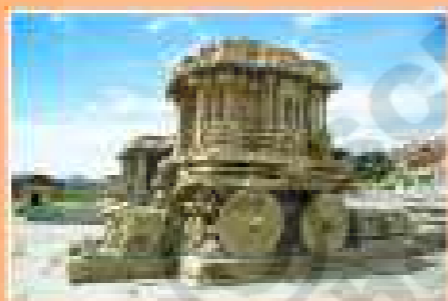


Social Studies Class-VII



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Department of School Education

Social Studies

CLASS VII



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CHILDREN'S BILL OF RIGHTS

A child is every person under the age of 18 years. Parents have the primary responsibility for the upbringing and development of the child. The State shall respect and ensure the rights of the child.

- I have the Right to express my views freely, which should be taken seriously, and everyone has the Responsibility to listen to others. [Article-12,13]
- I have the Right to good health care and everyone has the Responsibility to help others get basic health care and safe water. [Article- 24]
- I have to Right to good education, and everyone has the Responsibility to encourage all children to go to school [Article- 28,29,23]
- I have the Right to be loved and protected from harm and abuse, and everyone has the Responsibility to love and care for others. [Article-19]
- I have the Right to be included whatever my abilities, and everyone has the Responsibility to respect others for their differences. [Article- 23]
- I have the Right to be proud of my heritage and beliefs, and everyone has the Responsibility to respect the culture and belief of others. [Article- 29,30]
- I have the Right to safe and comfortable home and everyone has the Responsibility to make sure all children have homes. [Article- 27]
- I have the Right to make mistakes, and everyone has the Responsibility to accept we can learn from our mistakes. [Article- 28]
- I have the Right to be well fed and everyone has the Responsibility to prevent people starving. [Article- 24]
- I have the Right to a clean environment, and everyone has the Responsibility not to pollute it. [Article- 29]
- I have the Right to live without violence (verbal, physical, emotional), and everyone has the Responsibility not to be violent to others. [Article- 28, 37]
- I have the Right to be protected from economic exploitation, and everyone has the Responsibility to ensure that no child is forced to work and is given a free and secure environment. [Article- 32, 34]

These rights and responsibilities are enshrined in the United Nations Convention on the Rights of the Child, 1989. It contains all the rights which children and young people have all over the world. The Government of India signed this document in 1992.

DO YOU KNOW DO'S AND DON'TS FOR FACING THESE NATURAL DISASTERS!



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SOCIAL STUDIES

Class VII

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Reading Maps of Different Kinds

The world in which we live is so full of variety – mountains, hills, sea coasts, deserts, forests, snow covered regions.... Why is there so much variation? How does this affect the lives of people who live in those parts? To study and understand these questions we need to take the help of maps of different kinds. Some maps tell us about how high or low the places are, some tell us about how much it rains there or how hot or cold it gets there, some tell us about crops that grow there or the kinds of forests there are. By studying them we can know much about a place.



Fig 1.1 Evergreen forest in Western ghats of Karnataka



Fig 1.2 Cocana Beach in Brazil of South America



Fig 1.3 An Oasis in the Sahara desert of Libya in Africa





Fig 1.4 Ice covered continent of Antarctica

Bring copies of School Atlas and see how many different kinds of maps are there. Make a list of maps you would like to read and understand. Last year we learnt to read some simple maps. This year we learn to read maps which show heights. But let us first revise what we learnt last year.

- ◆ Hang a wall map of India in the class. Look at the map carefully and answer the following questions:
 - i. Mehar went to Bhopal from Hyderabad. In which direction did she travel?
 - ii. Ashok went to Chennai from Lucknow. In which direction did he travel?
 - iii. Regina went to Bhubaneshwar from Mumbai. In which direction did she travel?
 - iv. Weprechu went to Jaipur from Kohima. In which direction did he travel?
- ◆ Make more such questions and ask each other.
- ◆ Look at the symbols shown on the map. Now try to find out the boundary of Andhra Pradesh. Trace your finger over the entire length of the boundary.
- ◆ Draw the symbol for boundary of a state and symbol for the boundary of India (international boundary) in your notebook.
- ◆ Can you make a list of states which lie to the North, South, West of Andhra Pradesh? What lies to the East of the state?
- ◆ In class VI you have also learnt to measure distances between places with the help of the 'scale' given in the map. Now try to find out the distance between Hyderabad and various state capitals like Jaipur, Imphal, Gandhinagar and Tiruvananthapuram.

Symbols

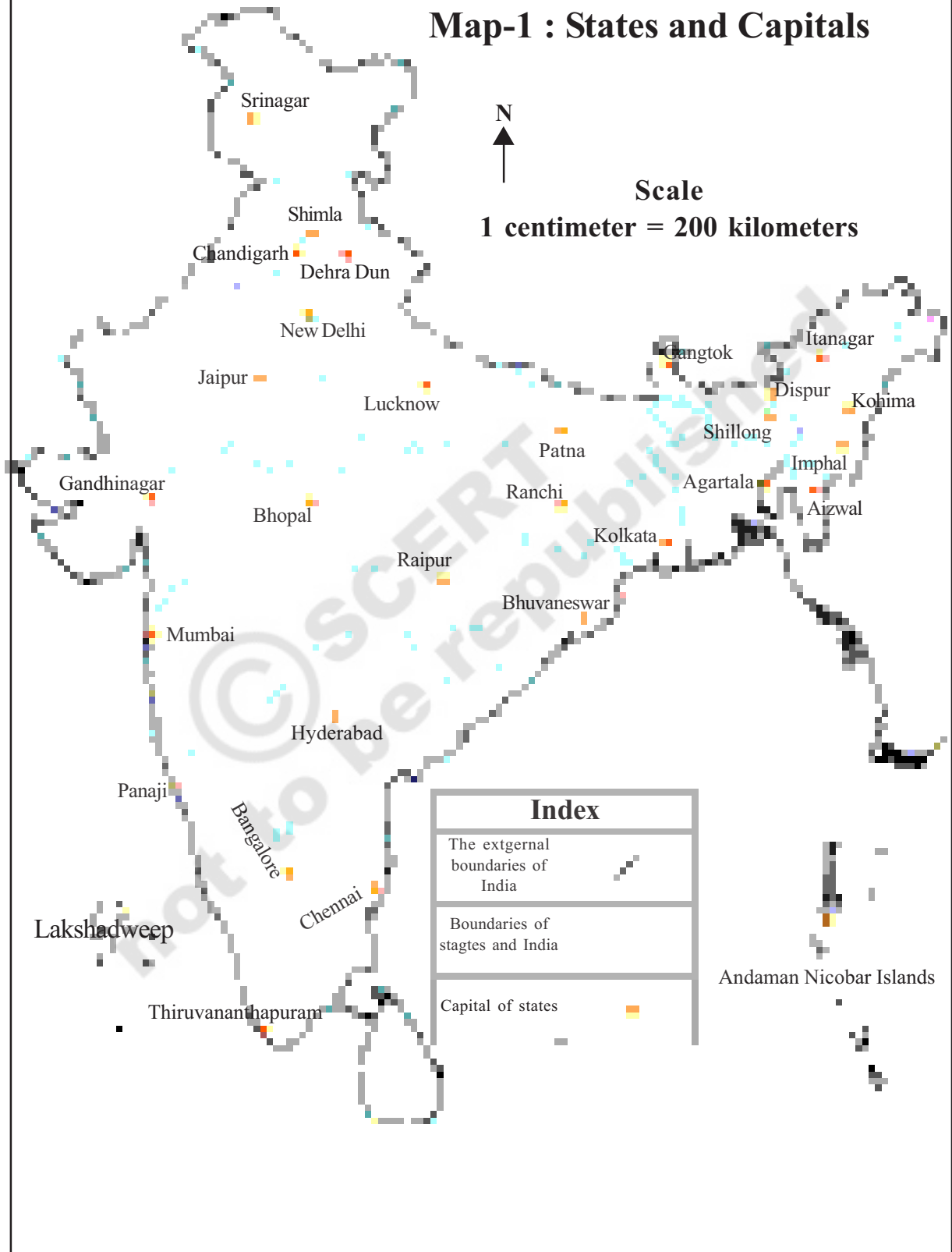
Point, Line, Area: We use symbols to show any physical object on the map. You have seen some of them in class VI.

If we are asked to show Delhi in India map, we will mark a point (●) and label it as Delhi. To show the river Manjeera, we draw a line () along its course, for the Railway line we will draw a track line () to represent it. In Andhra Pradesh map if we want to show the area of Medak or Hyderabad district, we demarcate its boundary and mark it with some colour or pattern, which is known as a real symbol. Thus all physical objects are shown on the map with the help of a point, line or an area symbol.

- ◆ Look at a few maps in later chapters of this book and list out the objects in the given map in the following table:

Point Symbol	Line Symbol	Area Symbol
1. Temple	1. River	1. Play ground
2.	2.	2.
3.	3.	3.

Map-1 : States and Capitals



Physical Maps

You will find some maps in your atlas called 'Physical Maps'. In these maps, you will usually find different parts of the land coloured in green, yellow or brown. Actually they show the variety of landforms (plains, mountains, plateaus, etc.) and depict the heights of places.

How can we represent the heights of land on flat paper? Of course, we can make a drawing like the one below:

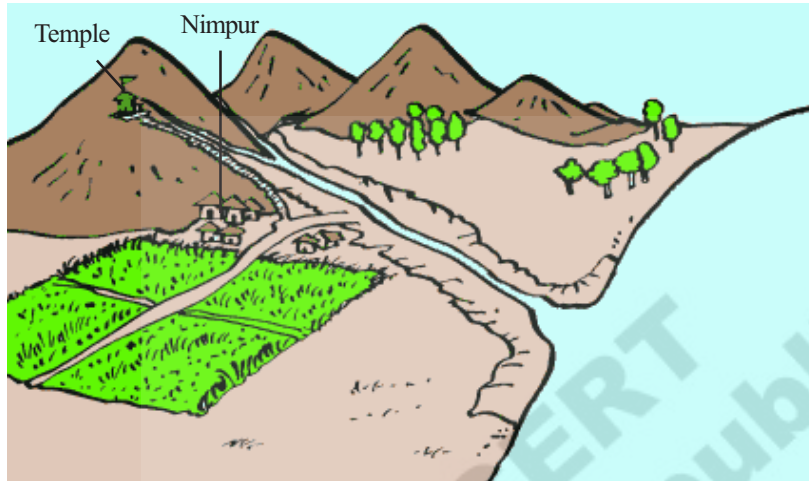


Fig 1.5 Drawing of "Nimpur" Village

As you can see this is a picture and not a map. Here the height of the hills hide what is behind them. A map has to show all places without hiding them. Can you think of a way in which we can draw a map of this place?

One way in which we can show heights on maps is through the use of colour. Let us see how this is done.

Measuring Heights on Land

All heights on the land are calculated from the sea level. Since all seas in the world are connected to each other, the sea level (the top surface) all over the world is taken to be roughly the same. Look at the picture of Nimpur village below to understand this idea.

You can see from the picture that Nimpur village is fifty meters above the sea level.

- ◆ How many meters above sea level is the temple?
- ◆ How many meters above sea level is the top of the hill?

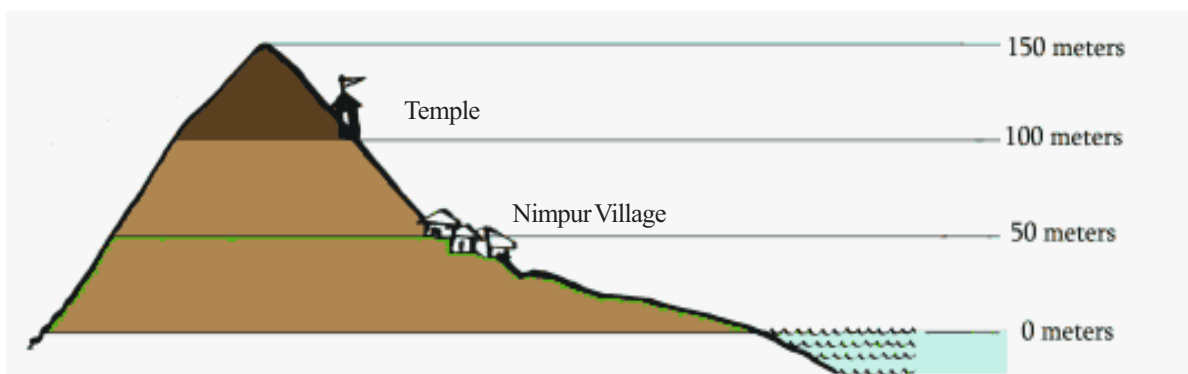


Fig 1.6 Heights in Nimpur Village

Showing Heights on a Map

Look at the map of Nimpur village area given here (Fig 1.7).

Can you see that the map shows three height zones in the map – firstly areas which are between 0 meter height and 50 meter height, areas which are between 51 meters and 100 meters and then finally areas which are between 101 meters and 150 meters. Thus any place which falls in any of the height zone 51-100 meters will have a height which is above 50 meters but below 100 meters. Heights are shown in different shades of colours.

- ◆ Look at the map of Nimpur showing heights. What is the colour given to the area adjacent to the sea?
- ◆ What is the colour given to the highest region in this map?

Now look at the Physical Map of Andhra Pradesh in your atlas or wall map. Find out the range of heights and colours for the places given below by reading the index and fill the table below.

Table -1:

Place	Height	Colour Zone
Hyderabad	From.... to meters	
Visakhapatnam	From.... to meters	
Khammam	From.... to meters	
Chittoor	From.... to meters	
Kurnool	From.... to meters	
Nellore	From.... to meters	
◆ Make such questions and give them to each other.		

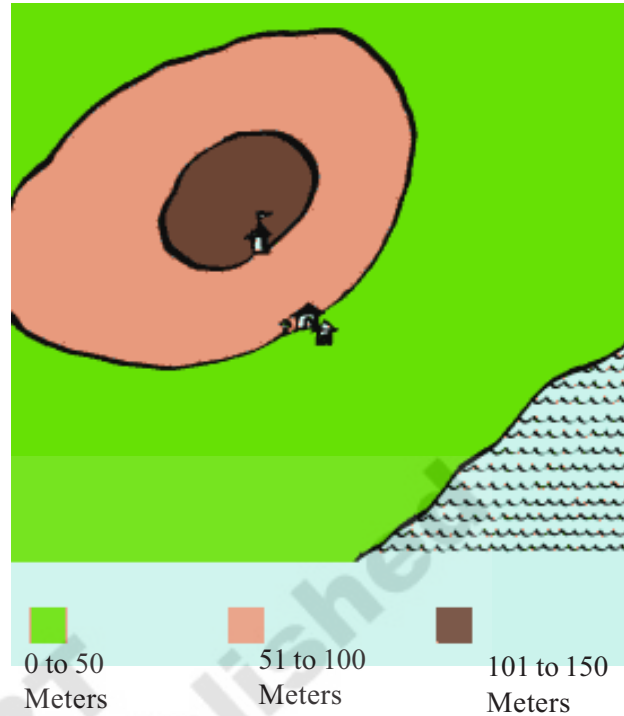


Fig 1.7 Map of Nimpur Village showing heights

Contour Lines

A contour is a line joining the places with equal heights. On the map of Nimpur you would have seen that there is a line passing through the village, this is the 50 meter contour line. All places on this line will have the same height of 50 meters. Contour lines will be in irregular shape depending upon the land form. These cannot cut with each other. The distance between two

contour lines will depend upon the landscape. If the land has a steep climb then the contour lines will be near to each other. If the slope of the land is gentle, then the contour lines will be quite far from each other.

Uses of Maps showing Heights

These maps help us to understand the nature of the terrain, where the mountains are, where the valleys are, etc. If you look at the physical map of Andhra Pradesh, you can identify the

coastal plains that run along the coast of the Bay of Bengal. If you travel westwards from the coast you will reach hills which form the “escarpments” to the plateau region. The plateau region itself is cut by many rivers like the Krishna and the Godavari which form deep and broad valleys in them.

Maps showing heights are very essential when roads or dams have to be constructed. If we have to lay roads in an undulating region between two places such maps help us in deciding the route to be taken by the road. Similarly, when dams are planned it is necessary to know how much land will be submerged by the water of the dam.

Mean Sea Level

There are high tides and low tides on the level of the sea, and they never stand still. As a result of this phenomena, the level of the sea keeps on either rising or falling. Which of these heights do we take as the sea level or 0 meter height? In order to solve this problem the level of the sea is carefully measured at frequent intervals and the mean level of the sea is calculated. Over a period of time, scientists observed the high and low levels of the sea and they have come to one calculated average level which is known as Mean Sea Level (M.S.L.).

- ◆ If you live near a Railway station find out the height of that place with the help of display board. The height is mentioned as “_____ M.S.L.”. Note it down in your note book.

- ◆ Look at figure 1.6 & 1.7 and tell whether Nimpur would be submerged if sea waters were to flood up to 30 meters?

Look at figure 1.8 and answer the following questions:

- ◆ Mark the direction of flow of the river.
- ◆ The height of the lowest land is between _____ meters and _____ meters.
- ◆ There are two high points in this map. What are their heights?

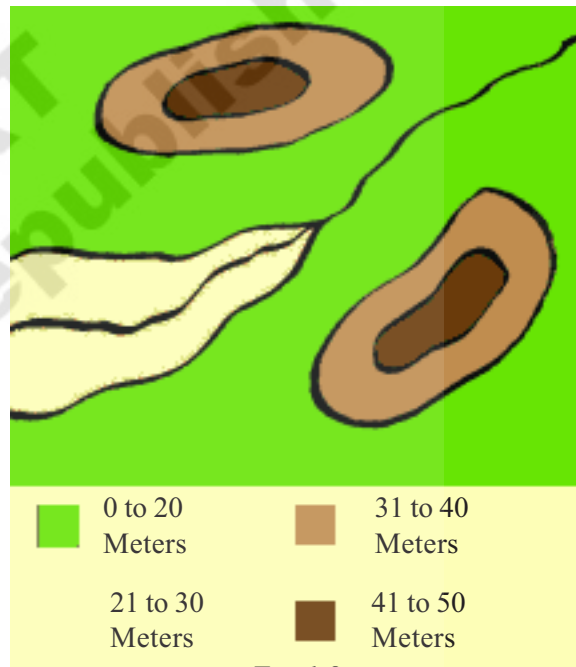


Fig 1.8

Improve your learning

1. Why are the levels of all the seas equal in the world?
2. How is the sea level measured?
3. What are the uses of maps showing heights?
4. What differences do you find between the life style of people living on high altitudes and low altitudes?
5. How are the maps helpful to people?

Rain and Rivers

All life on the earth is very crucially dependent upon water. As you know over 71% of the earth's surface is covered with water. We depend upon water for growing crops. But we do not get water uniformly over the year. It is also not available uniformly all over the earth. Nor is the quality of water the same everywhere.

Discuss in the class in which months you get rains, in which part of the village or town you have more water or less water, where you get good drinking water and where you get salty or hard



water. In the following chapters we will study about the diversity in water availability and its consequences.

PART - I

Sun, Clouds and Rainfall

After the unbearable heat of April, May and June, comes the rainy season which lasts for a few months. Do you know what causes rains? Where do the rain bearing clouds come from? Discuss whatever you know or think about these things in the class.

Evaporation

Pranavi woke up early in the morning. She needed to take bath in hot water, so she heated water in a dish over fire. As

the water heated up water vapour touched the lid and with the help of outside cool air, vapour became water drops and stuck to the lid of the dish. When she removed the lid some of the water drops fell down into the dish. By observing this, she realised that the water evaporates and latter it becomes condensed into water by cooling.

The story of rain begins with water vapour. What is water vapour? When you dry your wet clothes in the open, you see

that the water disappears after a while and the clothes dry. Similarly, if you keep some water in a plate, it dries up in a couple of days. Actually, water in the cloth or in the plate becomes water vapour and mixes with the air through a process called 'evaporation'. So even when water is not boiling there is evaporation.

There are several water bodies on the earth's surface – oceans, rivers, lakes, etc. There is constant evaporation of water from these water bodies. Infact, wherever there is moisture, like on wet cloth, there is evaporation. There is evaporation from our bodies, from trees, plants and soil! The process of evaporation speeds up with the increase in temperature.

- ◆ In which season do you think there would be more evaporation – in summer or winter?
- ◆ Do you think there is more evaporation during the day or night?
- ◆ Look at figure 2.1 and make a list of all places from which evaporation takes place.
- ◆ Where do you think maximum evaporation would take place – from plants, rivers, oceans or soils?

Formation of Clouds and Rain

When water vapour rises with hot air and reaches high up in the sky, it gets cooled. This is because it gets cooler as we rise above the surface of the earth. With the cooling, water vapour is transformed into tiny water droplets. These droplets gather around minute dust or smoke particles in the air and gradually increase in size. These small drops of water gather to form the clouds.

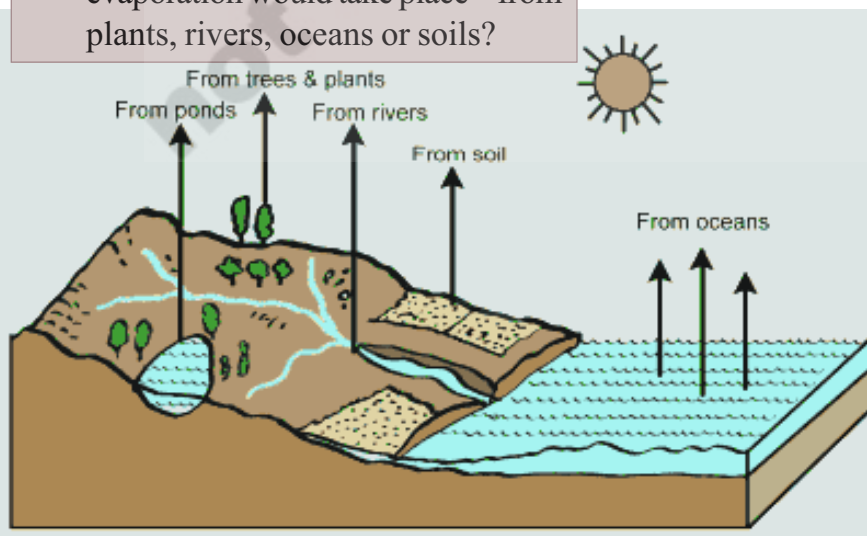


Fig 2.1 Evaporation

- ◆ Make a diagram to explain how vapour is transformed into clouds in the box given above. Label your diagram with these terms – earth, sky, rising vapour, cold, dust particles, water droplets, clouds....

As the clouds continue to rise upwards, it gets cooler and more droplets are formed. The droplets get together to form bigger drops. As they get heavier it gets more and more difficult for them to remain in the air and so they begin to fall as rain drops

- ◆ Why do you think it is necessary for the clouds to rise in order to cause rain?
- ◆ Do you ever observe dew? Where is it formed?
- ◆ In which part of the day you will find fog?
- ◆ In which season do you have more foggy days?
- ◆ Did you ever see snow fall? How is it different from rain fall?
- ◆ Have you ever experienced the hail storm?

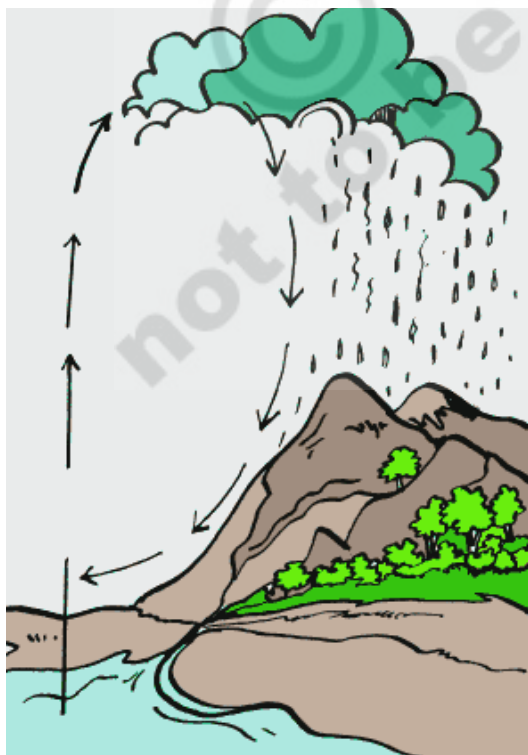


Fig 2.2 Water cycle

Some Important Terms

Evaporation: Change of water into vapour is known as evaporation. The process in which water vapour changes into water is called condensation. Clouds are tiny droplets of water hanging in the air above.

Water Cycle :

The cycle of water evaporating from the seas, becoming clouds in the sky, pouring down as rain and flowing down the slope on the land in the form of rivers and finally joining the sea again is called the water cycle.

Precipitation: Different forms of condensation of water vapour is known as precipitation. This may take place in the form of dew, fog, rain, snow, and hail etc.

Humidity: The amount of invisible water vapour present in the atmosphere is known as humidity. When temperature and humidity are high, we feel uncomfortable. We perspire and the sweat does not evaporate quickly. We feel sticky and such weather is called sultry.

Winds and Clouds

Since evaporation takes place all over the earth's surface, clouds are also being formed all over. However, it is on the surface of the oceans that maximum evaporation and cloud formation takes place. After all, oceans are vast water

bodies extending upto thousands of kilometres. As a result it also rains very heavily on the oceans. Clouds also travel inland for thousands of kilometres to bring rain to us. Do you know what brings them deep inland?

From which direction does the wind blow during the rainy season?

These winds come all the way from the Arabian Sea and the Bay of Bengal and they transport the rain clouds. They are called '*Monsoon winds*'. They are also called '*South-West Monsoon winds*' as they blow from that direction. These winds blow only in the summer.



There are two arms of the monsoon winds: one blows from the Arabian Sea and the other from the Bay of Bengal. The arrows in Map 1 show us the direction of winds.

- ◆ Towards which parts of the country will the winds take the clouds being formed in the Bay of Bengal?
- ◆ Towards which parts of the country will the winds take the clouds being formed in the Arabian Sea?
- ◆ From which direction will the winds blow to bring monsoon rains to West Bengal, Lucknow and Delhi?
- ◆ From which direction will the winds blow to bring monsoon rains to Mumbai, Hyderabad, Bangalore?

Rainfall in Andhra Pradesh

- ◆ In which months of the year does it rain the most in your place? List three rainiest months.
- ◆ In which months of the year does it rain the least in your place? Name the three driest months.
- ◆ Do you have 'normal' rainfall every year in your place or does it vary every year?
- ◆ Have you experienced drought years in which it rained very little?
- ◆ Have you experienced flood years in which it rained too much?

When the South West Monsoon sets around the beginning of June the winds carrying the clouds also reach Andhra Pradesh. As you can see from Map 1, these winds reach Rayalaseema districts of Chittoor and Kurnool first. However they

bring very little rain as most of the moisture in the clouds falls down in rain in the Western Ghats and only dry clouds and winds reach Rayalaseema.

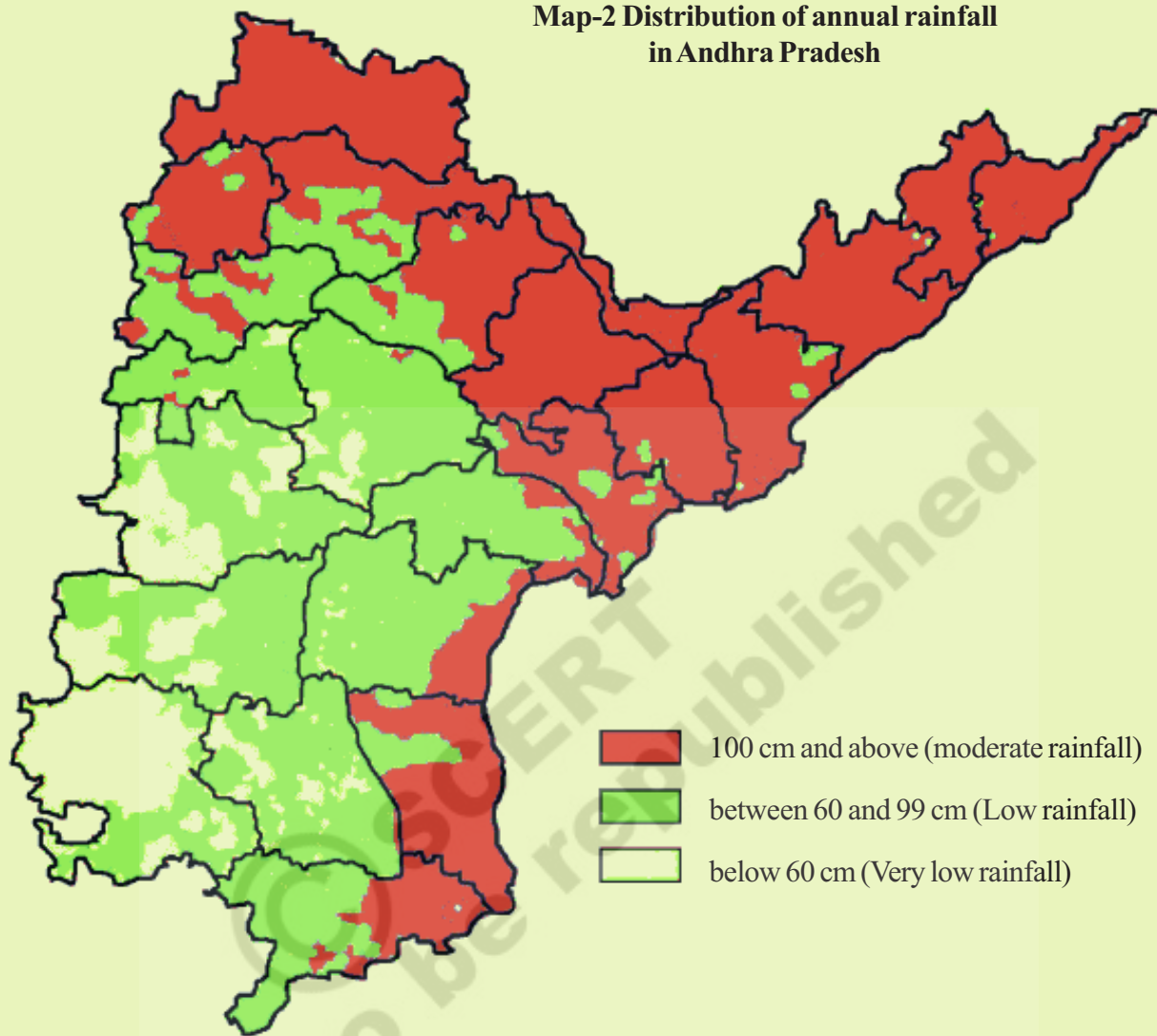
The mountain ranges like the Western Ghats in the path of rain-bearing wind cause them to rise. Rising air cools down and water vapour condenses faster. Further ascent leads to rainfall. This type of rainfall is common in the mountainous regions. However, when the clouds descend on the other side of the mountain range (as it happens when they reach Rayalaseema) they become dry and give very little rain.

The South West Monsoon however, brings much rain to the Telangana districts as the winds again rise over the Eastern Ghats.

In the months from May to October cyclones form in the Bay of Bengal causing widespread rains in coastal and inland Andhra Pradesh. Rain caused by whirling storms is called cyclonic rain. These cyclones are formed in the sea due to intense heating up in summer. In a cyclone, winds blow in from every side towards the centre of it. The whirling air rises up and causes rain. The centre of the cyclonic storm moves fast with the wind and hits the coastal areas causing heavy rains and winds. While these bring rains to the coastal regions they also cause much destruction.

The direction of the winds reverse in the months after October as the winds begin to blow from the Bay of Bengal South Westwards. This causes heavy rains in October-December months in coastal Andhra Pradesh and moderate rains in Rayalaseema and Telangana districts. This is called North East Monsoon or the Return Monsoon.

Map-2 Distribution of annual rainfall in Andhra Pradesh



- ◆ Look at the map given above of rainfall received in different parts of Andhra Pradesh:
 - i. Does your district receive moderate or low rainfall?
 - ii. Which town has the least rainfall and which has the highest – Ongole, Anantapur, Adilabad, Machilipatnam, Hyderabad?
 - iii. Make more such questions and ask each other.
- ◆ Look at physical map of India in your Atlas and identify Western Ghats, Eastern Ghats.
- ◆ Western Ghats are spread across the following states _____
- ◆ Eastern Ghats are spread across the following states _____
- ◆ In which direction of Andhra Pradesh are Western Ghats?
- ◆ Now create rough outlines of India in a note book – then draw imaginary hills, along ‘Western Ghats’, Eastern Ghats. Roughly mark the areas that are in Rayalaseema and Telangana. And label them with months in which it rains.

Raingauge

An instrument by which the rainfall is measured is known as 'raingauge'. The amount of rainfall for a unit area is measured in centimeters. How do we measure the amount of rainfall? How do we find out if Anantapur has more rain or Guntur?

Make your own Raingauge



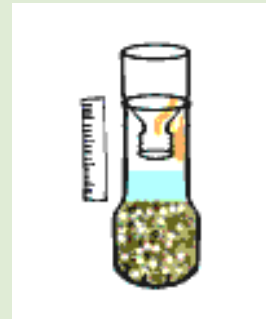
Collect the above items to make a rain (pic 1).



Cut the top of the bottle like this. This ensures the top of the bottle and bottom of the rain has the same circumference (pic 2).



Turn top of the bottle upside down like this, and fix it to the bottle. (pic 3).



Fill the bottle with sand and water till the spot where you can mark zero. If the bottom of your bottle is flat you need not fill too much water (pic 4).

Now ensure that you keep this bottle in an open place. Make sure that there are no walls or trees that can block the rain water from falling into the bottle. You can use a scale to measure the water. If you leave the bottle in the open for a few days you can know how much it rained in a week, a month.

When it rains the water level in the rises. Measure the height of water with the help of a scale and you will get the rainfall in Centimetres for your area during the period you had kept the in the open.

PART -II

Flow of Rivers

What happens to the water that falls on the earth? Some of it percolates into the soil, some flows on the surface of the land and the rest becomes water vapour and mixes with air. You will read about the water that percolates down into the soil in the next chapter. In this part we will discuss the water which flows on the surface of the land.

Rivers

Have you seen rain water flow in small streamlets on sloping land? Water flows in small streams from the mountain slopes during the rainy season. However, these streams dry up after some time. Nevertheless, water cuts channels on the mountains.

When it rains again, water flows down the same channels. In this way river courses and river valleys are formed. This process is shown in figure 2.3.

Study the figure below and answer these questions:

- ♦ Mark the direction of the flow of the river with arrows.
- ♦ Mark the direction of the slope of the land with arrows.
- ♦ Does the river flow in the same direction as that of the slope of the land?

Transformation of a Stream into a Broad River

At its source, a river usually is in the form of a thin stream. As it flows further it gets bigger and broader. This happens because many small streams join it as the stream flows. Rivers or streams which join a larger river, are called '*tributaries*'.

As the river becomes bigger and broader, its flow gets slower. It starts depositing the silt and sand it has carried, on its bed and banks. This causes the formation of plains. Do you remember the village on plains you read about last year?

