffa** is the chief port of Palestine, and is noted for its oranges. **Jerusalem** is the capital of Palestine, and the sacred city of Christians. It is connected by rail with Jaffa. **Acre** was defended by Sir Sydney Smith against Napoleon in 1799.

**ARMENIA and KURDISTAN**, situated to the south-east of the Black Sea, occupy a high plateau, which is crossed by mountains whose highest peak is **Mount Ararat**. The **Euphrates** flows southward and the **Kur** into the Caspian Sea. On the plateau is **Lake Van**. The Armenians are Christians and the most industrious of the inhabitants of Asiatic Turkey. Fine *carpets* are made and *tobacco* is extensively grown. **Kurdistan**, in the south, is the ancient Assyria; the ruins of Nineveh are on the banks of the Tigris. The Kurds are a nomadic tribe much given to robbery.

**Erzeroum** is the capital of Armenia. It is on the trade route from Persia to the Black Sea.

**MESOPOTAMIA** occupies the Euphrates and Tigris basin south of Kurdistan. The surface is flat, and in ancient times the soil was fertile, but owing to neglect the country is but a desert now. The ruins of **Nineveh** and **Babylon**, once magnificent cities supporting a vast population, are evidence of the former prosperous condition of the country. The **Euphrates** is navigable for steamers to 1000 miles from the sea. The **Tigris** is more rapid than the Euphrates, and steamers can only ascend to Bagdad. About 100 miles from the Persian Gulf the two rivers unite and form the **Shat-el-Arab**. The inhabitants are chiefly wandering Arabs. *Dates* are the chief production. **Mosul**, on the Tigris, is the capital. It was once noted for its fine cloths, called muslins. **Bagdad**, once the capital of the Caliphs, is still an important commercial centre. **Basra** or **Bussorah**, on the Shat-el-Arab, is the port of Mesopotamia. A line of English steamers trade between it and Bagdad.

#### ARABIA.

**Arabia** is a large peninsula in the south-west of Asia, having the Persian Gulf on the east and the Red Sea on the west. Arabia consists of a vast plateau sloping towards the east, which is entirely desert. The desert in the north-west is the ancient *Arabia Petræa* (stony Arabia), the central portion *Arabia Deserta*, and the south-west *Arabia Felix* (happy Arabia). The soil is fertile here, as the mountains of this district arrest enough moisture to supply wells and streams.

The western region of Arabia, called **Arabistan**, is subject to Turkey, and is divided into two provinces, *Hedjaz* and *Yemen*. Turkey also claims the western shore of the Persian Gulf. The Sinai Peninsula is controlled by Egypt, and **Aden** and its Hinterland by the British. **Oman**, on the south-east coast, is ruled by the Sultan of Muscat.

Arabia is one of the hottest countries in the world. The fixed settlers are somewhat civilized, but the wandering tribes, called *Bedouins*, are fierce and cruel. *Dates* form the chief article of food. *Coffee* is grown in the south-west. The country is famous for its breed of *horses*, but the most useful animal is the *camel*. Trade is carried on by means of caravans.

**Mecca** was the birthplace and **Medina** the burial-place of Mohammed.



The former is much visited by pilgrims. **Jeddah**, on the Red Sea, is the port of Mecca. **Sana**, the chief town of Yemen, is situated in the coffee district. **Mocha** was once its port, but the place has been deserted in favour of **Hodeida**. **Aden**, near the entrance to the Red Sea, belongs to England. **Muscat**, the largest town in Arabia, is the capital of Oman and a place of considerable trade. **Bahrein**, an island in the Persian Gulf, is famous for its pearl fishery.

#### PERSIA.

**Persia** is bounded on the north by Trans-Caucasia, the Caspian Sea, and Russian Turkestan; on the east by Afghanistan and Baluchistan; on the south by the Persian Gulf and the Arabian Sea; and on the west by Asiatic Turkey.

The interior is the high plateau of **Iran**, bordered on three sides by mountain chains, which divide it from the low country lying along the shores of the Persian Gulf. In the north is the **Elburz Range** fringing the southern shore of the Caspian Sea. In the north-east and south-east are salt deserts. The country is not well watered, and there are few navigable rivers. The chief is the **Karun**, which joins the **Shat-el-Arab**. In the south-east is the swampy marsh of **Seistan** or **Hamun**.

The climate on the whole is extreme. The shores of the Persian Gulf are very hot and unhealthy. The most fertile portion of Persia is in the west. *Wheat, rice, cotton, sugar, tobacco, wool, and silk* are produced. *Grapes, figs, and the vine* flourish. The famous Persian *carpets* are made by hand. *Shawls, embroidered silks, fire-arms* are also manufactured. *Pearls and turquoises* are included in the exports. The sovereign of Persia is styled the **Shah**, and is almost despotic.

**Teheran**, the capital, is situated on an arid plain to the south of the Elburz Mountains. **Tabriz** is the largest commercial city in Persia, all the trade with Europe passing through the town. **Ispahan** was formerly the capital. It is situated on a fertile plain. **Shiraz** is noted for its excellent wine. **Bushire** is the chief port of Persia, on the Persian Gulf. **Bander Abbas** is a port at the entrance to the Gulf.

Persia may be regarded as a "buffer" state between Russia and India. Russian influence extends along the north of the country, while British interests are confined to the shores of the Persian Gulf.

#### AFGHANISTAN.

**Afghanistan** is bounded on the north by Russian Turkestan, on the east by India, on the south by Baluchistan, and on the west by Persia. It is also a "buffer" state between Russia and India.

The surface consists of high rocky mountains and arid deserts. The **Hindu Kush Mountains** in the north and the **Suliman Mountains** in the east enclose a plateau. The south-west is desert. The rivers flow in three directions. The **Helmund** drains the greater part of the country and flows to **Lake Hamun**. The **Oxus**, or **Amu Daria**, forms the greater part of the northern boundary. The **Kabul** is a tributary of the Indus. The heat is great in summer, and the winters are very cold. Communication with India is maintained by means of the **Khyber Pass** from Kabul to Peshawur, and from Kandahar by the **Bolan Pass** in the south-east. The trade is mainly with India and Russian Turkestan in *horses, fruits, and spices*.



**Kabul**, 165 miles from Peshawur, is the capital and residence of the *Ameer*. Owing to its central position it has much trade. **Kandahar** in the south is 200 miles north-west of **Quetta**. **Herat**, on the north-west frontier, is regarded as the "Key to India," and is strongly fortified. **Ghazni** is a strong fortress near the **Gomul Pass**. **Jellalabad** is at the western entrance to the Khyber Pass.

**Baluchistan** is now under the protection of Britain, the Khan of Kelat being advised in all important matters by the Agent of the Governor General of India. **Kelat** is the capital. **Quetta** is at the head of the Bolan Pass, and is an important British cantonment.

### CHINA.

The **Chinese Empire** is bounded on the north by Siberia, on the east by the Pacific, on the south by the Indo-China Peninsula and India, and on the west by Turkestan. Its area is equal to about one-fourth of Asia, and it has a population greater than any other country, estimated at 400 millions. The principal divisions are **China Proper**, **Manchuria**, **Mongolia**, **Tibet** and **Eastern Turkestan**.

**CHINA PROPER**, in the south-east, is as large as India, and is the most important part of the Empire. It contains the greatest part of the population, and is richest in productions, industries, and trade. It occupies the basins of the four rivers, **Pei-ho**, **Hoang Ho**, **Yang-tse-kiang** and **Si-kiang** (or **Canton**), the whole province being one of the most fertile districts in the world. The climate, though hot in summer and cold in winter, is tempered by moist winds from the sea.

There are important vegetable products. *Wheat*, *maize*, and *millet* are grown in the north, *rice*, *cotton*, and *sugar* in the south, where it is warmer.

The *tea-plant* is the most remarkable production and is grown principally in the south-east. The *mulberry* grows everywhere for the silk industry. Trees produce *wax*, *camphor*, and *varnish*. The mineral productions include *coal*, *iron*, *copper*, *tin*, and *quicksilver*, and there are deposits of *kaolin* or *China clay*. China is noted for its manufactures of *silk*, *porcelain*, *embroidery* and *lacquer ware*. There are now many treaty ports open to foreigners, the busiest being **Shanghai**, **Tientsin**, **Hang-chau**, **Fu-chau**, and **Canton**.

The chief European powers have acquired ports in China. Great Britain owns **Hong Kong** and **Wei-hai-wei**, Germany, the port of **Kiao-chau**, on the Shantung peninsula; France holds **Kwang-chau**, on the Gulf of Tonquin, and the island of **Hainan** is her sphere of interest; Portugal has **Macao**, on an island at the entrance to the Canton River.

**Pekin**, the capital, is situated 100 miles up the Pei-ho, which flows into the Gulf of Pe-chi-li. Its port is **Tientsin**, at the mouth of the river. **Shanghai**, at the entrance of the Yang-tse-kiang, is the chief port and commercial centre of China. It has a large European settlement. **Canton**, in the south, has a large trade in tea and silk. **Hankow**, 700 miles up the Yang-tse-kiang, is the centre of the tea trade.

**MONGOLIA** lies west of Manchuria and south of Siberia. The **Great Wall of China** runs across the country for 1250 miles, and separates the province from China Proper. It was built in order to protect the latter country from Tartar invasion. The **Desert of Gobi** occupies the greater part of the country. **Urga**, the capital, is a sacred city of Buddhism.

**MANCHURIA** extends north from China Proper and Corea to the river



Amur. It is, on the whole, a hilly country, but is very fertile, being drained by the Sungari and Yalu rivers. The old capital was **Mukden**, the scene of a stubborn battle between Russia and Japan. The new capital is **Kirin**, on the **Sungari**. **Port Arthur**, a strong fortress at the extremity of the **Liaotung Peninsula**, and **Talienwan** (Dalny) were taken from Russia by Japan during the late war (1903-5). The latter is the southern terminus of the Trans-Siberian Railway.

**TIBET** occupies the high tableland between the Himalaya and Kuen-Lun Mountains, at an elevation of 15,000 feet. It contains the sources of the **Indus**, **Sutlej**, and **Brahmaputra**. The head of the state is the **Grand Lama**, the high-priest of the Buddhist religion, who lives at **Lhasa**, the capital. The country is inaccessible to foreigners. The fine hair of the Tibetan goat is exported and also woven into the shawls of Cashmere.

**EASTERN TURKESTAN**, to the north-west of Tibet, includes large barren steppes and deserts enclosed by lofty mountains. Sheep and horses are reared. The most important towns are **Yarkand** and **Kashgar**.

#### JAPAN.

The **Empire of Japan** consists of the islands of **Nippon** (or **Hondo**), larger than Britain, **Yezo** in the north, and **Kiu-siu** and many other smaller islands in the south. The **Kurile Islands**, and the southern half of **Saghaliën** in the north, and the **Loo-choo Islands** and **Formosa** in the south, also belong to Japan.

The coast-line is of great extent and very irregular, very few places being far from the sea. The islands are crossed by lofty mountain ranges containing several volcanoes, the most famous of which is **Fuji Yama**, 12,400 feet high, seventy miles from Tokio. Earthquakes are of frequent occurrence. Japan has an insular climate which is less equable than that of the British Isles. The eastern coasts are washed by the **Kuro Siwo**, or **Black Stream**, a warm ocean current which moderates the climate in the same manner as the **Gulf Stream** does that of Western Europe.

*Rice* is the staple food, but *wheat* and *barley* are also eaten. *Cotton*, *tea*, *tobacco*, and the *mulberry* are extensively cultivated. Valuable trees produce *camphor* and a *varnish* employed in lacquered ware, the process being called *japanning*. The *bamboo* is put to many uses. There is an abundance of *copper*, *coal*, *iron*, and *sulphur*. The Japanese are an ingenious people, which is shown in their manufactures, which are developing rapidly. *Silk*, *cotton*, *paper*, and *matches* are new industries, but the skilful manufactures of *porcelain*, *lacquered ware*, and *bamboo work* still flourish.

The Japanese have modelled their government and methods of living on those of Britain and other western nations. The ruler is the **Mikado**, a constitutional monarch, parliament being elected by the people. Her successes during the war with Russia in 1903-5 have given her an important place among the Powers of the world.

**Tokio**, or **Yedo**, is the capital, in the east of Nippon. **Yokohama** is the port of Tokio and the chief centre of foreign trade. It is the terminus of the Peninsula and Oriental Line. **Ozaka**, in the south-west of Nippon, trades chiefly in tea and rice. **Kioto**, once the capital of the Mikado, is a large manufacturing town. **Nagasaki**, in the island of Kiu-siu, is an important coaling station. It was the first port opened to foreigners. **Kobe** is a rising port. **Hakodate** is the port of Yezo. **Formosa** is noted for its camphor.



**Corea**, a peninsula to the north-east, was formerly a part of China, but after the China-Japan War of 1894-5 the country was brought under Japanese and Russian influence. Since the war with Russia, Japan has taken entire control over the country. The capital is **Seoul**, which is connected by rail with **Chemulpo**, the chief port on the Yellow Sea.

### INDO-CHINA.

The **Indo-Chinese Peninsula** in the south-east of Asia comprises (1) **British Indo-China**, (2) **Siam**, and (3) **French Indo-China**.

**British Indo-China** includes the Province of Burma, the Strait Settlements, and the Native Protected States of the Malay Peninsula. These are dealt with elsewhere.

**Siam** occupies the central portion of the peninsula, and is drained by the **Menam**, flowing into the Gulf of Siam. The forests produce *teak*, *gum trees*, *gutta-percha*, and *bamboo*. The chief exports are *rice*, *teak*, *tin*, and *pepper*. The capital is **Bangkok**, near the mouth of the Menam.

**French Indo-China** includes the country to the east of the Mekong river. It comprises the French colony of **Cochin China** and the **Protectorates** of **Cambodia**, **Annam**, and **Tonquin**. The productions are *rice*, *tobacco*, *indigo*, *teak*, etc. **Saigon** is the most important town. It is the capital and port of Cochin-China, and is used as a coaling station. **Hue** is the capital of Annam. **Hanoi**, the capital of Tonquin, is a busy port.

### THE EAST INDIAN ARCHIPELAGO.

The **East Indian**, or **Malay Archipelago**, lies to the south-east of Asia. They include (1) the **Dutch East Indies**, (2) the **British East Indies** (see p. 70) and (3) the **Philippine Islands**.

The **Dutch East Indies** consist of **Java**, **Sumatra**, a portion of **Borneo**, the **Moluccas** or **Spice Islands**, and numerous smaller islands. The islands are crossed by the equator, the climate is therefore tropical. The rainfall is exceptionally heavy, and the islands are subject to earthquakes. The productions are most important. The chief minerals are *gold*, *coal*, *iron*, *sulphur*, and *precious stones*. The vegetable productions include *spices*, *fruit*, *sugar*, *coffee*, *rice*, *cocoa-nuts*, *sago*, and *gutta-percha*. **Batavia**, in Java, is the capital of the Dutch possessions. **Padang** is the largest town in Sumatra. **Macassar**, in Celebes, has great trade.

The **Philippine Islands** belong to the United States since the war with Spain in 1898. The largest of the group are **Luzon** and **Mindanao**. The capital of Luzon is **Manilla**, which exports cigars, tobacco, coffee and sugar.

### QUESTIONS.

1. Name the countries of Asia (with capitals) and their relative positions.
2. Give the chief straits, stating the seas they connect or the countries they separate.
3. Describe a coasting voyage from Calcutta to Yokohama, naming the chief islands passed and the probable ports of call. What cargoes would be carried on the outward and return journey respectively?
4. What is the character of the eastern coast of Asia? Name the chief inland seas, with the groups of islands enclosing them.



5. Enumerate the chief peninsulas of Asia, and the cape by which each terminates.
6. Draw a sketch showing that the principal mountain ranges all branch off from the Pamirs.
7. Asia is a continent of tablelands. Give the situation of the most important. How do you account for so much desert in the south-west of Asia?
8. How does the build of the continent affect its rivers? Name and give the general direction of six of its largest rivers. Give examples of "continental" rivers, explaining their nature.
9. What and where are Ghauts, Formosa, Yenesei, Roumania, Bab-el-Mandeb, Elburz, Aral, Mekong, Hainan, Corea, Baikal, Gobi, Deccan, Shat-el-Arab, Taurus, Sumatra, Amur, Saghalien, Sunda, Palk, Negrais, Philippine, Levant, Balkash, Perim, Tigris, Helmund, Kamschatka, Akaba, Kowloon.
10. Write short notes about (a) the Malay Peninsula, (b) the East Indies, (c) French Indo-China.
11. Give the divisions of Asiatic Turkey, with their relative positions and chief towns.
12. Write a short general description of Persia or Afghanistan. What is the importance of these countries to the Indian Empire?
13. Japan is often styled the "Great Britain of the Pacific." Explain this statement, setting forth as many points of analogy and resemblance between the two countries as you can.
14. Describe the provinces included in the Chinese Empire. Name the chief towns of China Proper, with a list of the exports. What two large rivers drain this province?
15. Describe the Russian Empire in Asia under the heads of (a) Divisions, (b) Chief towns, (c) Productions. Describe a journey by the Trans-Siberian railway from Moscow to Vladivostock.
16. Give the situation and important facts concerning Shanghai, Yokohama, Singapore, Port Arthur, Muscat, Bushire, Baku, Seoul, Macao, Batavia, Manilla, Nagasaki, Vladivostock, Tashkend, Herat, Irkutsk, Tientsin, Bhamo, Teheran, Mecca, Smyrna, Hue, Tokio, Cabul, Samarkand, Tiflis, Pekin, Colombo, Jeddah, Nicosia, Beyrout, Damascus, Lhassa, Bokhara, Tabriz, Bagdad, Malacca, Kars, Saigon, Osaka.



## XVIII. Africa.

### SIZE AND BOUNDARY.

Africa lies to the south of Europe and to the south-west of Asia, with which it is connected by the **Isthmus of Suez**.

Africa is bounded on the *north* by the Mediterranean Sea, on the *west* by the Atlantic Ocean, on the *east* by the Red Sea and Indian Ocean, and on the *south* by the Southern Ocean.

Africa is three times larger than Europe, its area being about 11,500,000 square miles. The greatest length from north to south is 5000 miles, and from east to west 4800 miles.

### COAST.

The coast is very little broken. There are few gulfs and bays, and none of the rivers have large estuaries.

*North Coast.*—The north of Africa is washed by the Mediterranean, and includes the indentations called the **Gulf of Sidra** and the **Gulf of Cades**. **Cape Bon** is in Tunis, and **Cape Ceuta** opposite to Gibraltar.

*West Coast.*—Off the coast of Morocco lie the **Madeira** and **Canary Islands**. **Cape Blanco** and **Cape Verde** are prominent headlands. Off the latter lie the **Cape Verde Islands**.

The **Gulf of Guinea** contains the **Bight of Benin** and the **Bight of Biafra**, and also the islands of **Fernando Po** and **St. Thomas**. **Cape Palmas** is in Liberia.

The coast-line now becomes very regular, the chief features being **Cape Frio**, **Walfisch Bay**, **Table Bay**, and the **Cape of Good Hope**.

*South Coast.*—**Cape Agulhas** is the most southerly point of Africa. There are two openings, **False Bay** and **Algoa Bay**.

*East Coast.*—The coast of Portuguese East Africa contains **Delagoa Bay** and **Sofala Bay**, as well as **Cape Delgado**. The **Mozambique Channel** is between the island of **Madagascar** and the mainland.

**Zanzibar** and **Pemba** are islands adjacent to the coast of German East Africa. The **Seychelles** are to the north-east of Madagascar. **Cape Guardafui** is the most easterly point of Africa. Near it is the island of **Socotra**.

The **Red Sea** is entered through the **Strait of Bab-el-Mandeb**. At its head are the **Gulf of Akaba** and the **Gulf of Suez**. The **Suez Canal** connects the latter with the Mediterranean.

### SURFACE.

The centre of the continent is an immense plateau, the chief mountain ranges, lying near the coast, forming the edges. From this great tableland the rivers run in all directions.

The *northern* ranges include the **Atlas Mountains**, which stretch across Morocco into Algeria.

In the *west*, near the Guinea coast, are the **Kong Mountains**, the source of the Niger, and the **Cameroon Mountains**, of a volcanic nature.







of Guinea ; the **Congo** and **Orange** into the South Atlantic Ocean ; and the **Tugela**, **Limpopo**, and **Zambesi** into the Indian Ocean.

