

CHAPTER 6

EUROPE

In class 6 we had read about Asia and some countries of that continent. This year we shall study two more continents, Europe and Africa. We will begin with a lesson on Europe. The industrial revolution, which inaugurated the modern industrial age, began in Europe 300 years ago. Today, the people of Europe have attained high levels of income, education, health, etc. In the following two lessons we shall read about the land and climate of Europe and how modern transformation came about in the countries of Europe.

LOCATION OF EUROPE

In order to find out the location of Europe and to see how far it is from India you will need an atlas or a globe. To begin with, look at Map 1 in which Europe has been shaded. Identify the boundaries of the continent of Europe.

- *What is the name of the ocean to the north of Europe?*

This ocean is frozen most of the year. In your previous class, you had also read about the Asian Tundra, which is on the shores of this frozen ocean.

- *Name the ocean to the west of Europe.*

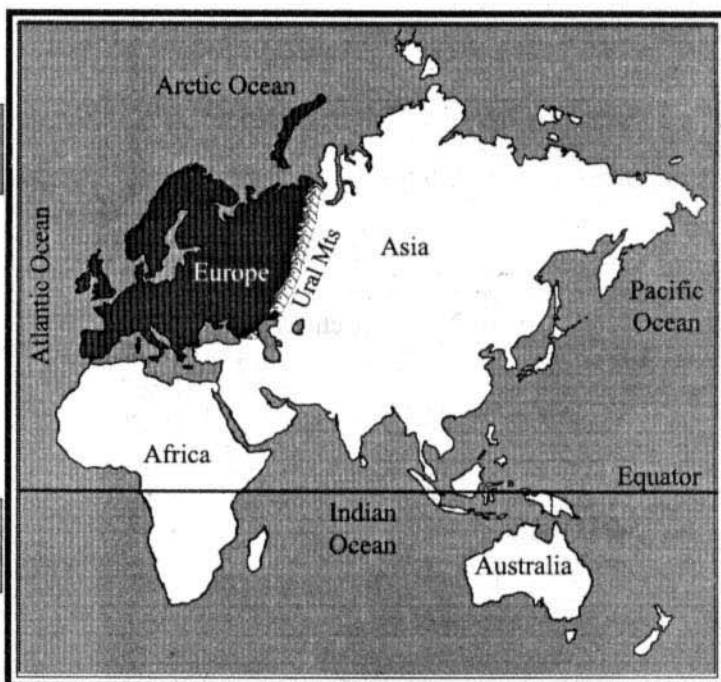
This ocean separates the continents of Europe and North America. About 500 years ago the people of Europe discovered the sea route to America and millions of Europeans migrated to the continent of America and settled down there.

- *Look in the atlas and find the name of the sea just south of Europe.*

This sea separates Europe in the north from Africa in the south. The name

of this sea means 'middle of the world'. Do you know why it is called by this name? In ancient times the people of Europe did not know about other continents like America or Australia. They only knew about Europe, western parts of Asia and northern parts of Africa. You can see that all these regions are situated around the Mediterranean Sea. That is why Europeans thought that this sea was in the centre of the world and named it so. It has been known by this name ever since.

Map 1 Location of Europe



- *Name the mountains to the east of Europe.*

These mountains are not very high and they form the eastern boundary of Europe. To the east of these mountains is Asia while Europe is to their west. In fact Asia and Europe are one continuous landmass. This landmass is therefore called Eurasia.

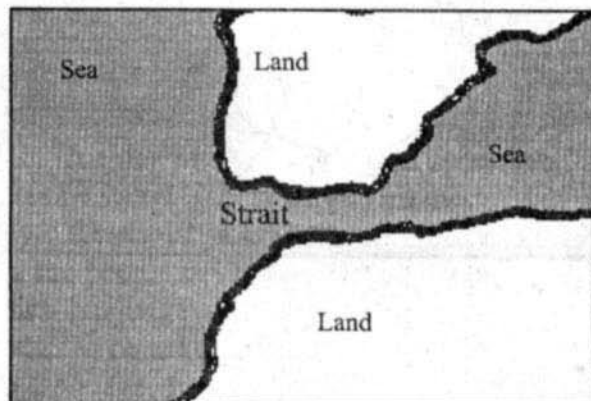
Can you see a vast lake to the south of the Ural Mountains? It is called the Caspian Sea because it is so vast and its water is salty. This sea, too, forms the boundary between Asia and Europe with Asia to its east and Europe to its west.

Look at the two interconnected seas to the south of Europe. These are the Black Sea and the Mediterranean Sea. Since the two are connected it is possible to travel by ship, quite easily, from one sea to the other. However the two are connected by a very narrow passage. Such narrow passages between seas are called 'straits'. (Figure 1)

- *In Map no. 3 write the names of Atlantic Ocean, Arctic Ocean, Mediterranean Sea, Caspian Sea and Black Sea in the correct places and colour the seas and oceans blue. Take care not to colour the small islands in the seas blue, too.*

Look carefully at the map and you will see that the Mediterranean Sea becomes very narrow at one point between Africa and Europe