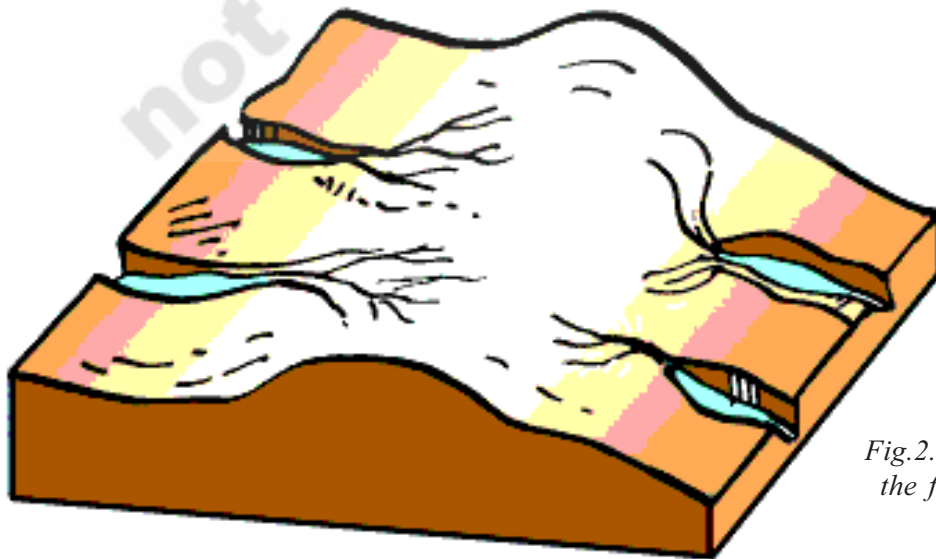


Fig.2.3 Slope and the formation of Rivers

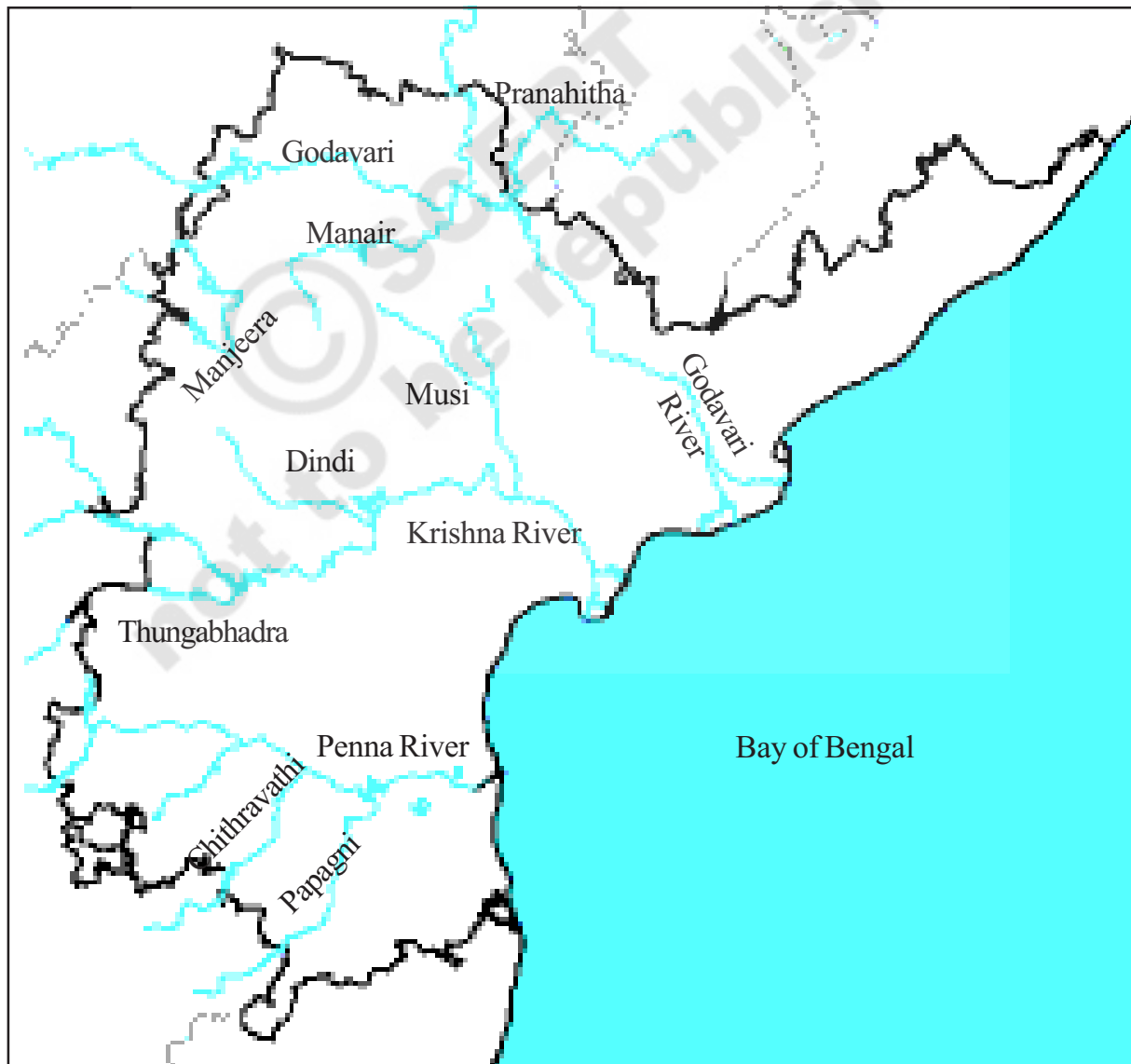
As it nears the sea, the river gets even more slower and is no longer able to carry the silt and sand. It deposits them on its own course which then gets filled up. When flood waters come again they have to cut through new channels to reach the sea. Thus towards the end of its journey to the sea a river forms a delta. In our state we have two main deltas of the Godavari and the Krishna rivers. Look for them in the map.

We have two large rivers flowing through our state - the Krishna and the

Godavari. However, we also have a large number of rivers that have water only during the rainy season. Why is this so?

Rivers like the Krishna and the Godavari start from the Western Ghats which receive heavy rains. The rain water slowly percolates into the ground and flows into the river all through the year. On the other hand, many of the rivers which start from the dry regions of Rayalaseema like the Penna are fed by scanty rains. Others which start in the Eastern Ghats too receive only

Map -3 Rivers of Andhra Pradesh



moderate rains and the water flows rapidly into the sea. That is why they go dry during the non-rainy season.

- ◆ Look at a map 3 and prepare a list of rivers that rise from:

Western Ghats	Rayalaseema	Eastern Ghats

- ◆ What do you think is the direction of slope in Andhra Pradesh – from North to South or East to West or West to East?

Flood-Plains and Floods

A river does not contain the same amount of water all the year around. While the river is full during the rainy season, it usually shrinks during the dry season. Look at figures 2.4 & 2.5 You can see that the river trough is very wide and it has high banks. This valley is filled with sand and gravel. The river flows as a small stream amidst them. You will notice that there are no trees here. This is because every year when it rains heavily, this valley is filled with water allowing no permanent trees or plants to grow here. This treeless bed is called the *flood-plain* of the river. All major rivers have their flood plains.

You must have heard that during the rainy seasons some parts of the country get flooded due to excess rainfall. You may have read about floods occurring in rivers like Krishna, Godavari, Brahmaputra or the Ganga.

Figure 2.5 depicts a flood situation. Look at it carefully and answer the following questions:

- ◆ Has the river water covered the entire flood-plain or is it confined to the tiny stream that was flowing in the dry season?
- ◆ Is the water confined to the flood-plain or has it overflown the banks of the river?
- ◆ In what way have the floods affected the villages, agricultural fields and trees?
- ◆ Floods are also beneficial to agricultural fields. Can you find out how floods help?

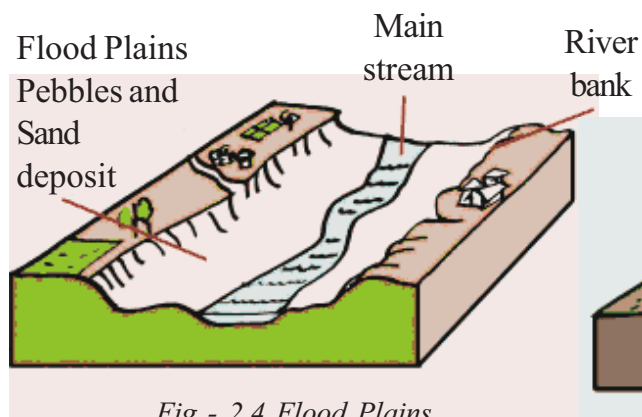


Fig - 2.4 Flood Plains

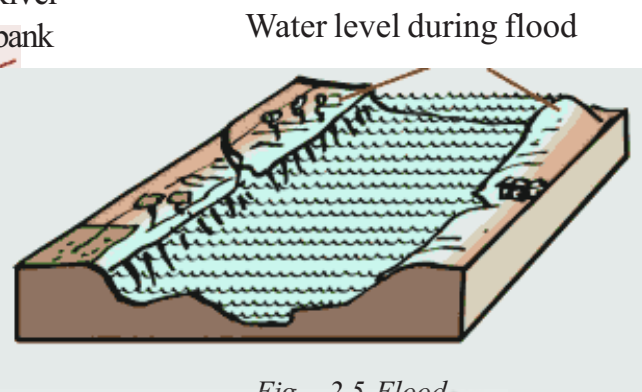


Fig - 2.5 Flood

Floods have become a major problem in our country in recent years. Some part of the country or the other is flooded every year during the rainy season. This causes severe damage to people, crops and livestock. Let us find out if we have contributed to this in any way.

Vegetation cover on the land (trees, plants, grass, etc.) obstructs the run off of rainwater and slows down the speed of its flow. This slowing down helps the rainwater to percolate into the soil. Floods are often caused by sudden increase in the volume of water reaching a river. Vegetation allows the water to flow slowly into the river, thus preventing sudden flooding. It also helps to increase the amount of water which goes into the soil.

Vegetation also helps to prevent floods in another way. It reduces the erosion of soil by rainwater. If there is little or no vegetation, rainwater cuts and carries with it a lot of topsoil. This soil is deposited on the riverbed, which reduces the depth of the river. This results in the reduction of capacity of the river to carry water. Thus, with even a little rain, the rivers are flooded and they overflow their banks, causing damage. If the surface of the land is

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covered with vegetation, then soil erosion is greatly reduced.

Let us take the case of Ganga. Earlier there were dense forests on the Himalayas from where the Ganga and its tributaries originate. In the recent years there has been a large scale felling of trees and hence the forest cover in the Himalayas has been reduced considerably. As a result, every time there is heavy rainfall, the rainwater rapidly flows down the slopes of the mountains and fills up the floodplain of the river. The waters also bring a very large quantity of silt and deposit it on the riverbed. This results in frequent floods, which cause heavy damage to life and property along the river.

All this tells us the importance of protecting our forests and increasing the vegetative cover over other lands.

- ◆ Can you explain how forests and vegetation can help in preventing floods?
- ◆ Can forest and vegetation help in lessening the effects of droughts (less rainfall)?

Facing the challenge in Cyclones and Floods

Our state has a long coast line and is frequently faced with very destructive cyclones. When heavy winds blow from the sea, heavy rains lash the lands, and high waves make the sea very unsafe. These usually occur between June and December. The worst cyclone hit the state in November 1977, perhaps, the worst cyclonic storm to hit the Indian shores. Six - metre high tidal waves swept across villages in coastal Andhra Pradesh, killing 9941 people. At least 100 villages were washed away by the cyclonic storms and the ensuing floods. Seen from air, it seemed like a sheet of water drawn over the affected areas floating in the swirling waters. About 100 people who left their homes to seek shelter in a building in Bapatla town died when the building collapsed. Most lives were lost in Diviseema, Krishna District.



Fig 2.6 Cyclone cloud in Bay of Bengal

Formation of cyclones may seem natural over which human beings have no control. However, the impact of these disasters are heightened or lessened due to how our society is organised and prepared. For example, if you see who lives in the most vulnerable part of the land which is most affected by cyclones, you will find that it is the poorest people who live there with least resources to defend themselves. The sea coasts are lined with the huts of poor fisherfolk and the low lands of the towns and villages which get flooded are usually inhabited by the slums of the poor. The people who live in high cement concrete buildings are able to store food, water etc. for many days. Thus we can see that disasters affect the poorest most.

Usually immediately after the flood waters recede, all sources of water are polluted and become unsafe for drinking. But people especially the poor are forced to use the polluted water and face the risk of several diseases like cholera, dysentery, jaundice etc. Only those with resources are able to arrange for safe bottled water to drink. Since roads are damaged and it rains heavily, bringing in relief to worst affected areas is not easy. Here people are forced to rely on their own resources to save themselves.

While the immediate damage of the cyclones is also heavy – like loss of lives, crops, houses etc., more importantly they also cause long term damages.

For example, the life savings of most of the poor stored in the houses in the form of food, tools, cattle, small shops, vehicles, boats, nets, etc are destroyed. To go back to their work they need to buy all these again. Many families may lose their working members. Daily wage workers face loss of work for several weeks till normalcy returns and therefore loss of livelihood. Farmers too not only face loss of crops but also permanent damage to their lands.

How can people meet the challenge of disasters like cyclones and floods?

This can be done through long term planning by governments and close cooperation between the people and government agencies. With the installation of early warning systems by the government, today it is possible to predict considerably in advance the possibilities of natural disasters like cyclone and flood particularly regions that are most vulnerable. Governments thus put in place these systems and inform people about possibility of disasters.

Governments are also responsible for providing for long term security of all people by building strong roads which are not easily destroyed, safe pucca houses for those living in vulnerable areas like sea coast or along the rivers or in low lands. Food, water and medical emergency teams should be kept ready whenever there is a forecast of cyclone.

How can the people prepare for disasters?

1. Cyclones and floods are a seasonal phenomenon. During the cyclone listen to radio or TV weather reports and in case of a cyclone/flood warning, ensure that everyone is alerted. This is usually done through loudspeakers or by going from door to door.
2. Keep an emergency kit ready at home. These kits should contain important papers, and some food materials, currency. Information about important telephone numbers that may have to be contacted during emergency should also be stored in the kit.
3. The nearest available place where refuge could be sought in case of a cyclone should be identified in advance.
4. Where necessary the walls of the house, roofing, doors and windows should be strengthened.
5. When you get a cyclone warning, store adequate drinking water and food grains in waterproof bags.
6. Do not venture outside, specially into the sea during and after the warning has been sounded.
7. Close doors and windows and stay indoors.
8. Move to a pucca building if you feel your house is too weak to withstand even an ordinary upsurge.
9. If the cyclone strikes while you are in a vehicle, stop but keep away from the sea shore, trees, electric poles, and other objects that may be uprooted during the gale.

10. If the cyclone wind suddenly drops, do not venture out, as this could be the eye of the cyclone. Wait till the all clear declaration is made officially.
11. Heed to such advice as may be coming through Radio broadcasts.
12. Even after 'all clear' has been sounded take necessary precautions while moving to or out of your house. There may be partially uprooted trees or poles.
13. Look out for snakes that may have come out of their holes.
14. Do not enter flood waters. They may be too deep.
15. As a student group you can play a very significant role in spreading awareness about the above precautions.

If you need to Evacuate:

1. Pack clothing, essential medication, valuables, personal papers, etc. in water-proof bags, to be taken to the safe shelter.
2. Raise furniture, clothing, appliances on to beds or tables (electrical items highest).
3. Turn off power.
4. Whether you leave or stay, put sandbags in the toilet bowl and cover all drain holes to prevent sewage back-flow.
5. Lock your house and take the recommended or known evacuation routes from your area to the safe-shelter.
6. Do not get into water of unknown depth and current.

During Floods:

1. Drink boiled water.
2. Keep your food covered, don't eat heavy meals.
3. Use raw tea, rice water, tender coconut water etc. during diarrhoea.
4. Do not let children remain on empty stomach.
5. Use bleaching powder and lime to disinfect the surroundings.
6. Avoid entering floodwaters. If you have to enter, wear proper protection for your feet and check depth and current with a stick. Stay away from water over knee-deep depth.
7. Do not eat food that has got wet in the flood waters.
8. Boil tap water before drinking in rural areas. Use halogen tablets to purify water before drinking (ask Village Health Worker for details).
9. Be careful of snakes. Snakebites are common during floods.

Key words :

1. Rivers and Tributaries 2. Condensation 3. Annual rainfall 4. Flood plain

Improve your learning

1. Explain how water changes into water vapour and also how clouds are formed from water vapour.
2. Where does evaporation and cloud formation take place on a large scale?
3. How do the clouds reach deep inland?
4. Where does it rain maximum? Choose the right option :
 - a) sea coasts that are in the direction of the winds
 - b) mountains that are in the direction of the winds
 - c) lands far away from the seas.
5. Fill in the blanks choosing the correct options (bank, tributaries, flood-plain, river valley):
 - a) A river flows through the
 - b) Streams or rivers joining a larger river are called the of the main river.
 - c) The entire valley of a river which is filled with water during the floods is called the of the river.
6. The Godavari flows from the west to the east. Why?
7. Describe the main stages of the water cycle.
8. Can you explain the causes of devastating floods? In what way is it natural occurrence and in what way is it man-made?
9. There may be streams and rivers flowing near your village or town. Find out about them and fill in the table below:

No.	Name	Source	Which river does it join?	Which sea does it meet?

10. Do the rivers in your area contain water throughout the year? Find out from your elders if they had more water in earlier times.

Tanks and Ground Water

PART - I

Tanks (*Cheruvulu*)

For thousands of years our ancestors have tried to use run-off rain-water by building tanks. We have evidence of tanks built and used for agriculture from the times of the Megaliths. You will be reading about the Kakatiya and Vijayanagara kings and nayakas who built a large number of tanks in Telangana and Rayalaseema. This enabled the extension of agriculture into these areas. To this day most of the villages in these regions have at least one or two major tanks.

How were the tanks built?

The tanks were usually built by building a strong wall of stones and mud across a small stream in such a way that with a wall on just one side a large lake could be formed. Look at the picture below:

The tanks were sometimes built by a king, sometimes by a military leader or nayaka or often by the people of the village themselves. Usually every village preserved the memory of those who were responsible for building the tank through stories or temples or festivals. In building the tank, everyone in the village contributed for expenses and labour. All people of the village together maintained the tank by repairing the tank bund (wall) or removing silt from the tank bed. They also took care so that no one dirtied or stopped the water which flowed into the tank. They also appointed a person to regulate the use of the water from the tank. This particular person is called '*Neerati*' or '*Neeru Katte manisi*'



Fig - 3.1(a) Tank and fields

How did the Tanks Help?

The tanks helped the people not only in giving them and their animals drinking water, but also irrigating their fields in such a way that even in drought years people could raise at least some crop. The tanks also helped to increase the water level in the wells nearby.

After the rains have stopped and the tank water decreased, the tank bed could be used for raising some crops.

Most important thing is that the tanks helped to prevent the run-off of rain-water and the erosion of top soils. Every year people would collect tank silt and apply to their fields to fertilise the soil.

We should remember that no one person owned the tanks and they belonged to all people of the village. Thus they benefitted not one or two people but all the villagers.

Decline of Tanks in Our Times

During the last twenty or thirty years the tanks have been neglected and have been allowed to break down. Repairs to the tanks, desilting etc. have not been done



Fig 3.1(b) Ramappa Cheruvu - Warangal

regularly. People also have gradually taken over the tank land for building houses or for agriculture. As a result in almost every part of the state we see the sad state of dry tanks lying uncared for. Instead of caring for the tanks we have been digging deeper and deeper tube wells at great expense. But they only benefit a few and in the long run deplete water resources. On the other hand tanks build resources for all.

Project

Find out in detail about the tank in your village or town and prepare a book on the tank.

- ◆ Prepare a sketch map of the tank and its nearby areas.
- ◆ Find out from where the water comes into the tank and where the excess water goes to.
- ◆ Find out the name of the river or stream across which it has been built or the names of the hills near which it has been built.
- ◆ Find out what the tank bund is made of and who maintains it.
- ◆ Find out who built the tank and when it was built.
- ◆ If there are any stories about the tank write them down.
- ◆ Prepare illustration of the tank and various things around it or get photographs of the tank.
- ◆ Find out what crops are grown, who controls the water, and how it is regulated and note down.

PART - II

Groundwater

Rainwater not only flows down the streams or rivers but also slowly goes down into the soil. This water accumulates below the ground in the gaps between rocks, pebbles, sand etc. This is the groundwater, which we reach through wells and tubewells.

Rocks which have cracks or pores (minute holes) in them and can contain water are called pervious rocks. In Andhra Pradesh we have few districts like Khammam where such rocks like sandstones are found. Some rocks like granite, Kadapa limestone, are very compact and do not have pores in them. Water cannot enter into them. Groundwater usually accumulates above such rocks. Since the water cannot go beneath them, these are called impervious rocks. Most of

the rocks underlying the soil in our state are of this kind. A small portion of the state which is next to rivers has deep layers of sand, soil and pebbles. Water also accumulates in these layers.

The layer of water which accumulates under the ground among rocks is called aquifer. The thickness of the aquifer determines the availability of groundwater in the area.

Visit the wells in your area and try to find out how many feet below the ground is the water level. Find out if there is any rock underneath and if so what kind of rock it is. Also find out who owns the well and when it was dug and also how much it costed. Add up all the information about the wells and prepare a small booklet.

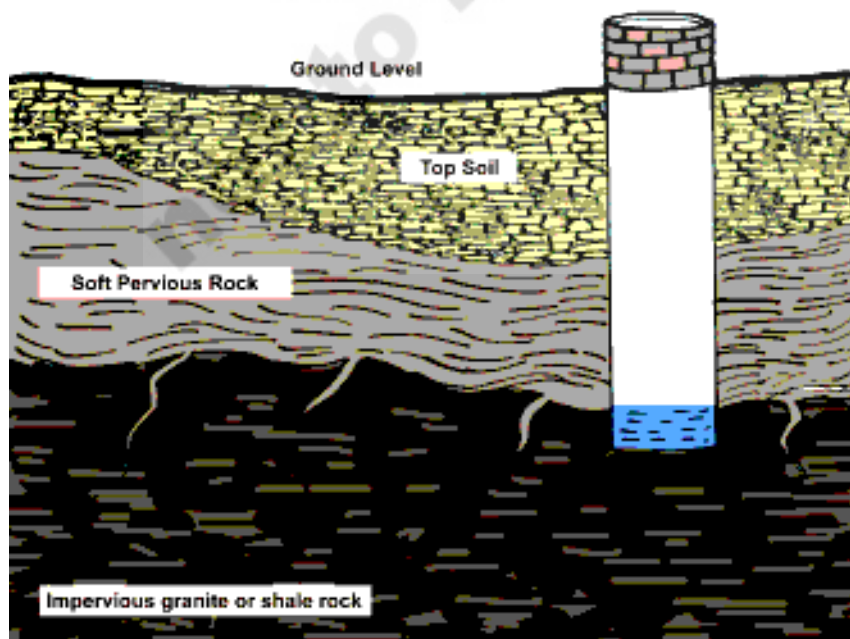


Fig 3.2. Rocks and Water below the ground level

- ◆ Do you think groundwater would accumulate if there were no impervious rocks?
- ◆ What would happen if the pervious rock is below the impervious rock? Where will the groundwater accumulate?

Water Table or Groundwater Level

Look at the wells in figure 3.3 below carefully, the water level is the same in all these wells. This is the water level in the wells after the rains. You can see that in all these wells, water is available at the depth of 5 meters, this means that if you were to dig a new well in the same region you would strike water at the same depth. This is the level of groundwater which is also called the water table.

Water level is never stable. It goes deeper in summer months and comes up after the monsoons.

Look at figure 3.3 and answer the following questions:

- The groundwater level is meters below the ground level.
- In summer if water level goes down to 10 meters below the ground level which of the four wells will go dry?
- Which well will have maximum water available?

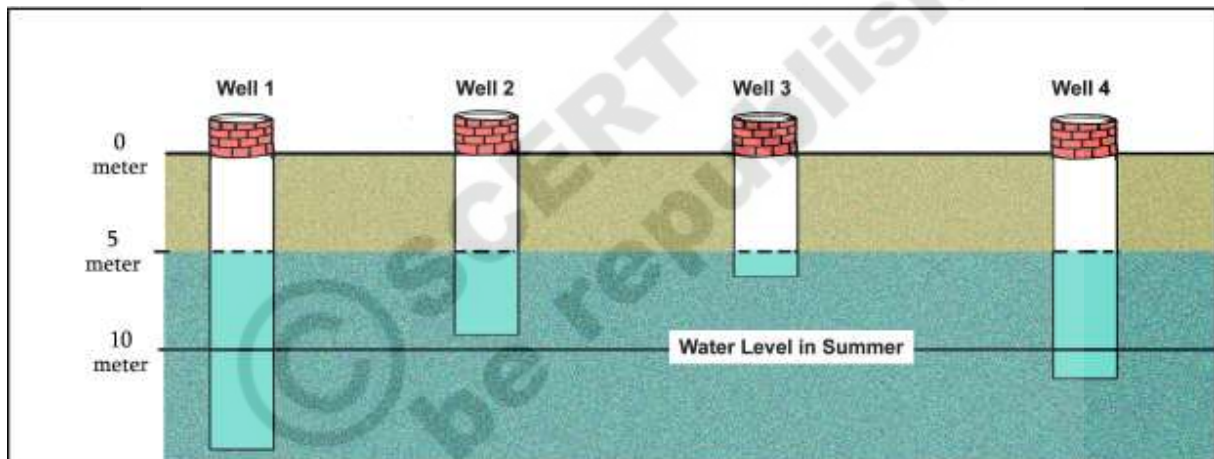


Fig 3.3. Ground water level

Rocks and Groundwater in Andhra Pradesh

Most of the rocks under the soil in Andhra Pradesh consist of granites which are hard and impervious. However, the top portion of these rocks (about 20 meters) are broken (weathered) and they carry water. Many of these rocks also have deep cracks going down to 50 or 100 meters depth. These cracks too contain water. Normally with ordinary wells that we dig we tap the water present in the top weathered layer. Tubewells which are dug

with the help of drill machines reach the deep cracks and draw water from them.

Look at the figure 3.4 and answer the following questions:

- Can you find how water entered the level below the impervious rock and reached the crack in the rock below?
- During summer which well will go dry first? Give your reasons.
- Will there be water in the well even if there is no crack in the rock?

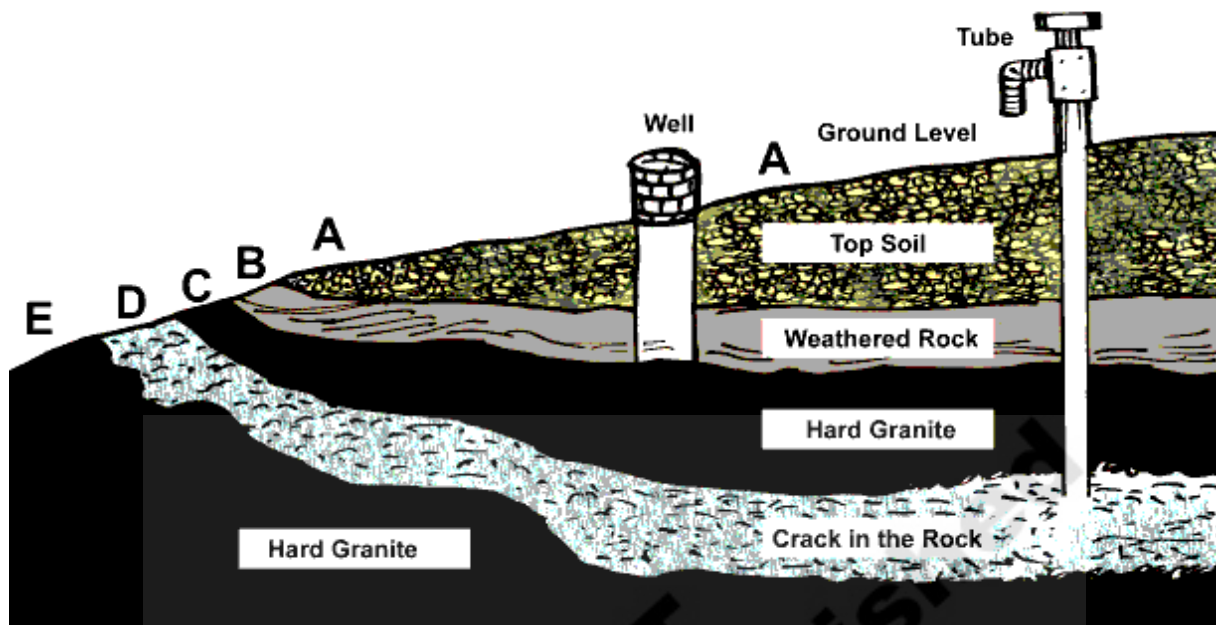


Fig 3.4. Rocks and Water below the ground level

In many mandals the predominant rocks are not granites but rocks of the Kadapa type of limestones, which too are hard but are greatly broken and have a lot of gaps between them allowing water to accumulate in them. In these rocks water is usually available between three to fifteen meters below the ground level. Wells are therefore dug upto 16 meters deep.

The area adjacent to the great rivers like the Krishna and the Godavari have deep layers of sand and silt. The water level here depends upon the water in the river. Usually there is plenty of water. It is nearly five to seven meters below the ground in these areas and it is very easy to dig wells in them.

- ♦ Can you recall the wells and tubewells in Penamakuru and Salakamcheruvu villages you studied in class VI?

Recharging Groundwater

Water flows swiftly on naked ground, which has no cover of trees or grasses as there is nothing to stop the flow. However, if the flow of the rain water is checked by vegetation or bunds, then there is a greater possibility of the water percolating into the soil to join the groundwater. Grasses are planted on the hill slopes from where a stream starts and small check dams are also built across streams to store water for a longer time. All this helps to increase or recharge groundwater.

However, it is seen in most parts of our state that we are extracting more water than the recharging rate. This means that we are over using the groundwater. The amount of water that percolates into the soil has also declined due to the cutting down of forests. This has been causing the rapid fall in the water table or water level by half to two meters every year.

If we draw more than the water that percolates down, the groundwater will decrease over time. Finally, there may be little groundwater left for us. This has been happening during the last few years.

- ◆ Can you think of ways in which ground water can be used less without wastage?

In our part of the country it rains only for about three to four months. For the rest of the year we are dependent upon groundwater. Rivers, wells and ponds all get their water from these groundwater sources.

Water quickly flows into streams and into rivers. However if the flow of the rainwater were to be checked by vegetation or *bunds*, then there would be a greater possibility of the water percolating into the soil to join the groundwater.

This is why vegetation like trees and grasses and *bunds* are used to enhance groundwater. Over the last few years great efforts have been undertaken to ‘harvest’ rainwater by these means. These measures are usually taken for a stream or river. Such efforts are called ‘watershed development projects’. Under these projects trees and grasses are planted on the hill slopes from where a stream starts and small *bunds* are built across streams to stop the flow of water. Small check dams are also built across streams to store water for a longer time. All this helps to increase or ‘recharge’ groundwater.

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- ◆ Are there any watershed development projects in your area? Try to visit the site and study how this is done. Try to draw a sketch-map of the project area.

Quality of Groundwater

Groundwater is usually mixed with many minerals. Sometimes the water is salty and sometimes it is sweet.

- ◆ Collect the water from various places like dug well or bore well, lake or pond. Can you explain why the taste of the water taken from some dug wells is sweet, while that of others is salty or brackish?

This difference is because of the minerals which are dissolved in the groundwater. These minerals come from the rocks and soils underneath. Hence depending upon the minerals which mix with the water, the taste and nature of water changes. In many mandals of our state, there is excess quantity of certain minerals like sodium, Fluoride, Chloride, Iron, Nitrate, etc. Drinking such water is not good for our health and can cause diseases which affect our bones, teeth etc (Fig 3.5). In such situations the drinking water should be properly treated to remove the excess minerals.

Many times water is polluted due to the excessive use of fertilisers and pesticides or poor drainage. Unless we take preventive steps, soon most of the well or river water will become unsafe for drinking or even bathing.



Fig 3.5 Person affected by excessive fluoride in drinking water

Use of Groundwater

Groundwater like the rivers, is the common resource of all people and not just of those who have land over aquifers. However, at present it is being used only by those who have such lands.

Those who own land over aquifers tend to over-use the water which decreases water table for all neighbouring people. Some of them dig deeper tubewells which cause further decline in water level. As a

result the wells in the neighbourhood are going dry. Unless we use the ground water as a common resource and in a restrained manner, can we ensure that everyone is able to benefit from them? In fact after a few years even those who dig deeper tube wells will not have any water left to pump.

- ♦ Can you think of a way in which the groundwater in your village can be used equitably so that all families – including those who do not have any land get water? Draw up such plans and discuss in the class.

Today's generation has received water from the past as a sacred asset. We should give it to the future generation just as we received it. We should also develop ways of using and conserving water in a restrained manner. Otherwise future generations will fight destructive wars over water and we will be responsible for it.

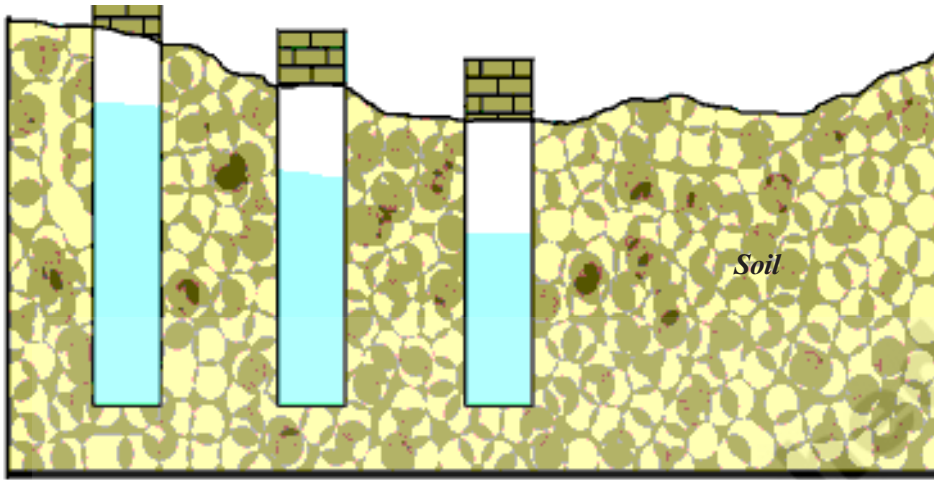
Key words :

1. Pervious rocks
2. Impervious rocks
3. Vegetation
4. Aquifers
5. Megalithicage

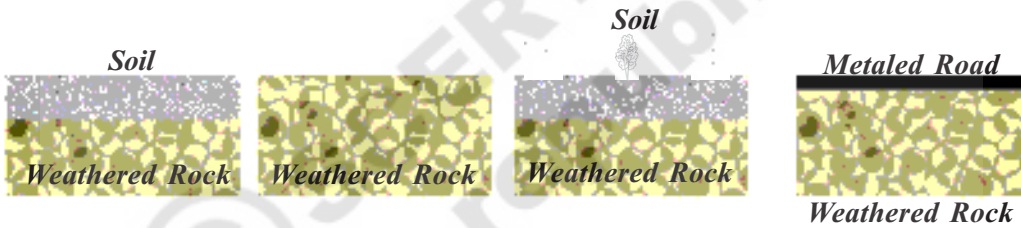
Improve your learning

1. Correct the incorrect sentences:
 - a. Water flows from the plains to the plateau.
 - b. There is a thick deposit of sand and gravel in the plains.
 - c. Groundwater will never dry.
 - d. It is easy to dig wells in Rajahmundry.

2. The wells shown in this figure are situated on the plains of the Godavari. But there seems to be a mistake in the figure. Can you correct it?



3. In which of these places do you expect maximum percolation to take place?



4. When the owners of some wells in Pallerla started using high-powered motors to draw water from the wells, the owners of other wells noticed that their wells were drying up. Discuss the possible solution to the problem.
5. In areas where there is shortage of groundwater, should there be any restrictions on digging tubewells? Why?
6. Think about the ways to restore the groundwater in your area.
7. Observe the picture 3.1(a) and compare with your locality.

Oceans and Fishing

PART - I

The earth is known as a watery planet as it is the only planet containing water in abundance. It is estimated that about 71% of the earth's surface is occupied by seas and oceans. What is your image of a sea or an ocean? What have you seen or heard about seas and oceans? An extension of saline water on earth is called sea. Large sea areas are called oceans. Oceans are huge bodies of water generally separated by continents.

- ◆ Is the water found in your village/town saline or potable? Is it different in different parts of the village/town?
- ◆ What are the names you use for different water bodies? Do large or small waterbodies have different names?
- ◆ In a map of the world or on the globe, find the names of five seas and five oceans. Run your hand over the areas they cover.

It will be interesting to learn what lies under the water. The surface of water does not tell us about what lies under it. You may have had the opportunity to notice or feel what the bed of a river or stream or pond is like.

- ◆ Please share what you have seen or felt about what lies under the surface of waterbodies.
- ◆ How many meters deep are the water bodies you have seen?

Ocean Relief

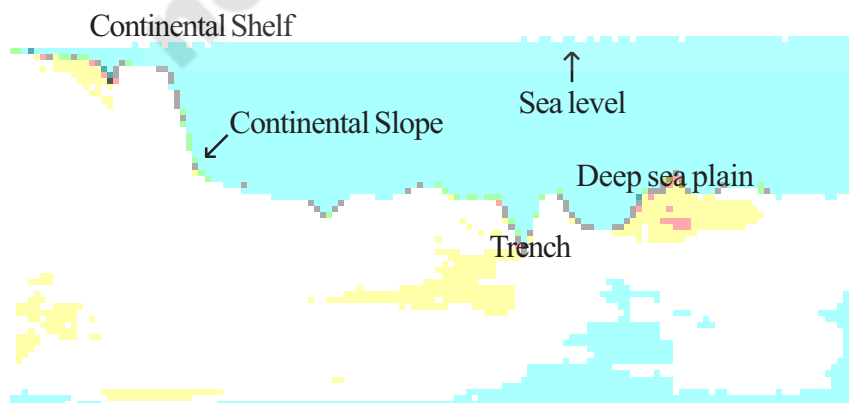


Fig 4.1 Relief features of an Ocean

The floor of the ocean is just like the surface of the earth. The bottom of the sea is not a flat surface. It consists of hills, mountains, plateaus, plains, trenches etc. Many trenches on the ocean floor are so deep that even if the Mount Everest is placed in them, it will drown completely. A

major part of ocean floor is about 3-6 kms below the sea level.

Figure 4.1 is a sketch of the kind of land forms that can be found under the surface of an ocean. And in fig 4.2 are the relief features of what lies below the surface of the oceans around our country.

In the figure 4.2 do notice the land mass of India and then go over to the floor of the Bay of Bengal, the Arabian Sea and the Indian Ocean. Try to point out what may look like hills, plains and trenches on the ocean floor.