The **Nile** (3,500 miles) is the longest river in Africa and the Old World. Its head waters consist of two streams—the **White Nile** and **Blue Nile**. The **White Nile** rises south of the Equator and flows through **Lake Victoria Nyanza** and **Lake Albert Nyanza** ; continuing north, it receives the **Bahr-el-Gazal** from the Soudan. The **Blue Nile** rises in the mountains of Abyssinia, and joins the **White Nile** at **Khartoum**. The united waters flow north, and the river only receives one more feeder, the **Atbara**, or **Black Nile**, near the town of Berber. Its course through Egypt is impeded by six cataracts. It enters the Mediterranean by an extensive delta. The Nile is navigable for over 3000 miles. Rosetta and Damietta are at the extreme mouths of the delta, and Cairo stands at its head. At Assuan a large dam has been constructed to store the water brought down by the annual overflow of the Nile.

The **Niger** rises in the Kong Mountains, and, making a curve, it empties itself into the Gulf of Guinea. In its upper course it is called the **Joliba** and the **Quorra** in the lower. The lower basin of the Niger is becoming important, and the river is of immense service in developing the newly formed protectorate of **Nigeria**.

The **Congo** rises to the west of **Lake Nyassa**. It flows through **Lake Bangweolo** in a northerly direction, crossing the equator at the **Stanley Falls**. It then makes a curve, and again crosses the equator at **Equatorville** ; finally flowing into the Atlantic by a wide mouth. The river is navigable to Stanley Falls.

The **Zambesi** rises in the mountains to the south of the Congo basin. It contains the celebrated **Victoria Falls**, and several other rapids occur in its course, so that only a small portion of the river is navigable. The **Shire River**, which flows from Lake Nyassa, joins it just before it flows into the Mozambique Channel.

**Lakes.**—The largest lakes are found on the central plateau south of the equator. **Victoria Nyanza** is nearly as large as Lake Superior in North America. Close to it are **Albert Nyanza** and **Albert Edward Nyanza**. **Tanganyika**, in German East Africa, and **Bangweolo**, to the south, are drained by the Congo. To the south-east is **Lake Nyassa**, one of the sources of the Zambesi. **Lake Chad** is in the Sahara Desert ; **Lake Ngami** in the Kalahari Desert ; and **Lake Dembea** in Abyssinia.

#### CLIMATE.

Africa is the hottest and driest of all the continents, more than three-fourths of it lying within the Torrid Zone. The vast desert in the north has excessive heat, and very little rain falls. Elsewhere there are two seasons, the rainy season and the dry season, which regularly succeed one another. The equatorial regions on the east coast, in Central Africa, and on the west coast, have an abundant rainfall with intense heat, which produce malaria and make the climate unhealthy. The southern part of the continent is within the temperate zone, and the climate is cooler.

#### PRODUCTIONS.

**Animal.**—The wild animals are numerous. The *elephant*, *rhinoceros*, *hippopotamus*, *lion*, *leopard*, *hyæna*, *giraffe*, *zebra*, *gorilla*, and many species



of *antelope* are abundant. The *ostrich* is the chief among birds; *snakes* are not so numerous as in Asia, the *crocodile* being the chief reptile. The insects are numerous and troublesome, such as the *tsetse fly*, *white ant*, and *locust*.

**Minerals.**—*Gold dust* is found in the sands of many of the rivers within the tropics. The quantity is small compared with that obtained from the mines of the Transvaal. *Diamonds* are obtained from South Africa. *Salt* is abundant in the deserts. *Iron* and *lead* are found in the Atlas Mountains, *copper* in Cape Colony, and *coal* in Natal.

**Vegetable.**—The great heat and heavy rainfall produce a luxuriant vegetation within the tropics. In central and western Africa there are large forests containing the *palm*, *baobab*, *ebony*, and *india-rubber* trees. The chief objects of culture are *cotton*, *flax*, *coffee*, *yams*, *bananas*, *rice*, *sugar*, and *cocoa-nuts*. In the district bordering the Mediterranean the *vine*, *orange*, *olive*, *fig*, and *date* abound. The south produces *aloes*, the *vine*, *maize*, and *wheat*.

#### PEOPLE.

The Black Race inhabit the central and southern parts of the continent, and include the **Negroes** of the equatorial regions and the **Bantus** in the south. The latter comprise such tribes as the **Kaffirs**, **Basutos**, and **Bechuanas**. The **Hottentots** and **Bushmen** also live in the south. The northern tribes (Arabs, Moors, Abyssinians, etc.) and the European colonists in the south, belong to the **Caucasian Race**. Dwarfs or pigmies have been discovered in the forests.

**Mohammedanism** is the religion of the north of Africa. **Christianity** exists in a corrupt form in Abyssinia, and is spreading among the native races in the centre and south, who are idolaters, making a "fetish" or god of any object, accompanied by human sacrifices.

#### DIVISIONS.

1. **North Africa** includes the Barbary States, Egypt, the Sahara, and the Soudan.

2. **West Africa** includes the countries of the Guinea Coast from the River Senegal to Cape Frio.

3. **South Africa** includes British South Africa and German South-West Africa.

4. **East Africa** includes British Central Africa, Portuguese East Africa, German East Africa, British East Africa, Somaliland, Abyssinia, and Eritrea.

5. The **Islands** of Africa.

The only independent states are Morocco, Abyssinia, and Liberia.

#### THE BARBARY STATES.

The **Barbary States** include **Morocco**, **Algeria**, **Tunis**, and **Tripoli**.

**MOROCCO**, at the north-west corner of Africa, is an independent country ruled by a Sultan. It has an area of 220,000 square miles. The inhabitants are chiefly Moors and Arabs. The country is crossed by the **Atlas Mountains**. The western coast is fertile, *dates*, *maize*, the *vine*, *olives*, and *peas* being largely cultivated. **Morocco**, in the interior, is the capital, but **Fez** is the



largest town. The latter is a holy city, and manufactures leather and a kind of cap called a *fez*. **Mequinez** is situated in the fertile district, and has spacious gardens of fruit and vegetables. **Tangier** is the chief port, opposite to Gibraltar. **Mogador** is a port on the Atlantic. The fortress of **Ceuta** and the town of **Tetuan** belong to Spain, besides several coast towns, called *Presidios*, of which **Casablanca** and **Melilla** are the chief.

**ALGERIA**, lying to the east of Morocco, is an important French colony. It has an area of 184,000 square miles. The fertile coast region is known as the *Tell*, and *wheat* and *wine* are produced. An important export is *esparto grass*. **Algiers**, the capital and port on the Mediterranean, has great trade. It was bombarded by Lord Exmouth in 1816, to put down piracy. It is connected by rail with **Oran**, another port, and with **Constantine** inland. The latter has important manufactures of leather, boots and shoes.

**TUNIS** lies to the east of Algeria, and is a French Protectorate. The area is 45,000 square miles. The capital is **Tunis**, ten miles to the south-east of the ruins of the ancient city of Carthage. **Biserta** is an important naval and coaling station on the north coast.

**TRIPOLI**, to the east, is a province or vilayet of Turkey, with an area of 400,000 square miles. The surface is chiefly desert. *Ostrich feathers*, *esparto grass*, and *wheat* are exported. **Tripoli** is the capital and only port. It is the terminus of the great caravan route from the interior.

#### EGYPT.

Egypt is nominally a dependency of Turkey, but has a ruler of its own called the **Khedive**. The country is now controlled by Britain.

**Egypt Proper** is bounded on the north by the Mediterranean Sea, on the east by the Red Sea, and on the west by the Libyan Desert. The boundary line in the south is 22° North latitude. Below this line is the **Egyptian Soudan** stretching south to the border of British East Africa.

The whole country occupies the valley of the Nile. The area cultivated is confined to the delta and banks of the river, which are inundated by the annual overflow of the river caused by the monsoon rains in Abyssinia and the equatorial regions. The great dam near Assouan will enable Upper Egypt to be irrigated during low Nile. The chief products of the soil are *cotton*, *sugar*, *wheat*, *tobacco*, *rice*, and *dates*.

The climate is hot and dry, for rain seldom falls. The population is estimated at ten million, including the *Copts*, who are descendants of the ancient Egyptians, and are Christians.

The chief means of communication is by the Nile, the navigation of which, however, is impeded by cataracts. A railway connects Cairo with Port Said, Suez, and Alexandria. A line also runs up the Nile Valley to Khartoum, and another from Berber to Port Soudan on the Red Sea.

The **Suez Canal**, completed in 1869, extends from Port Said, through the Bitter Lakes, to Suez, for a distance of 87 miles. A considerable number of vessels pass through the canal every year.

**Cairo**, at the head of the delta of the Nile, is the capital, and the largest town in Africa. To the south of the city are the famous *Pyramids*. **Alexandria**, on the Mediterranean, is the chief port. It was founded by Alexander the Great. **Port Said** and **Suez** are the termini of the Suez Canal. **Rosetta** and **Damietta** are ports at the two extreme mouths of the delta of



the Nile. **Ismailia** is a town near the middle of the Suez Canal. In Upper Egypt **Assouan** is near the first cataract, and **Wady Halfa** near the second cataract and 800 miles from Cairo is the southern limit of Egypt Proper.

The **Anglo-Egyptian Soudan** includes the upper valley of the Nile and the districts of Kordofan and Darfur. For some time the country was in the hands of the Mahdi, but with the aid of the British the Khalifa was defeated at Omdurman, 1898, and Egyptian authority once more restored. The Egyptian Soudan is now administered jointly by England and Egypt. The greater part of the country is a desert, and the people, mostly Arabs, are engaged in agriculture and pastoral pursuits.

**Khartoum**, at the junction of the Blue and White Nile, is rapidly becoming a large and important town. Here General Gordon made a gallant defence (1884) and met his tragic death (Jan. 1885). The town was retaken in 1898, and is now garrisoned by British and Egyptian troops. **Omdurman**, near by, was the native capital.

**Berber**, on the Nile, has communication by rail with **Port Soudan** on the Red Sea. **Suakim**, also on the Red Sea, is the chief port. **Fashoda** is on the Upper Nile.

#### THE SOUDAN.

**Soudan**, the Land of the Blacks, lies south of the Sahara, and stretches right across the continent from Senegambia on the west to the valley of the Nile on the east. The country is fertile and well watered, including the basins of **Lake Chad**, part of the **River Niger**, and the **Upper Nile**. The climate is hot and malarious. The chief productions are *gold-dust*, *ivory*, *gum*, and *ostrich feathers*. There is a large caravan trade.

There are several states, **Sokoto** and **Bornu** being the most powerful, but now included in the Nigeria Protectorate. **Timbuctoo** is the largest town, near the most northerly point of the Niger. It is the centre of caravan trade.

#### WEST AFRICA.

The whole of the western coast, from the River Senegal to Cape Colony, has been divided among the various nations of Europe, whose authority extends inland for a considerable distance.

South of Morocco the Spanish have claimed a portion of the Sahara along the Atlantic Ocean.

**French Soudan**, including the colony of *Senegambia*, between the rivers Senegal and Gambia, extends inland to the frontiers of Morocco, Algeria, and Nigeria.

**Gambia** is occupied by Britain; the capital is Bathurst.

**Portuguese Guinea** and **French Guinea** lie between Gambia and Sierra Leone.

**Sierra Leone** is also British, containing the important coaling station of **Freetown**.

**Liberia** is a Negro Republic, extending for nearly 500 miles along the Grain Coast. It is occupied by the descendants of slaves liberated from America. The capital is **Monrovia**.

The **Ivory Coast** and hinterland are French territory.

The **Gold Coast** is one of the oldest British possessions. **Accra** is the



present capital; **Cape Coast Castle** was the former capital. Inland is the native state of **Ashanti**, whose capital is **Coomassie**.

**Togoland** lies east of the Gold Coast, and belongs to Germany.

**French Dahomey** intervenes between Togoland and Nigeria, and contains the Slave Coast.

**Lagos** (island, and territory on the mainland) is a British colony.

**Nigeria** is an immense territory of 450,000 square miles, with a population of thirty millions, occupying the lower basin of the Niger. It is divided into two British Protectorates, Southern and Northern Nigeria. The chief ports are **Old Calabar**, **Bonny** and **Asaba**.

The **German Cameroons** extend inland from the Bight of Biafra to Lake Chad.

The **French Congo** next stretches towards the Congo. The capital is **Libreville**.

**Portuguese West Africa** includes the province of **Angola** and the upper basin of the Zambesi. The capital is **Loanda**, and **Benguela** is the chief port.

**German S.W. Africa** includes the coast from Cape Frio to the Orange River, and extends inland to Bechuanaland. **Walfisch Bay**, however, is British territory.

The **Congo Free State**, of which the King of Belgium is sovereign, lies in the centre of Africa, occupying the basin of the Congo and its many tributaries. Except for a small strip of coast at the mouth of the Congo it is entirely inland. **Boma**, on the Congo, 50 miles from the sea, is the capital, exporting *ivory*, *india-rubber*, *palm oil*, *coffee*, etc. The river traffic is interrupted by rapids, but between **Stanley Pool**, 300 miles from the mouth, and **Stanley Falls**, there are 1000 miles of navigable river. The interior is covered with vast forests.

#### EAST AFRICA.

**Portuguese East Africa** stretches along the shores of the Mozambique Channel, and inland along to the banks of the Zambesi to German and British territory. **Loença Marques**, a port on Delagoa Bay, is connected by rail with Johannesburg and Pretoria. **Beira**, also a port, communicates with Salisbury by rail. **Mozambique** is the chief port north of the Zambesi. The chief products of the country are *wax*, *rubber*, and *ivory*.

**German East Africa** extends from Cape Delgado to a point opposite Pemba. Inland it is bounded by the lakes Victoria Nyanza, Tanganyika, and Nyassa. **Dar-es-Salaam** is the chief port and capital, exporting *coffee*, *rubber*, and *grain*. **Bagamoyo** is a port opposite to Zanzibar. **Ujiji** is a trading station on Lake Tanganyika.

*British East Africa and Uganda* (page 95).

**Italian Somaliland** includes the coast region from the Juba River to Cape Guardafui.

**British Somaliland**, capital **Berbera**, lies south of the Gulf of Aden.

**French Somaliland** is a small district near the entrance to the Red Sea. It contains the rising port **Jibuti**, which is a coaling station.

**Eritrea** is an Italian Protectorate on the south-west shore of the Red Sea. **Massowah**, the capital, and a port on the Red Sea, trades with Abyssinia.



**Abyssinia**, a mountainous country to the south-east of the Egyptian Soudan, contains the sources of the **Blue Nile** and **Atbara**. The former rises in **Lake Dembea**. The climate, owing to the elevation of the country, is mild. The inhabitants are of a warlike disposition, engaged chiefly in agriculture and cattle-rearing. **Gondar** was the ancient capital of Ethiopia. The capital is now **Addis Abeba**, and the residence of the Negus or Emperor. **Magdala**, a hill fortress, was captured by Sir Robert Napier in 1868. **Harar** is connected by rail with the French port Jibuti.

#### ISLANDS OF AFRICA.

**Madeira** lies west of Morocco and belongs to the Portuguese. The climate is always mild, and the island is used by Europeans as a health resort. Vegetation flourishes luxuriantly. **Funchal**, the chief town and port, exports *wine, sugar, and fruits*.

The **Canary Islands**, to the south, belong to Spain. The largest is **Teneriffe**, which contains a volcano 12,000 feet high. All the islands are fertile and produce the *wine, sugar, tobacco*, and many kinds of *fruit*. **Santa Cruz**, on Teneriffe, and **La Palmas**, the largest towns, are used as coaling stations.

The **Cape Verde Islands** (Portuguese) lie 350 miles to the west of Cape Verde. **Praia** is the capital and **Mindello** the chief port.

**Prince's Island** and **St. Thomas** are both in the Gulf of Guinea, and belong to Portugal.

**Fernando Po**, a larger island in the same locality, is a Spanish possession. **Ascension**, **St. Helena**, and **Tristan d'Acunha** are British islands in mid-Atlantic (page 97).

**Madagascar**, off the south-east coast, is one of the largest islands on the globe, its area being 230,000 square miles. It is separated from the mainland by the Mozambique Channel. A range of volcanic mountains run through the island. The interior is mild and temperate, but the coast is low and unhealthy. The chief products are *rubber, sugar, coffee, rice, hides, and gum*. The island forms a French colony. **Antananarivo** is the capital and **Tamatave** is the chief port.

**Mauritius** lies 500 miles east of Madagascar, its capital being **Port Louis**.

**Reunion**, or Bourbon, is 110 miles to the south-west of Mauritius. The island produces *sugar, coffee, vanilla, and cloves*. The chief town is **St. Denis**.

**Pemba** and **Zanzibar**, off the coast of German East Africa, belong to Britain.

The **Seychelles**, 1000 miles north of Mauritius, are also British.

**Socotra**, off Cape Guardafui, is a dependency of the government of Bombay.

#### QUESTIONS.

1. Draw a map of the Guinea coast, from Gambia to the Cameroons, and insert the territories which belong to various nations. What are the chief productions of this region?
2. What countries, islands, and ports would be passed in sailing along the coast from Port Said to Durban?
3. Name the countries washed by the Mediterranean; give their chief towns, and say to what European powers they are (more or less) subject.



4. Describe the build of Africa. Name and locate the chief mountain ranges.
5. Name the principal rivers of Africa, giving their general direction and the part of the ocean into which each flows. What is the chief characteristic of African rivers?
6. Write a full description (with a sketch) of the Nile.
7. Name the islands and island groups of Africa, and say to whom they belong.
8. What and where are Sahara, Kenia, Drakensberg, Guardafui, Bight of Benin, Kalahari, Orange, Atlas, Atbara, Agulhas, Sidra, Teneriffe, Tanganyika, Ruwenzori, Great Karoo, Shire, Chad, Victoria Falls, Seychelles, Kilimanjaro.
9. Describe the lake system of Africa. Name the lakes, and the rivers they feed.
10. Draw two maps of Africa. On one show the relative positions of German and British territory, on the other French and Portuguese territory.
11. Write short notes about (a) the Barbary States, (b) Somaliland, (c) Madagascar, (d) the Soudan.
12. Describe Egypt under heads of extent, surface, agriculture, chief towns, and progress under British guidance.
13. Name the colonies and protectorates included in South Africa, with their chief towns.
14. What railways are there in Africa? Describe the route of the intended Cape to Cairo railway.
15. Give the capital of each of the following and say how they are governed: Nigeria, Congo Free State, Liberia, Abyssinia, Transvaal, Algeria, Morocco, Uganda, Eritrea, Madeira Islands, Egypt.
16. Name and locate ten of the largest towns in the various British possessions.
17. Draw a sketch map of Africa and insert the following: Nile, Zambesi, and Orange Rivers; Drakensberg Mountains, Atlas Mountains; Lake Tanganyika, Sierra Leone, Tunis, Cape Town, Durban, Pretoria, Cape Coast Castle, Freetown, Zanzibar, Khartoum, Algiers, Suez.
18. What and where are Alexandria, Massowah, Lorenzo Marques, Assouan, Jibuti, Timbuctoo, Mafeking, Mombasa, Walfisch Bay, Lagos, Tangiers, Melilla, Funchal, Beira, Salisbury, Suakim, Fashoda, Ceuta, Biserta, La Palmas, Ismailia, Wady Halfa, Nairobi, Tamatave, Boma.



## XIX. *America.*

### SIZE AND BOUNDARIES.

**America**, or the New World, extends north and south between the Atlantic and Pacific Oceans, and consists of two great divisions called North and South America. The area of the whole is 16 million square miles. **North America** has an area of  $9\frac{1}{2}$  million square miles, and **South America**  $6\frac{3}{4}$  million square miles.

The greatest **length** from north to south is 10,000 miles, but the **breadth** varies, being 3,100 miles under the 45th parallel N. latitude, and 3,200 miles under the 6th parallel S. latitude; while the Isthmus of Panama is only 28 miles wide.

### COAST FEATURES.

*North Coast.*—The extreme north, consisting of innumerable islands, is always ice-bound. **Baffin Bay**, between **Greenland** and **Baffin Land**, communicates with the Atlantic through **Davis Strait**, while the Pacific is entered through **Behring Strait**. The so-called **North-West Passage** passes through Lancaster Sound, Melville Sound, and Banks Strait. **Hudson Bay** is a large inland sea to the west of Labrador, and is entered through **Hudson Strait**. In the south it contains **James Bay**.

*East Coast.*—On the mainland, **Cape Charles**, in Labrador, is the most easterly point of North America. The island of **Newfoundland** is separated from Labrador by the **Strait of Belleisle**. The most southerly point of the island is **Cape Race**.

In the **Gulf of St. Lawrence** are the islands of **Anticosti**, **St. Pierre**, and **Miquelon**, **Prince Edward Island** and **Cape Breton Island**.

The peninsula of **Nova Scotia** terminates in **Cape Sable** and encloses the **Bay of Fundy**.

The coast of the United States includes the two arms of the sea called **Delaware Bay** and **Chesapeak Bay**, and **Cape Hatteras**. **Long Island** lies across the entrance to the **Hudson River**.

The **Gulf of Mexico** forms a huge curve between the peninsulas of **Florida** and **Yucatan**. The extremity of the former is **Cape Sable**.