Fig. 1 Strait



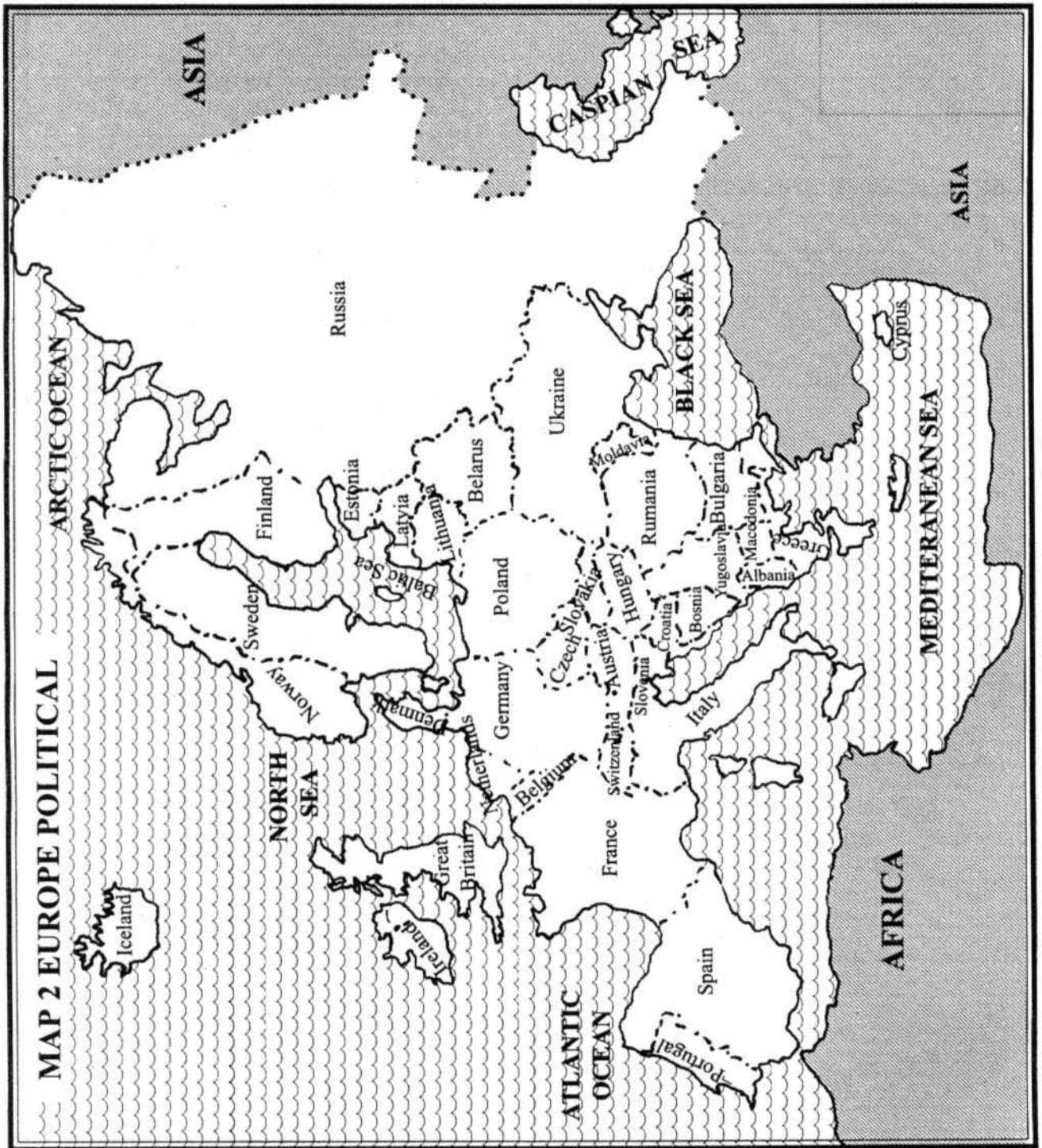
before it meets the Atlantic Ocean. Colour this narrow passage of the sea very carefully. This narrow passage is called the Gibraltar Strait. If any country gets control of the Gibraltar Strait it can control navigation on the Mediterranean Sea. At the head of the strait is the Gibraltar Island, which is under the control of Great Britain (England). The island is the base from where Great Britain controls transport on the Mediterranean Sea.