The water of the oceans are never still. There are different kinds of movements in them.

- ◆ Have you experienced the different movements of water in a river? You may be aware of waves, currents and the coming and receding of floods. Discuss these experiences in the class.

Ocean waters have three kinds of movements. They are:

1) Waves: When the water on the surface of the ocean rises and falls, they are called waves. They are formed when gentle winds scrape across the ocean surface. The faster the wind, the bigger will be the waves.

2) Currents: In the oceans, water is found to move from one part to another in

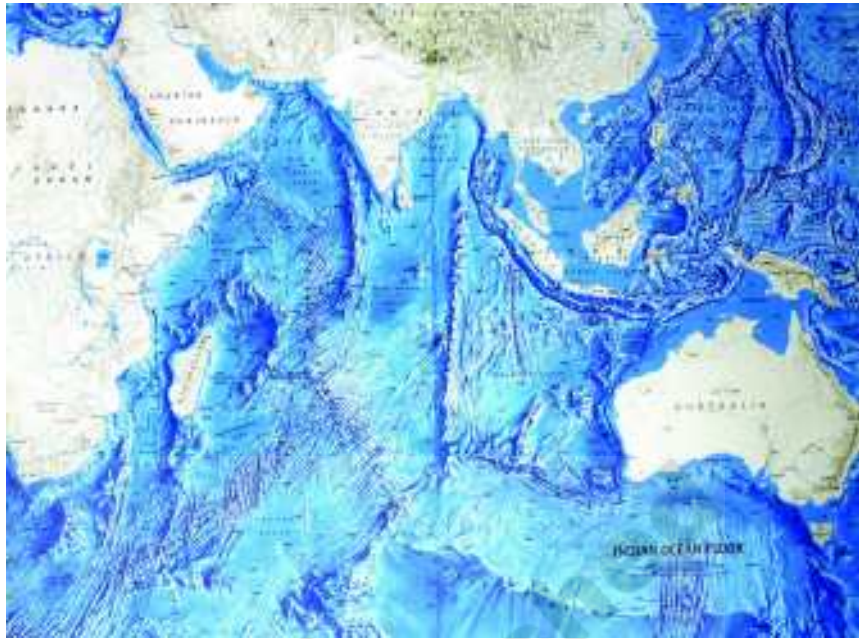


Fig 4.2 Relief features of Indian Ocean

big streams. These streams which flow constantly in a definite direction on the surface of the ocean are called ocean currents. The ocean currents are of two types - the warm currents and the cold currents. The warm currents flow from the equatorial region towards the poles. The cold currents flow from the poles to towards the equatorial regions. These are mainly caused by the prevailing winds, differences in temperature and salinity of the ocean water.

3) Tides: Tides are the rhythmic rise and fall in the level of the water in the oceans every day. All places on the coast experience some hours of low tide and some hours of high tide. Tides do not rise to the same height everyday. When the tide is high, water comes up to the coast for some distance. Then as low tide begins, the water moves back from the land. The tides are of great help to fishing. Tides at some places take away the mud brought down by rivers and prevent silting.

PART - II



Fishing Village on the Coastal Plains

Ocean water is always saline. It contains several mineral salts dissolved in it. The oceans are the main source for rainfall. Oceans are the store houses of fish and other sea foods. They are the main source of salts. Oceans provide natural highways for international trade. Let us visit Bhavanapadu, a fishing village near the coast of Andhra Pradesh and study the life of people living near the ocean.

- ◆ Observe the coastline in the map of Andhra Pradesh and find the districts that lie on the coast line.
- ◆ Find the district in which Bhavanapadu village is located.
- ◆ Look at the image of Bhavanapadu village (Fig 4.4) and find the following:

- Identify the water bodies in the image.
- Identify the land that is used for activities other than agriculture in this village. If so, for what purpose?

Fishing:

It is four in the morning. Appalakonda's wife Dhanamma, wakes him up and gives him some rice gruel to eat by 5.00 am after which Appalakonda is ready to go out to the sea. His friends wait for him on the beach. All of them are poor fishermen. They don't own any boats or nets. They work on Tata Rao's mechanical boat. They are altogether 20 members on a boat. Tata Rao too joins them and works along with them. The boat has already been made ready the day before, with all the necessary things properly loaded.

Fig 4.3 Bhavanapadu village settlement





Fig 4.4 View from above Bhavanapadu village settlement

Before launching into the sea they check the engine, the rope puller, the additional stock of diesel and also put their food packages down. They pray to the goddess in whom they have a strong faith.

Tata Rao owns this boat which he purchased from Markonda in Odisha. It cost him around Rupees 6 lakhs. He borrowed the money from private lenders at a high rate of interest. He couldn't get a bank loan as he had no fixed assets. Even for daily fishing expenses he has to get advances from middle men. He has to invest a minimum of Rupees. 5,000/- per trip for diesel, wages and other things. Because he has borrowed money from the middle man, Tata Rao has no option but to sell the day's catch of fish to the middle man at the rate he chooses to fix. By this time the boat is ready for sail and all the twenty members

are on the boat. They go up to 15-20 kilometers in the sea.

Dhanamma, wife of Appalakonda attends to domestic work after he leaves for work and finishes by 9 am. Then, she goes to work in the salt pans. Sometimes she also attends to agricultural work. As they don't possess any agricultural land or salt pans their family depends on the daily wages they get. While labouring in the salt pans Dhanamma eagerly waits for her husband's phone call. She remains anxious about her husband's safety and also about the catch. If there is a good catch they will get more money for the household.

The fishermen return any time between 1 pm and 8 pm or sometimes even late in the night. On the day we were there, they came back at 3 pm with a good catch of a variety of fish known as "*para*".



Fig 4.5

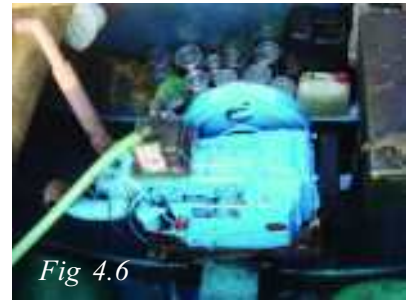


Fig 4.6

Fig 4.5 Anchored Boat with neatly packed net heap,
Fig 4.6 Engine of the boat, lunch carriers, diesel cans and picture of the goddess

Some middle men temporarily store the fish, segregate them and carry them in cold container tanks to faraway places like Kolkata, Bangalore, Chennai, Hyderabad, Kerala and the like. These people get four times more money than the catcher. Observe the following pictures of the Potaiah *adda* (4.9), the local middle man.

- ◆ What enables the middle men in the fish business to earn much more money than the fishermen?
- ◆ For what purpose are the thermocol boxes shown in the photo lined up in the middleman's *adda*?

Besides the big fishing business discussed till now, small business in fishing also takes place in the village. *Karrateppa* is a country made boat which goes up to 5 Km into the sea and brings small catches of fish. It can be carried by the wives of the fishermen known as *Berakatthelu*. They sell this fish in nearby towns like Naupada, Tekkali, Pundi and Palasa.

Compared to the *Karrateppa*, there is far more risk of life in *Marapadava* (mechanised boat) because it goes far into sea and it is difficult to swim over to shore in times of trouble. What is worse, there is no first aid in the big boats, nor any life jacket. Fishing is a risky and brave occupation.



Fig 4.7



Fig 4.8

Fig 4.7 Unloaded fish being carried to Auction hall.

Fig 4.8 Fish spread in the Auction hall, Middlemen are already there.



Fig 4.9 Middle man's adda storage tanks.



Fig 4.10 Loading at the middle man's adda to sell at the big cities.

Nets

After reaching home in the afternoon Appalakonda took his lunch, came to the cyclone shelter with the broken nets, and started repairing them. It is an activity seen at every common place of Bhavanapadu.

The fishermen have a special tool kit for repairing the nets which consists of *Nulukarralu* (net repairing fork) (Fig 4.12), *Nulukanda* (Thread) and a flattened stick that determines the net ring size.

Nets are of different types based on different sizes of the *Kannulu* (Rings) and the layers of the net. Recently a net known as Ring Net which helps in getting a better catch is being increasingly used by the fishermen. This has helped to reduce migration from the village. Earlier there were nets made up of cotton thread. Now cotton nets have almost been replaced by plastic, nylon and other synthetic materials. A net lasts for 4-5 years. Nets are purchased by weight and the type of rings they contain. Nets cost around



Fig 4.11 'Berakatthelu', waiting for their turn to load fish in their Thattalu to sell at nearby towns.

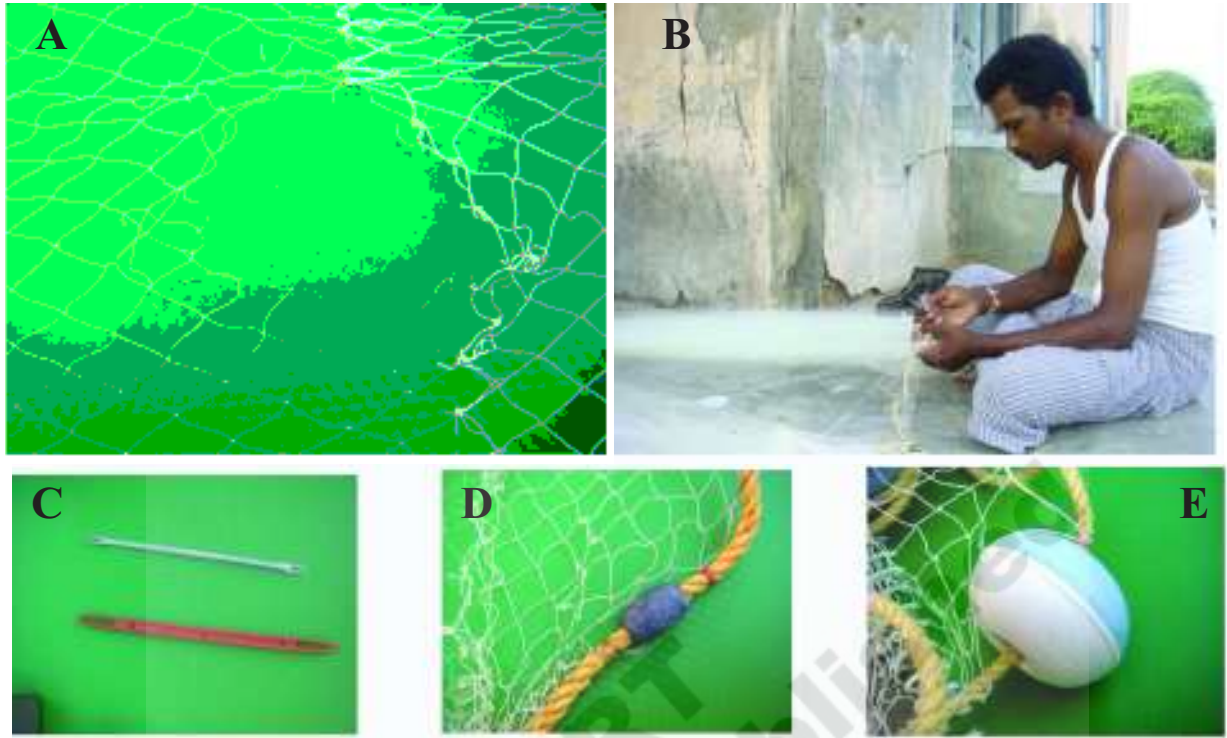


Fig 4.12 (A) Repairing nets, (B) Fisherman stitches (C) Nulukarralu.
(D) Floating beads-Lead, (E) Floating beads-Plastic.

Rupees 250-300 per Kg. Ring nets weigh around 500 kgs. The fishermen of this area usually buy nets from Barhampur (Odisha).

Agriculture and Animal Husbandry

Fishing is not the only occupation of the people in Bhavanapadu village. They cultivate the land to grow crops and also rear animals and birds.

The village soil is mainly loamy and rice is the principal crop grown on it. Only a few acres of land are irrigated. Bhavanapadu lies at the tail end of Vamshadhara canal. Water comes to Bhavanapadu only after the fulfilment of the needs of the nearby village, Marripadu. Hence most of the agriculture in Bhavanapadu depends on the rain.

There are no landlords in the village. A large number of cultivators of Bhavanapadu are small farmers. They don't grow any commercial crops. However, some of them rear cows and buffaloes. There are two poultries in this village running on profit. Rice production is not sufficient for their needs so they get rice from the ration shops through their 'white cards' and sometimes buy rice from the market.

Salinity and Drinking Water

The water in the village is saline. If one digs upto 8 or 10 feet near the beach one can get potable water. But in summer these wells dry up. And it takes long time for the water to fill up again. If you wait for an hour you may get another pot of water. So women have to wait long to fetch water or they walk upto 2 km to collect fresh water.



Fig 4.13

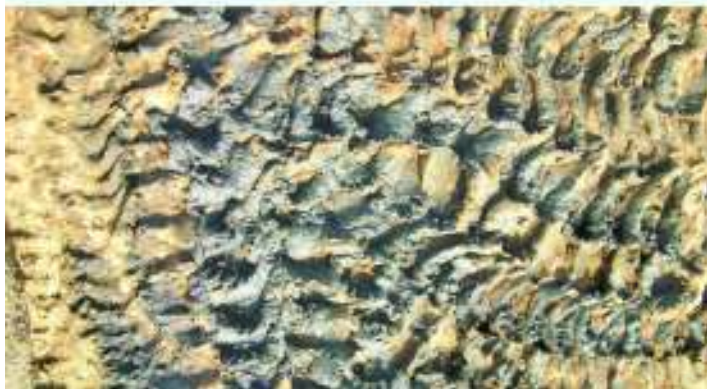


Fig 4.14

Fig 4.13, 4.14 Salt pan leveling work known as 'Adugetha', which makes the pan impervious



Fig 4.15 An old woman fetching water from a faraway place

The government has sanctioned a protective water project that pumps water from the nearest village known as Suryamanipuram. It gave relief for some time. But cleaning of over head water tank and frequent repair of pumping motor is a hurdle. For some time a youth organisation helped in keeping the water project active. But this has stopped functioning now.

Social Life

A large number of people of Bhavanapadu primarily worship Gangamma, Gowri, and Shiva. They perform puja to their boats and nets. The most important festival is Gowri Purnima. They spend common good fund of the village on these festivals. Observe the Fig. 4. 16. Most of the men like Appalakonda wear tattoos like this.



Fig 4.16 Why do you think people wear tattoos? What is the symbol on Appalakonda's hand? What does it signify?

There is an open stage, where the dramas, *burrakathas*, *harikathas* and record dances are performed. All these activities are lead by the caste head-men called *Pillas*. They determine customs and traditions of the people. They even resolve disputes and impose fines. The money collected goes to common good fund.

Key words :

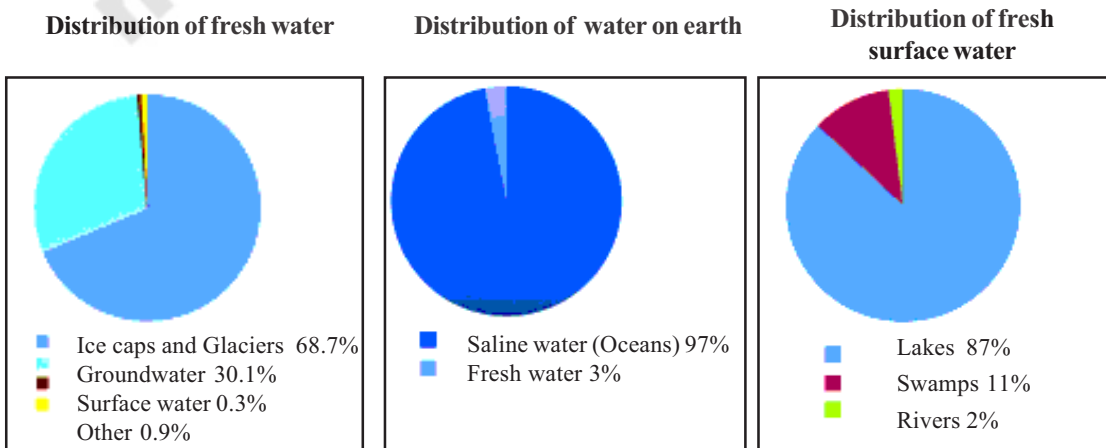
1. Tool kit 2. *Kannulu* 3. *Burra Katha* 4. Mechanical Boat

Improve your learning

1. Does Bhavanapadu look like the place you live in? What differences and similarities can you think of? Compare them on the following aspects?
 - a. Sources of livelihood
 - b. Types of employment
 - c. Water sources
 - d. Agriculture practices
2. How many types of ocean movements are there? Which of them is useful to the fishermen?
3. What is the difference between fishing with mechanical boats and that of *Karrateppa*?
4. Write the process of making mechanical boat ready for fishing.
5. What does the tool kit of fishermen contain?
6. What are the similarities that you find between the surface of the earth and the bottom of the sea?
7. Collect the information about the aquifers of your village / town and fill in the table. Analyse the benefits.

S.No.	Name of the aquifer	Uses	Limitations

8. Make an album by collecting pictures that reflect the life of fishermen.
9. Locate the coastal districts of Andhra Pradesh and write down.
10. What solutions do you show to the fishermen for not depending on the middlemen money?
11. Across the last 4 chapters we studied many different aspects of water. Here is more information about the availability of water on our earth. Look at them carefully and explain the water in our lives and on earth.



Europe

Industrial Revolution took place first in Europe. As factory based production became predominant in the countries of Western Europe, they also tried to establish control over other countries and continents. In this lesson we will try to find out about how the people of Europe have been using their distinct natural environment and resources.

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. There is an ocean to the north of Europe. Identify its name on the map. This ocean is frozen for most of the year.

- ◆ 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.

- ◆ Name the mountains to the east of Europe.



Map 1: Location of Europe

Europe

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Map 1: Location 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.

- ◆ Now you are familiar with the location of Europe. You can 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 have the same colour.



Fig 5.1 Budapest, capital of Hungary by the river Danube in Eastern Europe

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.

There are no 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, Bylorussia, 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 Dniپر 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

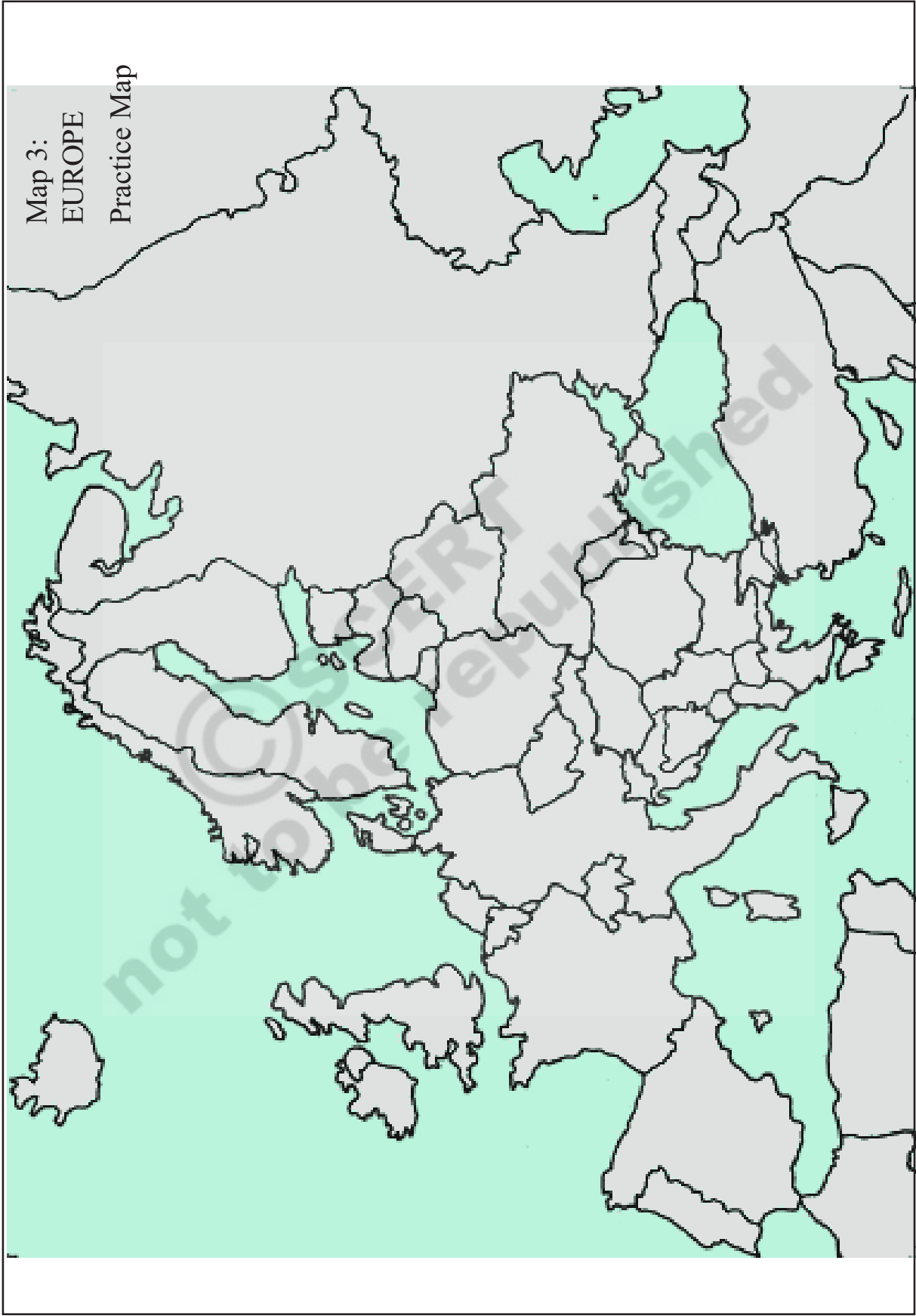
Mountains, Plains and Rivers

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.

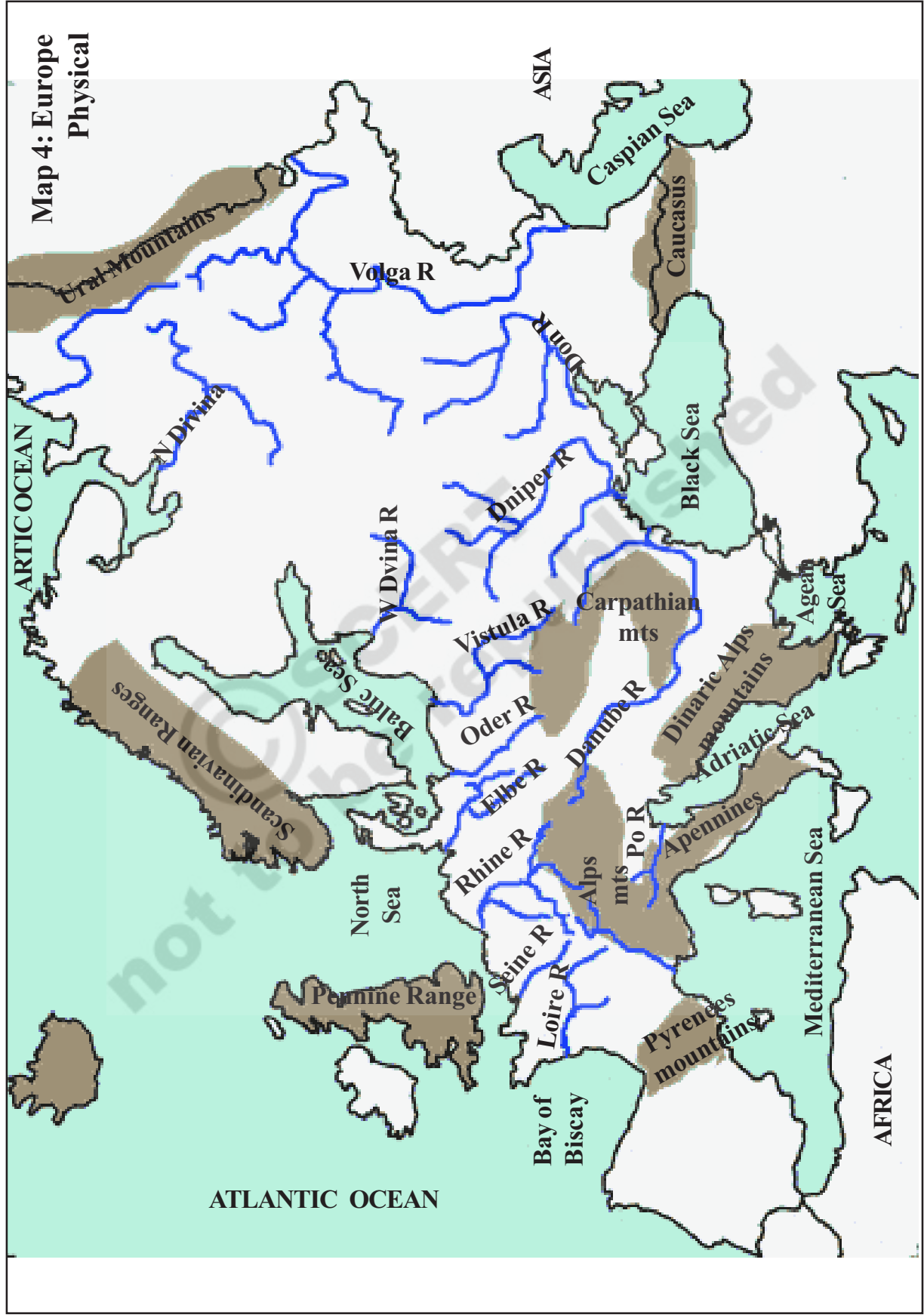
- ◆ The Alps stretch across several countries. Find out the names of these countries by comparing Maps 2 and 4.
- ◆ Write the names of two rivers starting from the Alps.
- ◆ Name the countries across whose borders the Pyrenees stretch.
- ◆ Name the mountains stretching the Eastern Europe.
- ◆ Identify the other mountains in Europe and prepare a table.

Map 2: Europe Political





Map 4: Europe
Physical



countries and empties itself into the North Sea. There are several major industrial and mining cities on the open sea and thus linked 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.

- ◆ Study 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..... 5.....
- ◆ Names of oceans or seas into which the following rivers empty themselves:

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

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 connected to the mainland on the fourth side are called 'peninsulas'. 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 5.2 Peninsula and Bay

- ◆ Which of these is a peninsula: Greece or France?
- ◆ Are Spain and Portugal peninsulas, 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 less expensive. 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 4 the names of the countries on the three sides of the Baltic Sea.

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.

Free Distribution by Govt. of A.P.

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

Distance from the Equator

The regions near the Equator 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 is north Europe from the Equator.
- ◆ Is Europe even farther north than India?
- ◆ 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 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

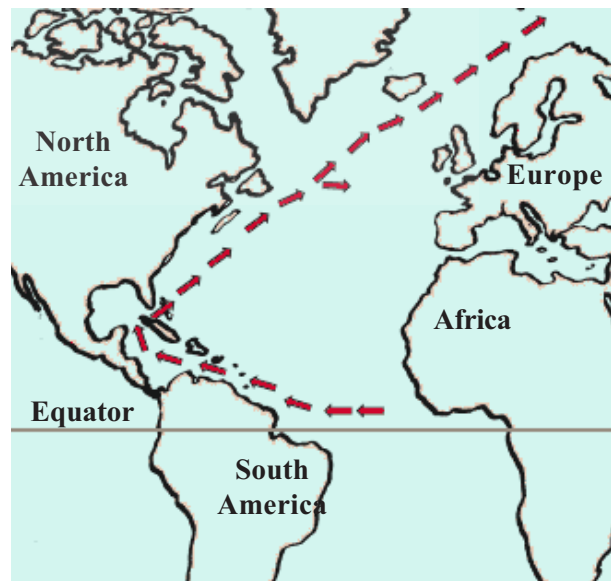
The waters in the oceans are not static. They keep flowing from one place to another along the continents. These are the ocean currents, which flow for thousands of kilometers in the ocean just as rivers flow on land.

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 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 '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.



Map 5: The Westerlies



Map 6: Gulf Stream

- ◆ 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 as '*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 Andhra Pradesh 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

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 suitable 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.

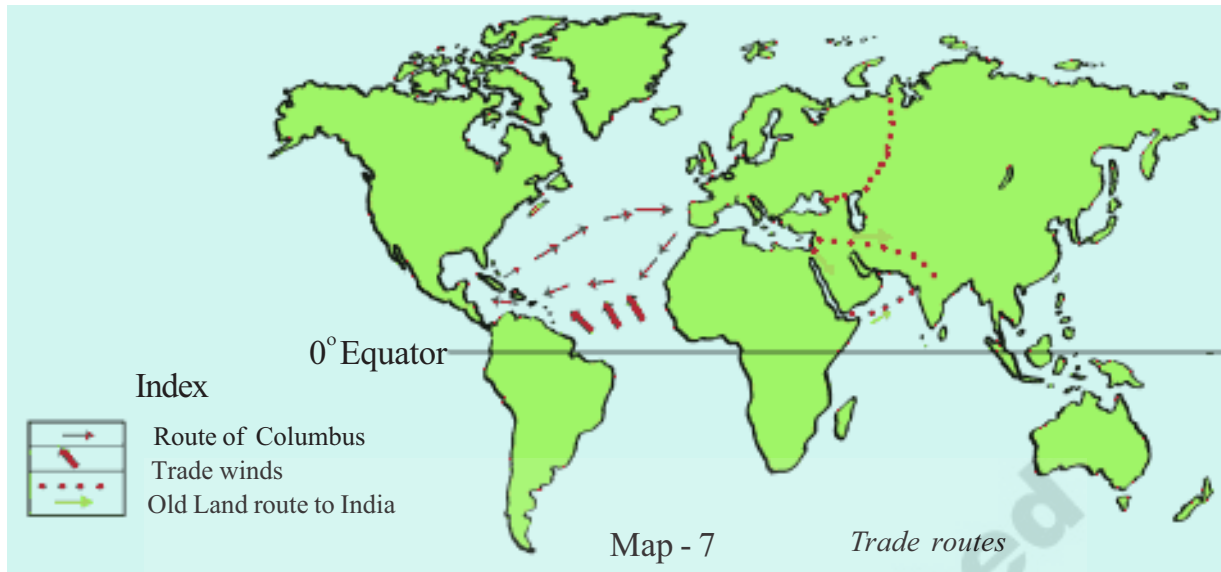
There is an acute shortage of land in Holland. The people of Holland (the Dutch) have reclaimed small portions of land from the sea by building embankments called dykes to push back the sea. The land that is reclaimed is called 'polder'.

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?



Fig 5.3 Hay bales after the harvest which will be stored as fodder for winter.



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, 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; 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 1492 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 the country which we now call the West Indies. These are a group of islands near America. In fact Europeans did not know of America before Columbus. In a way he 'stumbled' onto America. Soon Europeans realized 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' (Map 7).

The Westerlies blow from the south-west to 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.

Industrial Revolution in Europe

The industrial revolution as you know started in England around 1750 and soon factory production spread to France, Holland, Germany, Spain, Russia, etc. Countries like England and Germany which had large reserves of coal and other minerals took lead in developing new industries. However, as times changed, European countries began to use less and less of their own mineral resources and relied on imports from other countries. The old mining towns and old factories were closed down and new factories grew in new areas. Industrialisation also enabled the European countries to import agricultural

goods from other countries. Thus they relied less on the agriculture of their countries for their food and raw material requirements. Hence Europe became dependent upon trade with other countries. Initially this trade was with their colonies in Asia, Africa and America. However as the colonies became independent, they had to develop new ways of trading with them.

Key words :

1. Peninsula
2. Island
3. Bay
4. Currents
5. Gulf
6. Climate

Improve your learning

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. Why are harbours built in deep gulfs or bays?
4. Why are the winters less severe in Western Europe than in Eastern Europe?
5. Name four countries on the coast of the Black Sea.
6. How do the Westerlies benefit the people of Western Europe?
7. What are the characteristics of the Mediterranean climate? Name the countries which have a Mediterranean climate.
8. What are the factors that limit European agriculture?
9. Name the important crops of southern Europe.

France - A European Country

France is a large country in Western Europe. Its capital, Paris, is known the world over for its beauty. The broad roads with flowerbeds on both sides, rows of trees, fountains, colourful lights and beautiful statues at the road junctions are worth seeing. Paris is spread on either bank of the Seine River. You can see the whole of Paris from the Eiffel Tower, built of steel in 1889. It was erected to celebrate hundredth anniversary of the great French Revolution which ushered in the modern era of democracy. The people of France overthrew the monarchy and sought to establish the principles of Liberty, Equality and Brotherhood of all people.

The French are also famous for their trendsetting fashion designing and very delicious food preparations. This is because France is a land of great diversities as it extends from the Alps to the Atlantic and from the cold north to the warm Mediterranean.

- ◆ Can you look at the map of Europe and find out the location of France?
- ◆ Name the Oceans and Seas surrounding France. In what way do you think France would benefit from them?
- ◆ France also shares boundaries with several countries. Name these countries with the help of the map of Europe.

S.No.	Direction	Frontier Country

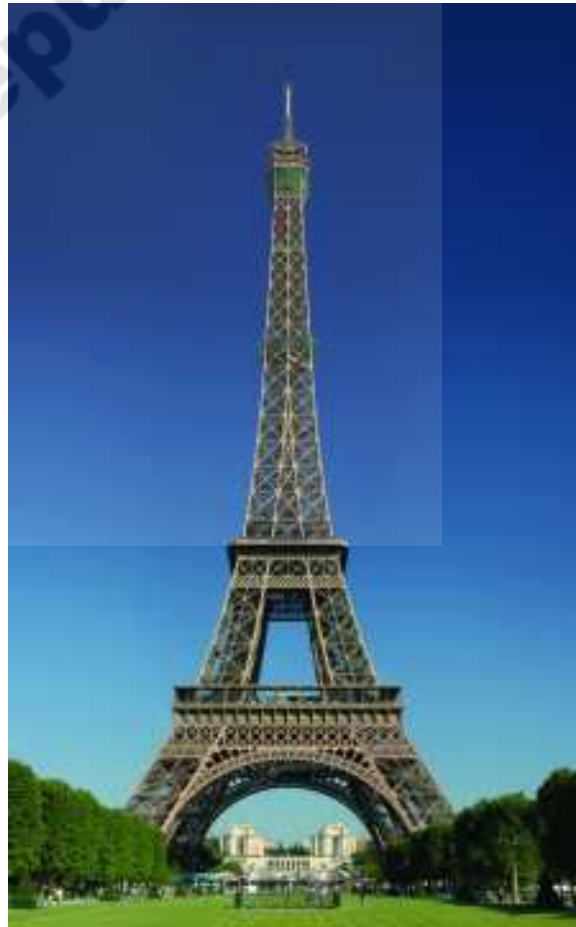


Fig 6.1 Eiffel Tower

Mountains, Plains and Plateaus

- ◆ Look at the natural features of France in Map-1. You will notice that the northern and the western parts have broad plains. Name the rivers flowing through these plains.
- ◆ Look for mountains on the eastern and southern side of France, and write down their names.
- ◆ There is a large plateau situated in central France called the Massif Central.
- ◆ Which of these regions do you expect to be mainly animal rearing regions? Why do you think such regions may not be suited to agriculture?

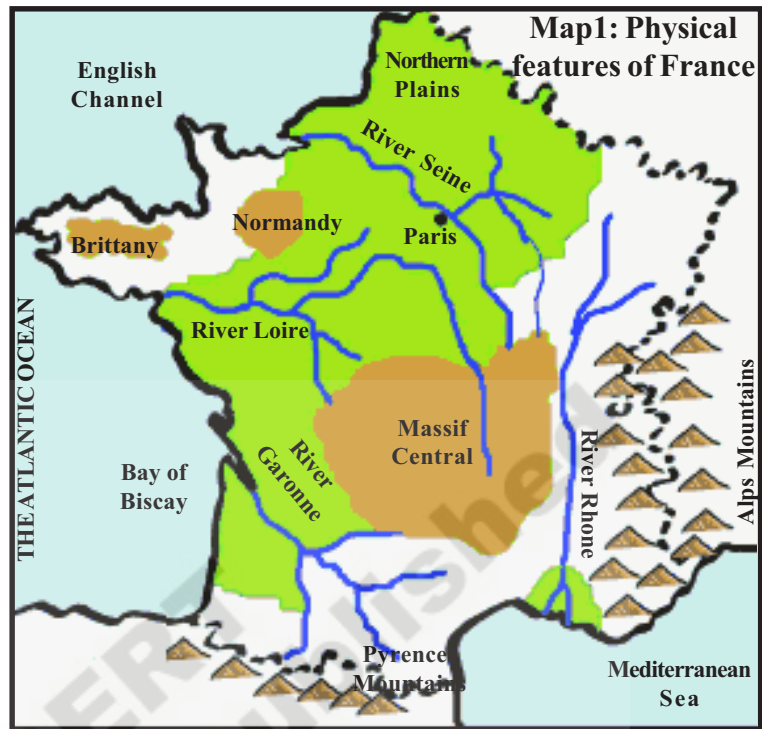


Fig 6.2 Port of Marseille, a harbour. Ships have anchored in the harbour. There are many such ports along the coast of France. What would the ships be used for?