To the south is the **Caribbean Sea**, enclosed by the **West Indies** from **Cuba** to **Trinidad**. These islands mark the outline of the original coast-line of the continent.

The east coast of South America is very regular, and contains no important indentations except the mouths of the **Amazon** and **La Plata**. The most easterly point is **Cape Branco** in Brazil.

In the extreme south the island of **Tierra del Fuego** is separated from the mainland by the **Strait of Magellan**. It contains **Cape Horn**, the extremity of the continent. To the east are the **Falkland Islands**, a British possession.

*The West Coast.*—The **Behring Sea**, washing the shores of Alaska, is enclosed by the **Aleutian Islands**.

The coast of Canada is similar to that of Norway, containing many fiords



and islands, the chief of which are the **Sitka Islands**, **Queen Charlotte Islands**, and **Vancouver**.

The **Gulf of California** is a long opening between the peninsula of **Lower California** and **Mexico**. The former terminates in **Cape St. Lucas**.

The narrowest part of Mexico is the **Isthmus of Tehuantepec**, about 140 miles in width.

The **Bay of Panama** is to the west of the **Isthmus of Panama**.

The Pacific coast of South America contains no indentations or good harbours, except in the south, where the character of the coast is similar to that of Canada, containing fiords and islands. Off the coast of Ecuador are the **Galapagos Islands**.

#### SURFACE.

(i.) The western portion of the continent is occupied by a mountain chain which extends through both continents, from Alaska to Cape Horn.

The **Rocky Mountains** form that part of the chain which runs through Canada and the United States, containing the important peaks of **Mount Logan** (19,000 feet), **St. Elias**, **Hooker** and **Brown** in Canada, and **Pike's Peak** in the United States. In Mexico the **Sierra Madre** extends the length of that country, and includes the active volcanoes of **Orizaba** and **Popocatepetl**.

The chain is continued into South America under the name of the **Andes**. In Ecuador, where it broadens out, is a cluster of volcanic peaks, the chief being **Antisana**, **Cotopaxi**, and **Chimborazo**, each approaching 20,000 feet in height. On the plateau of Bolivia are **Sorata** and **Illimani**, averaging 21,000 feet.

The highest peak in the Andes is **Aconcagua** (23,000 feet), on the western border of Argentina.

(ii.) To the east of this western chain in each continent, lies a vast plain, that in North America is the great **prairie** land drained by the **Mississippi**, **St. Lawrence**, and **Mackenzie**.

In South America the extensive plain embraces the **pampas** of the **La Plata**, the **selvas** of the **Amazon**, and the **llanos** of the **Orinoco**.

(iii.) The eastern side of the plain is bounded by the **Alleghany Mountains** in the United States, and the **Brazilian Highlands** in South America. To the east of these mountains is the **Atlantic Coastal Plain**.

(iv.) West of the Rocky Mountains is the **Tableland of Utah**, the western edge being formed by the **Sierra Nevada** and **Cascade Mountains**.

#### DRAINAGE.

The Rocky Mountains and the Andes Mountains form the chief watershed, and as they lie to the west part of the continent, the majority of the rivers have an easterly or southerly course.

**NORTH AMERICA.**—The head-streams of the **Mackenzie** rise in the Rocky Mountains. This river drains **Lake Athabasca**, **Great Slave Lake**, and **Great Bear Lake**, and flows into the Arctic Ocean.

The **Saskatchewan** flows to the east and the **Red River** to the north to **Lake Winnipeg**, which is drained by the **Nelson** flowing into Hudson Bay.

The **St. Lawrence** flows through the great lakes—**Superior**, **Michigan**, **Huron**, **Erie**, and **Ontario**, and carries an immense volume of water to the Atlantic Ocean. The **Hudson** flows out of **Lake Champlain**, and enters



the Atlantic at New York. Other rivers of the United States flowing east are the **Delaware**, **Potomac**, and **James**.

The **Mississippi** flows southward into the Gulf of Mexico, which also receives the **Río Grande del Norte**.

The **Colorado** rises in the Rocky Mountains, and flows south into the Gulf of California. For 200 miles of its course it passes through deep and tortuous gorges, from 6000 to 8000 feet high, called cañons. The **Sacramento**, **Columbia**, and **Frazer** flow westward into the Pacific Ocean.

The **Great Salt Lake** is on the Tableland of Utah. **Lake Nicaragua** is in Central America.

The **Mississippi** rises in **Lake Itasca**, in Minnesota, and flows southward into the Gulf of Mexico after a course of 2,500 miles. Its chief tributary, the **Missouri**, rises in the Rocky Mountains and joins the river at **St. Louis**. Its total length is 3000 miles, and the **Mississippi**, from the source of the **Missouri**, is 4200 miles in length—the longest river in the world. The **Arkansas** (2000 miles) and **Red River**, are other tributaries on the right bank. The **Ohio**, which receives the **Tennessee**, is the chief tributary on the left bank. The **Mississippi** is the great highway of commerce of the Middle States, being navigable nearly to its source. The **Missouri** brings down large quantities of yellow mud, and much alluvial soil is deposited at the mouth of the **Mississippi**, the delta projecting far into the sea. **New Orleans**, **St. Louis** and **St. Paul** are the chief towns on the main stream. **Pittsburg** and **Cincinnati** are on the **Ohio**, and **Omaha** and **Kansas City** on the **Missouri**.

**SOUTH AMERICA**.—The three principal rivers of South America, the **Orinoco**, **Amazon** and **La Plata**, rise in the Andes, flow eastward, and drain the northern, middle, and southern portions of the great plain. The **Magdalena** flows northward into the Caribbean Sea, and the **Francisco** drains the eastern part of Brazil.

**Titicaca** is the only lake of importance in South America, being situated on the Plateau of Bolivia at an elevation of 13,000 feet.

The **Amazon** rises in the **Andes**, and has an easterly course of 4000 miles. Though not the longest, it is the largest river in the world. Its immense basin, which includes the greater part of Brazil, is drained by a great number of tributaries, many of which exceed a thousand miles in length. Its head-streams are the **Maranon** and **Ucayali**, and the river is navigable to the point where they unite. The largest tributary on the right bank is the **Madeira**, and on the left bank the **Rio Negro**. The mouth of the **Amazon** is 200 miles wide, and is notorious for its bores. The river, for a great part of its course, passes through dense forests called **selvas**.

The **La Plata** is really the estuary of the three great rivers, **Paraguay**, **Parana**, and **Uruguay**.

#### CLIMATE.

The climate of North America is colder than that of the Old World. The eastern side is much colder and drier than the western. This is caused by the mountains on the west preventing the warm and moist winds of the Pacific reaching the central plains, while the absence of mountains in the north allows the cold winds from the Arctic to blow across the **Mississippi Valley**. Central America, a part of Mexico, and the West Indies are within the **Torrid Zone**. The coldest part of the continent is that portion north of **Hudson Bay**.



The climate of South America is warmer than that of North America, as two-thirds of it lie within the tropics. The south is more temperate, but no part lies within the South Frigid Zone. Within the tropics the rainfall is very heavy, but is deficient along a great part of the western coast.

### PRODUCTIONS.

**Animals.**—There is an abundance of wild animals. The chief beast of prey is the *bear*. The *buffalo* or bison is almost becoming extinct. The *rattlesnake* and *alligator* are common. Many fur-bearing animals are found in the north, such as the *polar bear*, *moose*, *reindeer*, *beaver*, *walrus*, *seal*. In South America the *jaguar* and *monkey* inhabit the forests. The *llama* is used as a beast of burden, and the *alpaca* is valuable for its wool.

The fisheries include *herring*, *cod*, and *salmon*.

**Minerals.**—North America is rich in minerals. *Gold* is found in California and British Columbia; *silver* in Mexico and Nevada; *copper* around Lake Superior. *Coal*, *iron*, and *petroleum* are found in the eastern provinces and states.

In South America, Peru is noted for its *silver*, Chili for *copper*, Guiana for *gold*, and Brazil for *diamonds*. *Nitrate* (used for manure) is found in Chili.

**Vegetable.**—In North America large quantities of *maize*, *wheat*, and other cereals are raised in Canada and the north part of the United States. The *sugar-cane*, *tobacco*, *rice*, *cotton*, and tropical *fruits* flourish in the south. The *vine* grows to perfection in California. There are valuable forests of timber in the north, and *mahogany* and *logwood* are found in Central America.

South America contains dense forests and large grassy plains. *Mahogany* and *rosewood* are found in the forests. *Maize*, *sugar*, *coffee*, *cocoa*, *cotton*, *cinchona*, and *plantains* are cultivated.

### PEOPLE.

In North America there are four varieties of people: (1) The descendants of **European** emigrants, beginning with the Puritans from England in the United States, the French in Quebec, and the Spaniards in Carolina and Mexico. This class forms the greater part of the population; (2) The **Negroes**, imported for the sugar and cotton cultivation; (3) The **Chinese** and **Japanese**, who have settled on the western border; (4) The **Red Indians**, who are gradually dying away before civilization.

In South America the majority of the inhabitants of the civilized parts are of Spanish and Portuguese descent. The remainder are Indians and negroes.

The people of Canada and the United States are of the **Protestant** religion. Those of Mexico, Central America, and South America are **Roman Catholics**. The Indians are still heathens.

### COUNTRIES OF NORTH AMERICA.

The greater part of North America belongs to two powers—the United Kingdom and the United States. Mexico and the Republics of Central America are independent. The divisions are as follows: Dominion of Canada, Newfoundland, United States, Mexico, Central America, and the West Indies.

The Dominion of Canada, Newfoundland, and the West Indies are dealt with elsewhere.



## THE UNITED STATES.

1. The **United States** occupy the central and southern portions of North America, with an area of  $3\frac{1}{2}$  million square miles. Its eastern shores are washed by the **Atlantic Ocean**, and possessing good harbours, it has every facility for trade with the countries of Europe. The western coast is washed by the **Pacific Ocean**, and has direct communication with Asia and Australia. On the south the **Rio Grande** separates the States from Mexico in the lower part of its course. The northern boundary consists of the **49th parallel of N. latitude**, the **Great Lakes**, and the provinces of **Quebec** and **New Brunswick**.

The surface and drainage have been described under North America. Although the United States are entirely within the Temperate Zone, they contain every variety of climate, owing to the great extent of country and the difference in elevation. The Atlantic coasts and the Great Central Plain are characterized by great extremes of temperature in summer and winter. The middle and northern portions are temperate; the southern states have an almost tropical climate; the west is much warmer and drier than the east, the coast ranges intercepting the rainfall.

2. The chief industries are agriculture, manufacturing, and mining. The value of their produce is considerable.

The principal products are food-stuffs and raw material for manufactures. *Maize* and *wheat* are extensively grown in the north and central States. Most of the maize is used for feeding pigs, so that the exports of *bacon*, *hams*, and *lard* are profitable. *Cotton* and *sugar* are cultivated in Louisiana, Alabama, Carolina, Georgia, and other southern States; *tobacco* in Kentucky, and *rice* in Carolina. Florida is noted for *fruit*: the *banana*, *pine-apple*, and *orange*. California produces the *vine* and other fruits. West of the Mississippi are extensive grazing grounds, rearing *cattle*, *horses*, and *sheep*. *Timber* comes from the states bordering the Great Lakes and from the forests of the Pacific coast.

The minerals are important. *Coal* and *iron* are widely distributed, but the greatest supply comes from Pennsylvania. *Gold* and *silver* are found in California, Nevada, and Arizona; *copper* in Michigan and Arizona; *lead* and *quicksilver* in the Rocky Mountains; and *petroleum* in Pennsylvania and New York.

The chief manufacturing States are **Pennsylvania**, **New York**, **Massachusetts**, **Illinois**, and **Ohio**, and the chief manufactures include *cotton* and *woollen goods*, *iron* and *steel* and *metal goods*, the making of *flour*, the packing of *meat*, and *oil-refining*.

3. The means of communication are extensive. The railway system, which comprises several trunk lines, is the largest in the world. The **Union Pacific Railway** connects New York with San Francisco. The **Northern Pacific Railway** runs from Chicago to Portland on the Pacific Coast, and the **Southern Pacific Railway** from New Orleans, through Los Angeles, to San Francisco. The rivers and canals afford many miles of navigable waterways, viz., the Mississippi and its tributaries, the Great Lakes, and the Erie Canal connecting the Great Lakes with the Hudson River and New York.

The chief exports of the country are wheat, flour, live stock, meat, and dairy produce; raw cotton and cotton goods; iron and steel goods; petroleum, timber, and tobacco.



4. The United States is a **Federal Republic** formed of forty-five States, five **Territories** (including Alaska) and one **District**, that of **Columbia**, which contains Washington, the capital. Each State has a separate legislature, and there is a Federal Assembly or **Congress** of two Houses—the Senate and the House of Representatives. The **President** is elected every four years.

Since 1898 the United States has held **Cuba** and **Porto Rico** in the West Indies, and the **Philippines** in Malaysia. Cuba is now an independent republic, but under the suzerainty of the States. In the Pacific the **Sandwich Islands** (capital **Honolulu**), and some of the **Samoa Islands**, belong to the United States. **Alaska**, purchased from Russia, has important seal fisheries.

5. *Towns in the East.*—**New York** on Manhattan Island, at the mouth of the Hudson River, **Brooklyn** on Long Island, and **Jersey City** on the right bank of the Hudson, form one great city, and one of the largest in the world, the population reaching nearly four millions. New York is the centre of commercial activity, and ranks next to London as a port. **Philadelphia** is the chief town of Pennsylvania, and the third city in the States. It has many industries, chiefly connected with iron and petroleum. **Boston** is the chief town and port of Massachusetts and the “New England” States. Near it is **Harvard University**. **Washington**, on the Potomac, is the capital. It has many fine buildings, including the **Capitol**, where Congress meets, and the **White House**, the official residence of the President. **Pittsburg**, on the Ohio, is the chief manufacturing town of Pennsylvania, situated on a great coalfield. It has large iron, steel, and glass works. **Baltimore** is a port in Maryland, and exports flour and cotton. It is also noted for oysters and canned fruit.

*Centre and South.*—**Chicago**, in Illinois, on the southern extremity of Lake Michigan, is the second city in the States. It is noted for its rapid growth. It is a great lake port and railway centre, and has large grain, meat, and lumber markets. **St. Louis**, near the junction of the Missouri and Mississippi, contains markets of grain, flour, and meat, the produce of the Central States. **Cincinnati**, on the Ohio, has a large trade in pork and bacon. **Buffalo** and **Cleveland**, on Lake Erie, are noted lake ports connected with the lumber and grain industries. **Omaha**, on the Missouri, has important grain and cattle markets, and is also a great railway centre. **New Orleans**, at the mouth of the Mississippi, and **Galveston**, in Texas, are noted cotton ports. **Key West** is a naval station off the south coast of Florida.

*West.*—**San Francisco**, on a bay of the same name, which is connected with the Pacific by the “Golden Gate,” is the largest town in California. Lines of steamers connect it with Japan, China, and Australia. It exports gold, timber, wines, and fruit. The city was recently destroyed by an earthquake. **Los Angeles** is a large inland town in California. **Portland** and **Seattle** are rising ports. **Salt Lake City**, in Utah, is the headquarters of the Mormons. The **Yellowstone Park** is the national park of America, in the State of Wyoming. It contains many geysers, lakes, cañons, lofty falls, and other natural wonders. The **Yosemite Valley**, in California, is noted for its wonderful scenery and waterfalls.

6. **History.**—The United States were originally established by settlers chiefly from the British Isles, at different times between 1607 (when the colony of Virginia was founded by Sir Walter Raleigh) and 1732, the date



of the settlement of Georgia. They continued subject to Britain till 1776, when in consequence of taxes imposed without their consent, the "Thirteen States" declared themselves independent, which was acknowledged by Britain after a struggle which lasted seven years. The present constitution of the United States was formed in 1789, and George Washington, who had been commander-in-chief during the war, became the first president.

There was a second war with England in 1812-14. In 1861 eleven of the southern States endeavoured to form themselves into a separate "Confederacy," in order to promote slavery. A civil war ensued for four years, which ended in the defeat of the Southern States and the abolition of slavery, 1865.

### MEXICO.

**Mexico** is bounded on the north by the United States, on the east by the Gulf of Mexico, on the south by Central America, and on the west by the Pacific Ocean. The area is 767,000 square miles.

The surface consists of a tableland sloping to the Gulf of Mexico, and on the west of which rises a chain, the **Sierra Madre**, connected with the Rocky Mountains. These mountains are of volcanic origin, and amongst them are **Orizaba** and **Popocatepetl**. The rivers are numerous but small, the longest being the **Rio Grande** in the north.

Minerals are very important productions, especially *silver*, which is abundant. Large quantities of *gold* and *copper* are also found. The vegetation is varied, owing to the differences in climate caused by differences in elevation. Along the tropical coast region *palms*, *mahogany*, *fruits*, *coffee*, *cotton*, *sugar-cane*, *aloe*, and *tobacco* flourish. The *cochineal* insect is reared, as it produces a valuable dye. In the dry interior the *cactus* is abundant.

The ancient Mexicans were called Aztecs. The population is chiefly of Spanish descent, and the form of government is Republican.

**Mexico** is the capital of the federal republic. It is situated on a plateau 7500 feet above sea-level. It has a splendid cathedral and many other fine buildings. **Vera Cruz**, on the Gulf of Mexico, is the principal seaport, and is connected by rail with the capital. The climate is hot and malarious. **Yucatan** is a peninsula in the eastern part of Mexico.

### CENTRAL AMERICA.

1. **Central America** consists of the republics of **Guatemala**, the most populous, **Nicaragua**, the largest, **San Salvador**, the smallest, **Honduras**, **Costa Rica**, and **Panama**, and also the colony of **British Honduras**.

Most of the surface is mountainous with volcanoes. **Lake Nicaragua**, 3000 square miles, and **Lake Managua** are connected by the **River San Juan** with the **Caribbean Sea**. The projected **Nicaraguan Canal** provides an alternative scheme should the **Panama Canal** scheme fall through. Its length will be 170 miles.

The whole country is a fertile plateau descending to the sea by means of terraces. The coast regions are hot and unhealthy, but the elevated interior has a more temperate climate. The chief productions are *mahogany* and *logwood*, *rubber*, *coffee*, *indigo*, *fruit*, *gold* and *silver*.

The **Republic of Panama** has recently been formed.

The **Panama Canal**, when constructed, will be forty miles in length.



The advantages of the canal will be the great saving of time and the different relations that will occur between various parts. Liverpool will be nearly 6000 miles nearer to San Francisco, 1250 miles nearer to Hong Kong, and 750 miles nearer to New Zealand. The journey by sea from New York to San Francisco will be shortened by over 8000 miles.

2. **Towns.**—**New Guatemala** is the capital of Guatemala and the largest town in Central America. It is situated inland at a height of 5000 feet. The town has suffered from earthquakes. It is connected with the port of **San Jose** on the Pacific, which is also the capital of Costa Rica. **Managua** is the capital of Nicaragua, but **Leon** is the largest town. **Greytown** is at the mouth of the San Juan, and the entrance to the Nicaraguan Canal.

The **Mosquito Coast Territory**, now included in Nicaragua, was once under British protection. **Tegucigalpa** is the capital of Honduras, and **Belize** that of British Honduras. **Panama** and **Colon** (or **Aspinwall**) will be the termini of the Panama Canal.

### COUNTRIES OF SOUTH AMERICA.

With the exception of Brazil, which was colonised by the Portuguese, nearly all South America was formerly under Spanish rule. Omitting **Guiana**, South America is divided into ten Republics, viz., **Colombia**, **Venezuela**, **Brazil**, **Uruguay**, **Paraguay**, **Argentina**, **Chile**, **Bolivia**, **Peru**, **Ecuador**.

**COLOMBIA** lies east of the Isthmus of Panama. The Andes traverse the west of the country, while the eastern district consists of the *llanos*. The area is about 500,000 square miles. The chief productions are *sugarcane*, *rice*, *coffee*, *tobacco*, *bananas*, *gold*, and *silver*. **Bogota** is the capital and **Cartagena** the chief port.

**VENEZUELA** lies between Colombia and Guiana. The area is nearly 600,000 square miles. The greater part of the country is drained by the **Orinoco**, and the *llanos* afford excellent pasturage for cattle. *Sugar*, *coffee*, *cocoa*, *tobacco*, *vanilla*, *india-rubber*, and *cinchona* are among its valuable productions. *Gold* and *copper* are found.

**Caracas** is the capital of the Republic. **La Guayra** is its port. **Maracaibo**, on the lagoon connected with the Gulf of Maracaibo, is the second port.

**GUIANA** is a large district in the north-east of South America. The country is well watered by the **Essequibo**, the **Demerara**, and **Berbice**. The climate is hot and unhealthy. The wealth of Guiana consists in the produce of the soil and its gold mines. *Sugar*, *coffee*, *rice*, *cotton*, *tobacco*, *spices*, and *gold* are exported.