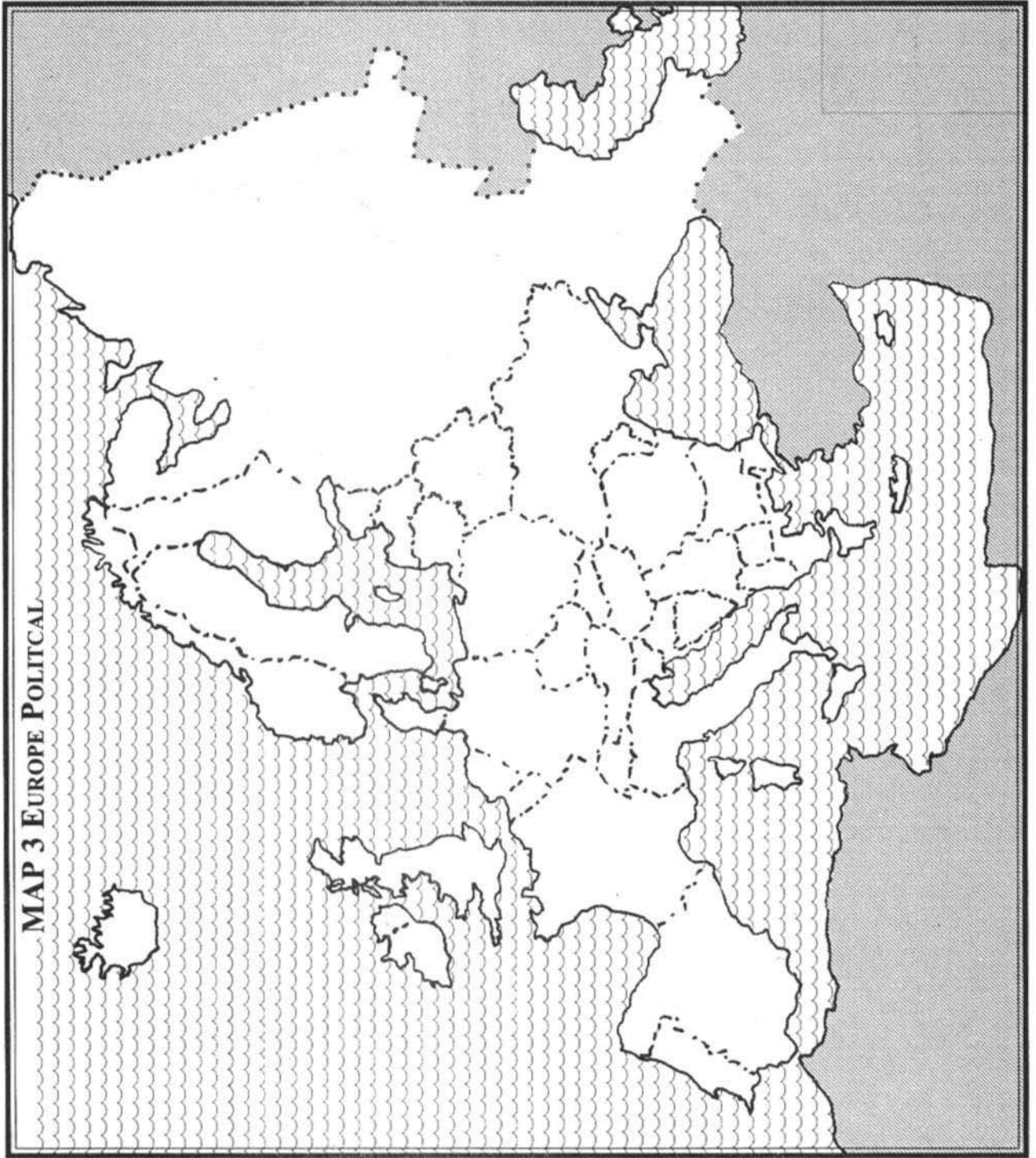
- *Now that you are familiar with the location of Europe you can take a look at the countries of Europe. Look at Map 2 to find out their names. Have you heard of some of these countries before?*
- *Map 3 has been left blank for your use. Write the names of the countries of Europe on this map and colour them in different colours. See that no two neighbouring countries are coloured with the same colour.*

MOUNTAINS, PLAINS AND RIVERS

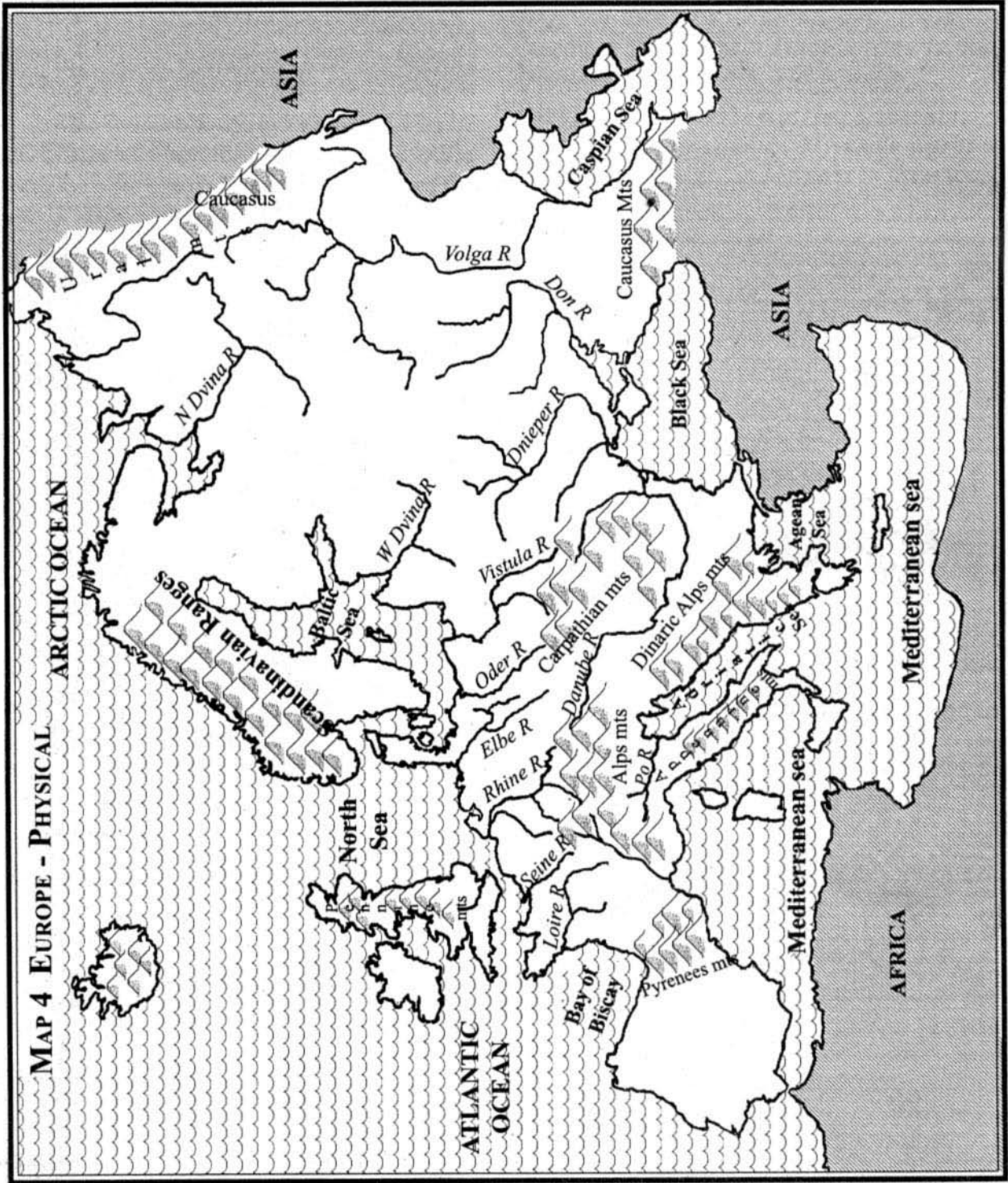
Let us learn more about the mountains, plains and rivers of Europe with the help of Map 4. Europe has several high snow-covered mountains. Look for the Alps and the Pyrenees in the map. The Alps, the most important mountain ranges of Europe, are covered with snow all the year round.