Fig 6.3 An ariel view of the city of Paris. What can you tell about the way the city is organised?

Climate

Europe is not as warm as our country and it has long and severe winters. However, France, being on the west of the continent, does not experience as severe winters as countries like Poland and Russia in Eastern Europe. This is because it receives warm winds from the Atlantic sea. It gets cooler and cooler as we move from the coastal area to the interior of the continent.

Due to the moist Westerly Winds, which blow throughout the year, France gets showers all round the year. There is bright sunshine during a part of the day and before long the clouds gather and pour rain. Soon enough the sky clears up and there is sunshine again. Though it rains throughout the year it rains more in the winter. Occasionally it also snows in winters. Since the air is cool, the rainwater does not dry up quickly and moisture remains in the air.

- ◆ Mention two differences between the climate of France and the climate of our state.

The Four Seasons and Agriculture

In our country we have three seasons, winter, summer and the rains. However, most European countries including France have four main seasons. They are winter, spring, summer and autumn. The look of the land changes according to the season and the agricultural routine changes, too. The transformation of a place over these seasons can be seen in the pictures given in the next page.

Winter: As November approaches, it begins to get chilly. December onwards, it gets very cold and snow begins to fall once

in a while. It snows heavily on the mountains and less on the plains. The sun shines once in a while. The sun rises very late in the day, at about nine or ten O'clock and sets by four O'clock in the afternoon. The overcast sky makes it even darker. France has broad-leaved trees, which shed their leaves in winter and stand entirely leafless.

Due to excessive cold the domestic animals cannot be kept outdoors. They are kept in stalls and have to be fed there. That is why the farmers have to collect hay and other animal feed for use in winter. Crops do not grow and the fields lie fallow during winter.

- ◆ Farmers in our country too store fodder; do you know in which season this stored fodder is used?
- ◆ Do fields lie vacant in winter in our country too?
- ◆ What crops do we grow in winter in our country and why do they not grow in the same season in France?

Spring: The landscape begins to change as March comes. The days get longer and the nights shorter. The snow begins to melt and new shoots appear on trees. Fresh green leaves appear and colourful flowers bloom everywhere. Lush green grass begins to grow on the pastures.

The fields are ploughed in spring and sowing is also done during this season. Wheat, rye, barley, corn, sugar beet and oats are the principal crops.

- ◆ Which of these crops grow in our state and in which area?



Winter



Spring



Summer



Autumn

- ◆ Look carefully at the pictures above. They belong to different seasons. What differences can you identify?

Wheat is the most important crop of France. In those parts of France where it does not snow much, wheat is sown before the onset of winter as snow melts. They however grow very fast with the coming of spring. The productivity of such wheat crop is very high.

Another important crop is rye, a cereal with longish grains. It is used for making bread and is also fed to animals. It is also used for brewing beer. Though sugarcane does not grow in French climate, sugar beet does. Sugar beet is used for making sugar. Its waste material is fed to animals. All these crops are sown in spring and they mature in summer.

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Summer: It is summer in France from June to August. It does not rain so much and there is more sunshine. The days are longer - longer than even in our country. The sun rises as early as four O'clock in the morning and sets after eight O'clock in the evening. Nevertheless it does not get very hot. The French summers are only as warm as our winters.

Summer is the season of agriculture in France. Crops mature in this season. There is no need for irrigation as the occasional showers are sufficient for the crops. At the end of summer the crops are ready to be harvested. It is in summer that the grapes are harvested too. Grapes are one of the most important crops of eastern and southern France. Grapevines are grown in vineyards. New leaves and flowers come in early summer and the grapes ripen by the

end of summer. France grows a number of varieties of grapes. These are mostly used for making wine, juice is pressed out of the grapes and it is fermented to get wine. French wines are famous all over the world.

◆ In which regions of Andhra Pradesh are grapes grown?



Fig 6.4 Vine yards in Burgundy in Southern France

In our country we have two agricultural seasons: *Rabi* and *Kharif* (winter and monsoon). Thus it is possible to grow crops for nearly eight to ten months in a year. On the other hand, in France and other European countries, cultivation is possible only for six to seven months.

Autumn: The climate changes once again in September and October. Tree leaves turn red and yellow and begin to fall. Agricultural operations are wound up. Hay is cut and dried for feeding farm animals in winter. Grapes and other fruits are plucked and used for making wine, jams and juices of various kinds and preserved in other ways.

◆ The four main seasons of France are 1..... 2..... 3..... 4.....

◆is the main agricultural season in France.

◆are important crops of southern France.

Fruits

Besides grapes, France also grows strawberries, cherries, apricots, plums, peaches and apples. These fruits are grown

in plenty in orchards. They present a beautiful sight with their riot of colourful flowers in spring. They are harvested in late summer.

These fruits are also grown in orchards in our country near Nainital and Shimla on the Himalayas, which have cold climates. In warmer climates, as in our state, we grow mangoes, banana, guavas and the like. These fruits do not grow in cold countries like France.

◆ Why do you think fruits that grow in France also grow in the Himalayas?

Southern France is warmer in comparison to the north. Hence some crops which do not grow in the north grow well here. Olives are grown in plenty in the south, especially near the coast. This tree grows well on stony slopes. In fact no other crop can be grown on such land. Oil is extracted from olives and is used as a cooking medium. Lemon, tangerine and oranges are grown extensively in south and these are used for preparing squashes and jams.

Animal Rearing and Fodder Crops

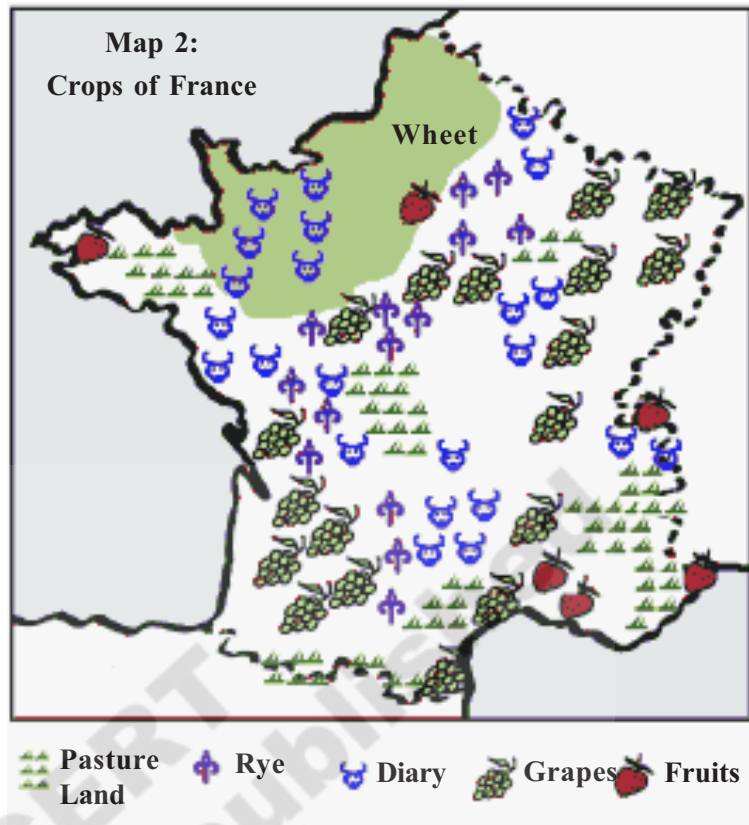
Animal husbandry is an important part of French agriculture. Unlike in our country animals are no longer used for working on the field or pulling carts. More than a hundred years ago animals like horses were used for tilling the land but today all farming operations are mechanised.

Milk, butter, cheese and meat are important ingredients of French food. Cattle are reared for their dairy products. Milk is made into cheese, which sets in large blocks like jaggery. Cheese is an important part of French cuisine.

The French also consume large quantities of milk, cream and butter. Pigs and cattle are also reared for their meat. There are different breeds of cattle for milk and meat. Sheep and goats are reared in the plateau and mountainous regions. They are reared for wool and meat.

You have just read that the grasses are short and juicy in cool and wet climates. Hence the grasses that grow in France too are short and juicy and cattle and sheep graze on them. However, the animal husbandry of France does not rely on them alone and a number of fodder crops are grown and the waste materials of a number of industries are used to feed the farm animals. The waste material obtained after extracting sugar from beetroot is also fed to farm animals.

- ◆ How is the climate of France suitable for animal husbandry?



French Farms

Most of the cultivation in France is carried on in large farms, most of them being more than 50 to 100 acres in size. Generally farmers build their houses in their own farms. That is why there are no large villages in France. The farmhouses are usually very large and have a number of rooms for different purposes. Sheds for animals, godowns for storing grains, coops and sties for poultry and pigs are part of the farm.

These big farmers hire labourers to work on their fields. They also use heavy machines like tractors and harvesters. Almost the entire product is sold in the market. Sometimes the farmers also hire machines from nearby cooperative societies.

- ◆ Find out the average size of farmer's land in your area.



Fig 6.5 Cheese stored in cellars

- ◆ Do farmers in your area too hire tractors and harvesters?

Large holdings and mechanized farming enable French farmers to earn a good income. They live in comfortable houses equipped with modern amenities. They use gas and electric stoves for cooking. About fifty years ago most French farmers baked their own bread. Now they sell off most of their produce and buy their bread from the market daily. Several varieties of bread and cakes are available in nearby towns. Fresh meat, which is an essential part of French diet, is obtained from poultry, cattle and pigs of the farm. Meat is also preserved by smoking, drying or freezing. All houses used to have larders or cellars where meat, cheese and wine were stored. These are also now stored in large cold storages.

The farmers obtain most of their requirements from the nearby towns. Besides bread and other food items, they also obtain agricultural tools and machines from nearby towns. Their children too go to schools in the towns. According to the

French law it is compulsory for all children to attend schools run by the government. Thus all children in France have the opportunity to get educated.

Modern Agriculture

In France, as in other countries of Europe, agriculture is practised as a commercial enterprise, just as any industry. The

farmer makes his living by selling his entire produce and getting all of his requirements from the market. The agricultural technology they use also requires the use of hybrid seeds, chemical fertilisers, pesticides, etc.

- ◆ Do you know of similar efforts in our country to increase milk production?

Minerals and Industries

Unlike Germany and Britain, France does not have very large deposits of minerals. Nevertheless, coal and iron ore are available. You have read in the previous chapter that the availability of coal and iron in close proximity helps in the development of iron and steel industry. France has a developed steel industry, which has enabled her to develop machine and tool industries. France is especially famous for its aviation (air craft) industry. France has also developed several other industries. Look at Map-3 to find out the kinds of goods France produces and look at the location of those industries. In recent years mining



of minerals like coal has declined as France finds it cheaper to import coal from South Africa and the US.

Look at Map-3 and answer the following questions:

- ◆ Are Industries located all over France, or are they concentrated in some regions?
- ◆ Must region with mineral wealth also have developed industries?



Fig 6.6 Nuclear Power Plant - Cattenom

Sources of Energy and Industrialisation

You read about the importance of sources of energy for industrialization. Coal obtained from domestic sources takes care of only a very small part of the country's needs. Hence France has to import coal from the US and South Africa. France also does not have large deposits of petroleum or natural gas. France has to import petroleum from South Africa and the Arab countries.

In order to make good the shortage in sources of energy France took to nuclear energy. Today nearly 80% of France electricity is from nuclear energy. There are 61 nuclear reactors producing electricity in France. However there are problems in using nuclear energy. It produces radioactive waste material, which is very harmful to the health of human beings, animals and plants. As a result the government of France has decided not to

increase the production of nuclear energy based electricity. France therefore has to increase the share of other sources of energy. France already uses its hydroelectric capacities to the full. So it has been forced to explore the possibility of using some new sources of energy like tidal energy from the ocean tides, solar energy and biogas.

- ◆ What problems do you think France will face in using solar energy on a large scale?
- ◆ Find out where the electricity you use is made and which source of energy is used there?



people protesting against nuclear energy. Can you identify the symbol of nuclear energy? Which source of energy are they trying to promote?

Improve your learning

1. What advantages does France have from being surrounded by the seas and oceans on three sides?
2. Identify the Plain area of France and the main river that flows through it?
3. Describe any two examples that show relationship between the crops and climate.
4. How do natural factors help animal husbandry in France?
5. Find out what efforts have been taken to protect different species of cows from your region? Compare animal rearing as you experienced and as described about France.
6. What type of industries are located in Northern France? Why are they located there?
7. Compare the agriculture in France and your region with regard to the following points:
 - a) Seasons
 - b) Crops
 - c) Size of land holdings
8. List out the various crops of France from the lesson.
9. Locate the 'France' and its adjacent countries in the world map.
10. Is the problem of coal in France applicable to our country?
11. Look at the roof of the houses below in the city of Le Havre. In the chapter on Nigeria you will find the roofs in the city of Kano (Fig 8.1) and in chapter 4 on Oceans and Fishing, roofs of Bhavanpadu village (Fig 4.3). Compare them and think of the reasons for the different type of roofs.



Africa

To the west of India lies a large continent. On this continent there are extensive deserts, dense forests, long and broad rivers, numerous large lakes and grasslands stretching over thousands of miles. There are certain wild animals, which we do not find in our country. The world's largest gold and diamond mines are located here. The name of this continent is Africa. Perhaps you will be surprised to know that Africa is the cradle of humankind. Human beings first evolved in Africa and then moved to other continents.



Fig 7.1 Equatorial forest in Uganda

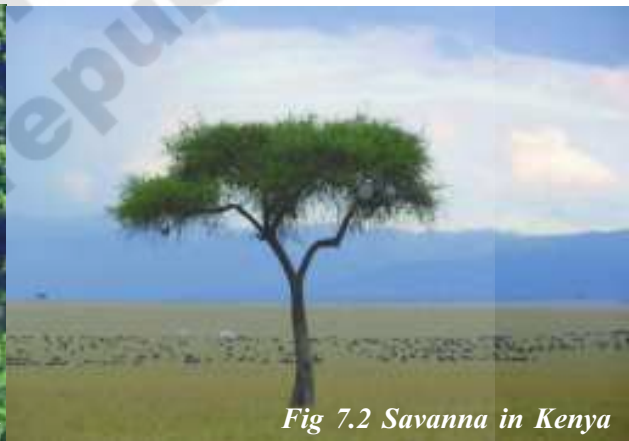


Fig 7.2 Savanna in Kenya

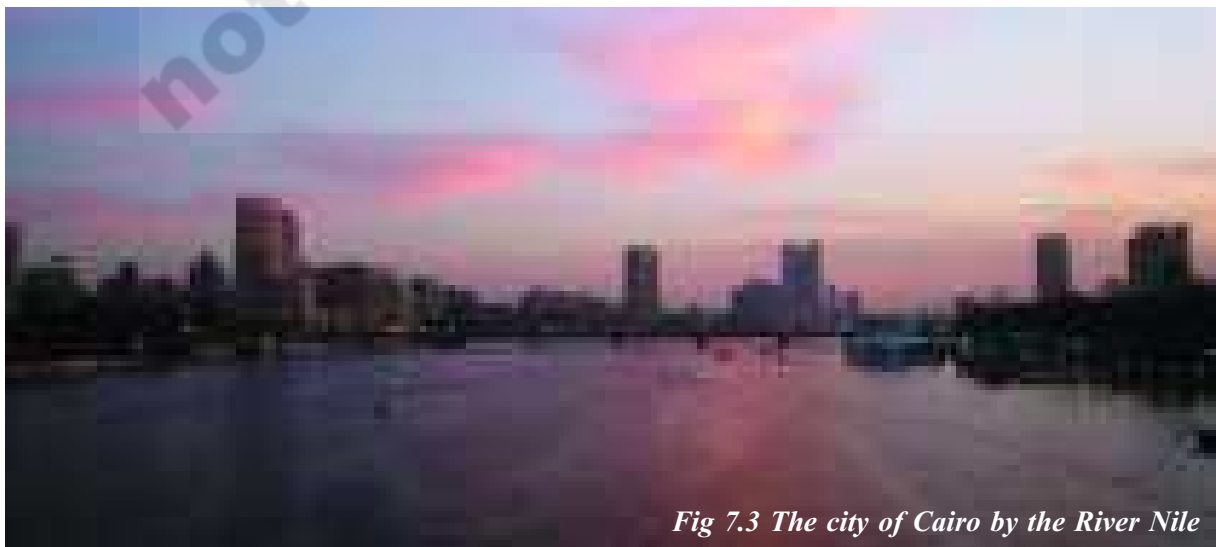


Fig 7.3 The city of Cairo by the River Nile

- ◆ Look for Africa on the world map, name the oceans that surround it. Which are its neighbouring continents?

Africa - A vast Plateau

Look at the physical map of Africa. Do you see any large plains in the interior of the continent? Only on the coast do we find a narrow plain. The rest of the continent is a vast plateau. If you look carefully at the map, you will see that the height of the plateau is not uniform. Look for the valleys of the Nile and the Congo rivers. There are also several mountains on this plateau. The highest peak in Africa is Mount Kilimanjaro in Tanzania.

There are long and narrow valleys in the high plateau. There are several large lakes in these valleys.

- ◆ Identify two other lakes in Africa, other than Lake Victoria and write down their names.
- ◆ Locate the following rivers on a map of Africa. Use map 6 to locate the countries of Africa. Which countries do the following rivers flow through, and which oceans do they empty themselves into?

River	Country	Ocean
Nile		
Niger		
Congo		
Zambezi		

Look at Map 1 and answer the following questions:

- ◆ What is the average height of the narrow coastal plain?
- ◆ What is the height of a major portion of the plateau?
- ◆ The height of the high plateaus in the south and east of Africa is
- ◆ In the north are the Mountains.

Map 1: Relief map of Africa



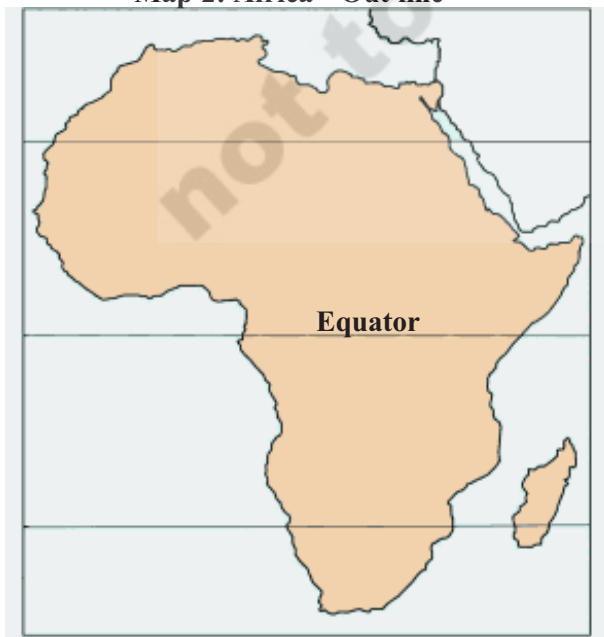
There is a region in the north where no rivers are to be seen. This is the Sahara Desert, which receives very scanty rainfall. There is only one river, which crosses the Sahara Desert.

Look for some of the large lakes on the plateau. Lake Victoria is the largest lake in Africa. This is one of the largest fresh water lakes in the world. The Nile originates from this lake.

The region where this river has its source receives such heavy rainfall that there is enough water to flow across the desert into the Mediterranean Sea. The Nile also flows through Egypt. Most of Egypt is a desert.

The Nile has helped a civilization to develop in this desert. Egyptian civilization is several thousand years old. The waters of the Nile have helped to irrigate the fields of Egypt for thousands of years (look at Map 3).

Map 2: Africa - Out line



Climate

If you look at Africa on the globe you will find that the Equator passes through its middle. Thus Africa is divided into northern and southern parts.

- ◆ Try to recognise the Tropic of Cancer on the wall map of Africa and label Map 2. To the south of the Equator is the Tropic of Capricorn. Locate it and write its name in the correct place on the map.
- ◆ Does the Equator pass through the middle of any other continent?

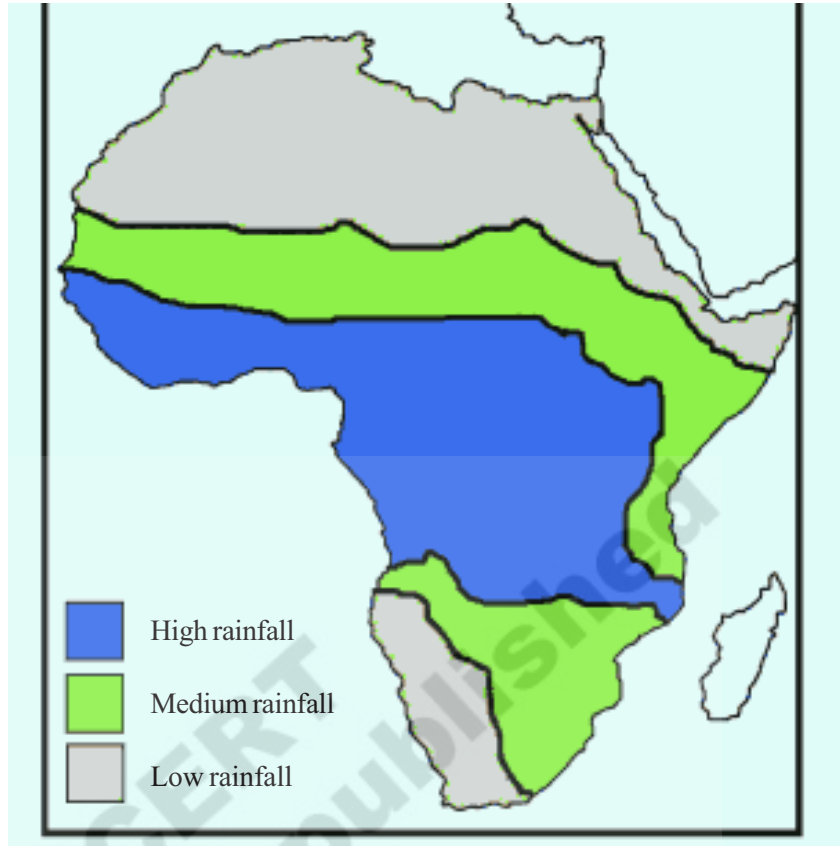
The zone between the Tropic of Cancer and Tropic of Capricorn experiences a hot climate. In fact, this is the hottest region of the world. There is hardly any winter here. This region is also known as the Tropic region.

- ◆ Locate this zone on the map of Africa, colour it and label it as the 'Tropical Region'. Colour the zone north of the Tropic of Cancer and south of the Tropic of Capricorn in different colours.

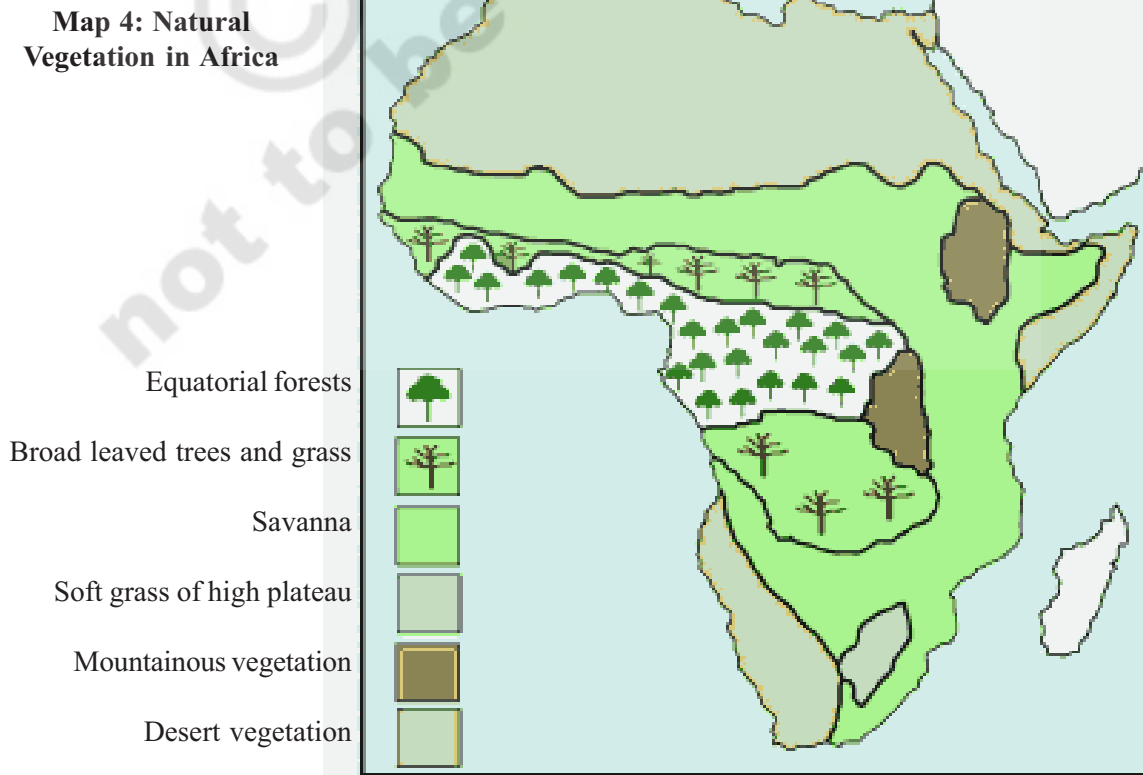
These zones south and north of the tropics experience summer as well as winter. They are called '*Temperate Regions*'.

So far we have been talking only about summer and winter. However, regions that are hot but receive heavy rainfall have a different climate from hot regions that get scanty rainfall.

Map 3: Distribution of Rainfall in Africa



Map 4: Natural Vegetation in Africa



Regions with Heavy Rainfall

A large part of Africa, on both sides of the Equator, receives heavy rainfall. Look at the regions with heavy rainfall on Map 3. These regions are in Central and Western Africa. They have dense forests due to heavy rainfall and warm climate.

Regions with Moderate and Scanty Rainfall

Look for regions with moderate rainfall in Map 3. You can see that the zone of moderate rainfall surrounds the zone of heavy rainfall. In the region of moderate rainfall, it rains only in the summer, while it rains throughout the year in the equatorial regions.

As in our country, so also in the zones of moderate rainfall in Africa, dry and wet seasons are distinct. Due to moderate rainfall tall grasses grow in this region. In some places these grasses are so tall that even elephants can hide in them! Some trees also grow between the grasses. This region is known as the 'Savanna'. Look at this region in Map 4. Different kinds of wild animals inhabit this region. You will read about them later.

A very large part of Africa is extremely arid (dry), where the rainfall is scanty or there is no rainfall at all for several years.

- ◆ Locate these arid zones in Map 3.

Almost half of the northern part of Africa is an arid region and is called the Sahara desert. Thorny bushes and short grasses grow in some parts of this desert. In other parts there are large stretches of sand, bare hills and rocks, stones and pebbles. In the south there is another arid region called the Kalahari Desert.

Study Map 2 and 4 and answer:

- ◆ Zones of heavy rainfall have vegetation.
- ◆ Zones of moderate rainfall have vegetation.
- ◆ Zones of scanty rainfall have vegetation.

Pictures of different areas of Africa have been shown in the beginning of the chapter. Somewhere there is dense forest, in another area trees and grass grow together, elsewhere there is grass and shrubs, and in still other areas there is no vegetation at all.

The People of Africa

People with different languages, lifestyles and habits live in different regions of Africa. Since ancient times, people have lived in small tribes, carrying out hunting gathering, animal husbandry and agriculture. Hunters have inhabited the equatorial regions and the deserts. Pastoralists inhabited the high plateaus and Savanna, grazing their animals on the extensive grasslands. Agriculture has long been carried out on river banks as well as on the margins of forests. There are several cities on the coasts where traders from distant countries come to trade.



Fig 7.4
Boabab tree

Africa, Europe and Asia

For a long time, people from other continents were largely ignorant about Africa. Europeans were familiar only with the northern coastal regions of Africa while the Indian and Arab traders knew about the eastern coast.

- ◆ Look at the map and guess how Europeans would have reached the northern coastal areas. Which direction would one have to go to reach Africa from Europe? Which sea has to be crossed?

Apart from these coastal areas, neither the Europeans nor the Indian or Arab traders had much knowledge about the interior parts of Africa.

About 500 years ago, Europeans began their attempts to reach India by the sea route by going around Africa. Traversing the Atlantic Ocean, they would stop over on the islands of St. Madiera and Azores. They were apprehensive about going south of these islands. They thought it would be so hot further south that the sea would be boiling. Then in the year 1498, a Portugese sailor named Vasco da Gama went around the southern tip of Africa and reached India.



Fig 7.5 Cape of Good Hope in South Africa

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Look at the map to answer these questions:

- ◆ In which direction does one have to travel from Africa to reach India? Which ocean has to be crossed?
- ◆ Are Asia and Africa connected by land?

The African Coast

While studying Europe, you must have noticed its broken coastline. You must have read about the gulfs and bays of Europe. Try to recall how these helped the Europeans in their ocean travel.

- ◆ Now look at the African coast. Do you see a broken coast or a smooth coastline?
- ◆ Do you find many bays and gulfs here, as in Europe? Name a bay and a gulf near Africa from Map 6.

Initially when Europeans tried to go inland, many African tribes came in direct conflict with them. Europeans indulged in unfair trade and tried to enslave the African people and sold them abroad. Europeans wanted to establish their rule over Africa and exploit the resources. Hence, the African people resisted the efforts of foreigners to establish themselves in their land.

Slave Trade

In the 16th century many Europeans began migrating to America and started cultivation there. There was plenty of land in America, but not enough people to work on the fields. It was to fulfil this need for additional working hands in America that the slave trade from Africa began.

Africans were captured and enslaved mainly from the coastal areas of Guinea as well as eastern Africa. The captured people were brought to the coast and sold to the Europeans. In exchange for the slaves, the African tribal leaders accepted guns, iron objects, liquor and clothes.



Fig 7.6 Slave

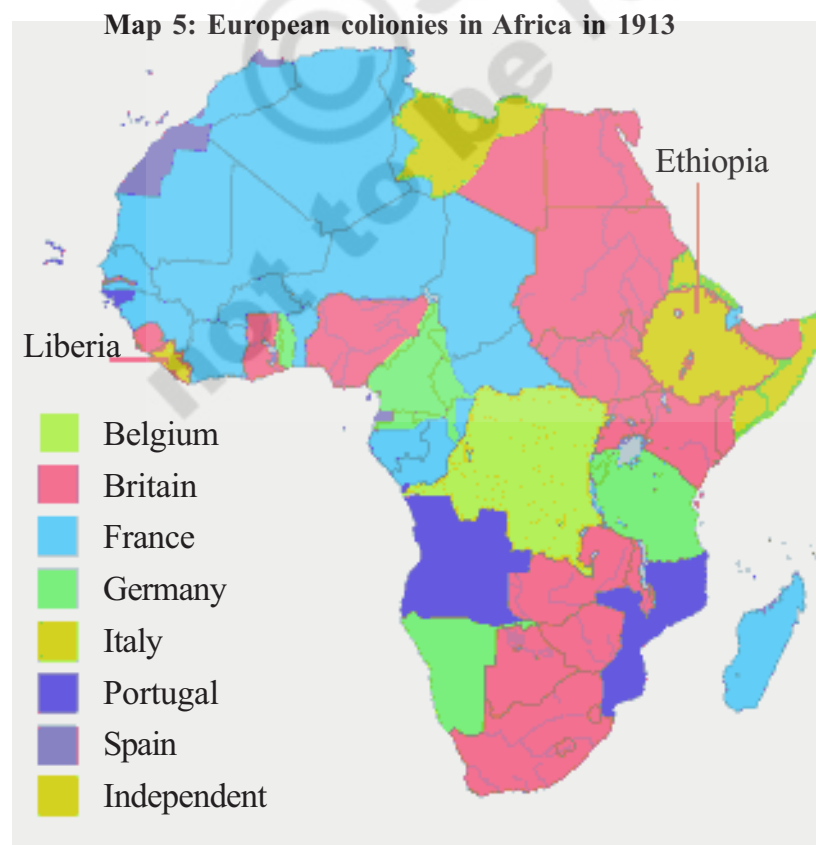
The slaves were greatly oppressed. Many of them died by the time they reached the ports. The ships were stuffed with slaves. There were no proper arrangements for food or medicine. In those days, it took

several days to reach America. Many slaves did not survive the journey due to illness and malnutrition.

Even in America, inhuman treatment was meted out to them. Despite working hard, they were not given proper food or living quarters. In this manner, millions of Africans were enslaved and taken to North and South America and the nearby islands. Lakhs of people died after being made into slaves. In the 16th and 17th century, numerous companies were engaged in the slave trade. Eventually, the slave trade came to an end in the 19th century and the slaves were declared free citizens in America in 1860.

European Colonies

Earlier you have read that Europeans had reached India by going around Africa. Subsequently, these Europeans started halting at African ports. Slowly the Portuguese, Dutch, English, French and Germans gained a foothold in the interior and colonized these areas. The political map of Africa at the close of the 19th century is given in Map 5. The regions colonized by the European colonies have been indicated on this map.



- ◆ Can you locate the countries that colonised Africa on a map of Europe?
- ◆ Which European countries colonized Sudan and Zaire?

- ◆ Can you point out any area of Africa which was not colonised?

Along with attempting to build their colonies in Africa, the Europeans continued to explore the interior of the continent. They travelled to the source of the Nile in the north. In the west, they explored the entire valley of the Niger and in the south they moved northwards from Cape Town. There they explored the region around the river Zambezi.

The Europeans exported African timber, minerals etc. on a very large scale to Europe. In fact, the gold and diamond mines in southern Africa are still under the control of European companies. Zambia and Zimbabwe have priceless mines of copper. This mineral has long been an important export item.

The Europeans did not stop with exporting the resources of Africa. They established plantations to grow tea, coffee, rubber, tobacco, etc. These products were also exported to Europe.

Independent Africa

During the course of the last century, African countries have been gradually gaining their independence from the control of European powers. New nations have come up where the people have formed their own governments. Of course, many Europeans are still settled in African countries. But slowly the African people are acquiring control over their land, forests, mines, and agricultural production and benefiting from these.

Key words :

1. Colonies
2. Slave
3. Plateau

- ◆ Familiarise yourself with the countries of Africa by colouring and labeling Map 7.

Improve your learning

1. From Europe which sea does one have to cross to reach northern Africa?
2. State three difficulties that the Europeans faced in reaching the interior parts of Africa.
3. Name the two large deserts of Africa.
4.
 - a. The Zone between the Tropics of Cancer and Capricorn is the Zone of climate.
 - b. The main vegetation of Savanna lands is
 - c. The two main rivers emptying themselves into the Atlantic ocean are and
 - d. The regions in Africa to the north of the Tropic of Cancer and to the south of the Tropic of Capricorn are of climate.
5. Two political maps of Africa have been given in the chapter. Compare the two to find out which European country controlled the present day countries of Nigeria and Zimbabwe.
6. Name two countries of Africa where equatorial forests are found.
7. What goods did Europeans trade with Africa? What kind of agricultural produce did they promote for trade purpose?
8. Who benefited from the slave trade? Why did America need slaves?

Map 6: Countries of Africa



First label this map with the help of Map 6. Then colour all the countries with different colours. Take care not to colour two neighbouring countries with the same colour.

Map 7: Countries of Africa



Nigeria - An African Country

Nigeria is a country on the western side of Africa. Nigeria, like India was a colony of Britain and became independent after a long period of struggle. Thus both Nigeria and India share much in common. Locate Nigeria on the map and see if we also have similar climate.

- ◆ Locate Nigeria on a map of Africa. Find out the name of the ocean which is to the South.
- ◆ Find out the names of the countries that are situated on the other three sides of Nigeria.
- ◆ Also find out which part of Nigeria is nearest to the Equator. What kind of climate do you think those regions will have?

- ◆ Which city is near the equator and which one is farther away?
- ◆ Which part of Nigeria gets maximum rainfall?
- ◆ Which part gets less rainfall?

Natural Vegetation of Nigeria

The trees found in Southern Nigeria are not found in Northern Nigeria. In fact in the extreme north east no trees could be seen at all.

Seasons

The Southern region of Nigeria which is near the Equator has equatorial climate, that is, it has only one season throughout the year – it is fairly warm and rainy all through the year. The capital city of Nigeria, Lagos, is situated in this region. This gives rise to dense forests along the sea coast. However, only Southern Nigeria has equatorial climate. Northern parts of Nigeria have a mild winter season also. And it rains only from May to October. It does not rain all the year round like it does in Lagos.

- ◆ Look at the rainfall map of Nigeria. Locate the cities of Lagos and Kano.