Guiana is divided between Great Britain, Holland, and France. **Georgetown**, at the mouth of the Demerara, is the capital of British Guiana, which is the westerly portion.

**Paramaribo** is the chief town in Dutch Guiana, which occupies the centre. French Guiana, to the east, is used as a penal settlement, its capital being **Cayenne**.



**BRAZIL** is the largest country in South America, having an area of over three million square miles. The west side is bordered by Colombia, Peru, Bolivia, Paraguay, and Uruguay; the east by the Atlantic Ocean, and the north by Venezuela, Guiana, and the Atlantic. In the south it tapers to a point.

The greater part of the country is within the tropics, and forms part of the basin of the **Amazon**, the dense forests of the latter being almost uninhabited. The eastern part is a plateau, forming part of the **Brazilian Highlands**. Only the coast regions are thickly populated and cultivated. The chief vegetable production is *coffee*, but *cotton*, *sugar*, *tobacco*, and *cocoa* are also grown. This country is exceedingly rich in mineral wealth, *gold*, *silver*, and *diamonds* being abundant. The forests produce *rubber*, *Brazil nuts*, and valuable *timber*. The white inhabitants are mostly of Portuguese descent.

**Rio de Janeiro**, the capital, is the centre of the coffee-growing district. It has a fine harbour, but the climate is unhealthy. **Bahia** is the second port and the outlet of a sugar and tobacco district. **Pernambuco** is another port to the north. **Para** is a port on the estuary of the Amazon, and exports rubber, timber, and Brazil nuts.

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**URUGUAY** is a small State between the River Uruguay, which flows into the La Plata, and the Atlantic Ocean. Its area is 72,000 square miles. *Cattle* and *sheep* are reared in great numbers, and there are large *preserved meat* factories, that at **Fray Bentos** manufacturing the well-known Liebig's Extract of Beef. **Monte Video** is the capital. It is situated on the north shore of the La Plata estuary, and is an important port.

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**PARAGUAY** is enclosed by the **River Paraguay** (and its tributary, the **Pilcomayo**) on the west and the **Parana** on the east. Bolivia is on the north, Brazil on the north and east, Argentina on the south and west. It has no sea-coast. The area is 145,000 square miles. The chief industry is the growing of *yerba-mate*, or Paraguay tea. Other products are *tobacco*, *fruits*, and *timber*. **Asuncion**, at the junction of the Pilcomayo and Paraguay, is the capital.

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**ARGENTINA**, or the Argentine Republic, embraces an immense territory to the south of Bolivia and Paraguay, and to the east of Chili, from which it is separated by the Andes chain. The east coast is washed by the Atlantic. The whole country has an area of over 1,212,000 square miles.

Being within the temperate zone, the climate is temperate and pleasant, but the district of **Patagonia** in the south is much colder.

Argentina consists of an immense plain, the region of the *pampas*, and the country is well watered by the rivers **La Plata**, and its branches, the **Salado**, **Paraguay**, **Parana**, and **Uruguay**. *Sheep*, *cattle*, and *horses* are extensively reared, and form the chief wealth of the country; for *live stock*, *preserved meat*, *meat extracts* (Bovril), and *hides* and *skins* are important exports. *Wheat* and *maize* are also cultivated and exported.

**Buenos Aires** is a handsome town on the south shore of the estuary of the La Plata. It is the largest town in South America and is an important



port and railway centre. **Rosario**, the largest town inland, is also a railway centre. **Cordoba** is situated in an important grazing district.

**CHILI** occupies the Pacific sea-board from Peru to Cape Horn, its width being 100 miles. The area is 279,000 square miles. The coast is very much broken. In the south **Tierra del Fuego** and the **Magellan Strait** are included in Chili. The **Andes** run the whole length of the eastern border, and contain the high peak of **Aconcagua**. The climate is cool and healthy, and except in the north the soil is fertile. *Wheat, wine, wool, hides, and skins* are exported, but the most valuable product is the deposit of *nitrate* in the north. *Copper* and *silver* are also mined.

**Santiago**, at the foot of the Andes, is the capital of Chili, and **Valparaiso**, its port, has considerable trade. **Iquique**, in the north, is engaged in the nitrate trade.

**BOLIVIA** is an inland state between Peru and Brazil, and to the north of Argentina and Paraguay. Chili borders the south-west. Its area is 703,400 square miles. The **Andes** broadens out into two chains enclosing a lofty plateau, on which is situated **Lake Titicaca**. The peaks **Sorata** and **Illimani** are in Bolivia. Bolivia is noted for its famous *silver* mine at **Potosi**. *Copper, nitre, rubber, and cinchona* are other products. *Cattle, sheep* and *llamas* are numerous. **Sucre** is the capital, but **La Paz** is the most important town.

**PERU** is bounded on the north by Ecuador, on the east by Brazil, on the south by Bolivia, and on the west by the Pacific. The area is 500,000 square miles. The sea-coast is barren, rainless, and intensely hot; the centre is traversed by the double chain of the Andes enclosing lofty tablelands, and has an equable climate. Beyond the mountains are grassy plains, watered by the tributaries of the **Amazon**. The greater part of Lake Titicaca is in Peru. The mineral wealth of the country is great, *gold, silver, and copper* being produced. Other productions are *sugar-cane, cotton, tobacco, coffee, rubber, cinchona, vanilla, and the wool* of the alpaca.

**Lima**, the capital, is six miles inland from its port **Callao**. **Cuzco**, in the Andes, was the ancient capital of the Incas. **Pazco** is noted for its silver and lofty situation. **Arequipa** is connected by rail with Lake Titicaca and La Paz.

Peru was the most powerful and wealthy state in the New World when it was conquered and plundered by the Spaniards under Pizarro in 1535.

**ECUADOR**, as its name implies, lies both sides of the Equator. Its area is 120,000 square miles. It has Colombia on the north, Peru on the south, and the Pacific on the west. The country is traversed by the Andes and contains many high peaks and volcanoes, including **Antisana, Cotopaxi, and Chimborazo**. The **Galapagos Islands** are included in Ecuador. The mountain region is cool, but the coasts are tropical. The natural productions are similar to those of Peru, but *cocoa* is extensively cultivated and exported, with *coffee, tobacco, and cinchona*.

The capital is **Quito**, almost under the equator, and having an elevation of 9500 feet, the climate is equable. **Guayaquil** is the chief port.



## QUESTIONS.

1. Describe a coasting voyage from Quebec to New Orleans, stating the chief physical features passed, and the ports that could be visited.
2. Describe the surface of North America, giving the position of the chief mountain ranges and plains.
3. What forms the watershed of the continent of North America? Name the rivers that flow from each side, and state where they empty themselves.
4. Write a description of the Mississippi and its tributaries. Show the commercial importance of this river.
5. Name the islands in order, around the coast of the whole continent of America.
6. What and where in North America are the following physical features: Saskatchewan, Race, Anticosti, Champlain, Utah, St. Elias, Sierra Nevada, Juan de Fueca, Alleghany, Hudson, Savannahs, Yucatan, Sitka, Fundy, Hatteras, Rio Grande, Pike's Peak, Popocatapetl, Nicaragua, St. Lucas, Huron, Tennessee, Mackenzie, Potomac, Panama.
7. Name the states of the United States washed by the Atlantic. How do you account for the eastern coast being the most prosperous and densely populated part of North America?
8. Name ten of the largest towns in the United States, giving the situation and importance of each.
9. Write short notes on (a) the North-West Passage, (b) the Rocky Mountains, (c) the Great Lakes.
10. By what railways can the continent of North America be crossed? Give the termini of each, and a general description of one of them.
11. Give an account of the surface, climate, and productions of Mexico.
12. Name and give the relative positions of the republics of Central America, with capitals. What two canals are in course of construction across Central America?
13. What islands lie between North and South America? Name the six largest, with capitals and system of government.
14. From what parts of North America are the following obtained: gold, silver, copper, coal, petroleum, timber, wheat and flour, cotton, sugar, bananas, live stock, wine, salmon, cod?
15. South America is a continent of plains. Name them and state the source and direction of the chief rivers that drain them.
16. Name the countries and ports passed in sailing from Colon to Valparaiso.
17. Describe the Andes chain, stating the countries it passes through and some of the chief peaks.
18. What and where are these physical features: Maracaibo, Madeira, Paraguay, Sorata, Magellan, St. Roque, Titicaca, Berbice, Galapagos, Aconcagua, Horn, Orinoco, Tierra del Fuego, Selvas, Llanos, Pampas, Cotopaxi, Curacoa?
19. Name the countries of South America, with the capitals.
20. Name the boundaries and give the chief towns and productions of Brazil or Argentina.



## XX. Australasia.

1. The continent of Australasia includes the island continent of Australia and the various islands and island groups between Asia and America.

Australasia comprises the following divisions: (1) **Australia** and **Tasmania**, (2) **New Zealand**, (3) **Melanesia**, (4) **Polynesia**, (5) **Micronesia**.

Australia and New Zealand have been described in former pages.

2. **Melanesia** (the islands of the Blacks) forms a curve of islands to the north-east of Australia, and includes **New Guinea** and the adjacent islands, the **Bismarck Archipelago** (German), the **Solomon Islands** (British and German), the **Santa Cruz Islands** (British), the **New Hebrides** (French), **New Caledonia** (French), the **Loyalty Islands** (French), and the **Fiji Islands** (British).

The climate is hot and moist. Rain falls in abundance, and vegetation is luxuriant. The forests contain *ebony*, *sandal-wood*, *cedar* and *palms*. *Plantains*, *bread-fruit*, *sugar-cane*, *spices*, *sago-palm*, *yams* and *rice* are cultivated. *Gold* and *pearls* are also found. The natives, except in the Fiji Islands, are in a low state of civilization.

3. **Micronesia** (little islands) embraces a large number of small islands to the north-east of Melanesia, mostly of coral formation. The chief groups are the **Ladrone Islands** (U.S.A.), the **Carolina Islands** (German), the **Pelew Islands** (German), the **Gilbert and Ellice Islands** (British), and the **Marshall Islands** (German).

4. **Polynesia** (many islands) comprises the numerous outer groups which lie between Australia and America. They are sometimes called the *South Sea Islands*. The climate is pleasant, owing to the moderating influence of the sea, and the productions are similar to those of Melanesia. The inhabitants are of the Malay race. The chief groups, extending to the east and lying south of the Equator, are the **Tonga** or **Friendly Islands** (British), the **Samoa Islands** (U.S.A. and German), the **Cook Islands** (British), the **Society Islands**, Tahiti being well known (French), the **Low Archipelago** (French), and the **Marquesas Islands** (French). North of the Equator are the **Sandwich Islands**, also called **Hawaii**, which belong to the United States. Captain Cook was killed here in 1778. The chief town and port is **Honolulu**.



## XXI. *Military Campaigns since 1688.*

### 1. War of the Spanish Succession, 1702-14. (Map A.)

1702.—The capture of **Venloo** and **Ruremonde** and the occupation of **Cologne** and **Liège** prevented an invasion of Holland by the French.

1704.—Marlborough's force lay between the French and Holland, between the Meuse and Lower Rhine. Hearing that the French had despatched a force to join the Bavarians on the Upper Danube with the object of marching on Vienna, he determined to move his army thither. He marched south with the object of deceiving the French, who imagined an attack on **Alsace** was imminent, but turning hastily eastward through **Wurtemberg** he suddenly appeared on the Danube, and having stormed the Bavarian camp on the Schellenberg he placed himself so as to prevent the enemy marching on Vienna. The battle of **Blenheim** followed.

1706.—Battle of **Ramillies**, fought by the French to prevent Marlborough taking **Namur**.

1708.—The French captured Ghent, but Marlborough fell upon them at **Oudenarde**. The French were driven over the frontier and **Lille** was captured.

1709.—While besieging **Mons** the French were again beaten at **Malplaquet**.

1713.—The war was closed by the Treaty of **Utrecht**.

### 2. The Seven Years' War.—

This was a contest between Britain and France for supremacy in India and North America. It was also a struggle between Prussia and Austria for **Silesia**. While France assisted Austria, Pitt formed a coalition with Frederick the Great to keep the French employed on the Continent while he attacked them by sea. Accordingly the Duke of Cumberland was sent to defend Hanover, but he was defeated at **Hastenbeck** and forced to retreat northward. At **Closter-Seven** (1757) he concluded a shameful convention by which he agreed to disband his army and leave Hanover to the French. This disaster did not discourage Frederick, for in the same year he beat the French at **Rosbach** and the Austrians at **Leuthen**.

A most brilliant victory over the French was gained by Ferdinand, Duke of Brunswick, at **Minden**, in 1759, which caused the enemy to retreat to France, and brought serious war to a close in Prussia.

### 3. Napoleon's Campaigns against Austria, 1796. (Map B.)

France and Austria have been bitter enemies in the past, and have frequently fought. The scenes of the campaigns have been either in Bavaria or Lombardy, the two paths by which Austria can be entered from France, following the basins of the Danube and Po respectively. The Plain of Lombardy, as well as Belgium, may also be regarded as the "Cock-pit of Europe," for here many important engagements have been contested.







1796.—Landing at **Nice**, Napoleon advanced against the Austrians and Sardinians, who were extended along the left bank of the Po from **Valenzia to Pavia**. The former had their base along the Mincio and the latter at Turin. Napoleon's object was to penetrate between the two Allies. Advancing through the Coldi Tenda Pass he forced the Sardinians to submit, and then drove the Austrians to **Alessandria** and thence to the Po. Napoleon crossed that river at **Piacenza**, and the Austrians again retiring, defended the bridge of **Lodi** over the **Adda**. It was carried by the French, and the Austrians, throwing a garrison into **Mantua**, escaped into the Tyrol. Two armies next arrived, one from Carinthia and the other from the Tyrol by way of the **Adige** valley for the relief of Mantua. Buonaparte forced the river, attacked them at **Arcola** and **Rivoli**, with the result that **Mantua** fell, and Napoleon invaded Austria.

By the treaty of **Campo Formio** Austria ceded the Netherlands and the west bank of the Rhine to France.

1800.—Napoleon having arrived at **Lausanne**, prepared to cross the Alps. With about 36,000 men and forty guns he marched over the mountain pass of the **Great St. Bernard**, which had till then been considered impracticable for the passage of an army, and especially for artillery. The French descended to **Aosta** and entered **Milan**, where they were joined by other divisions which had passed over the **Simplon**, **St. Gothard** and **Splügen** passes. The Austrians, being quite unaware of this advance over the Alps, were assembled near **Alessandria**. Crossing the Po at **Piacenza**, they were defeated with great slaughter at **Marengo** (June, 1800). In December of the same year, another French force under Moreau beat the Austrians at **Hohenlinden** in Bavaria. The Treaty of Lunéville was signed in 1801, by which Austria surrendered Piedmont and Genoa, and acknowledged Napoleon as ruler of France.

#### 4. Napoleon Shatters the Coalition of 1805. (Map A.)

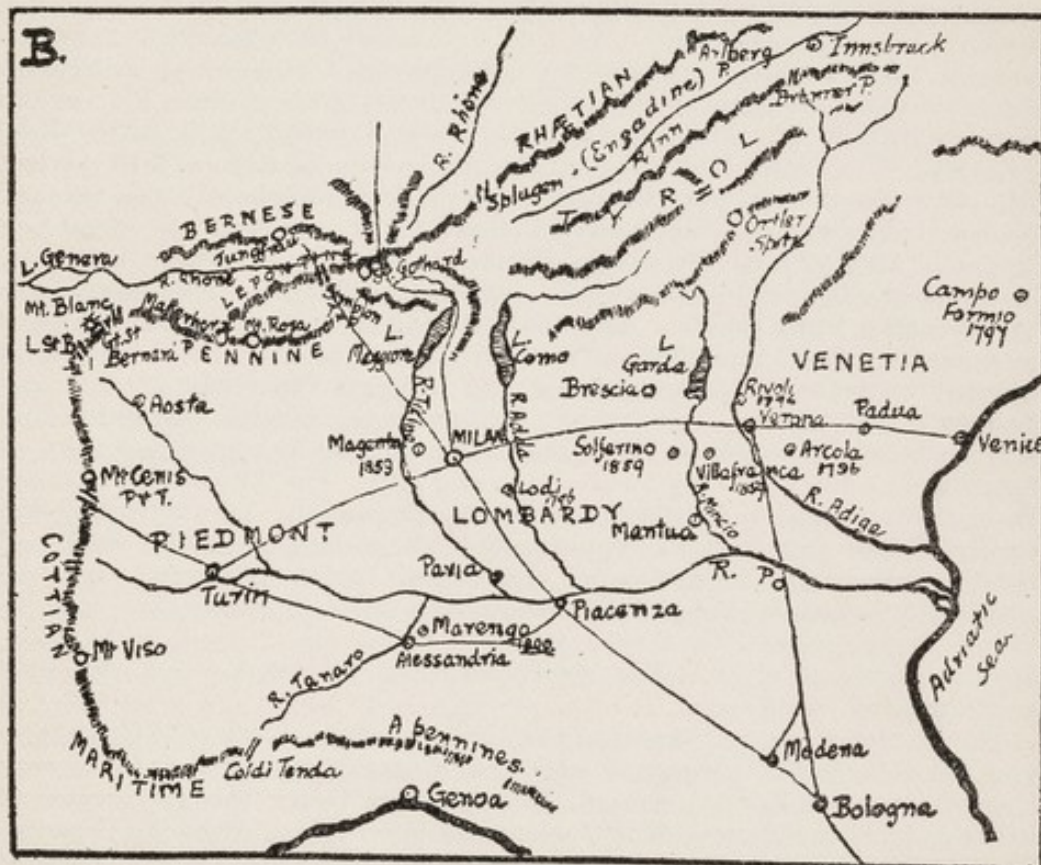
1805.—The French force assembled at Boulogne and intended for the invasion of England was sent by Napoleon against our Allies, Russia and Austria. The Austrians thought that Napoleon's main attack would be delivered in Northern Italy, and therefore the greater part of their army was sent thither. Napoleon, however, resolved to act quickly before the arrival of the Russians, and moving along both sides of the Danube he succeeded in cutting *Mack's* communications and getting in between him and the Russians. The Austrian commander was surrounded at **Ulm** and forced to surrender (Oct. 20). Napoleon, advancing along the Danube, captured Vienna before the Archduke Charles could hasten back from N. Italy. The Russians, passing through the Moravian Gate, united with the Austrians, but they were beaten with tremendous loss at **Austerlitz** (Dec. 2), and Austria was forced to sue for peace.

1806.—Napoleon next attacked the **Prussians**, who, to oppose him, had assembled at **Jena**, instead of defending the Elbe. They were driven from **Jena** with great loss and pursued to **Magdeburg**. **Berlin** was then occupied, 1806.

1807.—The King of Prussia fled to Königsberg, and the Russians advanced to the Vistula. The French occupied **Warsaw**, and early in 1807 Napoleon



beat the Russians at Eylau, and with greater effect at **Friedland**, forcing them to retreat to **Tilsit** on the Niemen, where a treaty of peace was signed. The Czar promised to aid Napoleon in his schemes against England, but Prussia was deprived of a great amount of territory.



##### 5. War of Italian Freedom, 1859. (Map B.)

Louis Napoleon was anxious to weaken the power of Austria, and as Count Cavour was desirous of increasing the power of Sardinia, ruled by Victor Emmanuel, by releasing Lombardy and Venetia from the Austrian yoke, the French were only too glad to assist. Napoleon declared he would free Italy from the Alps to the Adriatic. The Austrians crossed the **Ticino**, but on the approach of the French began to retreat upon **Como**, and four days later they were forced to fight at **Magenta**, where they were decisively beaten. On the news of this disaster the Austrians hastily evacuated Milan, which was entered by the two kings, Napoleon and Victor Emmanuel, on June 8th. On the 23rd, fresh Austrian forces led by their Emperor, Francis Joseph, recrossed the Mincio to engage the Allies at **Solferino**. The next day the Austrians were driven from their position and retired upon **Verona**. Napoleon, now fearing that Prussia would intervene on behalf of Austria and that he would have to fight on the Rhine and the Adige, made overtures for peace, which was concluded at **Villafranca**, much to the disgust of Sardinia. The latter, however, received Lombardy, and the French obtained Savoy and Nice. By 1871 Victor Emmanuel had become King of all Italy.