- *The Alps stretch across several countries. Find out the names of these countries by comparing Maps 2 and 4.*
- *Write the names of two rivers starting from the Alps.*
- *Name the countries across whose borders the Pyrenees stretch.*
- *Which mountain range is on the eastern boundary of Europe?*
- *How many more mountain ranges can you locate in Europe? Make a list of their names.*





MAP 3 EUROPE POLITICAL



The Caucasian Mountains, which lie between the Caspian Sea and the Black Sea form the southern boundary of Europe. They, too, are very high and covered with snow all the year round.

In comparison, there is a striking difference between Europe and Asia. You may remember that there are several vast plateaus in Asia. However, there are no such large plateaus in Europe. There are only some small plateaus in countries like France, Germany and Spain.

There are vast plains in Europe. The whole of Eastern Europe is a vast plain, which stretches across several countries like Russia, Ukraine, Poland, Belorussia, etc. These plains experience heavy snowfall and bitter cold in winters. When the snow melts in summer, small streams start flowing. These join to form mighty rivers. It is from these plains that rivers like the Dnieper and the Volga, which is the longest river in Europe, originate.

European rivers are used not only for irrigating the fields but also as major waterways. Ships and barges ply on these rivers and transport people and goods from place to place. Since these rivers flow across several countries they also facilitate international trade and transport. In this respect, the Rhine is one of the most important rivers as it flows through several countries and empties itself into the North Sea. There are several major industrial and mining cities on the banks of this river. The Rhine links these cities to the open sea and thus to intercontinental trade. Unlike the Rhine, the Volga drains into the Caspian Sea, which you may remember is a vast lake. Transport to the open sea through this river-way is not possible. Thus, the cities on the Volga are not linked to transcontinental trade through waterways.

♦ *Compare Maps 2 and 4 to answer the following questions:*

- *Names of countries through which the Rhine flows:*

1. 2. 3. 4. 5.

- *Names of countries through which the Danube flows:*

1. 2. 3. 4. 5.

- *Names of two mountain ranges on the border of the Hungarian plains.*

1. 2.

- *Names of countries which ring the Black Sea.*

1. 2. 3. 4.

• *Names of oceans or seas into which the following rivers empty themselves:*

<i>River</i>	<i>Ocean/Sea</i>
1. <i>Seine</i>	
2. <i>Rhine</i>	
3. <i>Oder</i>	
4. <i>Po</i>	
5. <i>Danube</i>	
6. <i>Vistula</i>	
7. <i>Volga</i>	
8. <i>Dnieper</i>	
9. <i>Don</i>	
10. <i>Dvina</i>	

PENINSULAS, ISLANDS AND BAYS

You can see on the map that the sea coast of Europe is very jagged. In several places it appears that the sea has cut deep into the land as in the case of the Baltic Sea. Elsewhere, it would appear that a part of the land has stretched far into the sea as in the case of Italy.

Italy is surrounded on three sides by the sea. Land masses that are surrounded by the sea on three sides and are connected to the mainland on the fourth side are called 'peninsulas' (figure 2). Norway and Sweden are also part of a peninsula. You can check this out in the map. This peninsula is called the Scandinavian Peninsula.

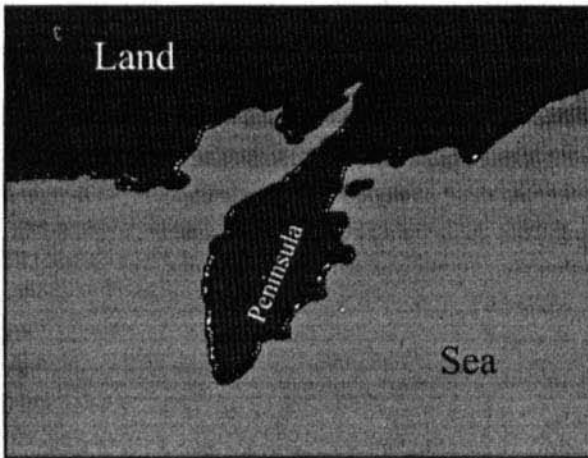


Fig. 2 Peninsula

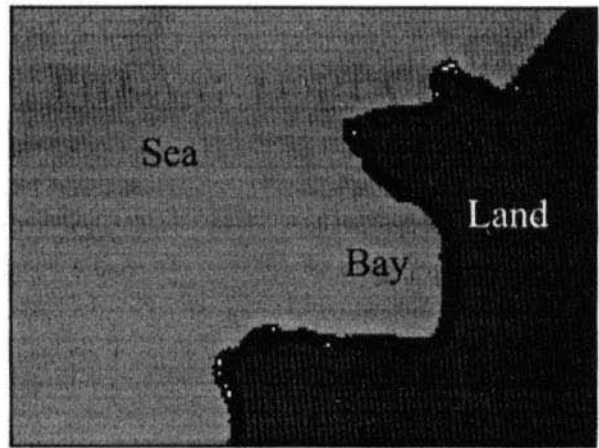


Fig. 3 Bay

- Which of these is a peninsula – Greece or France?
- Are Spain and Portugal a peninsula, too?
- Name the mountain range in the Scandinavian Peninsula.