Map 1: Rainfall in Nigeria

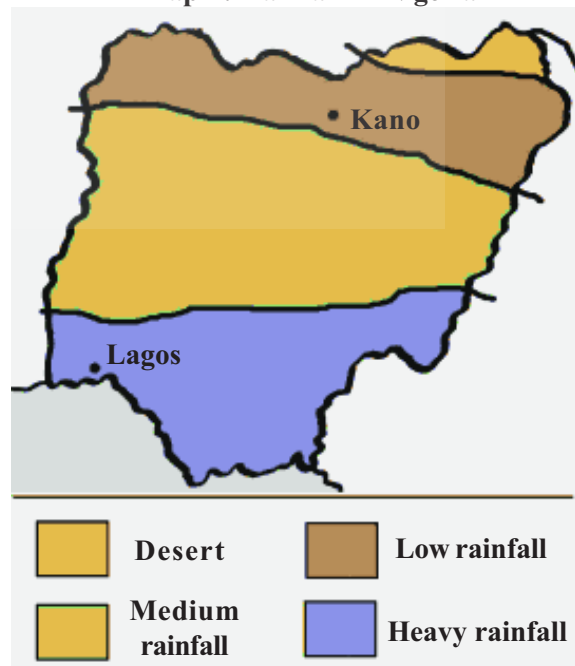




Fig 8.1 Flat roofs of Kano

The northern region of Nigeria is almost a desert. It is a part of the Sahara desert, which is the largest desert in the world.

- ◆ The natural vegetation of Nigeria is shown in Map 2. Compare this with the rainfall map and answer:
 - i. Regions with heavy rainfall have vegetation.
 - ii. Regions with medium rainfall have vegetation.
 - iii. Regions with low rainfall have vegetation.
 - iv. Desert regions have vegetation.

purposes. They help the tree to remain above water during high tides. These roots are submerged under water when the tide comes in. They also help the roots to breathe, as the marshy soil does not contain much oxygen. They also help to anchor the tree to the loose soil. Mangroves are the only kind of trees that grow in salty soils and are very important for preventing the spread of saline marshes along the coasts. The wood of the mangrove tree is very strong and heavy. Its fruit is sweet. Mangrove forests form a 16-96 km wide belt in the coastal region of Nigeria.

Mangrove Forests

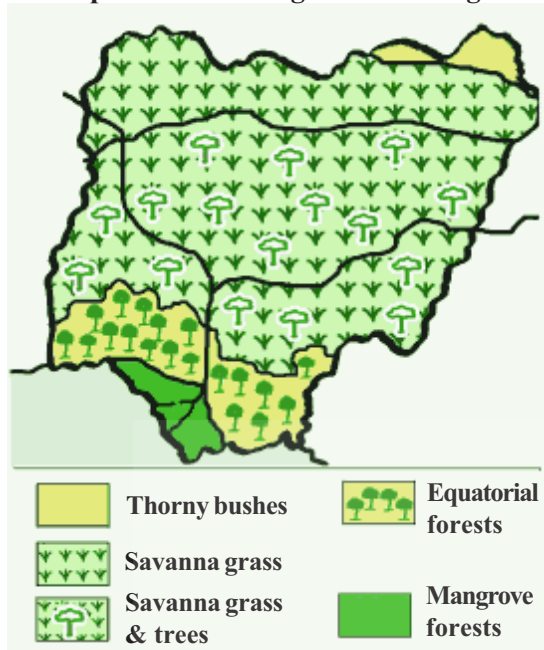
Nigeria's coast is not much above sea level. During high tide, salty seawater floods these coastal areas, small gulfs and deltas of rivers. When the tide subsides, the water recedes.

There are saltwater marshes in these coastal areas. Mangrove trees are found in large numbers in these marshy areas. In figure 8.2, look how the roots of the mangrove trees are sticking out of a marsh. They serve a number of



Fig 8.2 Mangrove forest in India.

Map 2: Natural Vegetation of Nigeria



The coastal areas of India too have mangrove forests. The Sunderban forests of the Gangetic delta (in West Bengal) are the most important mangrove forests in the country. Sunderi is the typical tree of this forest in India.

Equatorial Forests

Dense Equatorial forests begin where the salt water marshes end. These forests contain tall trees, creepers, etc. like mahogany, ebony, rubber, sapele, obeche, African walnut and oil palms. Since there is no dry season the trees here are evergreen and never leafless. Raffia palm is also a very important tree of this belt. Its fruit yields cooking oil. Coconut trees can also be found in the entire belt. Equatorial forests are found in 80-160 km belt after the mangrove forests.

- ◆ Which of these trees grow in your state?

Some of the trees in equatorial forest (as in Map 2) grow 60 meters high. An

interesting thing about these trees is that they give wood of different colours. Ebony has black wood, mahogany is reddish brown and obeche tree has white wood. In contrast, most of the trees in our country yield brown wood.

The Equatorial forests merge with monsoon forests towards the north. In these parts there is a dry season and the trees shed their leaves to conserve water. Leaves sprout again in these forests when it begins to rain in May or June.

There is a great demand for Nigerian wood in many countries, especially in Europe, because it is heavy and strong. Earlier, ships and boats were made out of such wood. This wood was also used as sleepers under railway lines. Nigeria earns much foreign exchange by exporting wood. However, this has also led to rapid depletion of forest resources.

The Savanna

So far we have been talking about Southern Nigeria near the coast. As we move inland, the rainfall declines. The trees are few and far between. Tall grass grows between the trees. The typical trees of this region are acacia and baobabs (Map 2), do not grow very tall. This is the Savanna region.

Trees grow closer together along the two major rivers, Niger and Benue, as more moisture is available there.

Have you wondered why there is more grass and fewer trees in the Savanna region? Trees need lot of water. Grass grows in regions with low rainfall. You must have noticed that grass grows rapidly during the rains, after which it dries up very fast. In the next season, new grass comes up.

In the hot Savanna region, the grass is stiff and dry. It is not soft and juicy like in the cold regions of Iran, Poland or France. That is why animal husbandry is not very common in the Savanna region, except among a few tribes.

Rainfall declines as we move north and with it, the vegetation also changes. Both the trees and grass get shorter and shorter. Trees, typically, spread out just like umbrellas.

If you had visited Gwalior or Rajasthan, you would have noticed small thorny trees (*babul*) and shrubs with grass growing in between. That is because this region also gets very low rainfall.

Natural Regions of Nigeria

There are no large mountains in Nigeria. There are only small hills.

Look at Map 3 and locate the different parts of Nigeria as you read along.

1. Niger Delta: This is the region where the river Niger divides into a number of small streams and empties into the sea. The Europeans built a number of ports along this area where their ships could halt. It was from here that slaves were sent to America. Later on, it was from these ports, that wood and other products were sent out of the country.

- ◆ Hang a wall-map of Africa in the classroom and identify the country from where the Niger originates. Into which ocean does it empty itself?
- ◆ Which river in India has a very large delta?
- ◆ What could be the problems in carrying out agriculture on deltas?

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2. Coastal Plains: The coastal plains of Nigeria stretch beyond the delta. These plains are about 120 meters high.

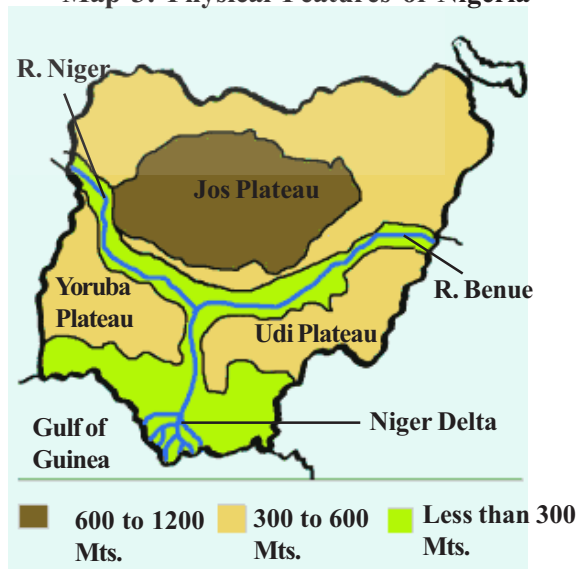
- ◆ Where has this height been measured from?

3 and 4. River Valleys and Plateaus: As you move northwards of the coastal plains you would have to climb gentle slope to reach the Yoruba and Udi Plateaus whose height is around 300 meters. Then you have to descend a sharp slope to reach the two river valleys of the Niger and the Benue. After crossing the narrow valleys you will have to climb a steep escarpment to reach Jos Plateau. This is the highest part of Nigeria. It is 1200 meters high.

If you descend a series of stepped scarps to the north-east you will reach Lake Chad. This is a vast lake and only a part of it is in Nigeria. The remaining part of the lake is in Chad, a country which has been named after the lake.

- ◆ Can you name the four major natural regions of Nigeria?

Map 3: Physical Features of Nigeria



People

Nigerian people belong to a number of different tribes – some of them are Ibo, Fulani, the Yoruba, the Hausa and so on.

Most of the tribes practice agriculture and live in small villages in which most of the villagers are related to each other. Of course, recently a large number of young people are migrating to towns to take up new jobs in factories and offices.

Agriculture

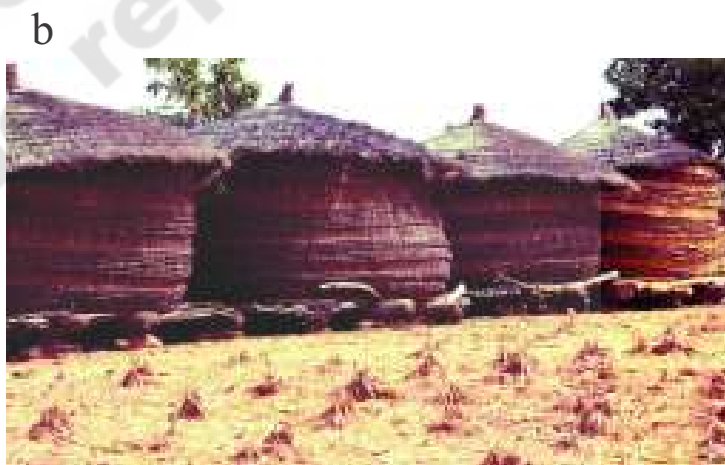
The food of the people consists of yam, cassava, guinea-corn, rice and beans. Cassava is a kind of tuber like the sweet potato. It features largely in the diet of the people.

Every year the groups of tribesmen clear a small piece of forest land of its trees and burn the wood. Then all the families distribute that piece of land among themselves. Often they share the work and help each other at harvest and other times.

In Nigeria, farmers cultivate just enough to meet the requirements of their families. They use the hoe to plough their fields. Even the use of bullock or horse driven plough is very rare. So, production is also limited. However, things are changing fast these days as people have begun to produce on a large scale for market. In the drier interior regions cotton is grown on a large scale for sale to factories.



Fig 8.3 a) Kola Seeds seller b) traditional maize storage



Crops and Plantations of South Nigeria

You may be fond of eating chocolates. They are made of cocoa which grows in Nigeria. In Southern Nigeria, apart from cocoa, there are also rubber plantations. Oil bearing palm trees are also found there. Oil is extracted from its fruit. People reach these forests after crossing the River Niger by boat and then collect palm fruit. Earlier all these trees were found wild in forests. When the demand for these products increased, patches of forest were cleared and these trees were planted there. Cocoa, rubber, palm and palm oil are being exported and this enables Nigeria to earn foreign exchange.

- ◆ In Map 4, identify the region of Nigeria where these crops are grown.

Plantations were started by the British who were not satisfied with the quantity of wild products collected from the forests. They wanted to produce more and export them.

Plantations made many things easy for them. First of all, it was no longer difficult to go into the forest and locate the trees. It was easy to look after the trees since the trees were all located in one place. Harvesting the produce also became much easier. Production, which was necessary for trade, increased.

Nigerian people started working in these plantations, while the British were their managers.

In this way, commercial agriculture of palm, cocoa and rubber began in Nigeria.

Not only this, a number of processing units were also set up near plantations, such as units to separate seed from the cocoa fruit, to dry it, extract oil from palm fruit, extract milk from rubber plants and so on.

Most of the profit from trade of palm, cocoa and rubber went to the British. The Nigerian people worked there only as agricultural labourers. Even in India during the British times, plantations of tea and coffee were started for trade purposes. Nigeria was under the British rule until 1960, when it won independence. After that the plantations and trade in plantation products have gradually come under the control of the Nigerians and they are able to benefit from these.

Agriculture and Animal Husbandry in Northern Nigeria

You know that Northern Nigeria is the region of Savanna grass. It rains very little here and only grasses and some thorny trees are to be found. Cattle-rearing is an important occupation of the Fulani tribe which lives in the north. They also rear sheep and goats. Trade in hides and skins is an important commercial activity here.

Only crops that can be grown in low rainfall regions are grown in the north. Most common food crops are coarse grains such as millets, guinea corn and cassava. In some areas, wheat is also grown. Trees here are generally not cut down and can be seen standing in the middle of the fields.

- ◆ Make a list of crops grown in the heavy rainfall region of the south and the low rainfall region of Northern Nigeria.



Fig 8.4 Designs on a traditional cloth called *Kampala*.

Here also, some commercial crops are grown, such as kola nuts, groundnuts, tobacco and cotton. Kola nuts are of great importance in the lives of Nigerians. It is specially served to honour guests. You may have tasted cola soft drinks. Kola nut is used in the production of many of these drinks. That is why the Kola nut is also exported on a large scale.

Northern Nigeria has been cultivating cotton for a long time. People weave cloth on hand-loom and also grow cotton for commercial use. Railways were built near cotton fields to facilitate easier transport so that trade becomes easier. Now cotton mills, too, have been set up in Nigeria.

Groundnuts are also grown in plenty in Northern Nigeria. The British introduced groundnuts in this country, as the soil and climate were suitable for their growth. Factories have been set up in Kano and in Kaduna to extract oil from groundnut.

- ◆ Locate the regions growing cotton and groundnuts in the map.

Mineral Oil

- ◆ Mineral oil is the most important natural resource of Nigeria. In the map, look for the mineral oil regions of Nigeria and name the ports from where this oil would be exported.

Since 1958, mineral oil has been exported from Nigeria. Oil refineries have been set up at Harcourt and Vari port. One such factory has also been set up in Kaduna city in middle Nigeria.

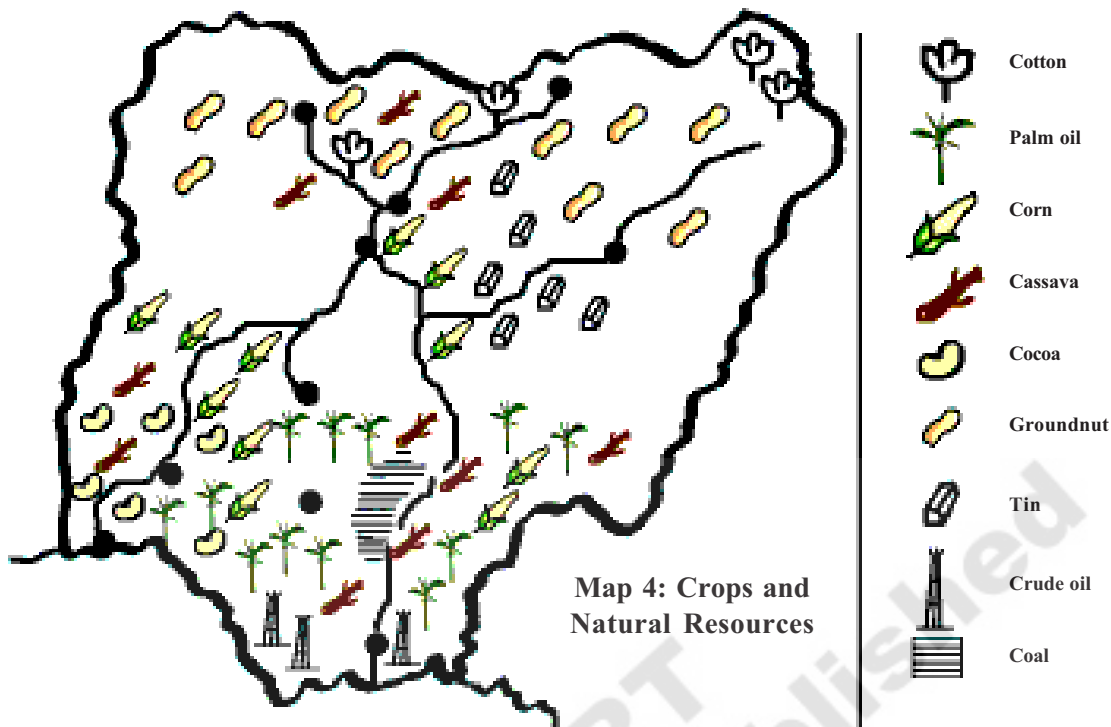
This industry is mostly in the hands of foreign companies. The Nigerian government has only a small share in this industry. This is the same with many other minerals which are mined from Nigeria.

- ◆ Look at the map and list the minerals that are mined in Nigeria.

Nigeria is rich in natural resources and agriculture, but they have not been able to use these resources to their full capacity. Moreover, most of these resources have remained in the hands of foreign companies. Presently, the Nigerian people are slowly establishing industries.



Fig 8.5 A view of the city of Lagos



Improve your learning

1. How are the equatorial forests useful to the people of Nigeria?
2. Name three cash crops of South Nigeria.
3. Name at least four crops, which the farmers of Nigeria cultivate for their food.
4. Why do some tribes in North Nigeria practise animal husbandry? What difficulties do you think they would be facing?
5. When you move from South to North Nigeria, what difference do you notice in :
 - a) terrain
 - b) rainfall
 - c) vegetation
6. Separate the occupations of North and South Nigeria which are given below. Make a table with the following titles (Occupations, North Nigeria, South Nigeria).

1. Coal mining	6. Palm plantation	11. Extracting palm oil
2. Tin mining	7. Groundnut cultivation	12. Cocoa cultivation
3. Mineral oil mining	8. Cotton cultivation	13. Cultivation of yam and cassava
4. Animal husbandry	9. Loading, unloading	14. Cultivation of kola nut
5. Rubber plantation	10. Extracting groundnut oil	
7. What is the height of the Yoruba Plateau and the Jos Plateau?
8. Nigeria, like India, was a colony of the British till recently. Do you think there are any other similarities between India and Nigeria?
9. Do you appreciate the design on the traditional clothes of the Nigerians? Why?
10. Read the paragraphs of “Natural vegetation” and comment on it.

Handicrafts and Handlooms

PART - I

Basket Maker of Andugula

Polaiah is a basket maker. He is from Andugula village in Kalvakurthi Mandal, Mahabubnagar district. He is about 35 years old. He belongs to Yerukala, a tribal community. Polaiah's family has been weaving baskets for generations. Bagamma, his wife also works as a basket maker. And they have three children. Polaiah's father along with other 25 families came to the city about 30 years ago as the demand for baskets had declined in their native village. He sells baskets on the pavements of Chaderghat.

Polaiah uses the spines of wild date palm (*eatha chettu*) leaves. Using a knife, he shaves off the leaves and keeps them in hot sunshine to dry them. The raw material, wild date palm leaves, are brought in bundles from Andugula, their native village. His relatives in Andugula collect the spines from bushes around their villages and sell to basket makers like Polaiah. Andugula is about 60 km from Hyderabad.

- ◆ What do you understand about raw material in the context of basket making? Who collects them?

- ◆ What are the tools used by the basket makers?

Each bundle of date palm spines costs Rs.120. Polaiah and other basket makers usually bring 10 bundles for two months. Polaiah's family makes 25 baskets from one bundle. Ten bundles of spines would give them about 250 baskets. It takes 30 minutes to make a basket. He weaves baskets from 10 am to 5 pm with some breaks for rest and eating.



Fig 9.1 Basket shop with bamboo products

Polaiah sells each basket for Rs. 20. Sometimes, customers ask for a bigger basket for family rituals. These are sold at a higher price depending on the amount of raw material used. He sells baskets throughout the year. In two months he



Fig 9.2 Basket weaving

would sell Rs.5000 worth of baskets. The cost price is Rs. 1200 excluding the transportation charges of Rs.100 for every visit to his village. So the income of his family is Rs.3700 for 2 months. He does not earn sufficient income to meet his family expenditure. To supplement his income Polaiah buys and sells bamboo products like trays and stands.

Basket making is a craft work that involves the use of wild date palm leaves, cane and bamboo which are found in forests. There has been depletion of forests due to their extensive exploitation for big industries. This affects the livelihoods of people who have traditionally depended on forest. Further, the demand for such products has reduced considerably. This forces them to move out of rural areas and migrate to urban areas for survival. This is true for many involved in traditional

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activities. However, they have to often live in urban areas without basic amenities.

Urban Slum

Polaiah lives in a slum which does not have proper drainage, emits foul smell, and breeds mosquitoes and flies. There is no electric connection or safe drinking water. Polaiah's hut is made of bamboo, mats and recycled plastic bags and tarpaulin. During rainy season their roofs often leak and the huts are flooded. The Municipal Corporation officials sometimes evict Polaiah and other basket maker families huts but they build them again.

Despite struggling hard people like Polaiah have been denied voting rights in the city and in fact they have also been denied ration cards as they don't have any identity or residence proof. Thus they cannot participate in the democratic processes of the city or avail the facilities for the poor.

Basket Makers

People of *Yerukula* tribe are usually involved in basket making and live in different parts of Andhra Pradesh. They are called '*Yerukula*' after their women's



Fig 9.3 Basket weaving

traditional profession of fortune telling 'Eruka chepputa' (Sodhi). People of this tribe speak 'Yerukula basha'. Words from Telugu, Tamil and Kannada languages are used in this language.

Choose the correct option:

- a. Forests are depleted largely because of the usage by (basket weavers / big industries).
 - b. Polaiah buys bamboo items from (trader in Mandi/village in Andugula).
- ◆ Make a table showing expenses for raw material and income from the produce.

- ◆ Do you think people like Polaiah should be given ration card and allowed to vote in Hyderabad?

By now you have learnt that goods such as baskets made of bamboo and *etha chettu* require simple production – using very few materials mostly made of natural resources. There are many other goods which require raw materials to be processed in a more complex way with complex tools. Cloth materials made of cotton and silk are examples of such goods. Cloth can be manufactured today either in hand operated looms or by power looms or in large mills. We will study here how it is produced by handloom weavers.

PART - II

Handloom Weavers in Pochampally

Pochampally is a small town in Nalgonda district in Andhra Pradesh. The weavers here produce unique sarees called *Ikkat* sarees, which are world famous. *Ikkat* is a term used for the particular style in which cloth is dyed, often also referred to Bandhini or Pochampally itself. They are high quality silk sarees containing simple geometrical designs and available mostly in three colours and shades. There are nearly 10,000 weaving families in 100 surrounding villages doing this craft.

Pochampally sarees have a unique design and colour – quite distinct from other silk saris. That is why it is the first handloom cloth patented in India. This means, no

other handloom saree producers in the world can sell sarees in the name of "Pochampally Ikkat Sarees". Only those produced in Pochampally and its surrounding villages can be sold with this brand name. These sarees are sold in India and abroad at high prices.

To make silk sarees you need raw material like – silk yarn, colours, cotton thread. These are not produced by weavers, they buy them from the market. Silk worms from which silk yarn is made, grow on mulberry leaves. Rearing of silkworm is taken up by small farmers. Cotton is produced in farms and is made into thread either in factories or as household craft. Colours are often made in factories. Weavers buy yarn and colours from the market.

Tools: Weavers own the wooden loom, which is the main tool for weaving. Apart from it, they also use small knives. For weavers it is also important to know the design plan to make in the saree. If you look at a saree you will notice that there are very intricate designs on them. These designs are marked on special sheets of paper with specific notations. Weavers follow them without making errors. With years of practice they even develop new designs.

- ◆ Look at a saree and draw any of the common designs on them in the box below.



Stages of Weaving a Saree

There are different stages of making the saree. The first of this is preparing the yarn. Silk yarn is wound on a bobbin. These yarns are then marked with the design. These markings of the designs help them to identify what colours need to be dyed into which part of the yarn. Dyeing the yarn is a long repeated process. Each colour

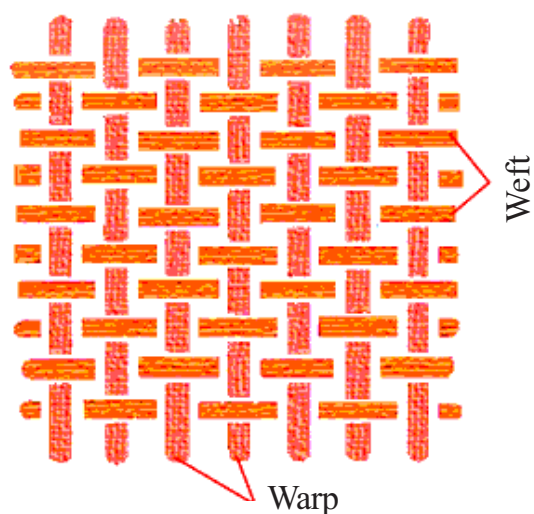
needs to be done separately and dried one after the other. Only when the colouring is completed, the thread can be used for weaving.

Dyeing yarn

For dyeing, the silk yarn is taken off, but when dry, it is again stretched, partly opened and tied again for dyeing, a process repeated several times. For making sarees in different colours and shade, different methods of dyeing are followed. The red and brown shades, between white and black, are achieved using alizarin dyes. For this the yarn is first soaked in a mixture of castor oil and alkaline earth, then dried, again soaked, dipped in alizarin paste and finally boiled till it becomes red. For the brown shades, iron filings are added to the colour. Dissolving iron filings in vinegar produces black colour.

Warp and Weft

You will notice that cloth has threads passing from top to down and sideways something like this #. Warp is the yarn that goes from top to bottom and wefts are the yarns that go from left to right.



Let us look at the account of a visit to a weavers' house in Pochampally to know more about ikkat cloth materials.

Jagathayya is a resident of Pochampally. All of his family members – he, his wife, son and daughter-in-law work as weavers. When we visited his house, we found all members in the family engaged in different tasks. While he was winding yarn, his son Murali was engaged in weaving on the *maggam* (pit loom) set up inside the house. Other tools such as *Chitkasu* (is a curved frame made for weft ikkat with pegs on which the weft threads are grouped and tied for dyeing), *panni* (reed), *Acchu* (head shaft), thread and rubber tubing were used to do different tasks in producing ikkat sarees. Most of the tools are made of wood. Since he has become old, Jagathayya spends most of the time winding yarn and his son weaves on the loom.

Jagathayya's wife and daughter-in-law do bobbin winding. Jagathayya's grand children are studying in schools. There is some work like warping done collectively by group of weavers on streets / outside the house.



Fig 9.4 At pit loom - weaving a saree



Fig 9.5 Winding thread



Fig 9.6 Bobbin winding

His son Murali brings all the raw material – dyed silk yarn, zari and design from master weaver and sometimes from cooperative society of which he is



Fig 9.7 Marking design

a member. At a time Jagathayya gets raw materials to weave eight sarees. The whole family has to work for 12-15 hours a day for nearly 50 days to weave 8 sarees. They get about Rs.1200 per saree for the work.

Weaving saree is a hereditary occupation for Jagathayya's family. The income Jagathayya's family gets from weaving ikkat sarees is insufficient to run the family.

During March-May, Jagathayya's family is able to weave only a few hours a day. If there is high temperature, thread will get cut. The whole family works only till afternoon during these days. Women are distressed a lot – they have to do weaving related works and also take care of the household chores – cooking food, fetching water and preparing children to go to school.

Earlier, Jagathayya's family used to weave only for the cooperative society. The cooperative societies provide financial assistance through insurance in case of unexpected illness or death in the weaver's family. They also help in getting loan for construction of houses. These days cooperative society is not giving sufficient work. They had to look for additional sources of income to run their families. Since a master weaver in Pochampally agreed to give work and the payment for work would supplement his income for the family, Jagathayya's family began weaving

Ikkat sarees for the master weaver. Jagathayya has not given up the membership with the cooperative society and hopes that it will improve its functioning in the coming days.

Weaver's Problems and Cooperative Societies

Andhra Pradesh has the second largest number of handlooms in the country, next only to West Bengal. Handloom weavers are facing a serious problem. They face a stiff competition from power loom and mill made cloth -these are cheaper as they are produced on machines and also because they use synthetic yarn which costs much less than cotton or silk. Even though it is popular due to its high quality and unique beauty, the Pochampally saree seems to be expensive. But the weavers are not getting good rate due to middle men's involvement.

The buyers are spread all over the world and weavers do not have any direct contact with them. Fashions in the cities change fast and it is difficult for the weavers to know what kind of designs are in demand and they have to rely on middle men to know about the designs in vogue and change their designs accordingly. They have to depend on middlemen for getting raw materials like cotton or silk yarn as these are produced in far



Fig 9.8 Weaving in process

away centres. This gives the middlemen an important position in the handloom industry and they try to get the largest share of the price paid by the buyers of the sarees.



Fig 9.9 Warping

In order to overcome these problems the weavers are encouraged to form cooperative societies. The cooperative societies are meant to help the weavers in buying raw materials at low price and to arrange for marketing of their cloth. This reduces their dependence upon middle men and traders. The cooperative societies should help the weavers by training in new designs.

However, now-a-days, a large section of weavers in many other parts of Andhra Pradesh also do not get sufficient work from cooperative societies. In some cooperative societies, weavers are not given any role in decisions regarding procurement of raw materials and sale of cloth materials. They do not provide opportunities for weavers to produce sarees to suit the changing preferences of consumers. This has once again pushed the weavers into the clutches of the middlemen and traders.



Fig 9.10 Folding the Ikkath Saree

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A large amount of handloom cloth materials in Andhra Pradesh are produced and marketed by master weavers and merchants. The master weavers and merchants procure all the raw materials and supply them to weavers and collect the woven cloth. They then sell these materials to wholesale cloth sellers. They pay a stipulated amount as wages for the weaving work. Many master weavers also provide loan to weavers to set up loom, buy other tools and restrict them not to weave sarees for other master weavers. They also decide the wages for the work done by the weavers. Since they are interested in raising their incomes, it is natural for them to look for ways to pay less to the weavers. Distressed weaving families should be provided work from cooperative societies and saved from the master weavers.

- ◆ List the raw materials and tools used to make Ikkat sarees.
- ◆ Why Jagathayya's family has begun to weave for a master weaver?

Key words :

1. Raw materials
2. *Ikkat*
3. Patent
4. Tie & Dye
5. Warp - Weft
6. Eruka Chepputa
7. Co-operative societies

Project work :

Invite a craftsperson to your classroom or visit their work place. Make a wallpaper showing different processes of their production.

Improve your learning

1. Do you think people have enough earnings from work like basket making and weaving?
2. Prepare a list of goods which could have substituted the basket. Discuss with your parents before preparing the list.
3. There are many products that have replaced handicrafts – identify them and try to find out where they are produced. Discuss how this could affect the lives of handicrafts persons.
4. Why did Polaiah’s family come to Hyderabad? Why does Polaiah have no right to vote in Hyderabad?
5. You may find crafts persons like Polaiah producing goods other than baskets. Meet two such persons and collect the following details and discuss them in the class. One sample is given for you.

Sl. No.	Name of the crafts person	Goods produced	One or two important raw materials used	Source of raw materials
1	Polaiah	Baskets	Spokes of date palm leaves	Andugula – native village
2				
3				

6. Why do you think patenting Pochampally Ikkat saree weaving would help weavers in Pochampally?
7. Should weavers procure raw materials and weave Ikkat sarees and try to sell them directly to the people? What are the challenges in it?
8. Prepare the flow diagram depicting the organisation of production in basket making and handloom textile weaving.
9. Compare the similarities and differences between basket making and Ikkat saree weaving and fill in the following table:

Work	Raw materials used	Tools used	How goods are sold
Basket making			
Handloom weaving			

10. List out various handicrafts with location in Andhra Pradesh and prepare a chart.

Industrial Revolution

In the previous lesson, you learned about various ways in which things are made by artisans. We also read that many of them are not able to compete with machine made products and many people have stopped practising their professions. In this chapter we shall explore how machines have come to dominate the way in which products are made and how they impacted the lives of people in societies where they happened.

Increasing control of Traders

During 1500 AD to 1800 AD trade between countries in America, Europe, Africa and Asia increased manifold. Textile trade too began to expand. Now European traders began to use putting out system – that is they gave advances to small farmers and artisans to produce textile goods. During this period, income from farming was low and many peasants were already losing their farm and grazing land. Therefore doing textile work helped them in making a living.

Under putting out system, a cloth trader in Britain purchased cotton from supplier and carried it to the spinners. Then the yarn was taken by the trader to next stage of production - the weavers. The cloth was taken to the fullers and finally to the dyers who gave it colour. These different activities could be done in different parts of the country. But all finishing work was done in London before it was sold in other countries. Thus, textiles goods were

produced by a large number of producers who were controlled by traders. There was no system of factory - that is, all different production aspects of producing a cloth did not happen in the same place but in different households. Each trader engaged 20-25 craftsmen at each stage of production.

Some time later the traders brought together the craftsmen under one roof so that they did not have to go to each one's home or explain their requirements to each person. They set up small workshops called *manufactories*. The craftsmen brought their own tools and worked with raw materials given by the trader. The trader then took the produce and sold it in the market. In this way slowly the control of the trader over the craftsmen increased. This phase is called 'proto-industrialisation' – a phase in which more and more people took to craft production and traders established control over the workers and a large market for craft produce developed across the world.

Beginning of Industrial Revolution 1750-1850 AD

Many changes occurred during this period. In about 1750, machines and steam power began to be increasingly used to produce goods, to move goods and people from one place to another. Several people living in villages moved to towns and cities for work. Today we use many machines in our daily lives and use goods produced using machines. This was the beginning of 'machine age' in Britain.

As the demand for cloth and so on increased manifold, many artisans wondered how they could increase production to cope with the demand. Some of them began thinking, 'These days there is a great demand for our cloth. But we are not able to produce more cloth to meet this demand. Besides, the cloth made with our looms is expensive. If we can make machines which can spin yarn faster and weave cloth faster, we will be able to produce more cloth at a lower price. Then more people will want to buy our cloth and we can earn more money.'

As a result of the pressure of trade and work several people attempted making such machines. Then came the long awaited invention – a machine which could spin lots



Fig 10.1 Spinning Jenny - A new machine to spin yarn.

of yarn in a short time. However, these machines were very heavy and the artisans thought, 'It is so tiring to turn these machines with our hands or feet. How nice it would be if these machines could turn by themselves.' Their dream also became true with the famous invention of James Watt – the steam engine.

James Watt's Invention

James Watt was an English craftsman who made machines. He noticed that steam had so much strength that it could move enormous weight. With this in mind, he made a machine which would run with the help of steam and would not need to be driven by men or animals.

He showed his invention to an industrialist called Boulton and the two entered into a partnership to make such machines. Boulton invested the necessary money and also paid Watt a salary. Watt made the steam engine. The understanding between them was that if they made profit then two thirds of it would be Boulton's and one third would be Watt's. The two together

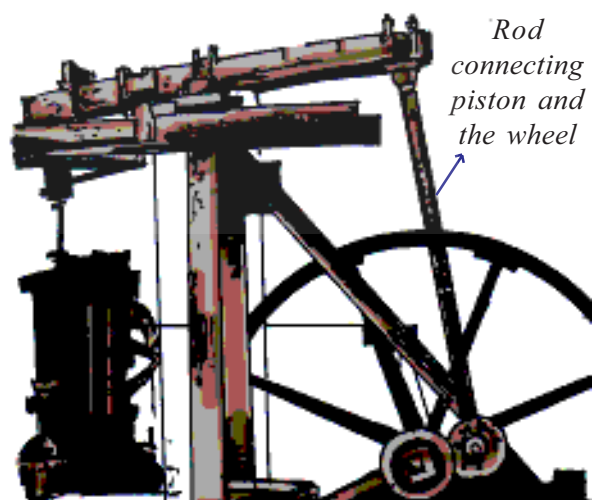


Fig 10.2 This is one of the steam engines made by James Watt. The piston under the pressure from the steam pushes the rod up and down which in turn turns the wheel.

made a large number of steam engines, sold them, and made huge profits. Once it became clear that machines could be made to run on steam, then such machines came to be made for all kinds of work – spinning, weaving, making iron tools, driving vehicles and ships, etc.

- ◆ How did the need for self-driven machines emerge in England?
- ◆ This example shows the arrangement between a scientist-inventor and a capitalist. Do you think it was a just arrangement?

Factory System of Production

During 1750-1850, a new system called the ‘factory system’ emerged. In the place of simple tools and manual power, new machines and steam power came to be increasingly used. Production was now carried on in a place called ‘factory’, unlike what we read earlier where production was happening in homes. Hundreds of workers were brought together to work in these large factories. Machines became important in place of minor tools and handlooms. They produced goods on a very large scale.

All facilities for production were owned and managed by individuals called capitalists. They invested money to bring workers, raw materials and machines. Everything belonged to the owner of the factory, from raw materials and machines to finished products. Unlike in guild system workers worked for wages and did not own things that they produced.

The early factories were dreadful places to work.

Free Distribution by Govt. of A.P.

The Experience of a 19th Century Child Worker

In the 19th century the industrial workers of Europe had to face several hardships. Let us read about the experiences of a child employed in an English coal mine.