#### 6. War Between Prussia and Austria, 1866. (Map A.)

Austria was the most powerful German state at this period, but it was the ambition of Bismarck to depose her from that position and make Prussia paramount. A war was soon provoked after Prussia had made secret military preparations on a large scale and secured the assistance of Italy. The Austrians were not ready and failed to secure the mountain passes. A Prussian army had no difficulty then in entering Austria in two divisions under the command respectively of the Crown Prince and General Bittenfeld. The latter advanced into **Bohemia**, through the Elbe gap, while the Crown Prince forced the passes from **Silesia**. The Austrians who were assembling near **Olmütz** could have invaded Germany through **Silesia**, but **Benedek**, the Austrian commander, resolved to operate in **Bohemia** and to hold the Crown Prince in check by a small force while he crushed **Bittenfeld**, afterwards turning to complete the destruction of the army from **Silesia**. But the Prussians, by the rapidity of their movements, spoilt his plans. The Crown Prince had no difficulty in forcing the passes and fighting his way through **Trautenau**, **Skalitz** and **Nachod**. **Bittenfeld**, after many engagements, entered **Gitschin**, and the Austrians fell back on **Königgrätz**. On July 23 he confronted them at **Sadowa** close by, attacking their centre and left. The Austrians weakened their right to deal a decisive blow to the Prussians. The arrival of the Crown Prince at a critical moment, and his onslaught on the weakened right, made a complete victory. The defeat of the Austrians may be attributed to their failure to defend the passes on the Silesian side; also the Crown Prince should have been attacked before the arrival of the more distant northern army. The Austrians then retired beyond the Elbe and arranged for peace.

The results were that Austria was shut out from Germany altogether, and the Kingdom of Hanover and the States north of the Main were formed into the North-German Confederation under the presidency of Prussia, with a common constitution and assembly. After the Franco-German War the southern states joined the Confederation, the King of Prussia receiving the title of German Emperor.

#### 7. Franco-German War, 1870-1. (Map A.)

Spain was searching for a prince who would accept the Spanish throne, and among those mentioned was **Leopold of Hohenzollern**, a cousin of the King of Prussia. **Bismarck** persuaded the King to endorse his candidature, knowing full well that France would take all steps to prevent it. When the fact was announced France protested and in the end **Leopold's** name was withdrawn. But the French ambassador demanded from King **William** a guarantee that no other German claimant would be put forward. This demand was declined, and so great was the clamour for war in France that **Napoleon** had to yield.

The French crossed the German frontier and won a small skirmish at **Saarbrücken**, but at **Weissenburg** (Aug. 4) they were driven back by the Crown Prince to join **MacMahon** near **Wörth**. A general engagement took place here (Aug. 6), and the French were again routed and had to fall back upon **Chalons**. The Germans, leaving a force to invest **Strasbourg**,



began to converge upon **Metz** with three armies. Napoleon, realizing the difficulties, handed over the command to **Bazaine**. The latter attempted to retreat upon **Verdun**, but the enemy prevented this by victories at **Vionville** and **Mars-la-Tour**. A series of battles was fought round Metz, the last and decisive being that of **Gravelotte** (Aug. 18), which resulted in Bazaine's force being invested in Metz. MacMahon, urged to move from Chalons to relieve Bazaine, marched out on the 23rd; but he was not at all confident. By the end of the month he found himself hemmed in near **Sédan**, and in the battle which opened on Sept. 1, MacMahon was severely wounded, and the result was a decisive defeat for the French, Napoleon and his army surrendering. The news of **Sédan** caused a revolution in Paris. On Sept. 15 the army of the Crown Prince arrived before that city and besieged it until its capitulation (Jan. 28, 1871). **Metz**, in the meantime, had fallen (Oct. 27), after making very little resistance, Bazaine surrendering with over 150,000 men. There was much fighting in France, but not serious enough to affect the main issue. Peace was eventually signed at **Frankfort-on-the-Main**, May 10, 1871. Prussia received Alsace and Lorraine, which included the fortresses of Metz and Strasburg, and the payment of an indemnity of two hundred million pounds in cash.

During the siege of Paris the Princes of Germany chose the King of Prussia as German Emperor. The Kings of Saxony, Bavaria and Würtemberg and the many Grand Dukes, etc., ruled their dominions as before, but sent members to a Parliament at Berlin which represented the whole German Empire.

The French frontier on its eastern side should now be noted. Commencing from the south, the **Alps** separate it from Italy and the **Jura** mountains from Switzerland. The line of defence against Germany then stretches from **Belfort**, which defends the **Burgundy Gate** to the **Vosges Mountains**. From there an extended line of fortresses runs through **Epinal**, **Toul** and **Verdun** to **Mezières** on the Meuse. Thence follows the Belgian frontier. The fortresses of **Namur** and **Liège** on the Meuse are a continuation of the French line of defence against Germany.

#### 8. Russo-Turkish War, 1877-8.

In 1876, Turkey was in a state of foment instigated, it is said, by Russia, who aimed at the dismemberment of the country. Later, when the Bulgarian atrocities took place, Russia found an excuse for war, invading Turkey to force her to do justice to her Christian subjects. England remained neutral but obtained from Russia a guarantee that the Suez Canal or its approaches were not to be blocked, that Egypt was not to be attacked, and that Constantinople must not pass out of the hands of the Turks.

The Russians crossed the Pruth and with the help of a Roumanian army prepared to cross the Danube. The Turks were in force at **Widdin**, and in the triangle **Rustchuk**, **Plevna**, and **Shumla**. First the Turkish gunboats were destroyed at **Braila**, **Rustchuk** and **Nicopoli**. The Russian plan of campaign was to send a force into the **Dobrudja** on the east, and another to operate against **Widdin** on the west. Both were then to support



the main army, which was to cross the Danube and pass over the Balkans to Adrianople and Constantinople.

On the night of the 26th June, the Russians, making a feint at a crossing at Nicopoli, embarked in boats near **Sistova**, and early the next morning succeeded in gaining a footing on the southern bank. The Turkish batteries were silenced, and many of the Turks fled to **Tirnova**. This place surrendered to General Gourko on July 7, and he then prepared to cross the mountains. The Turks occupied the **Shipka Pass**, and Gourko with a part of his force resolved to turn the position by crossing the Travna Pass and attack the enemy from the north and south, but the two columns did not act simultaneously and both attacks proved failures. But the next day the Turks evacuated the pass.



On the west the Russians prepared to occupy **Plevna**, but were badly beaten by a Turkish force under Osman Pasha, who then constructed defences for the town, the defence and subsequent capture of which form a thrilling story in military history. No fewer than four attempts were made to reduce the town, and finally Osman Pasha made a determined effort to break through the Russian lines, but failing was forced to surrender with 40,000 men, the siege having lasted from July to December.



In the meantime Gourko had with difficulty crossed the mountains and taken possession of **Sofia**. He then joined the main body and effected the capture of **Philippopolis** and pushed on to **Adrianople**. When in sight of Constantinople the British Government intervened, and Russia, exhausted by the vigorous defence made by Turkey, arranged the peace of **San Stefano**, which was afterwards revised by the Congress of Berlin, 1878.

By this treaty Roumania, Servia and Montenegro became independent, and Bulgaria was created a principality but remained tributary to Turkey. Bosnia and Herzegovina were handed over to Austria, and Russia extended her territory to the mouths of the Danube.

### 9. The Balkan War, 1912-13.

The recent war between Turkey and her neighbours, Bulgaria, Servia, Greece and Montenegro, was fought with a view to forcing Turkey to carry out reforms in Macedonia and other Christian provinces. The Balkan league had been secretly formed for this purpose, and they resolved to wait for some favourable opportunity of striking. This occurred in Oct., 1912, when Turkey had become almost exhausted after a war with Italy.

The campaign was chiefly confined to the land. Some naval operations took place in the *Ægean* Sea, but the Turkish navy, having been depleted, could not secure the command of the sea against the Greeks, with the result that several islands were lost and no attempt from the sea could be made to succour Salonica.

On land the Bulgarians and Servians were well prepared, and advanced rapidly into Turkey. There were two theatres of operations. In the east operations took place along the **Maritza** valley, and the western theatre lay in Macedonia, west of the **Struma**. The latter district is very mountainous, and therefore the forces on either side were broken up. **Salonica** was the Turkish base, and large Turkish garrisons were to be found at **Uskub** and **Monastir**. The Turks were not ready, and therefore could show only a defensive front. Unfortunately, too, the inhabitants, being Christians, were hostile. Otherwise it was open to the Turks to pierce the mountains at Kustendil and seize Sofia and thus cause the Bulgarians to fall back. The Servians, concentrating at **Nish**, advanced over the mountains upon **Uskub**, their objective being **Salonica**. They found the country extremely difficult for manœuvre on account of the bad roads and the scarcity of local supplies. Ultimately they succeeded in occupying Uskub and Monastir and then, co-operating with the Greeks, brought about the capture of Salonica.

In the eastern theatre the chief towns were Adrianople, Constantinople, Rodosto, and Gallipoli, the three latter being used as bases through which troops were brought from Asia Minor. **Adrianople** stands near the confluence of the *Maritza* and *Tunja* rivers, and blocked the roads and railway leading from Bulgaria to the Turkish capital. It was the failure to secure this town early in the war that delayed the progress of the Bulgarian army, for there was no other railway to Constantinople, and therefore, the line being blocked, all the transport had to be diverted by road to **Kirk Kelisse**, a five days' journey from Adrianople.



The Bulgarians advanced from **Philippopolis** to Adrianople and also, to the surprise of the Turks, pierced the mountains more to the east and descended upon **Kirk Kelisse**. Their object was to isolate Adrianople and also to advance upon Constantinople by a wide front. A stubborn battle was fought at Kirk Kelisse, the Turks being forced to retreat. Again at **Lule Bergis** they were worsted and driven back within the lines of **Tchatalja**. The loss of sea power showed itself now, for had a Turkish force been landed at **Midia** on the Black Sea it would have threatened the Bulgarians in their rear, for they really had no line of communication while Adrianople was in the possession of the Turks.

The Bulgarians were unable to overcome the line of defence at Tchatalja, but on the fall of Adrianople Turkey sued for peace and Bulgaria accepted the mediation of the Powers.

Montenegro, who was the first in the field, operated against **Scutari**, and in defiance of the Powers, who wished her to withdraw, succeeded in taking it, but afterwards it was restored to Albania in return for compensation.

The Treaty of London, 1913, has fixed a line drawn from **Enos** to **Midia** as the northern boundary of Turkey. Bulgaria has extended south to the Mediterranean, but has lost possession of Adrianople. Servia, also enlarged, has gained access to the Adriatic Sea, while Greece extends north as far as Salonica. Albania becomes an independent principality.

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**Crimean War.**—For the war with Russia, 1854, see the Crimean War, with sketch, in H. H. History, page 43.

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#### 10. Peninsular War, 1808-14.

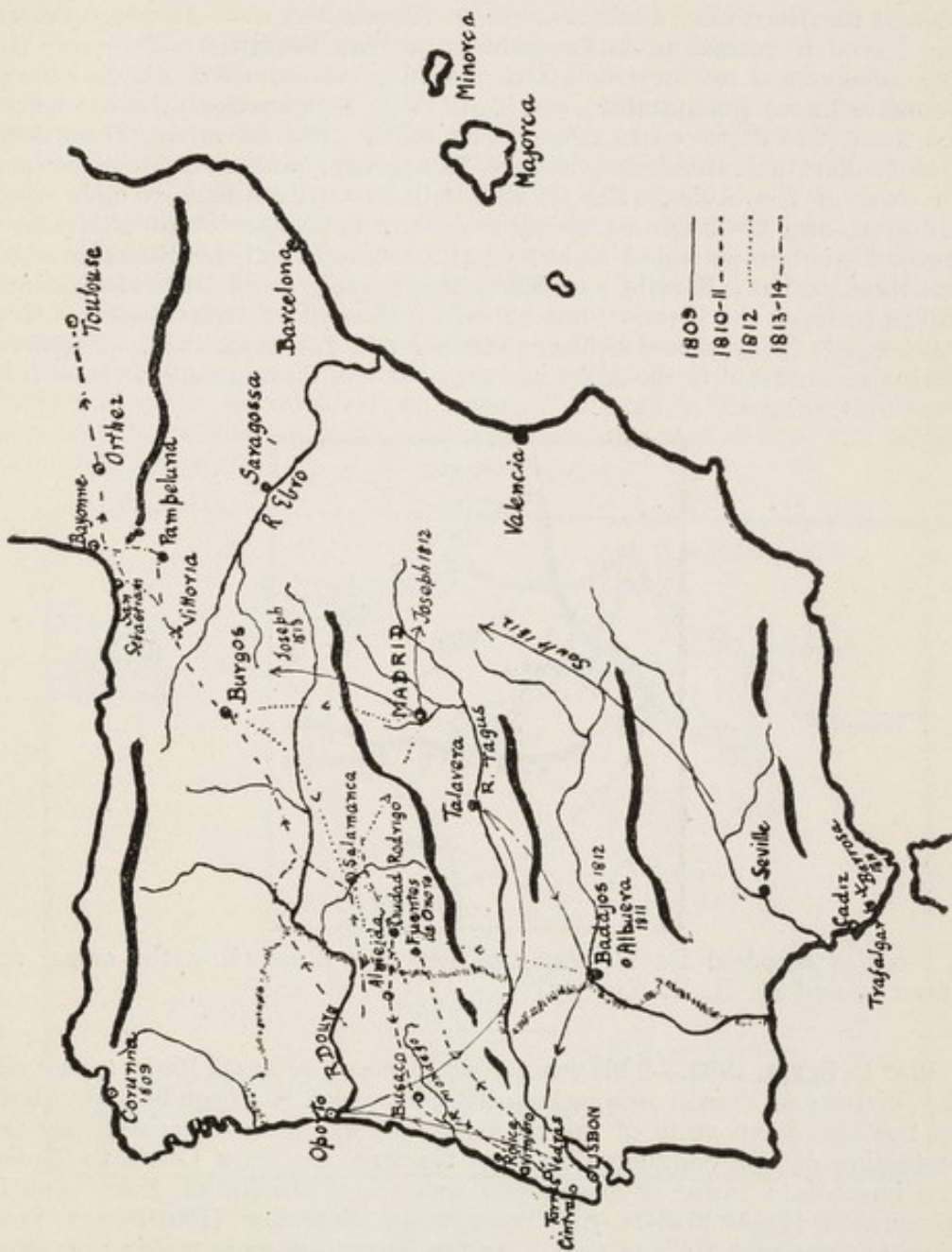
**Campaign of 1808.**—Sir A. Wellesley landed at Mondego Bay, and defeated the French at **Rolica** and **Vimeira**. The Convention of **Cintra** permitted the French to evacuate Portugal.

**Campaign of 1809.**—When Wellesley arrived at Lisbon, 1809, Soult was at **Oporto** and Victor near **Madrid**. Soult was first driven from the **Douro** northwards, and then Wellesley opposed Victor at **Talavera**, but after a two days' battle the former retreated to Portugal by way of **Badajos**.

**Campaign of 1810-11.**—Massena advanced on Lisbon, capturing **Ciudad Rodrigo** and **Almeida**. Wellington was on the Portuguese frontier, and carrying out his plan previously formed he retreated, but halted at **Busaco**, where the French were defeated. Continuing the retreat, Wellington retired within the famous **Lines of Torres Vedras**. Massena failed to break them, and withdrawing, was finally beaten at **Fuentes d'Onoro**, 1811.

**Campaign of 1812.**—Wellington's first offensive campaign. Before beginning a forward movement he captured **Ciudad Rodrigo** in January, and **Badajos** in April. Arriving at the Tormes river he defeated Marmont at **Salamanca**, which gave him possession of Madrid. Soult now evacuated southern Spain and joined King Joseph who had fled from Madrid, and advancing against Wellington who was besieging **Burgos**, compelled him to raise the siege and once more retire into Portugal.







**Campaign of 1813-14.**—Second and final offensive campaign. Wellington's force moved in two divisions, driving the French before them and uniting on the Douro. Joseph again evacuated Madrid, and so rapid was the British advance that the French had no time to defend **Burgos**. Retreating beyond the Ebro they made a stand at **Vittoria** but were utterly defeated and forced to retreat upon **Pampeluna** and **San Sebastian**. To cover the siege operations at San Sebastian, Wellington extended his line from **Roncesvalles** to **Fuentarabia**, and Soult, who had hurriedly been sent to the front, was expected to come to its relief. But advancing from **Jean Pied de Port** he intended to relieve **Pampeluna**, and then move against the rear of the Allies. The British fell back from Roncesvalles upon **Sauoren**, and Wellington arriving from San Sebastian, Soult was almost surrounded, but managed to escape and retreat upon the **Bidassoa**. At this river and the **Nivelle** and **Nive**, the French made three determined efforts to repel the invader, but in vain. Headed off from Bayonne they were closely followed and beaten at **Orthez** and **Toulouse**, 1814. Napoleon having surrendered to the Allies at Paris, the war then came to a temporary close by the Treaty of Paris.

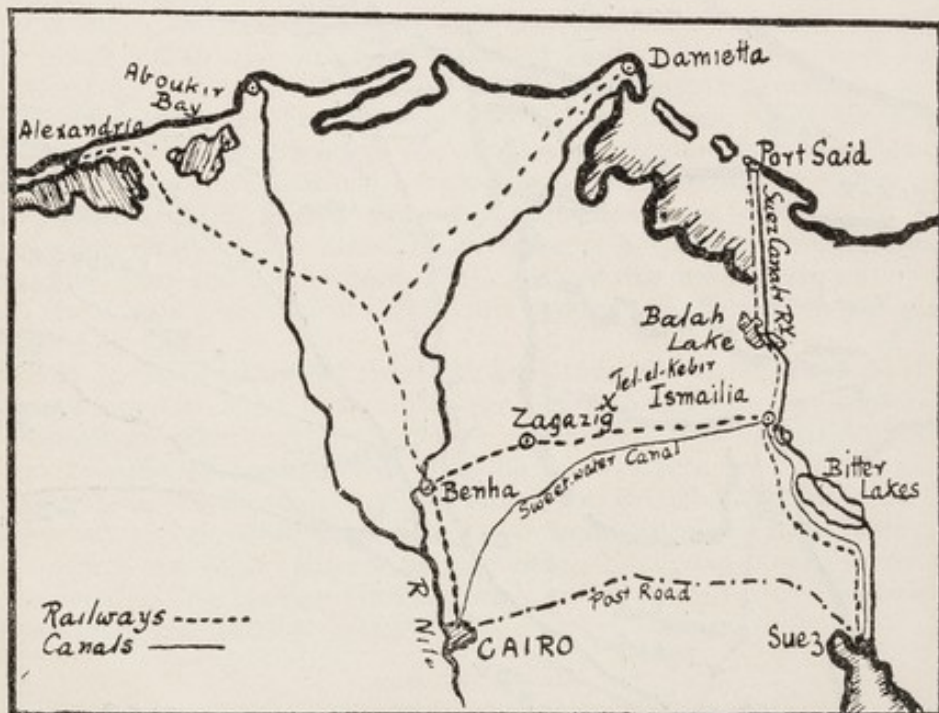


For the **Hundred Days' War** and sketches illustrating the same, see pages 34 and 35, H. H. History.

**War in Egypt, 1882.**—This war was an attempt by Arabi Pasha to prevent the British and French occupation of Egypt, which had been brought about by the disordered state of the country, and which was necessary for the protection of the commerce passing through the Suez Canal to India. The immediate cause of operations was the massacre of Europeans in Alexandria (June 11th). Sir Beauchamp Seymour (afterwards Lord Alcester) was sent to that port. As the Egyptians were making preparations to block the harbour, the admiral sent an ultimatum on July 6th, demanding the dismantling of the forts under pain of bombardment. On the 11th the attack began, and lasted till next day, when the Egyptians hoisted a flag of truce.



Sir Garnet Wolseley arrived (Aug. 15th), and having already made his plans for the capture of **Cairo**, he sailed for **Ismailia**, reaching that town on the 21st. Advancing inland along the route of the Fresh Water Canal, he found the enemy were strongly posted at **Tel-el-Kebir**. To avoid fighting in the day, owing to the intense heat, Sir Garnet resolved to make a night attack on the position, which succeeded in every way, the infantry carrying the redoubts and the artillery turning the guns upon their former owners. The enemy were also pursued, and **Zagazig** occupied the same evening (Sept. 13th). On the 14th **Benha** was taken, which dominated the main line of the railway and the river. The enemy then showed their willingness to submit by destroying the dam which prevented Alexandria from receiving fresh water. The Egyptians making little opposition, the British occupied Cairo the same day, after a splendid march of thirty-nine miles, and on the arrival of Sir Garnet the rebel pasha surrendered (Sept. 15th). In six weeks from the day the general had left England he had succeeded in subjugating the country. Such are the facilities afforded by steam and telegraph for a force which undertakes the invasion of an enemy's country. It also shows the necessity for a country to be fully prepared on shore against the descent of an enemy by sea.