The sea surrounds some of the European countries, not just on three sides but on all four sides! These are island countries. Great Britain is one such island country.

- Find out the names of some of the other island countries of Europe.

Since ancient times, the seas have played an important role in the lives of the people of these islands and peninsulas. Central and southern Europe is largely mountainous and travel and transport over them is both difficult and expensive. In comparison, sea transport is easy and inexpensive. This is the reason why Europeans have been extensively using sea routes since ancient times.

The presence of a large number of bays and gulfs has also facilitated the use of sea routes. Bays and gulfs are parts of the sea enclosed by land on three sides. In a bay the land curves inwards and the mouth of the bay is usually wide as in the Bay of Bengal. A gulf is a narrow inlet of the sea and has a narrow mouth. The entire Baltic Sea as you can see in the map is a large gulf. Since the bays and gulfs

are protected from the storms of the high seas they are very useful for building harbours where ships can be safely anchored and cargo loaded or unloaded. Deep gulfs or bays are preferred for building harbours as large ships can be anchored in them. Ships need deep waters so that their bottoms do not touch the sea floor.

- Find out from Map 3 the names of the countries on the three sides of the Baltic Sea.
- Look for the Bay of Biscay, Gulf of Bothnia and the Adriatic Sea on a wall map.

CLIMATE

Europe has a cooler climate than ours. Most of its countries experience snowfall in winter. Their summers, too, are not as warm as ours.

- Why do you think the climate of Europe is so different from ours? Discuss among yourselves in the class.

Distance from the Equator

While reading about Asia, you must have learnt that the regions near the Equator (like Indonesia) remain warm all round the year and as we move northwards or southwards away from the Equator it gets cooler and cooler.

Indeed the Polar Regions are covered with ice all round the year.

- *Look at a globe to see how far north, Europe is, from the Equator.*
- *Is Europe even farther north than India?*
- *Is Europe as far north of the Equator as Japan?*
- *Will Norway be warmer than Italy? Why?*

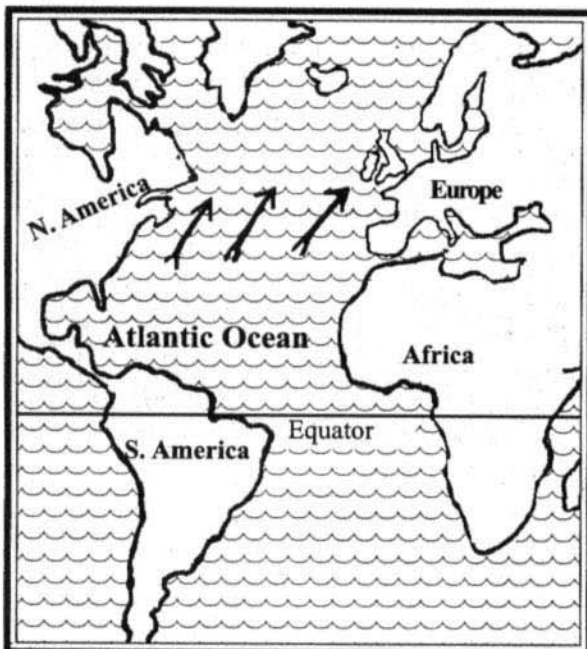
The Atlantic Ocean

Besides its distance from the Equator, the climate of Europe is influenced by another factor – the Atlantic Ocean and the winds blowing from it. This impact is felt more by the regions along the Atlantic Ocean than the ones which are far inland.

- *To begin with, find out which part of Europe is along the Atlantic Ocean – the eastern or the western part?*

In the winters it is quite cold in Western Europe but it is even colder in Eastern Europe. Thus countries like Poland and Russia have

MAP 5 THE WESTERLIES



severe winters while France and Great Britain are comparatively warmer. Russian winters are so cold that the rivers and even the nearby seas freeze. However, this does not happen in the countries of Western Europe along the sea coast.

- *Look at the map to be able to tell whether it will be warmer in Spain or in Slovakia.*

You would have guessed that this difference must be because of the nearness of Western Europe to the Atlantic Ocean. Let us see exactly how this ocean affects the climate of Europe.

Westerlies

Winds blow all the year round from the Atlantic Ocean towards Europe. Since they blow from the west these winds are called 'Westerlies'. (Actually these blow from the southwest towards the northeast). These winds are warmer than the land temperature and are also moist. The climate of Western Europe is affected by these warm and moist winds all the year round as they blow throughout the year.

- *Can you guess what the impact of the Westerlies would be?*

Warm Ocean Currents

The waters in the oceans are not static. They keep flowing from one place to another along the continents. These are the ocean currents, which flow for thousands of kilometers in the ocean just as rivers flow on land.

One such ocean current is to be found in the Atlantic Ocean. This current originates near the Equator where the waters are warm throughout the year. This why this current is also a warm current. This current flows westward to North America. It flows north along the eastern coast of America under the impact of the Westerlies and then advances towards Europe. Moving northeast, it hits the western coast of Europe. This current is called

MAP 6 GULF STREAM



'Gulf Stream' in America, while in Europe it is called 'North Atlantic Drift'.