“I have been working in these mines since I was four. Workers hew coal with pickaxes and fill the large wagons with it. Our job is to push these loaded wagons to the point from where horses or mules can haul them. This is a very difficult job. Hauling the loaded wagons through water and slush and over very steep slopes leaves us very tired. We have to work in this way for more than 12 hours a day. We are so tired by the time we return home that we don’t even feel like eating. Yesterday, I fell asleep on the way to my house. My mother searched for me and carried me home.”



Fig 10.3 Children pushing cart inside coal mine.

There were several movements to stop employing children in this manner in factories and mines. In response to these movements child labour was banned and now it is a thing of the past in most European countries.

Inside Early Factories

Major changes swept industries with the coming of machines. Machines could be worked by even unskilled persons. Thus skilled artisans were no longer required. In their place a large number of women and children were employed and made to work for meagre wages.

Machines cost a lot of money, and ordinary artisans could not afford them. Only wealthy merchants could set up mechanised factories.

This is what the workers had to say about their plight:

“Everyday we come for work at 6 am. and worked till 8.30 pm. There is lunch break of only an hour. By the end

of the day we are so tired. Then the factory owner uses whips to goad us to keep working.

These days new machines are being introduced constantly. These machines can do the work of several workers at the same time and therefore fewer workers are required. Everytime a new machine is introduced many of us are thrown into the street.”

Most of these workers had no other option as they had been expelled from their lands and if they were small craftsmen, their shops had closed down. Gradually, workers of factories and mines formed their own organisations to fight against the conditions of work. In the beginning, they demanded 10 or 8 hours working day, higher wages, disallowing children under 14 years of age from being employed in mines or factories, etc. Over time, their struggles were successful and the conditions of workers improved.



Fig 10.4 Redrawing of an illustration of inside of a factory.



Fig 10.5

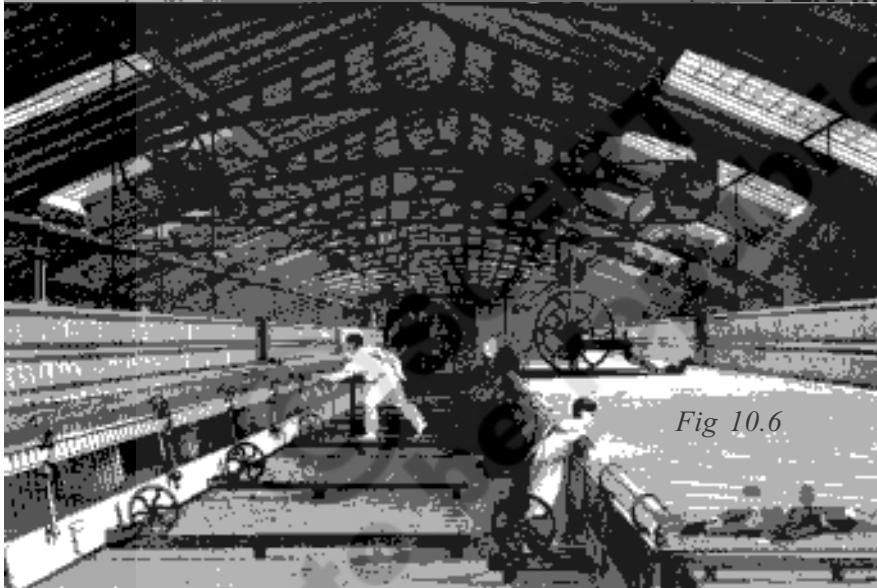


Fig 10.6

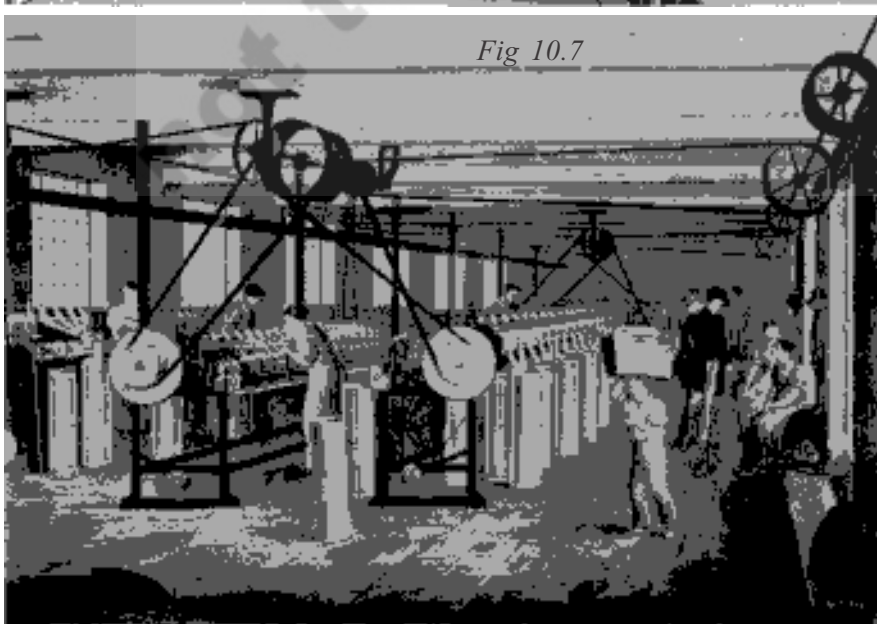


Fig 10.7

Fig 10.5, 10.6 & 10.7

- ◆ Look at these illustrations. These were made during the time of Industrial revolution.
- ◆ What details can you see in these pictures? Describe them.

- ◆ Who were employed to work on machines?
- ◆ Do you know of any factory nearby? Compare the conditions of work of that factory with that of English factories 150 years ago.
- ◆ Compare the conditions of workers of a leather tannery with those of the English workers 150 years ago and find out similarities and differences.

The factories too have changed by now. Almost all work has become automated, with machines directed by computers. They require very few people and little manual work to run them.

Sources of Energy and Industrial Development

You have seen that energy is needed to run machines in a factory. Energy is available from coal, electricity, petroleum, and so on. Initially industries depended upon energy from coal and steam. Subsequently, several other sources of energy like thermal and hydro electricity, petroleum, natural gas, nuclear energy and solar energy have been harnessed.

Transport Revolution

The invention of steam engine boosted shipping industry. It also reduced the cost of transportation by one third of cost of road transport. Yet people looked for better ways of transportation. The next big thing in the context of transport was adaptation of steam engine to locomotives. George Stephenson's locomotive pulled heavy loads along a 64 kilometre track from Liverpool to Manchester at 46 kilometer speed per hour.

In 1840s, John Loudon McAdam devised a method of laying road using broken stones. This created a hard surface which was an important advancement in road construction. Within another decade bitumen-based binding which we see in our areas as tar(mac) roads were built. This was further followed by the use of motor cars.

In the early part of the 20th century aircrafts were developed by Wright Brothers and today air transport is a major method of transport.

Trade in Industrial Products

Industrial production increased so much that it was not possible to sell all the products in their own countries. The factory owners began to sell them in other countries too. Machine made goods were cheap and durable. Hence the demand for them increased all over the world. This gave a boost to the industries in England and other countries. However, what is interesting is that these countries did not have the raw materials required for production of these goods. For example, the cotton needed for producing cloth was grown in India and America. English traders purchased these raw materials from India and other countries and sold them to factory owners. Subsequently, the traders purchased the finished products and sold them in countries like India, America, etc.

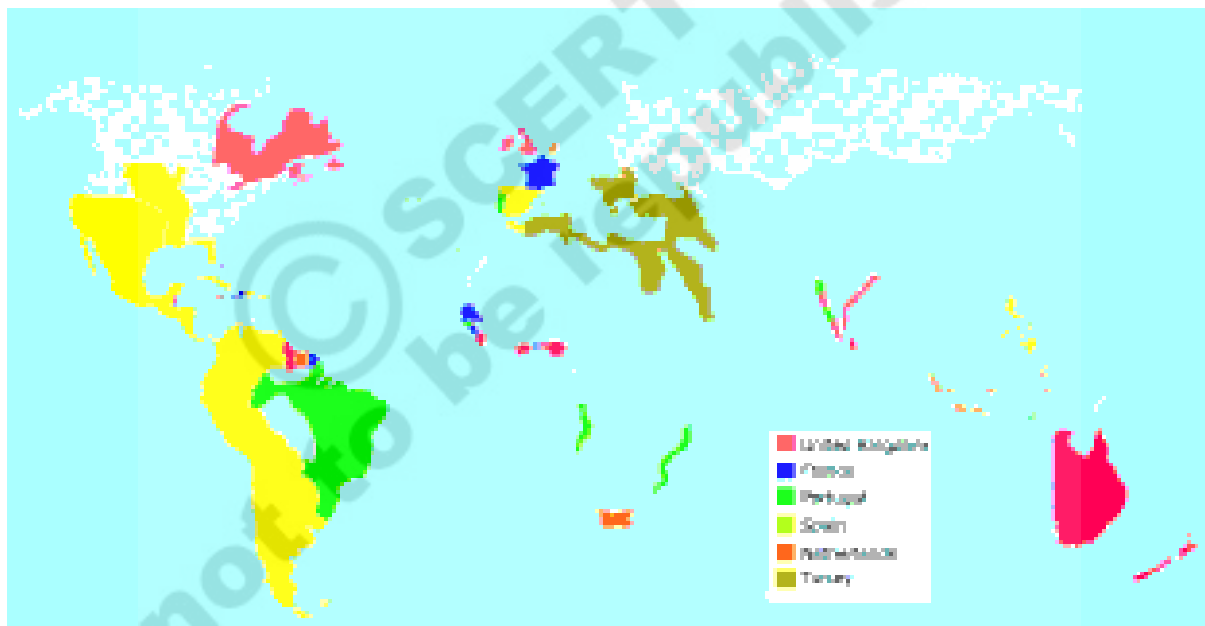
In order to serve the interests of their trade and industry the Europeans sought to subjugate these countries. Other countries like France, Germany, Spain, Portugal, Belgium, Holland and others conquered colonies for themselves in Asia, Africa, Australia and America ('Colonies' are

those countries whose resources are used for the benefit of another country). These European countries exploited the colonies in other continents and grew wealthy in the process.

Urbanisation and slums

Industrial revolution led to gradual shift of people from the villages to the towns. Industries and other urban activities gave people the necessary livelihood. As people moved to the towns which were newly emerging, they settled down in makeshift houses and shelters which were cramped

and had little sanitation or other facilities. Accidents, diseases and epidemics were common. Most workers' residential areas lacked proper ventilation, health and sanitation facilities. Slums became common scenario in towns and cities especially near the factories and mines. At the same time, distinct quarters came up for the rich and powerful which were well provided in terms of open spaces, sanitation, water supply, roads and other facilities. Slowly people fought for civic rights and the conditions of the workers quarters also improved.



Map 1: A world map showing colonies of European countries in 1800

Key words :

1. Revolution
2. Production
3. Factory
4. Organisation
5. Nuclear Energy
6. Urbanisation
7. Child worker
8. Slums

Improve your learning

1. Correct the false sentences:

Under the putting out system

- a. *Spinners took cotton to the weavers.*
- b. *Unlike in guild system traders controlled what product was to be made.*
- c. *All work was done by the same group of people.*

Under the Guild system

- a. *All small farmers were allowed to learn weaving.*
- b. *Weavers determined prices and quality of the products.*

2. Putting out system is better than factory based production of textiles. Do you agree? Give reasons for your answer.
3. If Kruthika argues “Railways in India were built only for the benefit of the people by colonial rulers” what can you provide to counter it?
4. How will increase in the wages of the workers affect industrial production?
5. Why did factory owners pay low wages and force workers to work for longer hours?
6. Why do you think the working conditions in factories should be improved?
7. Why is it necessary for government to enact laws to improve the working conditions?
8. Why should children not be employed in factories?
9. Transport system helps the industry – justify this statement in the context of Industrialisation.
10. Locate the following places in the world map.
a) England b) Portugal c) France d) Spain

Project work :

- ◆ You may recall lessons on agriculture and trade in Class VI. Compare the nature of farmers and traders in Andhra Pradesh with traders in Britain or Europe. You can use a few criteria and tabulate.
- ◆ Do you know any child in your neighbourhood working in a factory or shop? If you find, how do you respond?

Production in a Factory – A Paper Mill

Handicraft production is done at home by small families with the help of some simple tools. In contrast factories produce goods on a large scale, with the help of machines and a large number of workers. Let us find out how production is organised in large factories.

- ◆ Have you ever visited any factory? Describe it.
- ◆ Draw a picture of the factory you visited and using your imagination describe in 300 words on what could happen inside a factory.

We use so much of paper. Do you know how the paper of books, records, registers, progress reports and news papers is made? There are four paper mills in Andhra Pradesh - Sirpur Kagaznagar (Adilabad

district), Rajamundry (East Godavari district), Kurnool, and Bhadrachalam (Khammam district).

- ◆ Mark the four districts with paper mills in a map of Andhra Pradesh. Why do you think they are located there?

Raw Materials

Materials required to produce a commodity are called raw materials.



*Fig 11.1
Factory from outside*



Fig 11.2 Lorries waiting with bamboo loads

Factories require large and continuous supply of raw materials. You will find dozens of lorries supplying raw materials to them every day. Paper mills generally use wood from bamboo, eucalyptus and subabul trees. Subabul wood is most widely used now. Besides wood a large number of chemicals such as common salt, caustic soda and so on are also used in different stages of paper making. Scrap paper is also recycled in paper mills.

Factories use heavy machinery which are run by electricity. Paper mill needs electricity for operating its machines. The paper mill shown in the picture for example, requires nearly 25 Mega Watt every year. More than half of the electricity requirement is met through the factory's own power generators. Besides electricity, the mill requires a large quantity of clean water throughout the year.

Paper mills and Disappearance of Bamboo

Although raw materials for paper are available in the forests, it is not very easily procured. Paper mills are generally

established near forests where bamboo and other soft wood trees are available.

Paper mills engage contractors to supply bamboo and other raw materials. A few decades ago, contractors employed tribal people (like those living in Kunawaram hills you read about in Class VI) to cut bamboo from forests. Due to excessive cutting in the past, there are no bamboos available in forests near the paper mills now.

Hence, paper mills are looking for alternative raw materials like subabul which are grown in villages. This led the government to encourage people to grow subabul trees on farmland. Now-a-days, paper mills bring wood from distant places.

- ◆ What are the most important raw materials for the paper industry?
- ◆ Would you consider electricity as a raw material? Give your reasons.
- ◆ Discuss about a few mills or factories you know with your teacher and fill in the table.



Fig 11.3 Bamboo lifter

S.No.	Product	Name of industry	Raw Material
1	Shoe/Chappel	Footwear industry	Leather / rubber / canvas
2			
3			
4			

- ◆ Do you feel that if we use more paper, we will also have to cut more forests or reduce the area under food crops? Discuss in the class.

When we visited the paper mill, we found 4-5 lorries with loads of subabul wood waiting outside the mill gate. Only after 9.30 am, they would be allowed to enter the mill. There were separate gates – one for the workers and the other large gate for the vehicles. We had prior permission from the paper mill authorities to visit the paper mill. We entered our names in the register at the security room near the gate and went into the mill. Later lorries also entered the mill.

Process of Paper Making

Inside the factory compound we saw a lifter crane lifting subabul wood from a lorry and placing it on an iron platform. A conveyor belt took the wood to the cutting machine. Paper is actually made in five stages. This paper mill had separate

sections for each stage which uses different machines and raw materials. The stages are as follows:

(i) *Chipping*: In this stage, large wood pieces are cut into small chips with the help of large machines. There are about 15 to 20 workers in this section. The chips are separated according to the size. The big chips are again cut into small chips. One load of a lorry wood is cut by the machines into chips in about 30 minutes. Work goes in this way throughout the day. Can you imagine how many trees have to be cut to run a paper mill for just one day i.e. 24 hours?

(ii) *Making of wood pulp*: The small wood chips are sent to fibre line section. In this section, the wood chips are boiled with some chemicals in large vessels.



Fig 11.4 Labourer at chipping machine



Fig 11.5 Labourers at setting machine



Fig 11.6 Pulping machine (Fiber line)

Through this process the wood chips are turned into thin fibres (like cotton fibres). The liquid pulp is then whitened using chemicals. Then it becomes creamy. We found the liquid pulp in milky white colour without any dust.

(iii) *Spreading the pulp:* The liquid pulp is spread on thin screens over a cylinder. This is an important stage in the paper manufacturing as the width, length and thickness of the paper is set. The water drains out and also evaporates due to heat and the pulp dries up. Once this is done, the pulp is forwarded through the conveyer belt.

(iv) *Pressing, drying and rolling:* The drying pulp is pressed by rollers to smoothen it. When the pulp dries up completely we get a sheet of paper which is now rolled up.

(v) *Cutting:* The paper is cut in the cutting machines according to the size required. Paper is made into rolls and sheets as well. It is then packed and sent to godowns.

Production takes place continuously in all sections at the same time.

Work in Batches

The paper in the form of rolls and sheets is preserved in godowns. Each roll is labeled with Batch / Lot no., weight etc. What is a batch? When a lorry load of wood is brought into the factory, the entire wood is given a batch number. This batch is then sent to different sections one after the other. Raw material of one batch would be processed

together at each stage. For example, when batch No. 201 is being cut into small pieces, at the same time the previous batch (No. 200) would be in the section for making pulp and batch No. 199 would be in the spreading section and so on. As soon as No. 201 is cut into pieces it would be sent to the next section and No. 202 would come up for cutting into pieces.

All papers produced in one batch would have had the same inputs and processing and so the quality will be the same. The batch system allows a factory to produce continuously throughout the day. It also allows the managers to trace any mistake in the product by checking what went wrong with the particular batch.

Working Hours and Shifts

This paper mill runs all 24 hours in a day. The workers work in three shifts of eight hours each. They are 'A', 'B' and 'C' shifts. In each shift about 800-900 workers are at work.

A Shift: 6 AM to 2 PM

B Shift: 2 PM to 10 PM

C Shift: 10 PM to 6 AM (Night Shift)

Night shift workers get a special allowance. Workers change their shift

cyclically. Workers of each shift have to move from A shift to B and then to C every week. There is also a general shift for the administrative staff which is from 9.30 am to 5 pm. Administrative staff look after the management, accounts, trade and sales of the product, workers' welfare activities etc.

Selling the Paper

This paper mill has marketing depots in different cities. It also sells papers in other countries such as Sri Lanka, Bangladesh, Nepal, Malaysia, Singapore, Nigeria and South Africa. The paper is sold through these depots.

Developed railway and roadway are there. Therefore it is easy to transport wood and paper to and from the mill.

- ◆ Why is it necessary to put the Label / Batch no. on the paper rolls?
- ◆ Why do you think the paper mill works through the day and night? Compare this with how agricultural field work takes place.

- ◆ Why is there a security guard at the gate? Enact how the watchman behaves. Who does he allow in and who does he not allow?

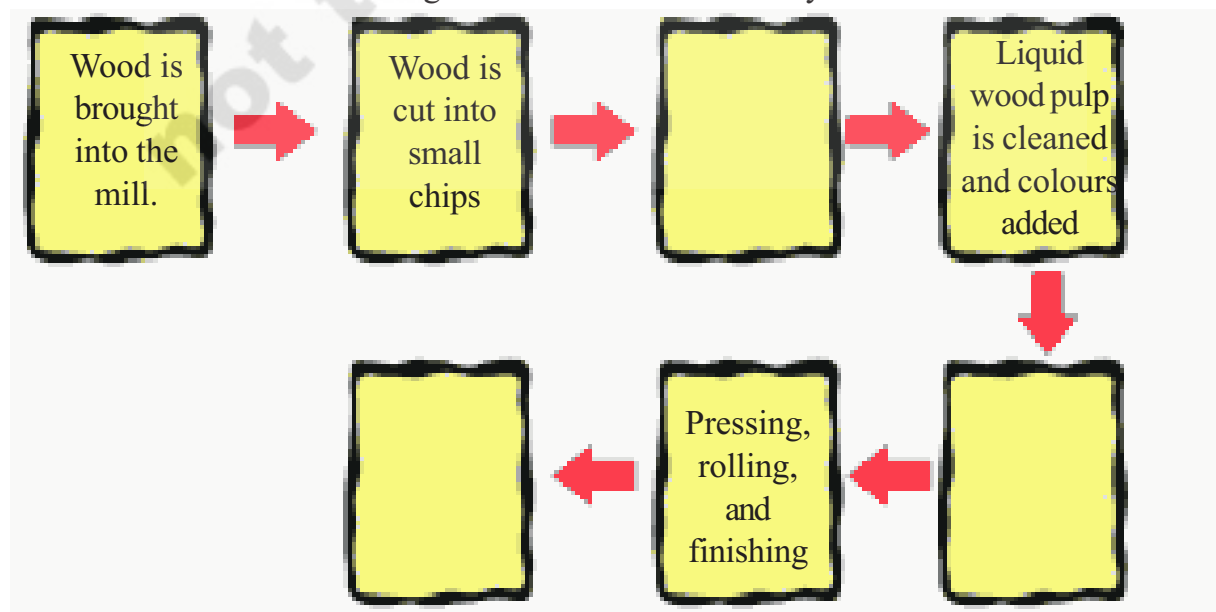
Working in Paper Mill

A factory employs a large number of workers of different kinds - some work on machines, some help them, some take care of electrical fittings, some help in transporting the materials, etc. Some of them are highly qualified like engineers while others may have education from ITI and polytechnique colleges. Still others may be illiterate doing manual work like cleaning. A factory also employs people on different terms and conditions.

Some are regular 'permanent' workers of the factory, while some others may be employed as casual workers when the need arises; still others are employed as contract workers. Let us look at this in greater detail.

Anand is a permanent worker in the paper mill. You can see him in his uniform - blue shirt and khaki pant in the pressing section.

- ◆ Read the below section again and fill in the blanks in your own sentences :



He has been working in this mill for more than 10 years and he is getting Rs. 15,000 per month. As a regular employee, he gets a number of benefits like Provident Fund (paid when he retires from service), medical insurance, etc. Also, if for any reason his employment is terminated or he has to cease work due to any accident etc, he will be paid compensation by the factory. He will also get a salary rise every year. If he or his family member becomes sick, he takes them to nearby government run (Employees State Insurance -ESI) dispensary and gets medicines free of cost. He pays a small amount and the paper mill pays some amount for availing this facility. Anand gets regular holidays – one day every week, festivals, and some additional leaves. He is also given allowances for buying uniform cloth and washing allowances. In some years, Anand also gets bonus, an additional amount paid to workers when the paper mill gets benefits. There are about 1800 such permanent workers in the mill.

Umar is not a permanent worker but he comes daily and works in the factory. He

is a contract labourer. He is usually asked to help in unloading the trucks or in packing and loading the paper. One year ago he was contacted in his village in Maharashtra by a labour contractor who promised him a job in this mill. Workers like Umar are paid a lower salary than that of permanent workers (about Rs.8000 a month) and do not get the allowances or medical help or bonus. They don't get any paid holiday. However, they get work throughout the year and may get regularised as permanent workers after two or three years of working.

The women who work in this factory usually clean the floors and paste labels on the paper packets. Pushpa is working as a casual worker in this factory. Workers who are employed off and on are called 'Casual Workers.' Pushpa comes every morning to the factory to see if there is work. Usually they employ her for four or five days in a week to clean the floors of the factory. In the section where wood is chipped, there is a lot of wood dust and chips all over the

floor. All this has to be cleaned and the machines are to be dusted properly. She is paid on a daily basis and many days she does not get any work. She is paid about Rs.100-150 a day. Though she has been working for more than three years, she earns only Rs. 2500 a month. She is also not entitled to any of the facilities that are available to permanent workers like Anand.



Fig 11.7 Paper cutting machine

Usually factory owners try to reduce their costs by employing casual workers even for regular work. Sometimes they bring new machines which require fewer workers. In such situations the workers and their unions resort to agitations and bargaining with the managers to improve their lot.



Fig 11.8 Inside the factory

Besides the workers the mill employs a number of accountants, clerks and managers who are paid better salaries. The senior managers who are usually from the families of the owners of the mill get paid very high salaries along with a number of allowances, free housing, education for children etc.

- ◆ Fill the table comparing Anand, Umar and Pushpa:

Who Owns the Paper Mill?

This mill does not have any one owner. Some people got together to form a company which owns this mill. These people invested large amounts of money and also borrowed money from the banks

S.No.	Name	Work	Experience	Income	Other Benefits
1	Anand				
2	Umar				
3	Pushpa				

- ◆ Why do you think a factory needs to employ people on different terms - regular, temporary and casual labourers?
- ◆ What do you think are the problems of the workers who are not permanent?
- ◆ Why do you think people from faraway places come to work in the paper mill in Andhra Pradesh?

to set up this factory. They appoint the managers, other administrative staff and regular employees. The workers, managers and administrative staff are paid salaries but not the owners. The owners share amongst themselves whatever is left after paying wages and other costs of running this paper mill. That is, they get all the profits from the factory. They also bear the loss, if any.

Can you summarise the main features of factory production using the following points?

1. Machines:
2. Raw Materials:
3. Energy and Water:
4. Production:
5. Workers:
6. Managers:
7. Market:
8. Owners:

Some factories are owned not by individual owners or group of owners but by the government. These are run by the government for the welfare of all people.

Most factories need raw materials in such large quantities that natural resources like forests, rivers and mines are rapidly exhausted. They also give out smoke, pollute the rivers and surrounding land with their chemical effluents. Thus there is a need to develop methods to control the damage they cause to the environment.

Factories provide employment to a large number of people. However, the workers who work in these factories often find the work very tedious and many of them become sick due to exposure to dust and chemicals etc. They also get paid very little. They are also often forced to live in slums with poor facilities.

One of the major challenges before us is to find out how to balance our need for various kinds of goods and the ill effects of the factory system and how to make the life of workers comfortable and dignified.

Pollution

When we were going to the other side of the paper mill, we felt some unpleasant smell in the area. This was due to the use of chemicals. After coming out of the paper mill, we were talking to a few residents living on the outskirts of the paper mill. They said this stench was usual and it was common to find dust released from the industry set down on the leaves of plants on the farm, trees in the nearby area and on garden plants. The mill also draws a lot of fresh water from the river but lets out waste water containing poisonous chemicals which eventually joins the river.

Only last year the paper mill got an effluent treatment plant to which all the waste water with chemicals is sent. This machine, removes contaminants (substances causing harm to living organisms through air, water, soil and food) and produce environmentally safe water (treated effluent) and solid waste suitable for disposal or reuse (which is normally used as fertilizer). Besides this, the paper mills use treated effluent to water their gardens. Some farmers also use this for irrigation.

There are large number of factories in our state and country which produce diverse articles of use. They produce them in large quantities in a short time.



Fig 11.9 Rolls of papers

Key words :

1. Platform
2. Conveyor belt
3. Fibre line
4. Label

5. Allowance
6. Bonus
7. Pollution
8. Working hours
9. Raw material

Improve your learning

1. Imagine that you wish to start a leather or textile factory. What are the aspects you will have to consider for setting up a mill?
2. Explain the process of paper making in your own words.
3. Do you think this paper mill will stop working one day? If it does, what will be the impact on the labourers' lives?
4. Fill in the following table

Shift	Timings
A	
B	
C	

5. Imagine a world without paper. What alternatives will you use instead of paper?
6. What do you think are some of the things that can be done to stop pollution caused by industries?
7. Organise a debate in the classroom on the pros and cons of the paper mill.
8. List the benefits and income received by a regular employee of the paper mill. Contrast them with that of a temporary employee and a casual worker.
9. Compare the production of baskets by craftspersons and production of paper with reference to the following points: (i) Workplace (ii) Tools/machines (iii) raw materials (iv) Workers (v) Market (vi) Owners.
10. There is a paper mill at Sirpur Kagaznagar in Adilabad district. Why do you think it is not established in the district head quarters? Discuss.

Project work :

You might have noticed some factories in your area causing pollution. Or imagine that in your locality one factory is causing pollution. Write a letter to the editor of a local newspaper and discuss the contents in the classroom.

Importance of Transport System

In our daily life, we use various vehicles to go from one place to another. We also move from one place to another. How people use transport facilities, roads, waterways, railways and airports and why people make choices to use transport services are discussed in this chapter. Besides these, why and how people depend on transport for their source of earning and how markets use transport are also discussed. You will learn more about other means of transport such as railways, waterways and airports in higher classes.

You already know a lot about transport systems.

- ◆ Fill the table below with given words. Some words could be placed in more than one place, and give reasons for choosing to put the word in a column.

Pilgrims, Car, Fish, Cattle, Grain, Bullock-cart, Petroleum, Workers, Ship, Helicopter, Tanker, Lorry, Cycle, Tourists, Iron-ore, Goods Train, Mangoes.

Mode of Transport	Vehicles used	Some products/groups of people – that could be using
Roads		
Railways		
Waterways		
Airways		

Transport System in Andhra Pradesh

If we look for a big picture about the transport system in the state, we would note the following :

Roads: In India, most roads are built and maintained by government. Roads are of different types. Some roads are called

National Highways built across different states in the country. For instance, a road network called National Highway No.7 (or 44) runs through Uttar Pradesh, Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka and Tamil Nadu. While Andhra Pradesh state government maintains roads connecting small towns and districts, Panchayats are responsible for village roads

many of which are made of gravel. Corporations and Municipalities are responsible for urban roads. In addition, roads laid along international boundaries are called border roads. Roadways play an important role in integrating people in remote areas with main cities.

Railways: One fifth of travellers in India use trains. Railways are mainly used to transport goods like coal, iron ore, fertilizers, cement, food grains etc. In Andhra Pradesh, there are nearly 650 Railway stations and Railway routes of about 5000 km. Railways collect the goods from and to sea ports. Seaports themselves are crucial as most of our foreign trade happens through them.

Airways: There are six airports in Andhra Pradesh – one international and five domestic airports. International Airport is in Hyderabad (Shamshabad) and the remaining airports are Visakhapatnam, Tirupathi (Renigunta), Rajamundry, Vijayawada (Gannavaram) and Puttaparthi. International Airport is for travel from Andhra Pradesh to foreign countries. Domestic airports connect those who travel within India.

Waterways: Almost all goods traded by Indian traders are transported to other countries through ports. Port cities or towns are thus major trading centres. Andhra Pradesh has 15 ports out of which Visakhapatnam is the largest port. Rivers such as the Godavari, the Krishna and the Penna and their canals are used as waterways.

- ◆ On a map locate the airports, and port cities of Andhra Pradesh.

Use of Roads for production and sale of goods

Most people in Andhra Pradesh depend on roads for travel. Transport facilities available to villages in Andhra Pradesh vary. In 2001, nearly three fourth of the villages had transport facilities.

In earlier chapters and classes, there were descriptions about farmers, fisher-folk, and industries which depend upon transport for various reasons. Farmers would want to take their produce to Rythu bazaar, fisher-folk will want to make the catch reach the buyer before it gets spoiled. Paper industry uses lorries to bring their raw material. Industries that produce goods depend on transport systems to reach out to consumers. Let us take the example of cotton. Cotton produced by farmers moves from fields to the factories. There are different processes through which cloth is produced and so it may have to move from one place to another, where cloth is finally produced. Markets are thus very dependent on transport facilities.

- ◆ Read the following and solve the problem given below:

Farmers residing in Punniapalli sell their paddy mostly in the nearby town Nayudupet which is about 7 km away from the village. Bullock cart operators can transport about 10 paddy bags at a time and charge Rs. 50 per bag. Tractor owners charge Rs. 20 per bag. Each tractor can carry about 30-40 bags. Lorries charge Rs. 10 per bag and can carry about 150 -170 bags in a trip. In the case of long distances, trucks charge more. For example, to

transport paddy from a wholesale trader in Nayudupet to Martur in Prakasam district which is about 100-120 kms away truck operators charge Rs. 50 per bag. They charge Rs. 800-1000 per tonne to transport goods for 500 kilometres.

There are three farmers in a village. They cultivated paddy in their fields and harvested. Their harvests are 25 bags, 50 bags and 75 bags respectively. They wish to sell their paddy in the Vyavasaya Market Yard in a nearby town which is 25 kilometres away. What mode of transport would you suggest and why?



Fig 12.1 Railway workers

- ◆ Find out the fares for travelling in the following types of buses and time taken for travel between any two locations you are familiar with.

Type of bus	Fare	Time taken
Pallevelugu / Gramani		
Express		
Delux		



Fig 12.2 Transporting Animals

Employment in Transport Activities

You might have noticed that in every bus two people are working – driver and conductor. For maintenance of transport vehicles, hundreds and thousands of people are required. For example, the Andhra Pradesh State Road Transport Corporation employs 1,20,000 persons to run its 20,000 buses so that these buses go all over Andhra Pradesh carrying more than 1.25 crore people every day. These employees maintain accounts, repair buses, or work in bus depots. Some employees issue bus passes and tickets in bus stations / stands or work as checking inspectors.

Nearly one crore vehicles are running on Andhra Pradesh roads and about three fourth of them are two wheelers. The functioning of transport system also requires many support activities – petrol/ diesel pump stations, repairing shops, shops selling transport vehicles and spare parts.

- ◆ Do you think differences in these fares are justified? Give reasons.
- ◆ Along with the difference in the fares there are also differences in the facilities available and time taken to reach the location. However, in your opinion how would most people prefer to travel? And suppose you were responsible for increasing the facilities in them which type of bus would you give preference?

Transport Services and Choices

People could use a particular mode of transport depending on the facilities available and affordability. Sometimes options to use different types of transport are possible. For example, it is possible to travel by bus, train or flight to Pakistan. For centuries, ships were important for travelling to far away countries or taking goods to far off countries. While today there are fewer people travelling by the ships, goods are mostly transported by them.

It is possible that some of you come to school by buses. People who are employed in factories, offices, households, shops etc. also depend on transport. Every city may not have public transport like buses, and people then depend on their own vehicles or hired vehicles like auto-rickshaws or taxis.

If the cost of travel is high, people may



Fig 12.3 Urban Transport in Hyderabad



Fig 12.4 Old and new modes of transport

not be able to move from one place to another. For example, if the wages in one place are higher than in another place, people earning low incomes may wish to move to the place where they get higher incomes. When the transport cost is high, they may not show interest in moving to that place.

The cost of travel, especially for the people who earn low incomes, is high as they have to put away a larger share of their wages for it. Cycling and walking also may not be easy to travel long distances. In big cities, it also becomes important to have enough place for people to walk or ride a cycle. Even when there are pavements, you may find them occupied by shopkeepers. Sometimes the height of the road and pavement could be so different that persons who use wheelchairs cannot use them and take the risk of riding them along the motorised vehicles.

- ◆ Krishna and Ibrahim study in a school in the same class. They live at different places but the distance from their house to school is three kilometers. Ibrahim comes to school in city bus whereas Krishna travels by school bus. What could be reasons for families of these students to travel by different bus services?

Congestion and Pollution

Most cities in our country are now experiencing congestion, and traffic blocks. If there is no good public transport system more people start buying private vehicles, which can further increase the traffic blocks in urban areas because the roads may not be broad enough to accommodate all these vehicles. Let us try to understand this with an example. The number of people living in six big cities in India increased by two times during 1981 to 2001 whereas the number of motor vehicles went up by eight times during the same period.

Motorcycles and cars are used in a big way. This has led to use of more petrol and diesel which increase air pollution. To reduce pollution we should consume less of these petroleum products. Public transport can help in this aspect as they carry more people with minimum cost.

Travelling safety

Road travel now-a-days has become more risky. The road accidents and deaths and injuries affect low income families as many of those killed or injured tend to be cyclists, pedestrians or pavement dwellers. Accidents can occur not merely on roads, but also in other means of transport. In places where the roads and rail-lines cross each other there are often gates to stop the



Fig 12.5 A train that climbs the mountain in Ooty.

vehicles while the trains are passing. These are called railway gates. However if there are no such gates in places where roads and rail-lines cross each other, it is important for people and vehicles to stop and look in both directions before crossing them.

Road Safety Week

First week of every year, the Road Transport departments all over the country celebrate Road Safety Week. On this occasion, they give guidelines to the people to follow traffic rules. The government-run companies such as the Andhra Pradesh State Road Transport Corporation conduct

awareness campaigns among drivers and give them training to drive safely. They also go to schools and organise essay writing, debate and other competitions among students and encourage them to travel safely and follow traffic rules. Every person using transport system – roads, railways or airways and those working in them are required to follow specific safety rules. This will reduce the deaths, injuries and other casualties occurring due to transport.



Fig 12.6 Visakhapatnam port

- ◆ Contact the nearest traffic police or driving school in your locality or a person who has a driving licence. Discuss how drivers are trained. Identify the details of things displayed in the driving school premises.
- ◆ Discuss basic rules and regulations in using roads and how to travel safely on roads. In your classroom display rules regarding traffic.