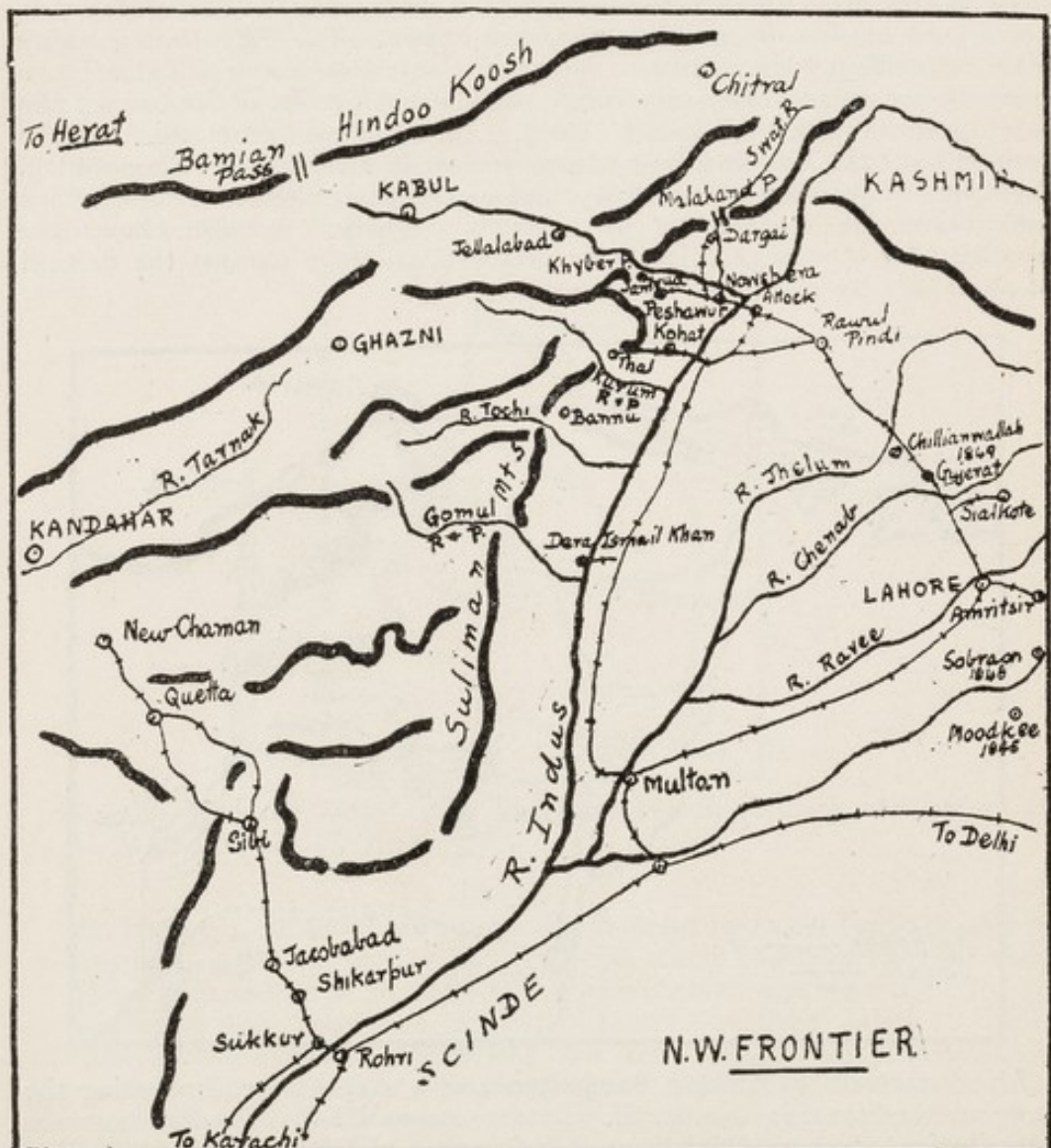


An account of the **Soudan Campaigns** and a sketch map illustrating the same will be found in the *H. H. History*, pages 52-3. The Soudan wars were instigated by the **Mahdi**, and during that of 1884-6, General Gordon was sent to **Khartoum** to withdraw the Egyptian garrisons from the Soudan, but he was besieged there and killed before the Nile Expedition under Sir G. Wolseley could reach him. The country was then evacuated and



left in the hands of the Mahdi. Ten years later (1896-8) the Soudan was recovered by Lord Kitchener, and a joint Anglo-Egyptian Government was established at Khartoum. Since then a railway has been constructed connecting Khartoum with Suakim and Port Soudan, so that in view of further troubles the Soudan may be easily reached by a military force from the Red Sea, avoiding the long journey down the Nile, and providing an alternative route.

**The South African War.**—For a detailed account and sketches of this war, see "Biography of Field-Marshal Earl Roberts."\*



**The Defence of India.**—The sketch inserted above shows the chief passes leading from Afghanistan into India, and the railways connected with them. †

\* Hiorns and Miller.—

† See page 74.



This magnificent frontier of mountain ranges has been cut by many rivers forcing their way to the Indus and forming the passes by which friend and foe have poured into India. Away to the north the Chitral country has been reached through the **Malakand Pass** and by the **Swat** valley. South of the *Kabul River* is the **Safed Koh** range enclosing the **Khyber Pass**, and throwing off a spur to the south which lets through the waters of the **Kuram** and the **Tochi**. The former provides access through the **Kuram** and **Shutargardan** passes to Kabul. Next comes the mountainous district of **Waziristan**, through which the **Gomul** penetrates. From here the **Suliman** range follows, bending round to the **Bolan Pass** until it forms a mass of mountains around Quetta.

The North-Western Railway runs from Delhi through Lahore, Rawal Pindi, Peshawur, and Nowshera (all large military stations) to **Jamrud** in the Khyber Pass; to **Dargai** near the Malakand Pass; to **Kohat** and **Thal** in the Kuram Valley, and to **Dera Ismail Khan** near the Gomul Pass. The importance of the strategical railway to Quetta is clearly indicated in the sketch.

The defence of the North-West Frontier has always occupied the minds of Indian statesmen. Of late years there has been little trouble owing to the pacification of the tribes, due largely to the formation by Lord Curzon of the new North-West Frontier Province. Lord Kitchener, during his term of office as Commander-in-Chief, reorganized the army, establishing large garrisons in the northern parts of India. Railways now form a network over India, so that troops can be concentrated quickly to repel any invasion through the Khyber and Bolan Passes. But as England and Russia are now friendly, the danger of invasion has been lessened; but the tension on the frontier can never be relaxed, for the whole of Afghanistan is fully armed with rifles obtained from Europe by way of the Persian Gulf, so that although invasion is not likely, there is still the possibility that the freebooters of the mountains may again swoop down upon the fertile plains of the Punjab and carry off any spoil that will supply their needs.

But if India be attacked from the sea, then the defence would depend upon our sea power, for it would be necessary to reinforce the Indian army by troops from other parts of the world. At present we keep no fleet in Indian waters because no foreign fleet is to be found there, and as the shortest route to India lies through the Suez Canal, the British have occupied Egypt to prevent the possibility of the canal being blocked by a belligerent. Neither will we allow Russia or any other European power to establish themselves on the Persian Gulf, as such an act would prove a menace to the safety of our Indian Empire.

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#### QUESTIONS.

1. Draw a map of Belgium, and show the position of the following places. Then state why each is important historically: Waterloo, Antwerp, Namur, Brussels, Fontenoy, Lille, Ramillies.
2. Compare Napoleon's campaign in Northern Italy, in 1800, with that of 1859.



3. Trace on a map the movements of Napoleon in 1805-6, after he had abandoned the invasion of England.
4. Give a short account of the Franco-German War, with a sketch map showing the position of the chief places mentioned.
5. Draw a map to illustrate the Crimean War. How did the climate affect the operations?
6. Sketch the river Nile, showing the route taken by the expedition for the relief of Gordon.
7. Give a short account of the war of the Hundred Days, illustrating your answer by a sketch map.
8. Draw a map of Spain, and on it trace the movements of Wellington during the campaigns of 1809 and 1810.
9. Give a sketch illustrating Wellington's final offensive campaign of 1813-14.
10. Where are the following situated, and for what events in history are they noteworthy? Toulon, Mantua, Koniggratz, Rossbach, Aix-la-Chapelle, Tilsit, Plevna, Minden, Sedan, Borodino, Kirk Kelisse, Atbara.
11. Draw a map of Natal, and insert the chief places of note connected with General Buller's campaign in Natal, 1899-1900.
12. Trace on a map the route taken by Lord Roberts from Kimberley to Pretoria.
13. On a map of the N.W. Frontier of India show the following: Khyber Pass, Bolan Pass, Kabul, Kandahar, Ghazni, Peshawur, Gomul Pass, Kuram Valley, Quetta, Swat Valley, Dargai, Waziristan, Malakand Pass.
14. Draw a map of India, and insert Assaye, Plassey, Arcot, Surat, Laswaree, Seringapatam, Meanee, Sobraon, Buxar. Place the date beneath each, showing the year in which it became famous in history.
15. By what routes could Austria be invaded? Give instances from past history.
16. State the chief streams of Northern Italy, with an important town on each. Also name the chief passes leading into Italy.
17. Do you consider the defence of the French eastern frontier easier now than it was in 1870? Draw a map of the frontier, showing the chief French and German fortresses.
18. Draw a map of South Africa, and mark the following: Kimberley, Paardeberg, Majuba, Colenso, Modder River, Laing's Nek, Ladysmith, Krugersdorp, Stormberg, Dundee, Harrismith, Mafeking. Select any six, and say for what historical events they are noted.
19. Give a sketch showing the advance of the Russians from the Pruth to Constantinople in 1877-8.
20. Where and for what noted are: Marengo, Hohenlinden, Austerlitz, Eylau, Jena, Salamanca, Bidassoa, Solferino, Sadowa, Gravelotte.



## XXII. *Geographical Influences on War.*

1. **Frontiers.**—In all European countries the study of *land* frontiers is an important part of military geography. Frontiers are either natural or artificial. The absence of some natural feature, such as a mountain range, river, or desert, necessitates an elaborate scheme of defence by means of fortresses. Germany on its western and eastern sides is strongly defended in this way. Countries with a mountainous frontier will organise their defence so as to make any advance through it as difficult as possible. Thus the roads over the Alps in Switzerland, Austria and Italy, and the passes on the N.W. frontier of India are strongly fortified. But mountains have proved but feeble barriers to many great commanders. Napoleon crossed the Alps into Italy, Alexander the Great entered India from the north through Afghanistan, and many British commanders have fought with success in this same mountainous district. The Drakensberg Mountains, forming the boundary between Natal and the late Boer Republics, were no obstacle to the Boers, who invaded Natal with ease from the north and west, with the result that Ladysmith was invested. Austria, almost surrounded by mountains, would appear to be safe from invasion; but in past ages the Turks have invaded the country from the south, the French from the Rhine and Lombardy, and the Prussians through the mountain walls of Bohemia.

The geometrical formation of frontiers, especially in regard to European countries, should be noted for their strategical importance. Switzerland, it will be noticed, forms a salient between South Germany, Austria, and Italy. The French, opposed by Switzerland, would, if invading Italy, be threatened on their left flank, and if invading South Germany, would be attacked on their right flank. With Swiss co-operation the French would be able to turn the left flank of a German army advancing upon Belfort or Nancy.

The Russian frontier on the west has disadvantages, since it projects into Germany; for a Russian advance through Poland to Berlin would be threatened on the right and rear by a German force in the north-east, and if Austria were assisting Germany, the Russian army would be open to flank attack on both sides. Austria-Hungary projects eastward between Roumania and Poland, rendering an invasion by Russia very difficult from the Pruth.

It is well to note, too, that the withdrawal of the French frontier after 1871 to its present line alters its geometrical formation, and has this advantage, that any advance by Germany through Alsace-Lorraine could be attacked on either flank by a French force; and as the province is entirely sympathetic to France, and equally hostile to Germany, news of any German movements could be transmitted to the French commanders.



2. **Sea Power.**—The most effective frontier is that of the sea. Insular countries are not dependent on large numbers of men or strong fortresses, but rely upon an efficient navy.

Britannia needs no bulwarks,  
No towers along the steep,  
Her march is o'er the mountain waves,  
Her home is on the deep.

The leading powers of the world recognise the necessity of maintaining a strong navy, and the command of the sea in any naval warfare will fall to that power which possesses a fleet of ships strong enough, and manned by men skilful enough, to attack and defeat the enemy's fleet in any part of the world.

The story of our mastery of the sea may be said to have begun by the destruction of the Spanish Armada. The decline of the Portuguese and Spanish power gave ascendancy to the Dutch. During Cromwell's rule England and Holland fought for supremacy, which ultimately passed to the former. The 18th century is noted for the progress made in colonial expansion. By the treaty of Utrecht, which closed the War of the Spanish Succession, we received large tracts of land in Canada. Following this occurred a long period of peace under Walpole, which led to a great increase of trade, and also brought England again into rivalry with France, Spain, and Holland. The Seven Years' War, the American War of Independence, and the Napoleonic wars illustrate the remarkable manner in which British naval power predominated and enabled us to withstand invasion, to develop our trade, and to form a world-wide empire.

Great Britain, isolated and surrounded by the sea, has more time to prepare in case of hostilities, and in consequence of her naval strength and the difficulty attending the transport of invading troops by sea, can rest secure with a comparatively weak land force. A strong navy, too, is essential to protect our commerce and to defend our oversea territory. Both depend upon Britain's mastery of the sea. Lord Bacon in one of his famous essays writes: "This much is certain: That he that commands the sea is at great liberty and may take as much and as little of war as he will. Whereas those that be strongest by land, are many times nevertheless in great straits. Surely, at this day, with us of Europe, the vantage of strength at Sea, (which is one of the principal dowries of this Kingdom of Great Britain) is great; both because most of the kingdoms of Europe are not merely inland, but girt with the sea; and because the wealth of both Indies seems in great part but an accessory to the command of the Seas."

Sea power then is more important than land power. A nation with command of the sea can transport large numbers of troops to the scene of war, and can carry without interference the requisite supplies needed for their maintenance to the various local bases or depots established at various parts of the coast. It is said that the battle of Trafalgar, 1805, established our naval supremacy. From then Britain's fleet controlled the coasts of Europe during the Napoleonic wars, and she was able to transport men and material to Spain throughout the Peninsular War, and to transfer the bases of operation in accordance with the requirements of the campaign. The growth of the Empire followed, for French and Dutch possessions fell into our hands. Where, then, two naval powers are at war, the



successful fleet is free to act as it desires, and the commerce of that country continues without molestation.

The possession of an overseas empire, and the vast trade arising from our dependence on our colonies and foreign countries for much of our food supplies and raw material; will exercise a great influence on war generally. An attack on our colonies and our trade will form one of the objectives of an enemy, and should a greater and more efficient fleet come into being, the food supply of Britain, the prosperity of her industries, and the means of communication with her colonies will all be exposed to grave danger. Therefore the command of the sea must be maintained, and our fleets must be so disposed not only that our coasts may be defended from invasion, but also on wide and general lines for the protection of our colonies. At present, owing to the expansion of the German fleet, the greater part of our navy is established in the North Sea. This disposition, besides covering the British Isles against attack, will prevent effectually all German communication with the Atlantic and practically with the entire world, thus safeguarding our possessions and preventing a disturbance of our trade and commerce.

The position of armies in regard to the sea is important. A coast lying behind an army is dangerous, as there is the risk of being driven back into the sea. Sir John Moore was forced to fight the battle of Corunna to cover the embarkation of his troops, and fortunately victory was obtained. It was the intention of Massena to drive Wellington into the Atlantic in 1810, but here the advantage of sea proved a great help, for though besieged within the famous lines of Torres Vedras, Wellington was enabled to draw much of his supplies from the sea. The same plan was conceived by the Boers in Natal, their chief design being to drive the British to Durban. The success of Japan against Russia was chiefly due to their retaining command of the sea and forcing the Russians to carry out a land campaign, where they were dependent on supplies and stores which had to be conveyed thousands of miles to the seat of war along a single line of railway.

The possession of an extensive sea coast is then of immense value to the defence of the country.

As a result of the late Balkan War, Switzerland is now the only country in Europe without direct access to the sea. But most of the European countries suffer from some disadvantage or other. The North Sea coast of Germany is small in extent, and, as we have seen, is controlled by the British fleet in the North Sea. That of the Baltic Sea is frozen from November to April, and is cut off from the Atlantic by other countries. Her coal and iron supplies are not near the coast, the ironworks of Westphalia, Saxony and Silesia being some distance from the dockyards of Kiel and Wilhelmshaven.

France opens to the Atlantic on the north and west but is landlocked in the south. Austria suffers from a small coastline, while Italy with an extensive sea border finds the action of her fleet limited to the Mediterranean.

Spain, once formidable on the sea, has declined in power owing to the loss of her colonies and the want of industrial enterprise.

Russian sea-power is confined on three sides. She has no access directly to the ocean, the Baltic and Black Seas being enclosed, and like the Arctic coast, frozen during the winter.



Outside Europe the United States has a fleet rivalling that of Britain and Germany. This is due to her recent acquisition of colonies, which necessitates the maintenance of large fleets on the Atlantic and Pacific coasts, and the disposition of these fleets has been the controlling factor in the construction of the Panama Canal.

**3. Mountains.**—Mountains form obstacles in warfare, as they can only be crossed in certain places by means of defiles. They are useful as a means of defence if the passes are strongly guarded. In 1866 the Austrians lost the day because they failed to defend the passes against the Prussians approaching from Silesia. An invading force would find operations in a mountainous country very difficult. Only small numbers could be employed, for movements would be restricted to the long, narrow valleys, and troops would have to break up into small units on account of supply difficulties; also the use of cavalry and artillery would be limited. But as mountains do not always prove a formidable barrier, the defensive line is bound to be pierced and the defence would then have to be abandoned. The mountains could also be used as a screen to conceal the movements of troops. From them defenders, knowing the chief roads and passes, would make sudden attacks and then retire again to their strongholds. This mode of warfare was common in the various frontier expeditions in India.

A range of mountains running parallel to a line of operations makes it difficult for transport and the progress of troops. It is also dangerous for an army to advance on both sides of such a range. In 1800 the Austrians lay on both sides of the Alps, and when Napoleon surrounded Mack at *Ulm*, the force in Italy was powerless to render him assistance. If the range is perpendicular to the line of operations; it can be used as a means of defence by either side. In 1878 the Balkans formed a parallel range and was defended by the Turks at the Shipka Pass. The Russians, leaving a force in front, succeeded in piercing the range by another defile and attacking the Turks in rear; but in operating on both sides of a range it is extremely difficult to correlate the two movements, and in this case the failure to act simultaneously produced no decisive result. In 1809 Soult's force on the north side of the Beja Mountains was greatly delayed and prevented from assisting Victor at Talavera.

**Valleys** should also be noted, for they influence operations to a great extent. By reference to a map it will be seen that along the great water-courses run the chief roads and railways, and as they form an important factor in the despatch of troops and stores, it follows that the theatre of war is generally to be found in the broad valleys. During the late Balkan War the valleys of the Maritza and Vardar laid down the lines of operation. Wellington in 1809 operated along the Tagus Valley; in 1812 and 1813 in the valley of the Douro, and in 1810, in retreating to Torres Vedras, he followed the valley of the Mondego river. The celebrated march of Lord Roberts from Kabul to Kandahar lay along the valley of the river Tarnak, and the various frontier expeditions in India have followed the Swat, Kurum, Tochi, and Gomul valleys.



4. **Rivers.**—In warfare rivers may be regarded as obstacles to an advancing force, for they provide an enemy with a strong defensive position. In this case the river must run perpendicular to the line of operations. Instances of rivers being used as a means of defence are common. At the Douro in 1809, Soult defended the river against Wellington; the Modder and Tugela rivers in the South African War were held by the Boers to prevent an advance on Kimberley and Ladysmith respectively; at the Danube in 1878, the Turks made a feeble attempt to check the progress of the Russians. The tributaries of the Po also lie perpendicular to forces advancing from France and Austria, and have on many occasions been used as a means of defence. The rivers of Germany are similarly placed, and the Prussians were in error in attacking Napoleon at Jena in 1806, for it would have been wiser to have defended the Elbe before Berlin.

But the defence of a river cannot be continued indefinitely, for the attacker is bound to effect a crossing at some point, after perhaps making feints at other points to distract the attention of the enemy. The first effort would be to form a covering party on the defender's side with a view to the construction of a bridge. This would have to be done by small parties in boats or by swimming across. Points, then, where a river may be crossed are of strategic importance, and it is here that fortresses may be found. Along the Danubian frontier of Bulgaria, fortresses have been constructed at Widin, Rustchuk, and Silistria. In Bavaria, along the same river, the fortresses of Ulm, Ratisbon, and Passau withstood the advance of Napoleon in 1809. The Rhine, too, provides a long line of fortresses for the defence of Germany.