The coastal waters of the east coast of North America and the west coast of Europe do not freeze in winters, thanks to the Gulf Stream. Thus it is possible for ships to visit the ports on these coasts in winter since the waters do not freeze.

- *Why do you think the climate of Eastern Europe is not so strongly affected by the warm currents?*
- *Fill in the blanks:*
 - *The waters near the Equator are (warm / cool / icy cold)*
 - *Starting near the Equator, the Gulf Stream reaches the coast of America. (eastern / western / northern)*
 - *The Gulf Stream flows in the (Atlantic Ocean / Mediterranean Sea / Black Sea)*
 - *The waters of the Gulf Stream which hit the European coast are (cold / warm / icy cold)*
 - *The Westerlies blow from the Atlantic Ocean towards Europe (in winter / in summer / all round the year)*
 - *These winds are (dry / moist / icy)*

Western Europe: Showers all the Year Round

The Westerlies, which blow throughout the year also bring ample moisture to northern and western Europe. Since these winds blow from the sea they carry a lot of moisture and regularly cause rainfall. This is why it rains throughout the year in northern and western Europe. While it rains only for a few months in our country, there are light showers all round the year in western Europe. The skies there are usually clouded. While we, in India, eagerly await cool showers, the people of western Europe long for bright sunny days.

- *What differences did you notice between the climates of India and west Europe?*

Western Europe also benefits in other ways from the Gulf Stream. The warm currents are very good for fish breeding as they contain ample food materials for the fishes. As a result the fishery industry is very well developed in the North Sea near Britain. This part of the North Sea is called 'Dogger Bank'. Fish is an important part of the food of the Europeans and fishing is a very important industry in Europe.

- *Name the countries which would benefit from the Dogger Bank.*

Mediterranean Climate in Southern Europe

Let us look at the countries of Southern Europe. All of them have the Mediterranean Sea to their south. They are called 'Mediterranean Countries'. The lands along the Mediterranean Sea have a distinct climate called the 'Mediterranean climate'.

- *Look at Map 2 and name four Mediterranean countries.*

The Mediterranean countries are the southernmost countries of Europe. As a result the winters here are not too cold and summers are warm. It does not rain all through the year as in Western Europe. The Westerlies blow here

during the winter months only. These winds bring rain to the Mediterranean countries. In other words, it rains here only in winter. Such rainy winters and dry summers are termed a 'Mediterranean climate'. Several regions in other continents too have a Mediterranean climate. This climate is very good for growing juicy fruits. Thus regions with Mediterranean climate are famous for their fruits. Fruits like olives, figs, grapes, oranges, etc. are grown extensively in southern Europe.

- *Compare Mediterranean and Equatorial climates on the following aspects:*

Seasons:

Rainfall:

- *When does it rain most in your state, in summer months or in winter months?*
- *Find out if your region gets light winter showers and the name given to it in the regional language.*
- *Fishing is of importance in whereas fruit growing is important in*

NATURAL VEGETATION

There is a lot of variation in the natural vegetation of Europe due to the variations in the terrain and climate. Let us begin with the extreme north. Northern part of the Scandinavian countries fall in the polar region. The vegetation there is quite similar to the vegetation in the Asian tundra.

- *Recall the vegetation of the Asian tundra. You read about it in class 6.*

The rest of northern Europe, too, is very cold but not as cold as the polar region. It snows heavily here for six to seven months, but the soil below does not get frozen. Thus trees are able to grow here unlike in the Tundra. However the trees that grow in Northern Europe are of a special kind which can

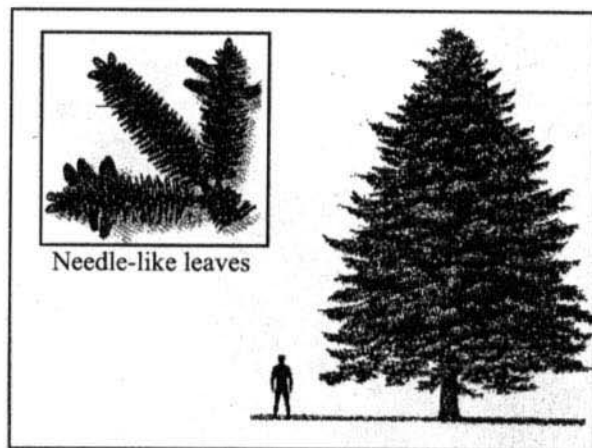


Fig. 4 A coniferous tree

withstand very cold climates. They are conical in shape so that snow can easily slip down and not gather on the tree tops. They have needle-like leaves and bear fruits called 'cones'. Hence they are called 'coniferous trees' and the forests are called 'coniferous forests'. Pine, spruce, etc. are examples of coniferous trees. The wood of the coniferous trees is soft and is used for making paper. Coniferous forests are found in Europe in Norway, Sweden, Russia and on the Alps. You would have read about such forests in the lesson on Japan. Such forests are also found in our country on the Himalayas.

Mediterranean forests are found in southern Europe where summers are dry. The trees that grow here have thick barks in order to reduce evaporation and preserve moisture in summer. Olive and cork are typical Mediterranean trees.