Key words :

- | | |
|----------------------|--------------------------|
| 1. Safety travelling | 7. State Highway |
| 2. Roadways | 8. Village / Rural roads |
| 3. Airways | 9. Urban roads |
| 4. Waterways | 10. Border roads |
| 5. Railways | 11. APSRTC |
| 6. National Highway | 12. Congestion |

Improve your learning

1. How is the transport system essential for producing agricultural goods? Illustrate with an example.
2. How is the use of buses different from trains?
3. Why is it important to provide transport facilities to villages?
4. Why do you think waterways are important for a country?
5. How does the transport system become a means for livelihood?
6. What would happen if there is a rise in transport cost for goods made in factories? Illustrate with an example.

Project work:

Interact with a driver working in transport and obtain information on the dangers and other aspects of his job.

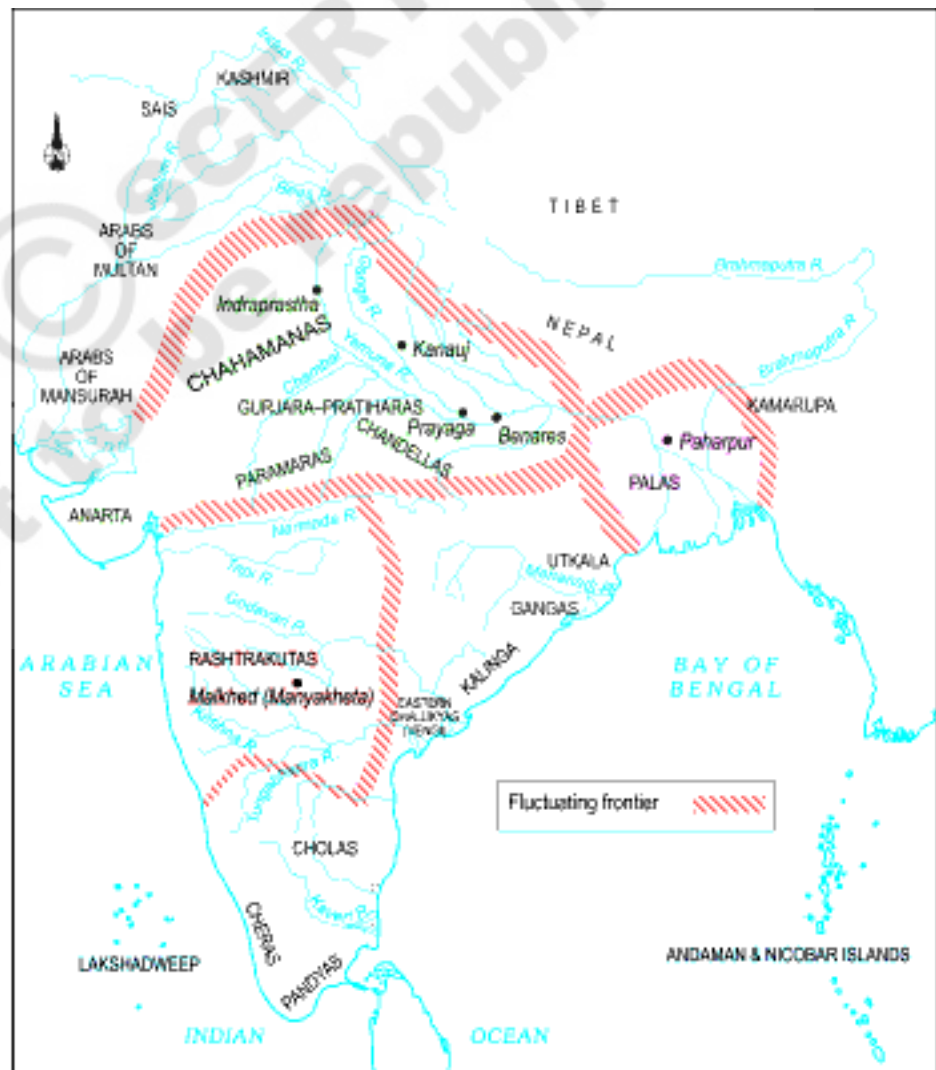
New Kings and Kingdoms

PART - I

Many new dynasties emerged after the seventh century. Map 1 shows the major ruling dynasties in different parts of the subcontinent between the seventh and twelfth centuries.

- Locate the Gurjara-Pratiharas, Rashtrakutas, Palas, Cholas and Chahamanas (Chauhans).
- Can you identify the present day states over which they exercised control?

Map 1 Major kingdoms during seventh-twelfth centuries



The Emergence of New Dynasties

By the seventh century there were big landlords or warrior chiefs in different regions of the subcontinent. Existing kings often acknowledged them as their subordinates or *samanthas*. They were expected to bring gifts for their kings or overlords, be present at their courts and provide them with military support. As *samanthas* gained power and wealth, they declared themselves to be *maha-samantha*, *maha mandaleshvara* (the great lord of a “circle” or region) and so on. Sometimes they asserted their independence from their overlords.

One such instance was that of the Rashtrakutas in the Deccan. Initially they were subordinate to the Chalukyas of

Karnataka. In the mid-eighth century, Dantidurga, a Rashtrakuta chief, overthrew his Chalukya overlord and performed a ritual called *hiranya-garbha* (literally, the golden womb). When this ritual was performed with the help of Brahmanas, it was thought to lead to the “rebirth” of the sacrificer as a Kshatriya, even if he was not one by birth.

- Do you think being born as *Kshatriya* was important in order to become a ruler during this period?

In other cases, men from enterprising families used their military skills to carve out kingdoms. For instance, the Kadamba Mayurasharman and the Gurjara-Pratihara Harichandra were Brahmanas who gave up their traditional professions and took to arms, successfully establishing kingdoms in Karnataka and Rajasthan respectively.



Fig 13.1 Wall relief from Cave 15, Ellora, showing Vishnu as Narasimha, the man-lion. It is a work of the Rashtrakuta period.

Prashastis and Land Grants

The invocation part of an inscription is *Prashasti*. *Prashastis* contain details about the ruling family such as their predecessors and the period to which they belonged. They also contain exaggerated accounts of rulers, achievements. But they tell us how rulers wanted to depict themselves as, for example valiant, victorious warriors. These were composed by learned Brahmanas, who occasionally helped in the administration.

The “achievements” of Nagabhata

Many rulers described their achievements in *prashastis*.

One *prashasti*, written in Sanskrit and found in Gwalior, Madhya Pradesh, describes the exploits of Nagabhata, a Pratihara king, as follows:

The kings of Andhra, Saindhava (Sind), Vidarbha (part of Maharashtra) and Kalinga (part of Odisha) fell before him even as he was a prince ...

He won a victory over Chakrayudha (the ruler of Kanauj) ...

He defeated the king of Vanga (part of Bengal), Anarta (part of Gujarat), Malva (part of Madhya Pradesh), Kirata (forest peoples), Turushka (Turks), Vatsa, Matsya (both kingdoms in north India)

Find some of these areas in Map 1.



Fig 13.2 This is a set of copper plates recording a grant of land made by a ruler in the ninth century, written partly in Sanskrit and partly in Tamil. The ring holding the plates together is secured with the royal seal, to indicate that this is an authentic document.

Kings often rewarded Brahmanas by grants of land. These were recorded on copper plates, which were given to those who received the land.

In twelfth century a long Sanskrit poem containing the history of kings who ruled over Kashmir, was composed by an author named Kalhana. He used a variety of sources, including inscriptions, documents, eyewitness accounts and earlier histories, to write his account. Unlike the writers of *prashastis*, he was often critical about rulers and their policies.

What was given with the land

This is part of the Tamil section of a land grant given by the Cholas:

We have demarcated the boundaries of the land by making earthen embankments, as well as by planting thorny bushes.

This is what the land contains: fruit-bearing trees, water, land, gardens and orchards, trees, wells, open spaces, pasture-land, a village, anthills, platforms, canals, ditches, rivers, silt-laden land, tanks, granaries, fish ponds, bee hives, and deep lakes.

He who receives the land can collect taxes from it. He can collect the taxes imposed by judicial officers as fines, the tax on betel-leaves, that on woven cloth, as well as on vehicles.

He can build large rooms, with upper stories made of baked bricks, he can get large and small wells dug, he can plant trees and thorny bushes, if necessary, he can get canals constructed for irrigation. He should ensure that water is not wasted, and that embankments are built.

● List all the possible sources of irrigation mentioned in the inscription, and discuss how these might have been used.

Administration in the Kingdoms

Many of these new kings adopted high-sounding titles such as *maharaja-adhiraja* (great king, overlord of kings), *tribhuvana-chakravarti* (lord of the three worlds) and so on. However, in spite of such claims, they often shared power with their *samanthas* as well as with associations of peasants, traders and Brahmanas.

In each of these kingdoms, resources were obtained from the producers – that is, peasants, cattle-keepers, artisans – who were often persuaded or compelled to surrender part of what they produced. Sometimes these were claimed as “rent” due to a lord who asserted that he owned the land. Revenue was also collected from traders.

These resources were used to finance the king’s establishment, as well as for the construction of temples and forts. They were also used to fight wars, which were in turn expected to lead to the acquisition of wealth in the form of plunder, and access to land as well as trade routes.

The functionaries for collecting revenue were generally recruited from influential families, and positions were often hereditary. This was true about the army as well. In many cases, close relatives of the king held these positions.

- In what ways was this form of administration different from the present day system?

Warfare for Wealth

You may have noticed that each of these ruling dynasties was based in a specific

region. At the same time, they tried to control other areas. One particularly prized area was the city of Kanauj in the Ganga valley. For centuries, rulers belonging to the Gurjara-Pratihara, Rashtrakuta and Pala dynasties fought for control over Kanauj. As there were three “parties” in this long-drawn conflict, historians often describe it as the “tripartite struggle”.

Look at Map 1 and suggest reasons why the rulers wanted to control Kanauj and the Ganga valley.

Mahmud Ghazni :

One of the rulers *Sultan* Mahmud of Ghazni, Afghanistan ruled from 997 AD to 1030 AD, and extended control over parts of Central Asia, Iran and the north-western part of the subcontinent. He raided the subcontinent almost every year – his targets were wealthy temples, including that of Somnath, Gujarat. Much of the wealth Mahmud carried away was used to create a splendid capital city at Ghazni.

Sultan Mahmud was also interested in finding out more about the people he conquered, and entrusted a scholar named al-Biruni to write an account of the subcontinent. This Arabic work, known as the *Kitab al-Hind*, is an important source for historians. Al-Biruni consulted Sanskrit scholars to prepare this account.

Chahamanas

Chahamanas, later known as the Chauhans, ruled over the region around Delhi and Ajmer. They attempted to expand their control to the west and the east, where they were opposed by the Chalukyas

of Gujarat and the Gahadavalas of western Uttar Pradesh. The best-known Chahamanas ruler was Prithviraja III (1168 AD-1192 AD), who defeated an Afghan ruler named Sultan Muhammad Ghori in 1191 AD, but lost to him the very next year, in 1192 AD.

Look at Map 1 again and discuss why the Chahamanas may have wanted to expand their territories.

PART - II

The Cholas

Let us have a look at South India now.

Chola rule is one of the well documented history in the South. Let us see how they became successful rulers.

From Uraiyur to Thanjavur

How did the Cholas rise to power? A minor chiefly-family known as the Muttaraiyar held power in the Kaveri delta. They were subordinates to the Pallava kings of Kanchipuram. Vijayalaya, who belonged to the ancient chiefly-family of the Cholas

from Uraiyur, captured the delta from the Muttaraiyar in the middle of the ninth century. He built the town of Thanjavur and a temple for goddess Nishumbhasudini there.

The successors of Vijayalaya conquered neighbouring regions and the kingdom grew in size and power. The Pandyan and the Pallava territories to the south and north were made part of this kingdom. Rajaraja I, considered the most powerful Chola ruler,

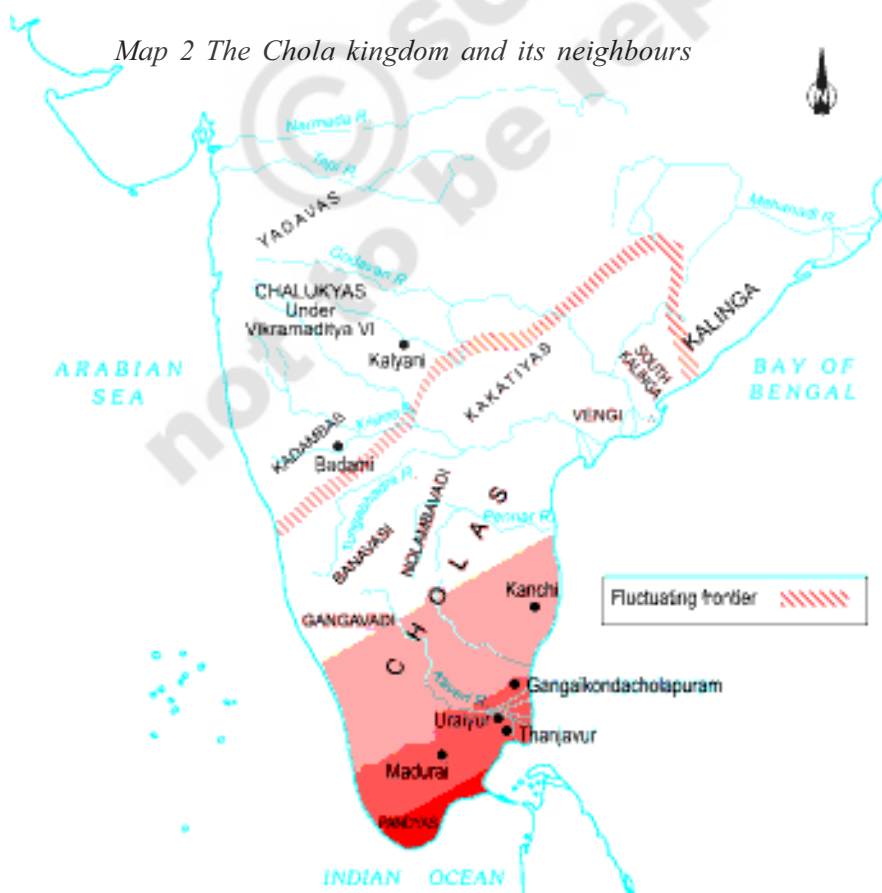




Fig 13.3 The temple at Gangaikonda-Cholapuram. Notice the way in which the roof tapers. Also look at the elaborate stone sculptures used to decorate the outer walls.

became king in 985 AD and expanded control over most of these areas. He also reorganised the administration of the empire. Rajaraja's son Rajendra I continued his policies and even raided the Ganga valley, Sri Lanka and countries of Southeast Asia, developing a navy for these expeditions.

Splendid Temples and Bronze Sculpture

The big temples of Thanjavur and Gangaikonda-Cholapuram, built by Rajaraja and Rajendra, are architectural and sculptural marvels.

Chola temples often became the nuclei of settlements which grew around them. These were centres of craft production. Temples were also endowed with land by rulers as well as by others. The produce of this land went into maintaining all the

specialists who worked at the temple and very often lived near it – priests, garland makers, cooks, sweepers, musicians, dancers, etc. In other words, temples were not only places of worship; they were the hub of economic, social and cultural life as well.



Fig 13.4 A Chola bronze sculpture. Notice how carefully it is decorated.

Amongst the crafts associated with temples, the making of bronze images was the most distinctive.

Chola bronze images are considered amongst the finest in the world. While most images were of deities, sometimes images were made of devotees as well.

Agriculture and Irrigation

Many of the achievements of the Cholas were made possible through new developments in agriculture. Look at Map 2 again. Notice that the river Kaveri branches off into several small streams before emptying into the Bay of Bengal. These streams overflow frequently, depositing fertile soil on their banks. Water from the streams also provides the necessary moisture for agriculture, particularly the cultivation of rice.



Fig 13.5 A ninth century sluice gate in Tamil Nadu. It regulated the outflow of water from a tank into the channels that irrigated the fields.

Although agriculture had developed earlier in other parts of Tamil Nadu, it was only from the fifth or sixth century that this area was opened up for large-scale cultivation. Forests had to be cleared in some regions; land had to be levelled in other areas. In the delta region embankments had to be built to prevent flooding and canals had to be constructed to carry water to the fields. In many areas two crops were grown in a year.

In many cases it was necessary to water crops artificially. A variety of methods were used for irrigation. In some areas wells were dug. In other places huge tanks were constructed to collect rainwater. Remember that irrigation works require planning – organising labour and resources, maintaining these works and deciding on how water is to be shared. Most of the new rulers, as well as people living in villages, took an active interest in these activities.

The Administration of the Empire

How was the administration organised? The king had a council of ministers to help him. He had a strong army and navy. The empire was divided into *mandalams* or provinces, further subdivided into *valanadus* and *nadus*.

Settlements of peasants, known as *ur*, became prosperous with the spread of irrigation agriculture. Groups of such villages formed larger units called *nadu*. The village council and the *nadu* performed several administrative functions including dispensing justice and collecting taxes.

Rich peasants of the Vellala caste exercised considerable control over the affairs of the *nadu* under the supervision of the central Chola government. The Chola kings gave some rich landowners titles like *muvedavelan* (a *velan* or peasant serving

three kings), *araiyar* (chief), etc. as markers of respect, and entrusted them with important offices of the state at the centre.

Types of land

Chola inscriptions mention several categories of land:

vellanvagai

land of non-Brahmana peasant proprietors

brahmadeya

land gifted to Brahmanas

shalabhoga

land for the maintenance of a school

devadana, tirunamattukkani

land gifted to temples

pallichchhandam

land donated to Jaina institutions

We have seen that Brahmanas often received land grants or *brahmadeya*. As a result, a large number of Brahmana settlements emerged in the Kaveri valley as in other parts of south India.

Each *brahmadeya* was looked after by an assembly or *sabha* of prominent Brahmana landholders. These assemblies worked very efficiently. Their decisions were recorded in detail in inscriptions, often on the stone walls of temples. Associations of traders known as *nagarams* also occasionally performed administrative functions in towns.

Inscriptions from Uttaramerur in Chingelput district, Tamil Nadu, provide details of the way in which the *sabha* was organised. The *sabha* had separate committees to look after irrigation works, gardens, temples, etc. Names of those eligible to be members of these committees were written on small tickets of palm leaf; these tickets were put into an earthenware pot, from which a young boy was asked to take out the tickets, one by one for each committee.

Inscriptions and texts

Who could be a member of a *sabha*? The Uttaramerur inscription lays down:

All those who wish to become members of the *sabha* should be owners of land from which land revenue is collected.

They should have their own homes.

They should be between 35 and 70 years of age.

They should have knowledge of the Vedas.

They should be well-versed in administrative matters and honest.

If anyone has been a member of any committee in the last three years, he cannot become a member of another committee.

Anyone who has not submitted his accounts, and those of his relatives, cannot contest the elections.

- Do you think women participated in these assemblies? In your view are lotteries useful for choosing members of committees?

While inscriptions tell us about kings and powerful men, here is an excerpt from the *Periyapuranam*, a twelfth-century Tamil work, which informs us about the lives of ordinary men and women.

On the outskirts of Adanur was a small hamlet of *Pulaiyas*, studded with small huts under old thatches and inhabited by agrarian labourers engaged in menial occupations. In the thresholds of the huts covered with strips of leather, little chickens moved about in groups; dark children who wore bracelets of black iron were prancing about, carrying little puppies ... In the shade of the *marudu* (arjuna) trees, a female labourer put her baby to sleep on a sheet of leather; there were mango trees from whose branches drums were hanging; and under the coconut palms, in little hollows on the ground, tiny-headed female dogs lay after whelping. The red-crested cocks crowed before dawn calling the brawny *Pulaiyar* (plural) to their day's work; and by day, under the shade of the *kanji* tree spread the voice of the wavy-haired *Pulaiya* women singing as they were husking paddy ...

◆ Describe all the activities that were taking place in the village.

Key words :

1. *Samantha*
2. Temple
3. Nadu
4. Sabha
5. Kingdom
6. Sultan

Project work :

1. Look at Map 1 and find out whether there were any kingdoms in Andhra Pradesh.
2. Compare the temple shown in this chapter with any present-day temple in your neighbourhood, highlighting any similarities and differences that you notice.
3. Find out more about taxes that are collected at present. Are these in cash, kind, or labour services?

Improve your learning

1. Who were the parties involved in the “tripartite struggle”?
2. What were the qualifications necessary to become a member of a committee of the *sabha* in the Chola empire?
3. What were the two major cities under the control of the Chahamanas?
4. How did the Rashtrakutas become powerful?
5. What did the new dynasties do to gain acceptance?
6. What kind of irrigation works were developed in the Tamil region?
7. What were the activities associated with Chola temples?
8. Contrast the “elections” in Uttaramerur with present-day panchayat elections.

The Kakatiyas - Emergence of a Regional Kingdom

You may have listened to many ballads and stories about the bravery and martial skill of Brahma Naidu and Balachandrudu and the 66 heroes. You may have also participated in *Jataras* dedicated to Sammakka and Sarakka. They had fought against armies of kings to protect the rights of the tribal people. You might have enjoyed the popular story of Katama Raju who fought with the Kings of Nellore in defence of the right of animal herders.

- ◆ Find out from your parents and elders the stories of the Palnati Virulu, Sammakka-Sarakka and Katama Raju. Relate these stories in the class.

All these stories relate to the period from 1000 to 1350 AD. This was a very important period in our history. In the previous chapter we read about the new ruling families that emerged all over India. These rulers sought to establish small kingdoms over agricultural villages and to enable their herder-followers to settle down as agriculturalists. These ambitious warriors and kings fought against each other constantly. Amidst this situation arose the Kakatiya kingdom in Warangal.

This was also the time when the first books in Telugu were written. According to tradition, *Srimad-Andhra Mahabharatam* is the first poetic work in Telugu which was composed by *Kavitrayamu*, the Trinity of Poets - Nannaya, Tikkana and Erra Pragada between 1000 and 1200 AD.

We have a large number of inscriptions which tell us about the activities of the kings, queens, chiefs, farmers, herders and traders. We also have a number books written about them in Sanskrit and Telugu. Vidyantha wrote *Prathaparudra Yashobhushanam* during the Kakatiya rule. Some works were also written after the end of their rule (Vinukonda Vallabharaya's *Kridabhiramamu*, Ekamranatha's *Prataparudra Charitramu*).



Fig 14.1 Kirti Torana entrance of Svayambhu Siva Temple - built by Kakatiya kings in Warangal.

- ◆ Having read the above passage can you tell which are the two important sources of information about the Kakatiya kings?

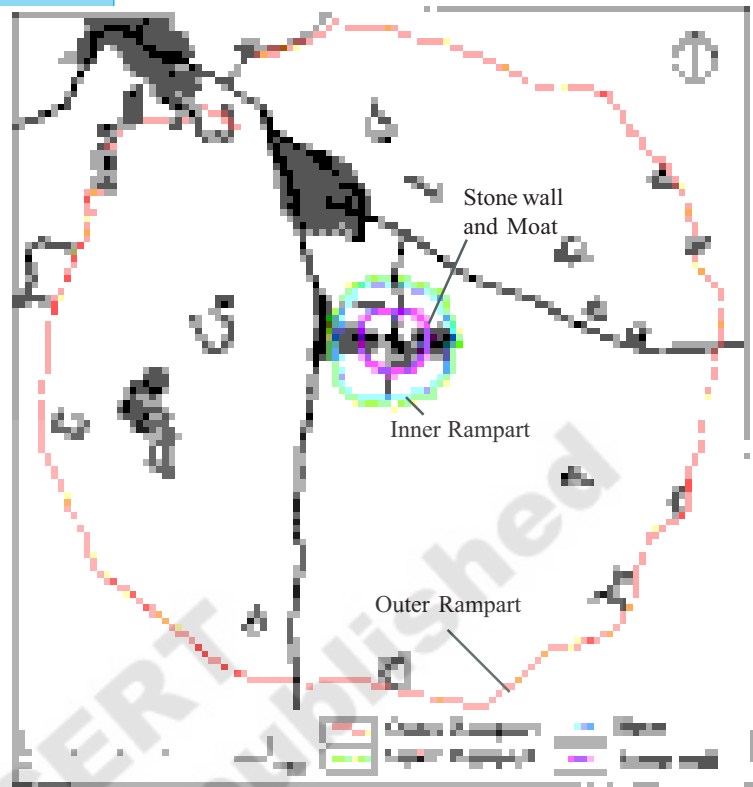
According to inscriptions and literature the Kakatiyas traced their lineage to certain Durjaya. They also adopted Telugu as the favoured language of the court. Most of their inscriptions are in Telugu and they also called themselves as ‘Andhra Rajas’. They also sought to bring together the three regions in which Telugu was being spoken - the coastal regions, Telangana region and Rayalaseema region. In this manner the Kakatiya kings tried to build a Telugu regional consciousness. To some extent they were also successful as even to this day they are remembered fondly in this region.

Important Kakatiya Rulers

Prola II	(1116 - 1157AD)
Rudradeva	(1158 - 1195AD)
Ganapati Deva	(1199 - 1262AD)
Rudramadevi	(1262 - 1289AD)
Prataparudra	(1289 - 1323AD)

The early members of the dynasty began their career as warriors and *samanthas* of Rashtrakuta and Chalukya kings who were ruling in Karnataka. They were holding the posts of village heads called *Rattadi* and through their military skills became army chiefs, *samanthas* etc. and gained control

Map 1: Warangal Fort



over Anmakonda in Telangana. The Kakatiyas emerged as independent rulers after the fall of Western Chalukyas.

During Rudradeva’s rule (1158-1195 AD) the capital was shifted from Anmakonda to Orugallu (Warangal). The new city was laid out with a plan to accommodate increase in city population and to address the needs of an imperial capital. Rudradeva built a big fort, a tank and a temple called Thousand Pillared Temple in Anmakonda.

Look at the map of Warangal Fort. You can see an outer fort wall with four gates. This protected agricultural lands and several water tanks within it. In this area were huts of many artisans like basket weavers. After crossing these we come to the centre where there was another moat and a fort wall made of mud.

If you walked further towards the centre you would find another moat and fort wall made of stone. The city buildings and palaces were within this stone wall. It had four gates opening out into East, West, North and South. From each gate a main road went to the centre of the city where there was a temple of Svayambhu Siva. This temple too had four gates in the four directions.

The city itself was divided into several quarters or *vadas*. People of a profession lived in their own distinct *vadas*.

- ◆ Can you draw a rough sketch map of your village or town and compare it with the map of Orugallu?
- ◆ What are the main differences you find between modern towns and cities of the past like Orugallu?
- ◆ Use the scale shown on the map to find out the breadth of the outer wall from East to West.
- ◆ Also find out the breadth of the city within the inner stone wall from North to South.
- ◆ If you have ever been to Warangal city, describe the city today to your classmates.
- ◆ Svayambhu Siva was the family god of the Kakatiyas. Why do you think they built the temple and not the palace or a market place in the middle of the city?

As Kakatiya kings became powerful they were able to persuade many chiefs to accept them as their Kings. The Kakatiyas

protected their *samantha* subordinates from other warriors and chiefs and also took the *samanthas* with them when they went to conquer other kingdoms. Many of the *samantha* chiefs made attempts to become independent and the Kakatiya kings sent armies to subdue them.

Rudrama Devi

Have you heard of a brave woman ruler by the name of Rudramadevi? She was a powerful and successful ruler who impressed one and all with her abilities. Rudramadevi ruled from Orugallu (modern Warangal) and belonged to the famous Kakatiya family. She ruled from 1262 AD to 1289 AD for nearly 27 years. In our country there have been very few women rulers. In distant Delhi too there was a woman ruler by the name of Raziya Sultana some years before. But her nobles did not like to be ruled by a woman and had killed her. A famous traveller from Italy, called

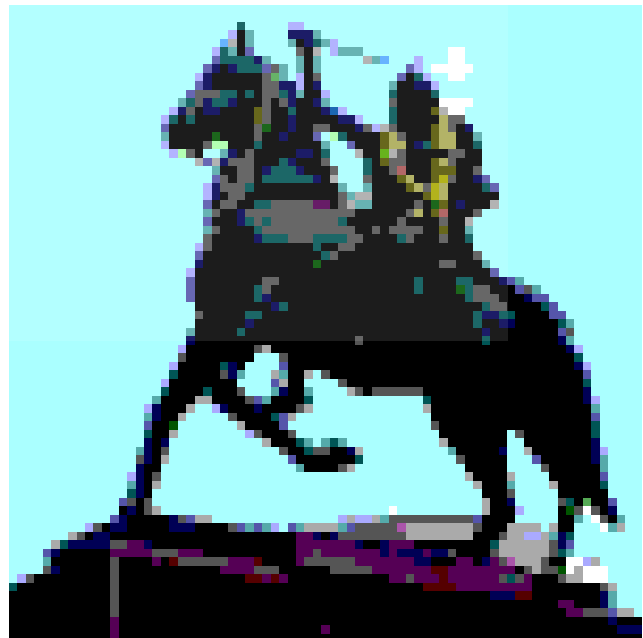


Fig 14.2 Rudramadevi - Riding the Horse.
(Modern representation in Hyderabad)

Marco Polo visited Rudramadevi's kingdom and he says that she was fearless, dressed herself like a man and rode horses with ease. In fact in her inscriptions Rudramadevi calls herself as Rudradeva Maharaja. Like Raziya Sultana she too faced

the opposition of many important chiefs who had been under her father, but Rudramadevi succeeded in subduing them. Rudrama and her grandson Prataparudra faced many revolts and took several steps to control these chiefs.

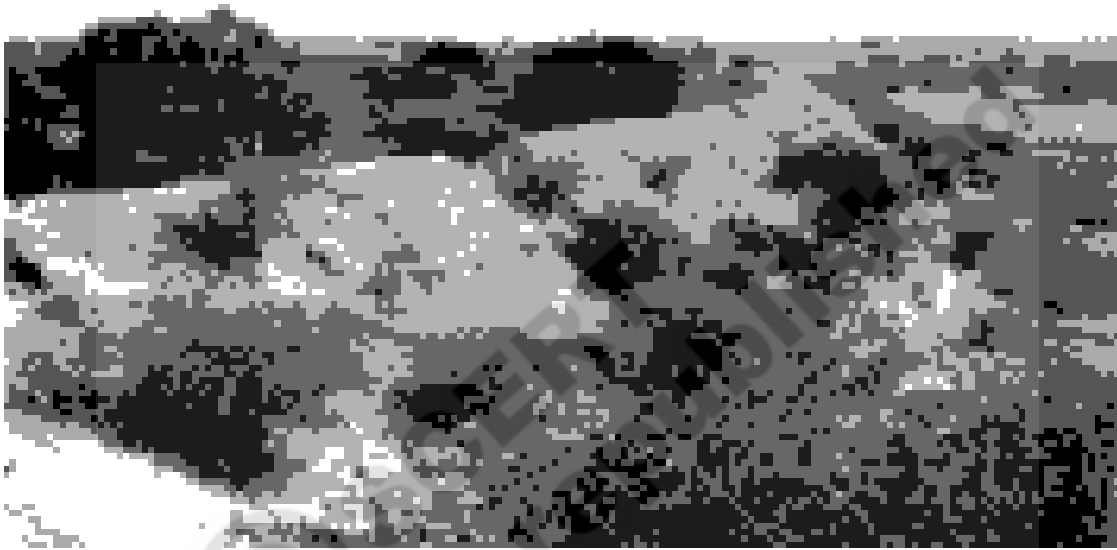


Fig 14.3 A segment of the inner earthen wall with its (dry) moat at right.



Fig 14.4 Aerial view of the eastern gateway in the city's inner stone wall, showing the 'bent entrance' (Vankadari) and open courtyard (anganam). The doorway at right is the 'great city gate' leading to the royal avenue (raja margambu).

Nayankara System

Rudramadevi and Prataparudra encouraged several skilled warriors who were not from any powerful family but were very loyal to the queen and the king. They gave them high positions and the title of Nayaka. They were given several villages from where they could collect taxes. These villages were called their Nayankara. Each nayaka had to maintain a stipulated amount of army, from the income they derived from the nayankara, for the service of the king. But they did not keep these villages permanently as they could be transferred at the will of the king to a new place. These Nayakas depended upon the queen or the king and remained loyal to them. They were also probably used to subdue the rebellious chiefs. This arrangement was called Nayankara system.

Read here a portion of an inscription by a nayaka of Rudramadevi :

“In the year (1270 AD) on the occasion of Sankranti, Bollinayaka the guardian of the gate for Kakatiya Rudradeva Maharaja, gave ten measures of land to the temple servants of God Kalyana Keshava of Kranja village in his own nayankaramu for the merit of his master Rudradeva Maharaja.”

- ◆ Why do you think Bollinayaka was calling Rudramadevi as Rudradeva Maharaja?

Encouragement to Agriculture and Temples

The Kakatiyas brought large tracts of land under cultivation by building tanks and digging wells. Apart from members of royal family and other feudal families the rich sections of the society like merchants and artisans participated in expanding



Fig 14.5 The remains of the great temple dedicated to Siva.

agriculture through construction of tanks. This enabled the extension of cultivation in the difficult terrains of Telangana and Rayalaseema.

The Kakatiyas also extensively patronised temples by making large donations to them. Women members of royal family like Muppamamba, and Mailamma made land grants. Women of other rich sections also made gifts of land, tanks, cash, cattle, jewellery, etc., to temples and brahmins. By promoting agriculture they derived income in the form of taxes and agriculture produce.

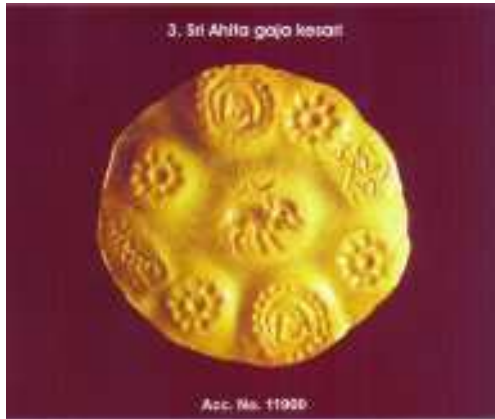


Fig 14.6 Gold coin issued by Kakatiyas.

Trade

Warriors, chiefs and Kings derived much of their income by taxing traders, especially those who engaged in overseas trade from the ports. Read a portion of an inscription issued by Kakatiya king Ganapatideva in a place called Motupalli:



14.7 Motupalli Pillar Inscription

“This Abhiaya Shasana has been granted by Ganapatideva to sea traders going back and forth to all continents, countries and towns. In the past, kings forcibly seized all the cargo such as gold, elephants, horses, jewels, etc. when sea going vessels were caught in storms, wrecked and cast on shore. But We for the sake of our reputation and punya and out of pity for those who have incurred the grave risk of a sea voyage, give up all but the customary tax.”

The inscription goes on to mention the tax he would collect from the traders on different articles of trade.

- ◆ How did the kings treat the traders earlier?
- ◆ What was the guarantee Ganapatideva was giving them?
- ◆ Why do you think he was giving this protection to the traders?

Marco Polo who visited one of these ports says that the exports were diamonds, best and most delicate cloth which looked like tissue of spider’s web. He further says, “There is no king nor queen in the world but might be glad to wear them”.

The End of the Kakatiyas

Sometime around 1190 AD a new kingdom was established in Delhi. The new kings were called Sultans and they originally came from Turkistan. They had a powerful army and were able to defeat most of the kings of north India and the Deccan before long. Sultan Mohammad bin Tugluq was able to defeat Kakatiya Prataparudra in 1323 AD. Thus ended the Kakatiya dynasty.

Some years later two new kingdoms were founded in Karnataka called Bahamani and Vijayanagar Kingdoms about which we will study in the next chapter.

Palnati Vira – Heroes who cut across Caste barriers

Palanati Virula Katha written by Srinatha around 1350s helps us to understand how collectives of warriors must have been formed. The leading character, Balachandrudu, has a small war band of devoted companions from diverse backgrounds. One is a Brahmin while others – a blacksmith, a goldsmith, a washerman, a potter and a barber – are drawn from the service and artisan communities. Balachandrudu and his cohorts are so committed to each other that they are called *sodarulu* (brothers). Just before they set out for battle, Balachandrudu's mother prepares a meal for all the "brothers" with her own hands. But she serves this food to each one on a different kind of plate (earthen, bronze, leaf, etc.) and is rebuked for making such distinction by her son, who says that caste must be set aside when one goes to war. And so the "brothers" all eat from each others plates, in defiance of convention but in recognition of their joint fate.

Key words :

1. Warriors
2. Nayankara System
3. *Samantha*
4. Artisans

Project work :

1. Prepare a short presentation of any of the three stories in the form of a play.
2. Collect popular accounts of the origin of your village or town and prepare a chart and present the same.
3. Visit an old temple of your area and find out who built the temple, when etc. and look for any inscriptions in it.

Improve your learning

1. Compare the warriors of those times with what you know about the armies of modern times. What differences do you see between them?
2. Kings and chiefs built irrigation tanks to improve agriculture in the Kakatiya times. What do they do now?
3. How do you think the Kakatiyas were able to gain control over the chiefs?
4. Why do you think the Kakatiyas did not appoint powerful chiefs as Nayakas?
5. Why was it difficult for women to rule in those days? Is it different today? How?
6. In those days powerful men had their own land and were also able to tax other farmers, traders and artisans. Can powerful people do this now? Give reasons.