Where a river runs parallel with the line of operations it may be regarded as a means of communication. In the Nile expedition for the relief of Khartoum, the river, notwithstanding the natural obstacles, was most convenient for the transport of provisions and stores. The Ganges also proved useful in this respect during the Mutiny. As a means of communication a river has many advantages over roads. The latter necessitate much expense in the provision of animals of draught and forage for the same. Should the weather be inclement, the roads are soon cut up and converted into shapeless tracks. There is also the liability of the road becoming congested when the traffic is unusually heavy. A river, on the other hand, is always available, never becoming useless by wear and tear. The Danube and Mississippi have at times been used in warfare as a means of communication.

To fight in front of a river is dangerous, and as in the case of mountains and for the same reason, it is not considered wise to advance along both banks of the river. Tallard, defeated at Blenheim, 1704, had no alternative but to surrender or be driven into the Danube. When the retreating enemy can cross a river they save themselves from pursuit, as exemplified in the war of 1866, where the Austrians after Königgratz fled beyond the Elbe.

Rivers have also been used to screen the movements of troops, but the advent of the aeroplane will prevent this in future, and render impossible disasters similar to those that occurred at Magersfontein and Colenso.



5. **Deserts** are not often the scenes of fighting, although the occupation of Egypt has forced us to engage in serious wars in that country and the Soudan. The chief difficulty in such expeditions is the scarcity of local supplies of food, water, fuel, and forage. All these would have to be carried, and unless the campaign, like that in Abyssinia 1868, and in Egypt 1882, was short and decisive, the force would be helpless when supplies were exhausted. Then the intense heat is detrimental to the health of the troops. Deserts form a means of defence, being a barrier to the advance of an army. The Kalahari Desert is a protection to the Cape of Good Hope Colony and the Transvaal. Should India be entered from the north-west, the desert of Rajputana lies between the river Indus and the main territory of India within. The difficulties of crossing a desert should always be left to an enemy.

6. **Railways.**—Railways have improved communication by land, as steam navigation has done for the sea. During the last fifty years the growth of railways has been very rapid, and now nearly all the chief countries of the world are covered by a network of railways, which in most cases carry the goods from where they are produced to the great commercial centres. It is common for the railways in a country to converge upon the capital or upon the great industrial centres of trade. Those in England converge on London, in France on Paris, and in India on Delhi. In all the continents there are great trunk lines connecting centres of trade widely separated, and enabling a country to make good use of its natural resources by bringing the productions of the interior to the sea to be distributed over the world. In Canada the Canadian Pacific Railway conveys to the coast all the grain, etc., of the interior. In the United States trunk lines connect New York with Chicago and San Francisco. In India great centres of trade and population like Bombay, Karachi, Lahore, Delhi, Madras and Calcutta are similarly connected; and now it is possible to reach the Pacific by rail from the shores of Western Europe.

From a military point of view, railways afford means for the rapid concentration of troops, the quick transit of all that is needful in the way of stores and food supplies, and the speedy removal of the wounded and prisoners from the front to the bases.

Railways have made great changes in modern warfare. Owing to the rapidity with which troops may be concentrated, we find that the size of armies has greatly increased, and their maintenance in the field is also possible by the quick transit of stores and supplies to the theatre of war. In fact, to railways may be attributed the necessity of universal service in Continental countries.

Any country at war will seek to act on the offensive, and for that reason will mobilise and despatch troops to the frontier as speedily as possible. The advantages to be gained by taking offensive action will be greatly facilitated by providing an efficient system of railways for the concentration of troops. Much thought is given to this subject by Continental countries. There the railways are chiefly constructed for strategical purposes. Lines are doubled, special sidings for the entraining and detraining of troops are provided, and the rolling stock, besides being used for commercial purposes,



is also constructed for the conveyance of men, horses, and military wagons, etc. Success in concentration, then, will depend upon the possession of an adequate number of railway lines to the frontier, linked up with great military centres. In India the railway has been extended as far as possible to the frontier to Dargai, Jamrud, Kohat and Quetta. At the latter town there is sufficient rolling stock to extend the railway to Kandahar. In England it would be necessary to concentrate our troops at the chief points of embarkation. It is a disadvantage where the railways of a country are not of the same gauge, as in India and Russia. But it is wise to have a gauge different from that of a neighbouring country.

As railways are necessary, then, for the rapid supply of an army in the field, we find that one of the chief objectives of an enemy will be the severing of the line of communication by destroying the railway. This is not a difficult matter, and it can easily be done by a small number of men. To guard the railway necessitates a large number of men being withdrawn from the main body. In South Africa the advance of Lord Roberts depended solely on the security of the railway being maintained, and we find the number of men employed on this duty far exceeded the number that marched to Pretoria.

All the important railway routes in Europe are found in valleys through which armies have traversed by road in past ages. For instance, the railway from Vienna to Constantinople follows the Danube valley to Belgrade, thence it runs up the Morava valley, across the Sofia basin, and descends the Maritza Valley to Adrianople and Constantinople.

**7. Resources.**—In any great war the local resources have to be utilized to the fullest extent. The chief requirements will be in connection with food for the troops, forage for horses and transport animals, and the supply of animals for transport work. As a rule an army takes its supplies of food with it, but there are times when these are not available. An army may advance rapidly from its base carrying only a few days' rations, and then it may have to wait until further supplies are hurried up. In the meantime food would be obtained locally. An army depending on local resources would either get its supplies by requisitioning or by billeting the troops. Where an army remains stationary, the local supplies soon become exhausted, and therefore must be supplemented from the base, but this difficulty does not occur if the army is in movement. But as the armies engaged in modern wars are very large, it is now found impossible to feed them without the help of local supplies. In South Africa over 300,000 men and 250,000 animals had to be fed, requiring nearly 3,500 tons of food and forage daily. Also the larger the army the greater are the requirements regarding ammunition, hospitals, etc., necessitating a great increase in the transport.

Most of our small wars have been conducted in countries where we were unable to live on the local resources. In the Abyssinian campaign supplies for six weeks were carried to Magdala. When Lord Wolseley advanced to Cairo there was no time or transports available to take more than sufficient supplies to last for the journey, and when they arrived at Cairo the men and horses subsisted for a considerable time on food obtained from the town. On the march to Kandahar, supplies were also obtained *en route*.



In South Africa, as before noted, considerable use was made of the local resources, both as regards supplies and transport. Meat and flour were procurable as food, and oxen were requisitioned as transport as well as forage for the animals.

Fortresses and other towns liable to investment are of necessity reduced to existing on what is obtained locally, as in the sieges of Plevna, Metz, Paris, Ladysmith, Kimberley, and Mafeking. The difficulty is increased here, for provision has to be made for the civil population as well as the military. Where the local supply has given out the campaign has often been brought to a speedy conclusion. Wellington, before retreating into the famous lines of Torres Vedras, ordered the Portuguese peasants to lay waste the country, with the result that Massena was forced to draw his supplies from an almost desolate and hostile country, and he had no alternative but to retreat. Napoleon had to contend with the same difficulty in 1812, the Russians harassing the French during the retreat and cutting off all means of supply.

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8. **Climate.**—To a great extent the resources of a country depend upon its climate. The weather, too, has its effects upon the conduct of a campaign.

The health of the troops is much affected by the climate, many lives being lost by dysentery through lying on the wet ground. In tropical countries cholera and malaria prove most disastrous to armies in the field. British troops, however, have overcome difficulties in all diversities of weather. They have endured the rigorous winters in Afghanistan and the torrid heat of Egypt, yet the variations in climate have made no difference whatever to their fighting vigour. The climate may be too cold or too wet for bivouacking, and therefore tents would be necessary. The experiences of the Crimean troops during the winter of 1854-5 are well known. The neglect to furnish the requisite supplies was chiefly due to the lack of knowledge concerning the climate of this part of Russia. The failure of Napoleon's Russian campaign of 1812 may be attributed to the rigorous climate and the scarcity of supplies. Thousands of men perished through starvation and cold without fighting a battle. The recent advance of the Bulgarians upon Constantinople was considerably retarded by the heavy winter rains, the soft country tracks being converted into almost impassable swamps.

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9. **Fortresses.**—These are constructed to cover certain strategic points which would be of immense value to the enemy. But there is a diversity of opinion as to their utility. They do not give permanent security to a country, as in most cases they are bound to fall. They do not always hinder the advance of an army. It is true that the Russian advance was delayed by the siege of Plevna, as the recent siege of Adrianople hampered the Bulgarians. Wellington, too, was unable to assume the offensive until he had taken Ciudad Rodrigo and Badajos. But, on the other hand, the Germans were outside Paris long before the capitulation of Metz and Strasburg. Another disadvantage of fortresses is that they reduce the field armies by employing numbers of men for their defence. The French have an extensive line of forts along the frontier, but Germany is satisfied with a few large fortified camps at Coblenz, Metz, Mayence, and Strasburg.



In stating the importance of fortified towns, due regard must be paid to the following points. Towns are fortified—

- (a). To protect capitals, such as Paris, Berlin, Vienna.
- (b). To protect the passages over rivers.—*Belgrade* on the Danube, *Warsaw* on the Vistula, *Piacenza* on the Po, *Verona* on the Adige, *Badajos* on the Guadiana.
- (c). Where two rivers converge.—*Lyons* on the junction of the Rhone and Saone, *Metz* on that of the Seille and Moselle, *Coblentz* on the junction of the Moselle and Rhone. Also *Strasburg* and *Namur*.
- (d). To block mountain passes, gaps, etc., *Peshawur* at the Khyber Pass; *Belfort* at the Burgundy Gap. Also *Epenal*, *Widin*, *Pampeluna*, *Cracow*, *Geneva*, *Shumla*, and *Quetta*.
- (e). At the junction of roads and railroads. *Lille*, *Basle*, *Leipsic*, *Wilna*, and *Bayonne*.
- (f). For the protection of harbours, mouths of rivers, arsenals, etc. *Antwerp*, *Portsmouth*, *Cherbourg*, *Cronstadt*, *Quebec*, *Halifax*.
- (g). To form a line of defence, to shelter an army. The French line of *Belfort*, *Besançon*, *Dijon*, *Langres* and *Epinal*. The Turkish Quadrilateral (1878), *Rustchuk*, *Silistria*, *Shumla* and *Varna*. The Austrian Quadrilateral (1796), *Peschiera*, *Mantua*, *Verona* and *Legnago*. The German line in East Prussia, *Konigsberg*, *Danzig*, *Thorn*, *Posen* and *Breslau*.

#### QUESTIONS.

1. Distinguish between natural and artificial frontiers. Give examples of the former.
2. Show how mountains may be used as a means of defence. Give instances where mountains have proved feeble barriers to an invading force.
3. How may rivers be used (a) as a means of communication; (b) as a means of defence? Give examples.
4. In what ways have the following rivers figured in history: *Sutlej*, *Tugela*, *Nile*, *St. Lawrence*, *Mincio*, *Douro*, *Boyne*, *Danube*?
5. Account for the following from a geographical point of view: (a) the failure of *Massena's* campaign in 1810; (b) the disaster to *Napoleon* in 1812 in *Russia*.
6. What advantages and disadvantages are to be derived from the geometrical form of frontiers?
7. What disadvantages would *Russia* meet with in invading *Germany* through *Poland*, or *Austria* from the *Pruth*?
8. Show that offensive strategy depends to a great extent upon the railway system of the country.
9. Show how deserts may affect the conduct of a campaign.
10. What do you know concerning the following: the *Burgundy Gate*, the *Moravian Gate*, the *Iron Gate*, the *Elbe Gap*, the *Bamian Pass*, the *Great St. Bernard*, *Shipka Pass*.
11. For what objects are fortresses maintained? Show that the possession of fortresses does not give permanent security to a country.



12. For what purposes are railways used in modern warfare? Compare them with rivers as a means of communication.

13. State the advantages and disadvantages of using a line of railway as the chief means of communication.

14. Give some reasons why the following towns are strongly fortified: Liege, Belfort, Lille, Posen, Elsmore, Glatz, Shumla, Pampeluna, Mantua, Warsaw, Verona, Belgrade, Alexandria, the Helder, Antwerp, Coblenz, Bayonne, Kieff, Philippopolis, Magdeburg.

15. State the different methods for supplying the troops with food. To what extent may the local resources be utilised?

16. Discuss the influence of climate or weather upon military campaigns.

17. What do you understand by sea-power? What advantages fall to that power which possesses command of the sea?

18. Why are the following places important strategical points: Singapore, Montreal, Malta, Peshawur, Khartoum, Bermuda, Jamaica, Delagoa Bay, Aden, Esquimaux?

19. What frontiers form admirable sites for fortresses? State some of the inconveniences of fortresses.

20. Give instances where the command of the sea was one of the chief factors in securing success in military warfare.



### *XXIII. Examination Papers.*

The following papers have been set at recent examinations for First Class Certificates of Education, and are printed by permission of the Controller of His Majesty's Stationery Office.

#### **1. February, 1913 (A).**

1. Define the following, giving examples where possible:—Tropic of Cancer, archipelago, longitude, oasis; and describe the position, giving latitude and longitude, of a traveller 45 degrees due south of London; also his approximate position if he then travelled 80 degrees due west.

2. Show by as many examples as you can that volcanoes occur in lines on the earth's crust. What are the usual products of volcanic action?

3. Describe and give a sketch of the physical features of that part of England lying south of the Thames and Bristol Channel, specially indicating the position of the hills, rivers, and level ground, and of the railways. Show accurately on your sketch the position of London, Dover, Chatham, Portsmouth, Salisbury, Aldershot, Plymouth.

4. State the exact position of each of the following, and explain as fully as you can the reasons for their naval, military, and commercial importance:—Queenstown, Leith, Pembroke, Harwich. To the best of your ability state what natural advantages for defence are possessed by each of these places.

5. What railways join the following? Write notes on one town between each of the places named:—Dublin and Belfast; Aberdeen and Inverness; Newcastle and Middlesbrough; Cardiff and Liverpool; Cork and Galway; Glasgow and Carlisle.

6. If a battalion stationed at Jubbulpore was ordered on active service to occupy Kandahar, proceeding as far as possible by rail, describe its journey, stating what railways would be used, the rivers and mountains (if any) crossed, and the passes traversed. Write notes on three places on the way, excluding those mentioned above, and specially describe the nature of the country to be marched through after leaving the railway.

7. Describe as fully as you can any route at present available by which troops may reach Johannesburg from Aldershot. What supplies for an army in the field in the Transvaal might be procured locally? State what you know about the climate of the Transvaal.

8. Indicate as fully as you can the naval, military, and commercial importance, and the natural defences of (a) Quebec; (b) one fortified port on the Atlantic coast of the Dominion of Canada, and (c) one on the Pacific side of the same.

9. Draw on a large scale an outline map of the Balkan Peninsula, and on it mark and name the position of Roumania, Bulgaria, Macedonia, the Danube, the Balkan and Pindus mountains, the Bosphorus, Sofia, Belgrade, Varna, Athens, Cetigne, Constantinople, the Maritza.



10. Describe in detail the boundaries and surface of Holland and Belgium, and name the chief natural and artificial waterways of these countries. How might these channels be utilised as means of national defence? State carefully the position and importance of one fortified town in each country.

11. Where are the following? Explain as fully as you can the reasons for their importance. Answer with regard to any six:—Trieste, Cadiz, the Simplon Pass, Adrianople, Verona, Metz, the Pruth, Antivari, Munich, Corfu.

12. Describe the boundaries of the Chinese Empire, the position of three of its mountain ranges in China Proper, three great rivers, and three chief seaports. What holdings have European Powers in China? Say what you know about Tibet, Manchuria, Kashgar.

13. Describe the east coast of Africa from Cape Guardafui to Cape Agulhas, naming the adjacent mountain ranges and rivers, the European Powers to which each part of the coast belongs, and one port in each holding.

14. Wool, gold, silver, copper, tin, horses, are all largely exported from Australia. State the exact situation of the chief regions from which each product is derived, and name the ports of shipment.

## 2. February, 1913 (B).

1. Define Arctic Circle, first meridian, isthmus, watershed. Illustrate your definitions, where possible, by examples or sketches. A man left Sydney (New South Wales) on 22nd June, and after visiting many ports he arrived in London on 21st December in the same year. When he left Sydney the days were very short and the nights very long, and when he reached London he found that the days there also were very short and the nights very long. Explain this.

2. The land of the globe tends to run into peninsulas pointing to the south. Show by examples in each continent that this is so. Name three exceptions.

3. Describe and draw a sketch map of the physical features of the country lying between the Thames and the Humber, specially indicating the hills, rivers, and level ground, and the railways. Indicate accurately on your sketch the position of London, Grimsby, Lincoln, Norwich, Cambridge, Colchester, Harwich.

4. State accurately the position of the following places, and explain as fully as you can the reasons for their military, naval, and commercial importance:—Sheerness, Portsmouth, Londonderry, Newcastle.

5. Select two of the following counties: Derbyshire, Donegal, Aberdeenshire, Glamorgan. Describe their position, surface, and climate, and show how the occupations of the inhabitants have been determined.

6. If a battery stationed at Allahabad was ordered on active service to occupy Kabul, proceeding as far as possible by rail, describe its journey, stating what lines of railway would be used, the rivers and mountains crossed, and passes traversed. Write notes on three places on the way, excluding those named above, and specially describe the nature of the country to be marched through after leaving the railway.

7. Describe as fully as you can one route at present available by which troops may reach Khartoum from Shorncliffe. What supplies for an army



in the field in the Eastern Soudan might be procured locally? What season would be most favourable for military operations in this region, and why?

8. State fully the reasons for the naval, military, and commercial importance of Gibraltar, Bermuda, Barbados. In regard to Gibraltar describe its natural defences.

9. Draw an outline map on a large scale of the Balkan Peninsula, and on it mark and name the position of Servia, Montenegro, Eastern Roumelia, the Danube, the Balkan and Rhodope Mountains, the Tchar-Dagh, the Shipka Pass, Novibazar, the Vardar, Uskub, Salonica, Durazzo, Adrianople.

10. Describe the boundaries and surface of Germany. What natural defences has this Empire on each side? State the position of two of its inland fortresses.

11. Where are the following? State fully the reasons for their importance. Answer only in regard to any six:—Antwerp, Namur, Rotterdam, Helder, Warsaw, Vienna, Kronstadt, Mantua, the Adige, Sofia.

12. Enumerate in detail the boundaries of Asiatic Turkey, and name one port on each of its seaboard. Describe the position of its principal mountains and rivers, and of Syria, Armenia, Aleppo, Baghdad.

13. Describe the West Coast of Africa from Cape Verde to the Cape of Good Hope, naming the adjacent mountains and rivers, the European Powers to which each part of this coast belongs, and one seaport in each holding.

14. Name in order from north to south four seaports of South America on the Atlantic coast, and four on the Pacific, stating what country each is in, and the nature of its exports.

### 3. July, 1913 (A).

1. Explain fully the meaning of the following symbols and terms:— $54^{\circ} 30' N.$ ,  $5^{\circ} 45' W.$ , tundras, promontory, vernal equinox, Crown Colony. Illustrate your answer as much as possible by sketches, diagrams, or examples.

2. Describe the physical structure of the western side of England and Wales, and explain its effects on the climate, water system, and occupations of the inhabitants.

3. Where in the United Kingdom are the districts specially famous for slate workings, woollen manufacture, flax growing, pottery making, tin mining? Mention any great towns which flourish on these industries.

4. Where does each of the following rivers rise, and into what does it fall? Name two towns on each, stating fully why each town is important:—Mersey, Clyde, Liffey, Trent, Forth, Shannon.

5. Describe the position of the Pyrenees, and indicate any routes by which an army could pass them without taking to the sea. What obstacles would have to be overcome by a force marching from the Pyrenees to Paris through Bayonne? State the position and reasons for the commercial importance or historical interest, or both, of Lille, Toulon, the Nivelle, Toulouse.

6. Draw an outline map of Spain and Portugal, and on it mark accurately the following:—

The Castilian Mountains, Serra d'Estrella, the Mountains of Toledo, the Tagus, Lisbon, Busaco, the Lines of Torres Vedras. Explain as fully as



you can the connection of the three last-named places with our military history, and say why the Lines of Torres Vedras were so important.

7. "The struggle which followed was brought to a prompt end by the quick and decisive action of Sir Garnet Wolseley, who seized the Suez Canal, and marched across the desert to Cairo, while the Egyptians were expecting him on the side of Alexandria. By a daring night surprise he carried the lines of Tel-el-Kebir and routed Arabi's host." (Oman).

Draw a sketch-map to show the position of the places named in the above passage, and also of Port Said, Ismailia, Suez, Zagazig, the Nile, the Sweet-water Canal. Write a short description of the area of the operations referred to, and explain how their success illustrates the importance of retaining the command of the sea.