The forests of central Europe are different from the coniferous and the Mediterranean forests. Central Europe gets very cold in winter and experiences snowfall in some months too. However, it does not get as cold as in northern Europe or as warm as southern Europe. Central Europe has forests of broad-leaved trees. Their leaves are broader than the needle-like leaves of the coniferous trees. These trees shed their leaves in autumn before the onset of winter. September to November are the autumn months. When it gets too cold in winter the life activities of the trees are greatly reduced and they shed their leaves as a result. As summer

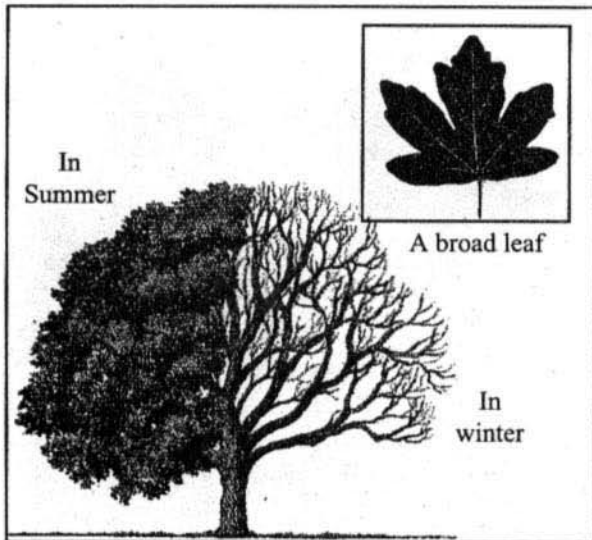


Fig.5 A deciduous broad-leaved tree

sets in, they are covered with fresh green leaves. They are also called *deciduous forests* or forests that shed their leaves annually. The typical broad-leaved trees are maple, birch and oak. These trees also grow in parts of the Himalayas in our country.

There are grasslands on the mountain slopes and plains of Europe. They are covered with short and juicy grasses. These are called 'steppe' grasslands. Animal rearing is an important activity in steppe grasslands. Wheat cultivation is also very important in these plains. The grass, which grows in the plains of our country, is long and hard. It is not as suitable

for animal rearing as the steppe grass.

- *In which of the following countries will you find coniferous forests – Norway, Italy, Spain.*
- *List two important features of coniferous forests.*
- *Give two important differences between Mediterranean and Equatorial forests.*
- *Why are steppe grasslands more useful for animal rearing than the grasslands of our plains?*
- *Compare the deciduous trees of your area with the deciduous trees of central Europe.*

LAND, CLIMATE AND AGRICULTURE

European plains and river valleys are very fertile. It rains here all through the year and the rivers, too, do not dry up in any season. As a result the plains are very suited for agriculture. However, a very large part of Europe is mountainous and not suitable for agriculture. Some countries have very little agricultural land. For example only 3% of the land of Norway is available for cultivation. 30% of England is cultivable while in Germany it is about 40%.

This is very different from our country. In India as much as 55% of the land is cultivable.



Fig. 6 Cattle rearing in the grasslands

There is an acute shortage of land in Holland. The people of Holland (the Dutch) have reclaimed small portions of land from the sea by building embankments called dykes to push back the sea. The land that is reclaimed is called 'polder'.

In eastern and northern Europe, it is not possible to cultivate the land in winter due to the extreme cold. Snow that covers the land for almost six-months begins to melt only in spring leaving very little time for crops to mature. It is in spring that sowing takes place and crops mature in the summer months and are ready for harvest in autumn. As a result it is possible to raise only one crop in a year in these parts. However, in southern Europe it is possible to raise two crops a year.

• *Can you reason why it is possible to raise two crops in the Mediterranean countries?*

Wheat is the main crop of European plains. It is grown extensively in France, Germany, Russia, Ukraine, Poland, Italy, Greece, etc. We have seen that fruit cultivation is prominent in southern Europe. Fruits like grapes are used for making wine. The Mediterranean countries like Portugal, Spain, Italy and southern France are famous for their wines.

Barley, oats, rye, sugar-beet, potato, etc. are also important crops of Europe. Sugar is manufactured from beet in Russia, Ukraine and Germany.

DISCOVERY OF SEA ROUTES

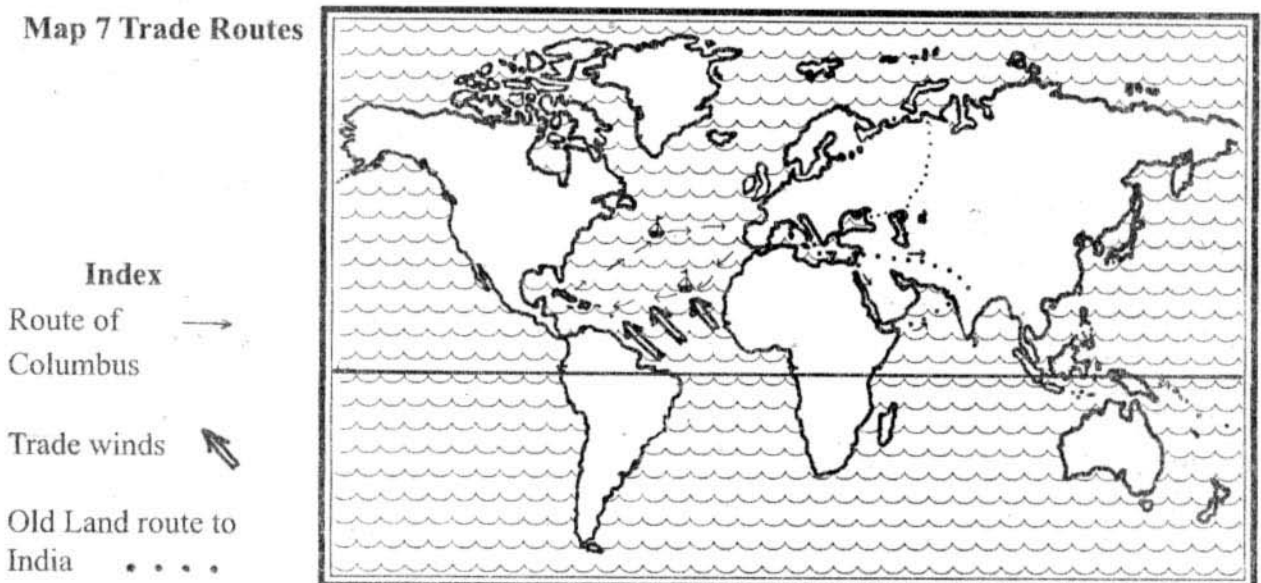
No part of western Europe is too far from the ocean. In contrast many countries of Asia are thousands of kilometers from the sea.