8. What events in our military history are associated with (i) Gallipoli, (ii) Varna, (iii) Eupatoria, (iv) the Alma, (v) Balaclava, (vi) Inkerman, (vii) Sebastopol?

Indicate on a sketch-map the position of these places, and state as fully as you can why (iv), (v), and (vii) were so important.

9. What is meant by the German Empire? Account for the length and direction of the Vistula, Elbe, Rhine, stating where they rise and where they fall into the sea. Explain their importance both for commercial and defensive purposes, and write notes on two towns on each of them.

What historical associations are connected with Jena, Leipzig, Strasbourg?

10. Name in detail the mountain ranges separating Italy from the countries lying to the north, north-west, and north-east, and describe their effects on its climate and water system. Write short accounts of Lombardy, the Po, Sicily; and describe the importance for defensive purposes of the Adige, Verona, Mantua, Alessandria.

11. Describe the position of six of the principal seaports of British India (including Burmah); say of what region each is the outlet, and name one railway running into it.

12. What are monsoons? Write a short account of them, and explain their importance to India.

13. Describe the principal rivers of British North America, stating where they rise, where they fall into the sea, and accounting for their length and direction. Write notes on the chief towns on two of them, and explain why some of these rivers have no towns on their banks.

14. What do you understand by New Zealand? Describe its area, surface, climate, the occupations of its inhabitants, and three of its principal towns. Contrast its time and seasons with those of Great Britain, accounting for any differences.

#### 4. July, 1913 (B).

1. What are Pamirs, dunes, fiords, north latitude, feudatory state? Illustrate your definitions by sketches, diagrams, or examples.

2. Describe the disposition of the highlands and lowlands of Ireland, and the resulting effect on the water system.

"The most populous province is Ulster; the most thinly populated Connaught." Explain the causes of this, and write an account of the occupations of the inhabitants.



3. Where in the United Kingdom are the districts specially famous for quarrying building-stone and granite, linen manufacture, salt mining, hop growing, herring-fishing? Mention any great towns which flourish on these industries.

4. Excluding a metropolis, name one inland town and one seaport on each of the following railways:—North-Western, Great Western, North-Eastern, Great Northern of Ireland, North British, Caledonian. Name the special industries of the inland towns, and in regard to each port the countries it chiefly trades with.

5. Indicate on a sketch map the position of the Moselle, the Meuse, the Scheldt, the Sambre, Namur, Liege, Charleroi, Brussels, Quatre Bras, Ligny, Wavre, Mont St. Jean, Planchenoit. Explain the military importance of the first three rivers named above, and state very briefly the connection of the other places with the campaign of Waterloo.

6. Name in order the chief provinces, towns, mountains, and rivers passed, and give some idea of the nature of the country traversed by Marlborough's army in 1704 in its march from the Netherlands to the valley of the Upper Danube, and explain the reasons for and the advantages of the position taken up by this army on the Nebel at Blenheim. Illustrate your answer by a sketch map.

7. Suppose a British expeditionary force is landed at Ostend from England, and is ordered to march south-east to Metz. What provinces would it march through, and what rivers would it have to cross? Describe the nature of the country traversed, and mention any old battlefields on or near the route.

8. State accurately the situation of any five of the following, and say what events in our military history are associated with each:—Plassey, Seringapatam, Assaye, Sobraon, Guzerat, Lucknow, Delhi, Gwalior, the Peiwar Kotal.

9. Write short descriptions of the Ghauts, the Himalayas, the Deccan, the Jumna, the Punjab, Calcutta, Quetta.

10. Where are Aden, Colombo, Singapore, Hong Kong? Account as fully as you can for the commercial, naval, and military importance of each.

11. Describe the rivers of Russia, stating where they rise and where they fall into the sea. Name and give the position of one port on each part of the Russian sea coast, and explain the commercial importance or historic interest of Borodino, Moscow, Warsaw, Sebastopol.

12. Describe in detail the boundaries and surface of Austria-Hungary. Why is its foreign commerce not great? Write short accounts of any five of the following:—The Danube, Bohemia, Vienna, Galicia, the Tyrol, Fiume, Austerlitz, Königgratz.

13. Name the provinces which form the union of South Africa, with two chief towns of each, and write a short description of their build, climate, mode of government, and principal industries carried on by the inhabitants.

14. Describe the railway route from Montreal to Vancouver, naming the provinces traversed by the line, and write notes on three towns between the above termini. Give some account of the advantages this region offers as a field for emigration, and comment on the importance of the railway from every point of view.



**5. September, 1913 (A).**

1. On reference to any map it is observed that certain lines run north and south, while others run east and west. What are these lines respectively called, and what is their use? Bergen and Lyons are two places on the same line running from north to south, but the cross lines on which they stand are marked  $61^\circ$  and  $46^\circ$ . What do these figures mean, and what is the approximate distance in English miles between the places?

2. Make a sketch map of that part of England north of the Humber and Mersey. Mark the great watershed, and the chief rivers, with their names, emptying into the North Sea. Show, by shading, the position of two coal-mining, and two iron-mining centres. Show, by names, Preston, Holderness, Leeds, Barrow, and Scafell.

3. Distinguish between a mountain chain and a mountain group; a strait and a channel; a bay and a gulf; tundra and steppe. Write one example of each from the geography of Europe.

4. Write brief notes on (a) the "Black Earth" region, (b) the Ardennes, (c) Lombardy Plain, (d) the Carrara quarries, (e) the Riviera.

5. What importance, commercial or otherwise, may be ascribed to Valetta, Utrecht, Belgrade, Kiel, Marseilles, Palermo, Lyons, Salonika? Select five only, and be careful to state where each you select is situated.

6. From what parts of the British Empire are furs, rubies, diamonds, pearls, tea, teak wood, cotton and bananas obtained in large quantities? Mention one place only for each product.

7. Troops are under orders to proceed from Karachi to Mandalay by the most expeditious route. Describe the chief features of the country through which they will pass. What railway lines would likely be used, and what ports touched?

8. Indicate as accurately as you can in words, the geographical position of Navarino, Vittoria, Metz, Sadowa, and Oudenarde. What historical significance is attached to each place?

9. Give some account of the divisions of Germany, natural and political. Mention five important inland towns, other than the capital. To what do you attribute their importance? What Continental countries border upon Germany, and where are its natural frontiers?

10. How are the great traditions of England's land forces connected with Isandula, Kandahar, Arcot, Killiecrankie and Mafeking? Say where each place is.

11. A transport sails from London to Hongkong. Mention in order the ports belonging to Great Britain at which she would most likely call, and for what purpose the halt would be made. Which of these ports are fortified?

12. Draw an outline map of France. On it mark (a) the natural frontiers, (b) the Rhone-Saone valley, (c) the Landes, (d) two naval ports, (e) Paris, Bordeaux, Calais. Indicate also where its railway system connects with the Spanish railways.

13. What natural obstacles would a military force meet with in marching from Strasburg to Brussels?

14. Name the six "Great Powers" of Europe, and distinguish their several modes of government. Offer a few general remarks on their naval and military power.



**6. September, 1913 (B).**

1. A chronometer is a timepiece supposed to show Greenwich time accurately in all places. The captain of a vessel at sea finds by observation that local time is 11 a.m., whereas his chronometer shows 1 p.m. Is the vessel east or west of London Bridge, and by how many degrees? Explain how you arrive at your answer.

2. Draw an outline map of Ireland. Mark on it the high regions of the country, (b) the great plain, (c) the river, with its expansions, which drains the plain. Mark and name one military centre and one port on the river. Show also where the Curragh, Killarney Lakes, Dundalk and Valentia are situated respectively. Insert each name on the map.

3. European rivers flow, generally speaking, in a north-west and south-east direction. How is this accounted for? Name six of the largest of these rivers, and say what countries they mainly serve. Give the name of the seas into which they flow, and write the name of a town at or near the mouth of each.

4. Write brief notes on the following: The Maelstrom; the Cyclades; the Magyars; the Swiss lakes; and the volcanic districts of Italy.

5. Mountains are said to form barriers to the spread of races, and to produce the most patriotic men. Establish the truth of this statement from your knowledge of the European mountain systems.

6. Name three staple products imported into England from Australia, India, Canada, and the West Indian Islands, respectively.

7. Draw an outline map of India, and on it show the Thar Desert, the province of Bengal, Nilgiri Hills, Gujerat. Mark also as accurately as you can the position of Peshawar, Poona, Bangalore, Mhow, and Rawalpindi. How is it these last mentioned are all garrisons of importance?

8. Describe the situation of any five of the following places: Hammerfest, Trieste, Helsingfors, Almaden, Andorra, Brindisi, Gothenburg, Philippopolis. Mention anything you know of interest or importance connected with those you select.

9. How did the military history of England come to be associated with Walcheren, Kumasi, Tugela, Delhi and Badajos? Where are these places respectively situated?

10. Write a brief geographical description of Holland with reference to its surface, industries and foreign possessions.

11. Name as many as you can of the countries comprised in the British possessions in South Africa, and point out their relative positions to one another. What are the Kalahari, the Karroo, the veldt? Mention three inland towns of importance, and three ports.

12. Belgium has been called the "battlefield of Europe." Explain why. Write notes on its inland communication, natural resources and frontiers.

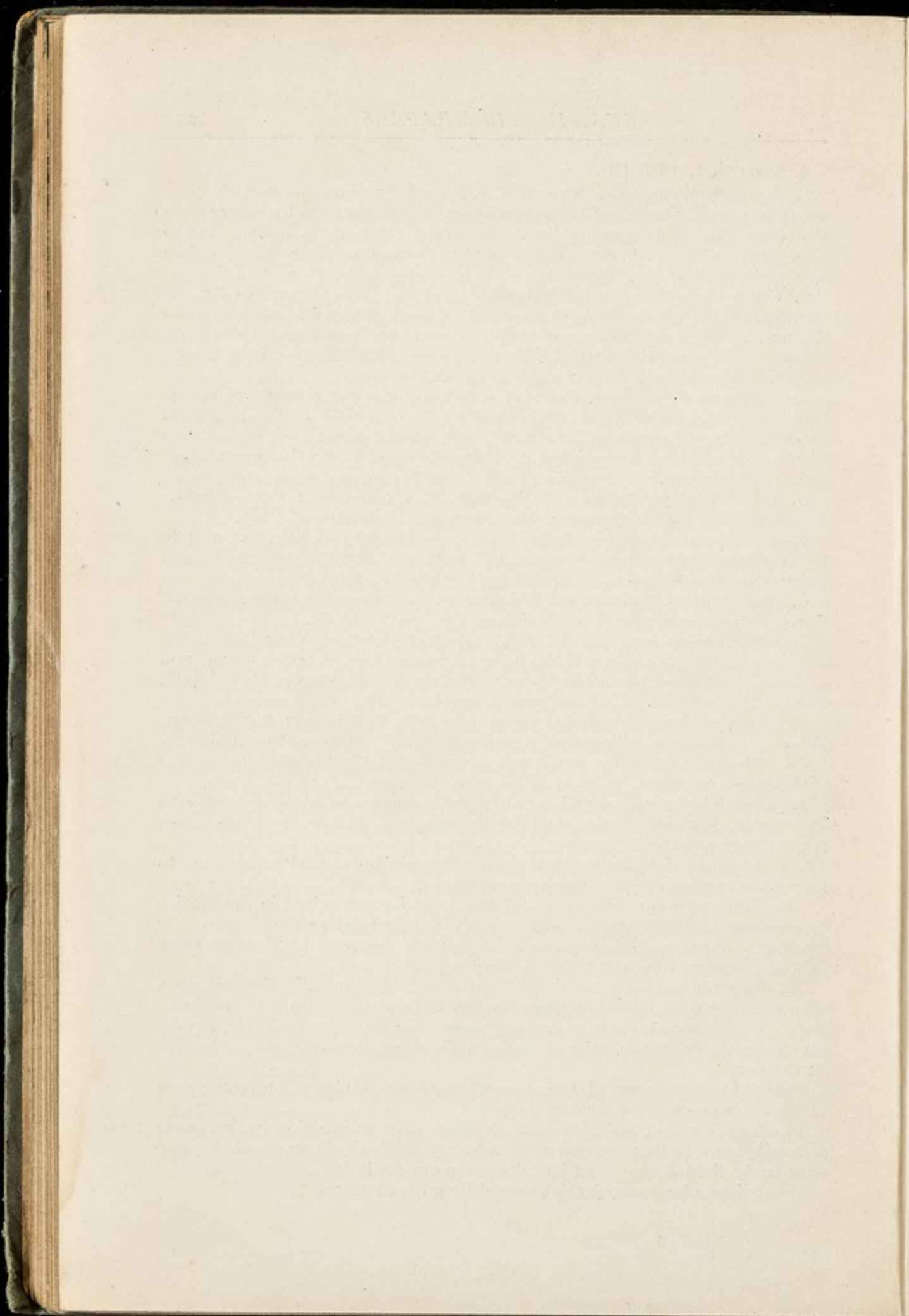
13. Why is it considered necessary to establish a strong chain of outposts on the north-western frontier of India, while similar precautions are lacking in the north?

What do you know of the somewhat recent military movements of British troops on the northern frontier?

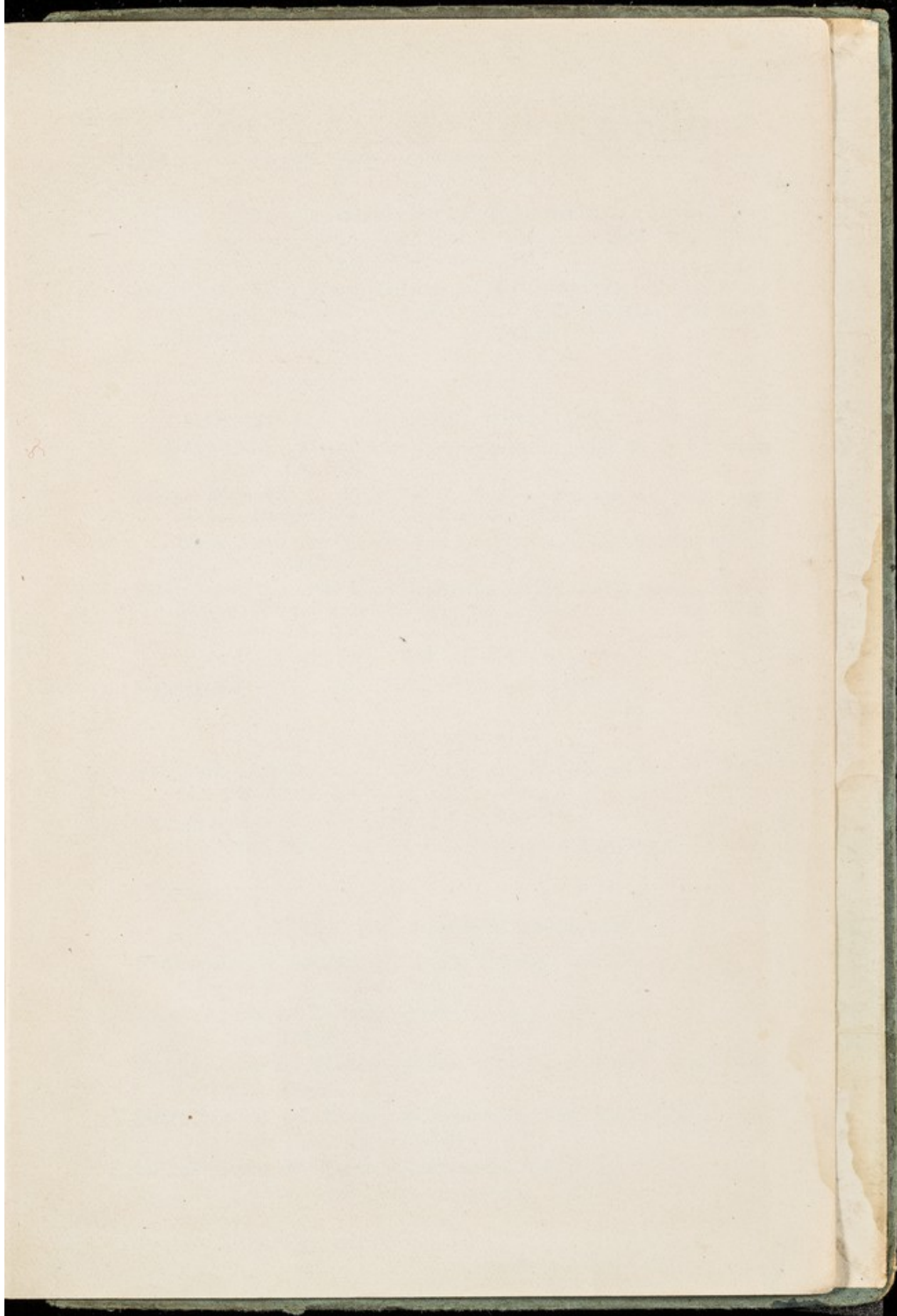
14. What parts of the Irish coast are most open to invasion? Assuming a hostile force to have landed at Rosslare (Co. Wexford), from what garrisons could British troops be first drawn to oppose it?

What lines of communication would be open to attack?

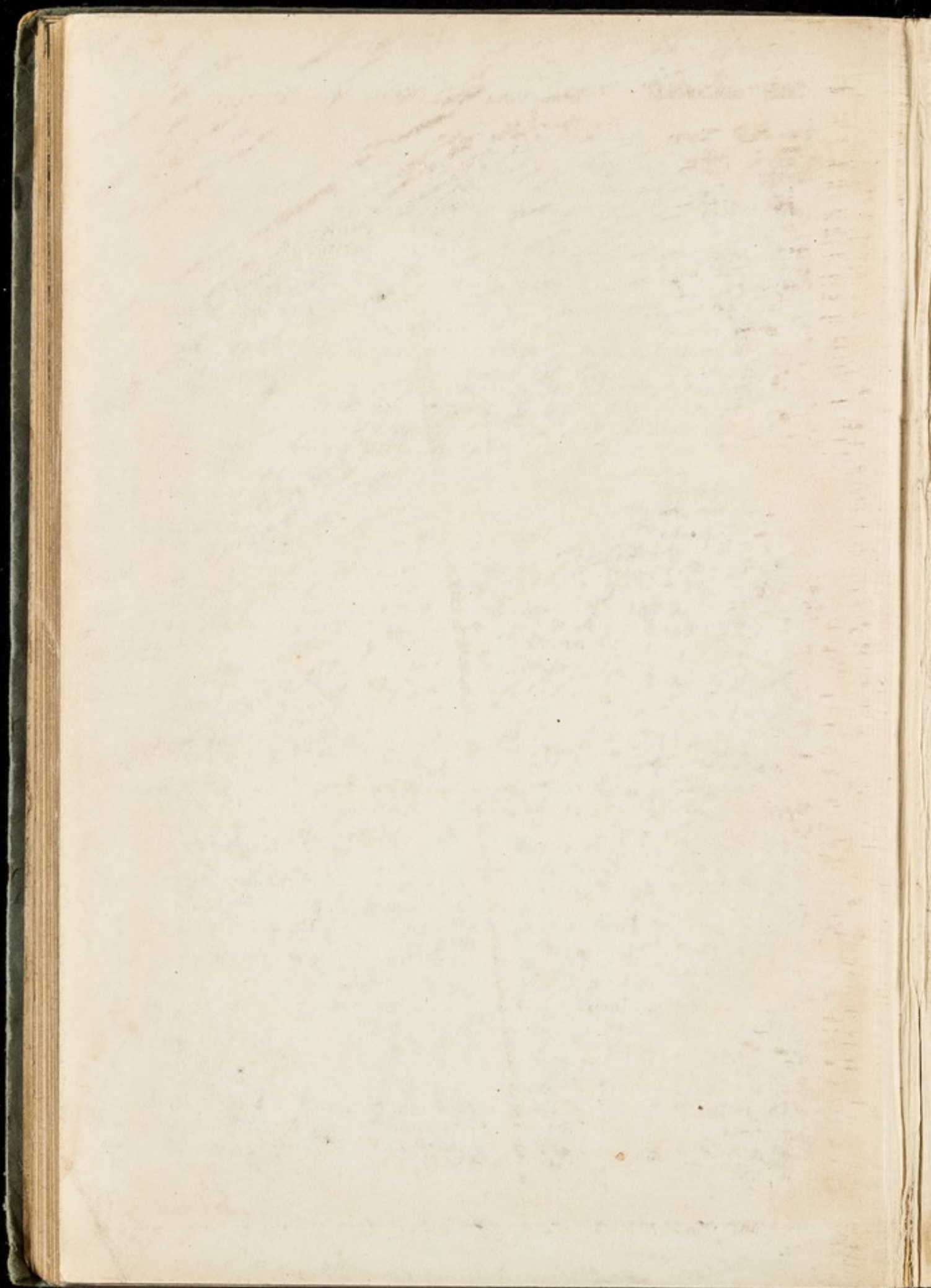














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