• *Look at the wall map or atlas to identify the names of at least six cities of Europe which are situated on the sea coast.*

There are thousands of such seaside settlements where seafaring people have been living for hundreds of years. With centuries of experience of sea travel the European sailors were famed for their skill and courage on the seas. They were also skilled in building boats and ships. Initially they were built for fishing in deep seas. Gradually besides being used for fishing, ships began to be used for international trade.

From the very ancient times the people of Europe have been trading with India and other countries of Asia like Indonesia and China. From these countries Europe obtained many things like cotton and silk cloth, gems,

Map 7 Trade Routes



ivory and spices such as cloves, pepper, and cinnamon – that were not available in Europe. The Europeans got these in exchange for gold and silver, which they brought from Europe. Do you know what route they took from Europe to India? Look at map 7 in which two major routes are given. Both the routes crossed the Mediterranean Sea and then while one of them took a land route via the Middle East, Iran, and Afghanistan, the other route took a sea route via the Red Sea and the Arabian Sea.

About five hundred years ago the West European sailors and traders began to search for new routes to India. This was because both the routes mentioned above passed through countries ruled by the Arabs who were often at war with the Europeans. Further, most of the trade in the Mediterranean Sea was controlled by Italian merchants who did not let traders of other countries in easily. That is why the sailors of the other countries began to look for routes to India which did not have to pass through the Mediterranean Sea or the Arab ruled countries.

• Looking at the map can you tell what the new route could be?

Of course these maps did not exist in those days and people had just begun to figure out that the earth must be round and not flat. An Italian sailor named Christopher Columbus thought, 'If the earth is round then it should be possible to reach India from the west too. If we were to travel westward across the Atlantic Ocean we would reach China and India sooner or later.'

• Look at a globe to check whether Columbus's thinking was correct.

Columbus set out with three ships in 1498 to cross the Atlantic Ocean. After three months of sailing he saw land ahead. Columbus thought that he had reached India. Actually he was still far from India; he had reached what we now call the West Indies. These are a group of islands near America. In fact Europeans before

Columbus did not know of America. In a way he 'stumbled' onto America. Soon Europeans realised that Columbus had not reached India but a new unknown continent. After that several Europeans went to America to trade, conquer and settle.

The ships of those times had sails to harness wind-power. They sailed with ease with the winds blowing westwards towards America. Which were these winds blowing westwards taking ships from Europe to America? Were these the Westerlies? No, these were not the Westerlies, which blew towards Europe. These were different winds, which blew from the south of Europe towards the south-west direction. They blew throughout the year and took ships from south-west Europe to the east coast of America. These winds are called 'Trade Winds'.

While the Westerlies blow from the south-west to the north-east, the Trade Winds blow from the north-east to the south-west. In other words the two winds blow in opposite directions all through the year. (Both these winds are shown on Map 7.) This helped Europeans to travel to and from America easily. They could go to America using the Trade Winds.

- Look at Map 7 and answer the following questions:*
- Which winds would help the sailors to return to Europe from America?*
 - Could the sail driven ships use the Trade Winds to return to Europe? Give reasons for your answer.*

After Columbus the Europeans discovered several sea routes. They could now sail not only to America but also to different parts of Africa, India and Australia. They traded with these countries and amassed immense wealth, which was used to develop industries in Europe. You will read about this in the next lesson.

EXERCISE

1. The Atlantic Ocean has had a deep impact on the climate of Europe as well as on the life and livelihood of the people of Europe. Collect all the references regarding how this ocean affects the climate of Europe and the life of the Europeans and write an essay on the theme.
2. Answer these questions with the help of the maps given in the lesson:
Which of the following is not a landlocked (surrounded by land) country – (Hungary / Romania / Poland / Switzerland).
Which mountains lie between the Caspian Sea and the Black Sea – (Alps / Caucasus Mountains)
Which countries are on the shores of the Arctic Ocean – (Russia / Germany / Sweden / Norway).
Can a ship sail from the Black Sea to the Atlantic Ocean? If yes, trace the route it will have to take.
3. Fill in the blanks:
Land which is surrounded on all four sides by water is called
Land which is surrounded by water on three sides is called
An inlet of a sea which is surrounded on three sides by land is called
4. Why are harbours built in deep gulfs or bays?
5. Why are the winters less severe in western Europe than in eastern Europe?
6. Name four countries on the coast of the Black Sea.
7. How do the Westerlies benefit the people of western Europe?
8. What are the characteristics of the Mediterranean climate? Name the countries which have a Mediterranean climate.
9. In which part of Europe will you find coniferous forests?
10. Give the forest type against the trees in the following table:

Tree	Forest
Olive	
Pine	
Oak	
Spruce	
Maple	

11. What are the factors that limit European agriculture?
12. Name the important crops of southern Europe.