The Kings of Vijayanagara

In the previous lesson we read about warriors and chiefs who had established control over villages and how the Kakatiyas tried to bring them under their control and built a kingdom. The efforts of the Kakatiyas ended when the Delhi Sultans conquered Warangal. But soon another kingdom was built by a family of warriors who laid the foundations of a large empire called Vijayanagara or Karnataka Samrajyam.

Vijayanagara means the ‘City of Victory’. It was located on the banks of Tungabhadra River in Karnataka. According to tradition it was founded by two brothers named Harihara Raya and Bukka Raya around 1336 AD with the blessings of a sage named Vidyanarya. The kings of Vijayanagara worshipped Sri Virupaksha (Shiva) and greatly enlarged the temple. The Vijayanagara empire lasted for about 250 years - but it was not ruled by kings of the same family. After the family of Harihara Raya and Bukka Raya of Sangama Saluva, Tuluva and Araviti families ruled the empire one after the other.

On the North of the Tungabhadra river too arose some new kingdoms called the Bahamani kingdoms. Initially it was one large kingdom with its capital in Gulbarga, later on, between 1489 and 1520 AD, it broke up into five smaller kingdoms. Of these five kingdoms, Bijapur and Golconda ruled over large parts of present day Karnataka and Andhra Pradesh. These kingdoms were ruled by Sultans and

warriors many of whom came from Iran and Arabia. All these kingdoms were constantly at war with each other and trying to enlarge their own kingdoms. They also tried to recruit the local warriors and chiefs about whom we read in the last chapter. With their help they tried to establish control over the villages and towns and collect revenue from the farmers and traders.

Some Important Kings of Vijayanagara

Harihararaya	(1336-1357AD)
Bukkaraya I	(1357-1377AD)
Harihararaya II	(1377-1404AD)
Devaraya II	(1426-1446AD)
Saluva Narasimharaya	(1486-1491AD)
Krishnadevaraya	(1509-1529AD)
Achyutaraya	(1529-1542AD)
Aliya Rama Raya	(1543-1565AD)
Venkatapati Raya	(1585-1614AD)

How do we know?

We know much about Vijayanagara Empire from inscriptions, books and buildings of that period. We get insights into the daily life, the administration and the social organization of the kingdom. Of particular value are the detailed accounts left by travellers from several countries – Nicolo Conti from Italy who visited Vijayanagara in 1420 AD, Abdul Razzak the Persian trader who visited in 1443 AD, the Portugese travellers and Paes, who visted it in 1520 AD and Nuniz who wrote in 1537 AD.

The City of Vijayanagara

The city was built on the banks of the river Tungabhadra next to ancient temples of Pampadevi and Sri Virupaksha. Abdul Razzak says that the city had seven rings of fortifications. Some of these have been found by archaeologists.

Read the description of the city by Portugese traveller, Paes:

“The king has made a very strong city, fortified with walls and towers... These walls are not made like those of other cities, but are made of strong masonry... and inside very beautiful rows of buildings with flat roofs...”

You have a broad and beautiful street full of fine houses... and these houses belong to merchants, and there you find all sorts of rubies and diamonds, and emeralds and pearls... and cloths of every sort on the earth... In the evening you have a fair where they sell horses, vegetables, fruits, wood, etc.”



Fig 15.1 Bronze images of Krishnadeva Raya and his two wives installed in Tirumala Temple.

- ◆ Why were vegetables, fruits and horses sold in the evenings?

Archaeologists are of the opinion that the city had four separate divisions - first one devoted to temples, situated on rocky hills; second one on the valley where crops were raised using water from irrigation channels; third a royal centre in which royal palaces and residences of important nayakas were located and fourthly the residences of ordinary townsfolk. Each area was separated from the others as shown in the map.

- ◆ Compare the city of Vijayanagara with Warangal to point out the similarities and differences between them.



Map 1: Vijayanagara City

- ◆ Why do you think modern cities do not build fort walls of this kind?

Armies and Military Leaders

You would have heard and read about great wars being fought today and the powerful armies.

- ◆ Can you say what makes the armies of countries powerful?
- ◆ What kinds of arms and weapons do modern armies use?

Let us find out how it was in Vijayanagara times.

Vijayanagara rulers invested in building their military power. They imported a large

number of horses from Arabia and Iran which came in ships to their ports on the west coast. They recruited a large army and built many strong forts. One of the important rulers Devaraya-II of Vijayanagara started recruiting Muslim fighters to serve him and to train his soldiers in the new modes of warfare. He also permitted the construction of mosques in the capital city where the muslim soldiers were garrisoned. In those days guns and cannons had been newly introduced. The Vijayanagara kings adopted guns and cannons in their forces. The combination of firearms and cavalry (horse-riders) made them one of the most powerful armies in India.

- ◆ Horses in those days were important for fast movement of troops. What do you think has taken their place today?
- ◆ Elephants were slow moving but powerful in attack. What do you think has replaced them today?

‘Captains of the Troops’ - the *Amaranayakas*

The entire kingdom was actually controlled and administered by the commanders of these armies. Who they were and what they did, let us find out. Read the following account left by Domingo Paes, a Portuguese traveller who visited Vijayanagara during Krishnadeva Raya’s period:

“This king has a million fighting troops, in which are included 35,000 cavalry (horse riders) ready to be dispatched to any quarter whenever

necessary... He is the most feared king in these parts...

The captains of these troops are the nobles of his kingdom and they hold the city, the towns and the villages of the kingdom. There are captains among them who have a revenue of a million and a million and half gold coins, others two hundred, three hundred or five hundred thousand coins. The king fixes for each according to his revenue the number of troops which he must maintain, on foot, on horse, and elephants. These troops are always ready for duty, whenever they may be called out and wherever they may have to go. Besides maintaining these troops, each captain has to make his annual payment to the king.

Besides the troops supplied by the captains, the king has his own troops whom he pays.”

Answer the following questions after reading the above passages carefully:

- ◆ Why was Krishnadevaraya the most feared king?
- ◆ Who controlled the towns and villages of Vijayanagara Empire?
- ◆ Did all of them get equal income?
- ◆ What did the captains do with the villages and towns under their control?



Fig 15.2 Stone Chariot at Hazara Rama Temple.

- ◆ What did the captains have to do for the king in return for these villages?
- ◆ Did the king depend only on the troops sent by the captains?

The ‘captains’ mentioned here were the nayakas. These nayakas held *amara* revenue assignments – that is they were given some villages and cities whose revenue they could collect and use. They had an obligation to maintain a certain number of troops for keeping the revenue of such assignments. They also administered the areas under their control and also had judicial powers (the power to judge criminals and give punishments, etc). This was quite similar to the system of the Delhi Sultanate whose nobles or *amirs* were given similar revenue assignments called *Iqtas*.

Most of the *amaranayakas* were Telugu warriors. They recruited their soldiers usually from among their own villagers or kinsmen and trained them. These armies were loyal to the Nayakas rather than to the king. Many powerful nayakas like Saluva Narasimha or Narasa Nayaka controlled vast areas and at times

could even challenge the Vijayanagara Kings. In fact some of them were so powerful that when a king died they took power in their own hands and themselves became kings.

Let us compare

You read about how the villages were administered in Chola kingdom by councils of landholding villagers and how the king collected revenue from villages with the help of these councils. Things had begun to change in Vijayanagara Empire as the power of the armies and nayakas increased. You saw that the control over the villages and town was given over to these nayakas.

- ◆ What impact do you think it would have had on the villagers? Discuss in your class.
- ◆ In a previous lesson you had read about how villages and towns are administered in our country today. Can you compare this with the Vijayanagara system and point out the differences?

Amaranayakas and Agriculture

Most of the Nayakas were Telugus and they led armies which were mostly composed of Telugu speaking farmers. As the Nayakas established control over different regions of south India these peasant soldiers also settled down and brought land under cultivation. They built irrigation tanks and canals. They thus settled down in various parts of Andhra Pradesh and Tamil Nadu, especially in regions with black soils.

All over the empire tanks / reservoirs for capturing rain water and other drainage water, were constructed by the kings, chiefs, nayakas and traders. Even temples invested their endowments in irrigation and were sharing the enhanced production with those who worked their lands. Look at portions of an inscription from Tirumala temple of 1494 AD:

“The authorities of Tirumala Temple executed this inscription in favour of Timmana Dandanayaka of Chandragiri as follows: whereas you have paid three hundred gold coins to the Temple treasury, this sum shall be invested for



Fig 15.3 Relief on Hazara Rama Temple. Can you write a story based on this image?

excavation of tank fed channels in the villages belonging to the temple and with the harvest reaped thereby certain offerings will be made to the deity.”

All these efforts resulted in the expansion of agriculture into new areas and tremendous increase in agricultural production. This in turn provided impetus to trade.

- ◆ In what way would the nayakas have benefitted from increase in agricultural production?

Trade and Cavalry

Trade in agricultural produce as well as craft produce like cloth increased manifold in Vijayanagara period. We find change in trade activity during this period. Trade centres were established on both of India's extensive coasts and these were under the administration of local merchants and others representing trader communities from other places: Arabs, Jews, Armenians and others. States were attracted to these ports for the revenue as well as for access to strategic commodities like horses. Knowledge of the breeding of horses appropriate for heavy cavalry tactics was lacking in India at that time. Through the ports, war horses from Arabia could be imported by chiefs and kings in the Indian peninsula. Guns were another strategic good that was obtained through the ports. While these goods were imports, Indian exports remained the same as earlier periods as textiles and spices and other craft items.

In addition to ports and market towns there were towns strategically sited for defence and administrative purposes. Some

Free Distribution by Govt. of A.P.

towns attained considerable size and permanence as pilgrimage centres.

Krishnadeva Raya - The Ruler

Krishnadeva Raya ruled from 1509 AD to 1529 AD. He was a great general who led the Vijayanagara armies successfully against the Bahmani sultans and also against the Gajapatis of Odisha. He also subdued several chiefs who had revolted in Karnataka, Andhra and Tamil regions. This gave him control over the entire region south of river Krishna and especially control over the ports of the eastern coast.

During this period the Portuguese had established their power over some ports of the western coast like Goa. Krishnadevaraya established friendly relations with them in order to get exclusive supply of horses and fire arms from them. He also employed Portuguese troops in his wars.

Every year on the Vijayadashami day the King organised elaborate festivities and worship which concluded with a massive parade of his armies. On this day all the chiefs and *amaranayakas* of the empire brought their tributes to the King.

Krishnadevaraya paid special attention to the temples of his kingdom and personally visited many of them like Tirupati, Srisailam and Ahobilam. He also made big donations to a large number of temples.

Krishnadeva Raya's inscriptions state that he had distributed the great treasure gained in his successful wars to all the major temples of southern India. Towering temple gateways called 'Raya gopuram' were built in many of these temples in his honour. This munificence assured that his name would be remembered for long among



Fig 15.4 Gopuram of Ekamreshwar Temple in Kanchipuram.

the people of south India. He also built some beautiful temples in Vijayanagara city.

Krishnadevaraya was also patron of Telugu literature and himself composed the poetic work *Amuktamalyada* on the life of Andal the Tamil Bhakta poetess. His court was adorned with eight poets known

popularly as “*Ashtadiggajas*”. They are Allasani Peddana, Mukku Thimmana, Dhurjati, Ramaraja Bhushana, Tenali Ramakrishna, Pingali Surana, Ayyalaraju Ramabadrudu and Madayagari Mallana.

The power of the Vijayanagara kings grew further during the time of Krishnadevaraya’s successors Achyutadeva Raya and Aliya Rama Raya. As the Bahamani rulers were unable to fight the Vijayanagara individually, by 1565 AD all the five Bahmani kingdoms joined together and defeated Rama Raya in Rakkasi tangadi war also known as Tallikota war and looted and destroyed the city of Vijayanagara. The emperors who succeeded him shifted their capital to Chandragiri near Tirupati, but never regained the glory of earlier times. While part of the empire came under the control of the Sultans, the chiefs and Nayakas became independent in other parts.

Key words :

- | | |
|-----------------------|-----------------|
| 1. <i>Amaranayaka</i> | 4. Amirs |
| 2. Iqta | 5. Raya gopuram |
| 3. Archaeologists | |

Improve your learning

1. Why do you think the Portuguese travellers were interested in knowing about the forts and armies of Vijayanagara kings?
2. Why do you think the kings of Vijayanagara lived in a separate quarter and not in the middle of the city as in Orugallu?
3. Historians feel that Vijayanagara state was a highly militarised – in what way do you think it would have affected the common people?
4. Why were the *amaranayakas* very powerful?
5. Compare the *amaranayakas* and the old chiefs you had read about in the lesson on Kakatiyas. Were they different or similar – in what way?
6. Why was the Vijayanagara army dependent upon imports from the western coast?
7. Krishnadeva Raya fought against several enemies in order to consolidate his kingdom. Make a list of all of them.

Mughal Empire

A new age begins with the unification of India under the Mughals. The Mughals created an empire between 1550 and 1700 AD and expanded their empire from around Delhi to almost the entire subcontinent. Their administrative arrangements, ideas of governance and architecture continued to influence rulers long after the decline of their empire. Today the Prime Minister of India addresses the nation on Independence Day from the ramparts of the Red Fort in Delhi, the residence of the Mughal emperors.



*Coin showing
Jahangir*

Who were the Mughals?

The Mughals were from ruling families of Central Asian countries like Uzbekistan and Mongolia. Babur, the first Mughal emperor (1526 - 1530 AD), was forced to

leave his ancestral throne due to the invasion of another ruler. After years of wandering he seized Kabul in 1504 AD. In 1526 AD he defeated the Sultan of Delhi, Ibrahim Lodi and captured Delhi and Agra.



Fig 16.1 Red Fort.

Important Mughal emperors - Major campaigns and events



Babur 1526-1530 AD

1526 AD – defeated Ibrahim Lodi and established control over Agra and Delhi.

He introduced cannons and guns in Indian warfare.

Humayun 1530-1556 AD

Sher Khan defeated Humayun forcing him to flee to Iran. In Iran Humayun received help from the Safavid Shah. He recaptured Delhi in 1555 AD but died in an accident the following year.



Akbar 1556-1605 AD

Akbar was 13 years old when he became emperor. He rapidly conquered Bengal, Central India, Rajasthan and Gujarat. Thereafter he also conquered Afghanistan, Kashmir and portions of the Deccan.

Look at his empire in Map 1.

Jahangir 1605-1627 AD

Military campaigns started by Akbar continued. No major conquests.





Shah Jahan 1627-1658 AD

Mughal campaigns continued in the Deccan. He faced many revolts by nobles and chiefs of his empire. In 1657-1658 AD, there was conflict over succession amongst Shah Jahan's sons. Aurangzeb was victorious and his three brothers were killed. Shah Jahan was imprisoned for the rest of his life in Agra.

Aurangzeb 1658-1707 AD

Conquered Assam but faced a large number of revolts all over his kingdom from Afghanistan, Assam, Rajasthan, Punjab, Deccan, etc. Guru Tegh Bahadur, Govind Singh, Shivaji and his own son Akbar revolted against him. Shivaji succeeded in establishing an independent Maratha kingdom. Aurangzeb conquered Bijapur in 1685 AD and Golconda in 1687 AD. His death was followed by a succession conflict amongst his sons.



Map 1: Akbar's Reign 1605AD

Mughal Relations with other Rulers

In India of those times there were several kings and chiefs in all parts of the country. The Mughals sought to bring them under their control. They allowed the older rulers and chiefs to continue to rule over large parts of their old kingdoms and collect revenues from them. But they could not wage wars against each other and had to keep an army ready for the use of the Emperor.

Mughal rulers campaigned constantly against rulers who refused to accept their authority. But as the Mughals became powerful many other rulers also joined them voluntarily. The Rajputs are a good example of this. Many of them married their daughters into Mughal families and received high positions. But many resisted as well. The Sisodiya Rajputs of Chittor refused to accept Mughal authority for a long time. Once defeated, however, they were given their lands back as assignments.

The careful balance between defeating but not removing their opponents enabled the Mughals to extend their influence over many kings and chieftains. The Mughals married princesses of many of the local rulers as a mark of friendship. The mother of Jahangir was the daughter of the Rajput ruler of Amber (modern Jaipur). The mother of Shah Jahan was a daughter of the Rajput ruler of Jodhpur.

Mansabdars and Jagirdars

As the empire expanded to encompass different regions, the Mughals recruited diverse kinds of people. From a small nucleus of Turkish nobles they expanded to include Iranians, Indian Muslims, Afghans, Rajputs, Marathas and other groups. Those who joined Mughal service were enrolled as *mansabdars* (or rank holder). They were directly under the control of the emperor who could allocate any work for them to do – like guarding his palace, governing a province, conquering a new kingdom or suppressing a rebellion.



Fig 16.2 A mansabdar on march with his sawars.

The Mughals developed a political system in which the *mansabdars* would not act independently but only as per the wishes of the emperor. You may remember that the Nayakas in Vijayanagara empire could become independent and powerful enough to declare themselves the kings. The Mughals prevented this by constantly transferring the *mansabdars* from one place to another every two or three years. Thus a *mansabdar* could not become settled and powerful in any one place.

The *mansabdar's* military responsibilities required him to maintain a specified number of horse riders or cavalymen. The *mansabdar* brought his cavalymen for review, got them registered, their horses branded and then received money to pay them as salary.

A *mansabdar's* son could not become a *mansabdar* automatically. That is, it was not hereditary. The emperor decided whether or not to appoint the son as a *mansabdar*. In fact he even took over all the property of the *mansabdar* on his death.

Mansabdars received their salaries as revenue assignments called *jagirs* which were somewhat like Vijayangara Nayankaras. But unlike the *Nayakas*, most *mansabdars* did not actually reside in or administer their *jagirs*. They could only collect the revenue due from their *jagir* villages and send to the emperor. This was collected for them by their servants while the *mansabdars* themselves served in some other part of the country. The *jagir* was administered by other officials directly under the emperor. These officials tried to ensure that the *jagirdars'* agents did not

collect more from the farmers than permitted. The *jagirs* too were constantly transferred every two or three years.

In Akbar's reign these *jagirs* were carefully assessed so that their revenues were roughly equal to the salary of the *mansabdar*. By Aurangzeb's reign there was a huge increase in the number of *mansabdars* which meant a long wait before they received a *jagir*. These and other factors created a shortage in the number of *jagirs*. As a result, many *jagirdars* tried to extract as much revenue as possible while they had a *jagir*. Aurangzeb was unable to control these developments in the last years of his reign and the farmers therefore suffered tremendously.

Zabt and Zamindars

The main source of income available to Mughal rulers was tax on the produce of the peasantry. Akbar's revenue minister, Todar Mal, carried out a careful survey of crop yields, prices and areas cultivated for a ten-year period, 1570-1580 AD. On the basis of this data, tax was fixed in cash for each crop. Each province was divided into revenue circles with its own schedule of revenue rates for individual crops. This revenue system was known as *zabt*. It was prevalent in those areas where Mughal administrators could survey the land and keep very careful accounts. This was not possible in provinces such as Gujarat and Bengal.

In most places, peasants paid taxes through the rural elites, i.e., the headman or the local chieftain. The Mughals used one term – *zamindars* – to describe all



Fig 16.3 Details in a miniature from Shah Jahan's reign showing corruption during his father's administration 1. A corrupt officer receives a bribe and 2. A tax collector punishes poor peasants.

intermediaries, whether they were local headmen of villages or powerful chieftains. The *zamindars* were not appointed by the Mughal Emperors but existed on hereditary basis, that is, sons succeeded when the fathers died. They too had contingents of armed followers. They received from the *jagirdars* a share of the revenue collected from the area and also some dues from the farmers and others. They often acted as representatives of the local people in dealing with the Mughal officials.

In some areas the *zamindars* exercised a great deal of power. The exploitation by Mughal administrators could drive them to rebellion. Sometimes *zamindars* and peasants allied in rebelling against Mughal authority. These *zamindar*-peasant revolts challenged the stability of the Mughal Empire from the end of the seventeenth century.

- ◆ What was the difference between a *mansabdar* and a *zamindar*?
- ◆ Who was under the greater control of the emperor?
- ◆ Compare the position of a *Nayaka* and a *mansabdar*.

A Closer Look at Akbar's Policies

The broad features of administration were laid down by Akbar and were elaborately discussed by his friend and member of his court, Abul Fazl in his book the *Akbar Nama*.

While Akbar was at Fatehpur Sikri (near Agra) during the 1570s he started discussions on religion with the Muslim scholars, Brahmins, Jesuit priests who were Roman Catholics, and Zoroastrians. He was interested in the religion and social customs of different people. Akbar wanted to bring together people of diverse faiths. This eventually led Akbar to the idea of *sulh-i kul* or "universal peace". This idea of tolerance did not discriminate among people of different religions in his realm. Instead it focused on a system of ethics – honesty, justice, peace – that was universally applicable. Abul Fazl helped Akbar in framing a vision of governance around this idea of *sulh-i kul*. The Emperor would work for the welfare of all subjects irrespective of their religion or social status. This principle of governance was followed by Jahangir and Shah Jahan as well. Aurangzeb deviated from this policy and tried to project himself as favouring only *Sunni* Muslims. People of other religions felt anguished by this policy of Aurangzeb.



Fig 16.4 Akbar holding discussions with learned individuals of different faiths in his ibadat khana.

Sulh-i kul

Jahangir, Akbar's son, described his father's policy of *sulh-i kul* in the following words:

"As in the wide expanse of the divine compassion there is room for all classes and the followers of all creeds, so... in his Imperial dominions, which on all sides were limited only by the sea, there was room for the professors of opposite religions, and for beliefs, good and bad, and the road to intolerance was closed. Sunnis and Shias met in one mosque and Christians and Jews in one church to pray. He consistently followed the principle of 'universal peace' (sulh-i kul)."

The Mughal Empire in the 17th Century and after

The administrative and military efficiency of the Mughal Empire led to economic and commercial prosperity. International travellers described it as the fabled land of wealth. But these same visitors were also appalled at the state of poverty that existed side by side with the greatest opulence. The inequalities were glaring. Documents from the twentieth year of Shah Jahan's reign inform us that the highest ranking *mansabdars* were only 445 in number out of a total of 8,000. This small number –

a mere 5.6 per cent of the total number of *mansabdars* – received 61.5 per cent of the total estimated revenue of the empire as salaries for themselves and their troopers.

The Mughal emperors and their *mansabdars* spent a great deal of their income on salaries and goods. The scale of revenue collection left very little for investment in the hands of the primary producers – the peasant and the artisans. The poorest amongst them lived from hand to mouth and they could hardly consider investing in additional resources – tools and supplies – to increase productivity. The wealthier peasantry and artisanal groups, the merchants and bankers profited in this period.

The enormous wealth and resources commanded by the Mughal nobility (elite) made them an extremely powerful group of people in the late seventeenth century. As the authority of the Mughal emperor slowly declined, his servants emerged as powerful centres of power in the regions. They constituted new dynasties and held command of provinces like Hyderabad and Awadh. Although they continued to recognise the Mughal emperor in Delhi as their master, by the eighteenth century the provinces of the empire had consolidated their independent political identities.

Key words :

1. *Mansabdar*
2. *Jagirdar*
3. *Jagir*
4. *Zabt*
5. Elite

Improve your learning

1. Match the following
 - i) Mansab () a) Marwar
 - ii) Zamindar () b) Revenue assignment
 - iii) Sisodiya Rajput () c) Hereditary chiefs
 - iv) Rathor Rajput () d) sulh-i kul
 - v) Akbar () e) Mewar
 - vi) Jagirdar () f) rank
2. What was the relationship between the *mansabdar* and his *jagir*?
3. What was the role of the *zamindar* in Mughal administration?
4. How were the debates with religious scholars important in the formation of Akbar's ideas on governance?
5. How do you think the Mughals were able to build a system where the emperor's will was supreme?
6. Why do you think the Mughals allowed earlier rulers to continue in their old kingdoms as before?
7. Why was the policy of *sulh-i kul* important for the Mughals to control their vast empire?

Establishment of British Empire in India

Aurangzeb was the last of the powerful Mughal rulers. He established control over a very large part of the territory that is now known as India. After his death in 1707 AD, many Mughal governors (*subedars*) and big *zamindars* began asserting their authority and establishing regional kingdoms. As powerful regional kingdoms emerged in various parts of India, Delhi could no longer function as an effective centre.

By the second half of the eighteenth century, however, a new power was emerging on the political horizon – the British. Did you know that the British originally came as a small trading company? How then did they come to be masters of a vast empire?

East India Company Comes to East

In 1600 AD, the East India Company acquired a charter from the ruler of England, Queen Elizabeth I, granting it the sole right to trade with the East. This meant that no other trading group in England could compete with the East India Company. With this charter the Company could venture across the oceans, looking for new lands from which it could buy goods at a cheap price, and carry them back to Europe to sell at higher prices. The Company did not have to fear competition from other English trading companies.

Mercantilism

Mercantile is a business enterprise that makes profit primarily through trade. Trading companies in those days made

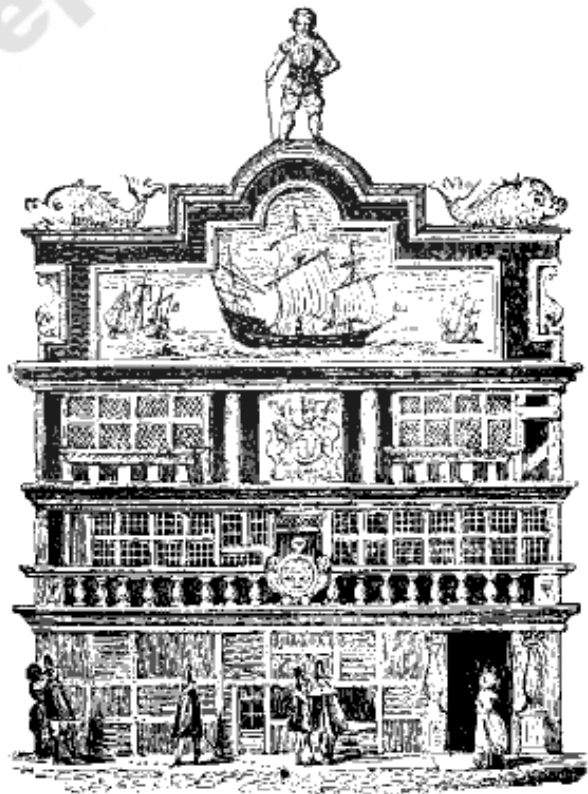


Fig 17.1 The headquarters of East India Company in London.



Fig 17.2
VascodaGama.

profit primarily by excluding competition, so that they could buy cheap and sell dear.

The royal charter, however, could not prevent other European powers from entering the Eastern markets.

By the time the first English ships sailed down the west coast of Africa, round the Cape of Good Hope, and crossed the Indian Ocean, the Portuguese had already established their presence in the western coast of India, and had their base in Goa. It was Vasco da Gama, a Portuguese explorer, who had discovered this sea route to India in 1498. By the early seventeenth century, the Dutch (Holland) too were exploring the possibilities of trade in the Indian Ocean.

Soon the French traders arrived on the scene.

The problem was that all the companies were interested in buying the same things. The fine qualities of cotton and silk produced in India had a big market in Europe. Spices like pepper, cloves, cardamom and cinnamon too were in great demand. Competition amongst the European companies inevitably pushed up the prices at which the goods were purchased. Trade was carried on with arms and trading posts were protected through fortification. This effort to fortify settlements and carry on profitable trade also led to intense conflict with local rulers.

Armed Traders

European traders formed their own companies to trade in India. The English traders formed the English East India Company while traders from France formed the French East India Company. Both companies fought against each other for many years to capture the trade in India.

Each made efforts to drive the other away. They brought armies from England and France to help them in their fight. The kings of England and France also backed their respective companies and helped them in many ways. The companies acquired land in India and built their own forts to wage battles against each other.



Fig 17.3 *A drawing of Machilipatnam from 1676.*

The wealth that was accumulated in this way was one of the most important factors that enabled England to develop industries and establish their dominance in the world.

This was the time when England as well as some other European countries like Spain, Portugal, France, Holland and Germany were acquiring colonies in North and South America, Africa, and Asia. The colonies contributed to the power and wealth of these European countries.

The Mughal emperors as well as many rajas and nawabs began to realise how dangerous it was to let such traders maintain armies, build forts, fight battles and use military force to establish their economic power in their kingdoms.

As long as the Mughal empire was strong, it had not been possible for the European companies to establish their own military power in India. In fact Emperors Shahjahan and Aurangzeb had fought and defeated the European companies on a number of occasions. Some years after the death of Aurangzeb, the different provinces of the empire became almost independent and were ruled by their respective governors. Thus Bengal, Awadh (Lucknow) and Hyderabad became independent kingdoms which only nominally acknowledged the Mughal Emperor as their supreme.

Once the Mughal empire broke up into these small kingdoms, the companies found their chance to assert their power. Though the rajas and nawabs wanted more trade they



Fig 17.4 Mughal Emperor Shah Alam granted Robert Clive the right to rule Bengal.

tried to check the growing military strength of the companies.

For example, in 1764 AD, Nawab Anwaruddin Khan of Arcot (in northern Tamil Nadu) sent his army to fight against the French company. However, to the astonishment of all, the small French army managed to defeat the large army of the Nawab. The European traders became bolder after this victory and felt they could do whatever they wanted in India because of the strength of their armies.

How were the European armies different from the armies of Indian rulers in the 1700's? The soldiers of European armies were better trained and received higher and more regular salaries. They also had better cannons and guns. The European armies held parades and drills every day. With such regular exercise, Indian soldiers enrolled in these armies also became quite skilled in battle.

Growing European Interference in the Kingdoms of India

The companies used their military advantage to increase their profits from trade. On many occasions when they saw two Indian rulers fighting among themselves, they would take sides and get involved in the fight. They would lend their army to one side to help them defeat their rivals. But, in return, the companies would demand and extract many trade concessions from the rulers. The rulers also ‘gifted’ the companies large amounts of money in return for their military help. This money helped the companies increase their trade even more.

For example, Dupleix, a governor of the French East India Company, helped Muzaffar Jang to become the Nizam of Deccan. In return Muzaffar Jang gave the French some territories near Pondicherry and the town of Machilipatnam. He also gave Rs. 50,000 to the Company, Rs. 50,000 to the French troops, and Rs. 20,00,000 and a *Jagir* worth Rs. 1,00,000 per year to Dupleix.

The companies also began to acquire small parts of kingdoms as ‘gifts’ from the local rulers. They would collect land tax from the villages and towns in these areas and use the money for their trading activities. They also used this money for maintaining and improving their army.

Slowly, the English Company began emerging victorious over the French Company in the struggle for dominance in India.

Misuse of the Company’s Power

The Indian rulers soon found that the burden of giving ‘gifts’ to the English East India Company and bearing the expenses of its army was becoming very heavy. They were also troubled by many other things the company was doing.

Some Indian rulers exempted the company from paying taxes on many of the goods it purchased from their kingdoms. However, people began taking advantage of these concessions. For example, employees of the company would do their

own private trading. But they would show their own goods as belonging to the company to escape paying taxes. In this way, while the company got richer, its employees

Fig 17.5 Local boats bring goods from ships in Madras, painted by William Simpson, 1867.



and officers also made a lot of money in India and returned home wealthy. Many Indian traders and *seths* helped the company in its trade. They, too, showed their goods as belonging to the Company to escape paying taxes.

Thus, there was much looting and swindling taking place in the kingdoms under the Company. So proud was the Company of its military strength that it began working with great impudence. It forced craftsmen to sell their goods at low prices. In the areas it had acquired, the company tried to squeeze revenue from the peasants beyond reasonable limits. When the rulers protested against such practices, the English fought against them. They even went to the extent of dethroning kings and anointing successors who would be only too willing to remove any obstacles in the way of their trade.

- ◆ Traders need money to buy the goods they sell to others. List three sources of money that helped the English to buy goods in India.
- ◆ What advantages did the Indian rulers get from the English?

The English Impose their Rule

The English gradually began to feel that they could make fuller and freer use of India for trade if they themselves ruled the country. So they began removing the nawabs and rajas and started ruling themselves.

In 1757 AD, the English defeated Sirajuddaula, the Nawab of Bengal, at a place called Plassey and established their rule over Bengal. The Battle of Plassey is an important event in Indian history. After

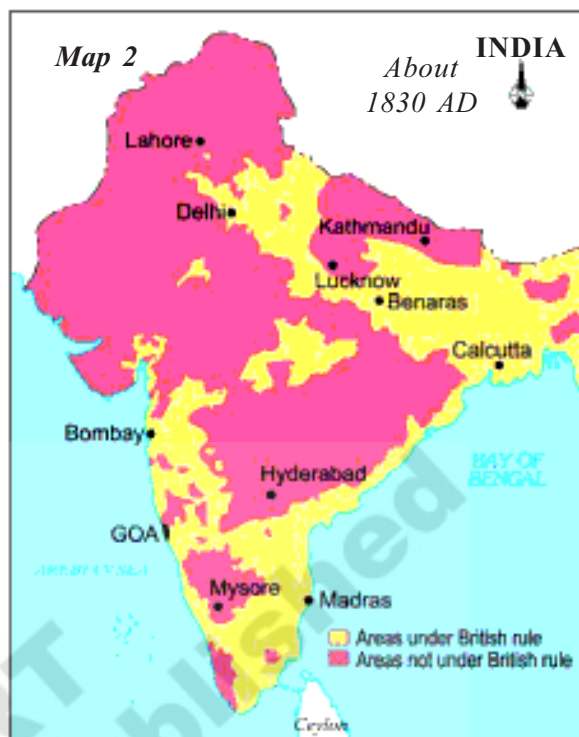
that, the English started conquering many of the kingdoms of India, big and small.

The English East India Company also forced the Nizam of Hyderabad to hand over the coastal Andhra Pradesh districts (Krishna, East Godavari, West Godavari, Srikakulam, Vijayanagaram, Prakasam Visakhapatnam and Guntur,) between the years 1765-1768. These were known as the 'Northern Sarkars' of the Madras province of the company. In return the English agreed to maintain an army contingent for the use of the Nizam. In fact this army was used more to control the Nizam rather than to help him.

Many rajas and nawabs saw through the British plot and fought hard against them. They included Haider Ali and Tipu Sultan of Mysore, the Maratha sardar Mahadji Scindia, Nana Phadnawis and others. But their kingdoms were small and, one by one, they lost to the English.

Among those who played an important role in the British success on the battlefield were generals Robert Clive, Warren Hastings and Lord Wellesley. Slowly, large areas of India came under the direct rule of the English. In many places, the rajas and nawabs continued to rule, but they were under the sovereignty of the English. An English official (known as the 'resident') would be assigned to stay in the court of these kings or nawabs so that the British government could keep an eye on how they ran their kingdoms.

- ◆ While carrying on trade with India, why did the English East India Company start thinking of establishing its rule over the country?



Maps showing expansion of the British territorial power in India.

- ◆ Look at these maps along with a present day political map of India. In each of these maps, try and identify the different parts of India that were not under the British rule.
- ◆ How far did English rule spread by 1857? Make a list of those areas where Indian kings still ruled in 1857.

Discontent with English Rule

The English had to fight with many kings and nawabs to establish their rule. You will learn more about their policies and administration in later years. They constantly faced resistance from the people of India.

The royal families resisted them because the English would anoint or remove rulers as and when it suited their purposes.

Farmers and landowners resisted them because the English imposed very high taxes on them and collected the taxes very strictly. So they lived in constant fear of failing to pay the taxes and losing their lands as a result.

Tribal people also offered resistance, because of the new rules and laws that the

English began implementing in their areas. As a result, many tribal people lost their rights over jungles and land. You will read more about this in the later years.

Many Hindus and Muslims feared that the English would destroy their religions and convert them to Christianity.

The English faced their toughest battle in 1857 when, for few months, their rule was uprooted over almost the entire northern Indian region. This revolt was started by Indian *sipahis* or soldiers, who were soon joined by royal families, landowners, farmers, tribal people and craftsmen. The royal families who joined the revolt include Nana Sahib, the adopted son of the peshwa, Tantia Tope, his general, the Begum of Awadh, and Rani Lakshmi Bai of Jhansi. Hindus and Muslims fought together against their common enemy.

The Revolt of 1857

Place: The military cantonment at Meerut, where the British army had camped

Date: Sunday, May 10, 1857

The sun was about to set when the Indian soldiers began firing their guns on their English officers. These were the same soldiers who had helped the English to conquer the kingdoms of India. They were now fed up with the behaviour of the English. They were not getting their salaries on time and they were not treated with respect in the British army. On top of this, the *sipahis* suspected that the cartridges for their new guns (rifles) were being coated with cow and pig fat to keep them dry. They felt that their religious faith was being violated. Based on this suspicion, a similar uprising had occurred at Barrackpur, near

Free Distribution by Govt. of A.P.

Kolkata in March 1857. The sense of discontent at Meerut was widespread and on this day the soldiers opened fire on their English officers. The rebellious soldiers marched towards Delhi that very night.

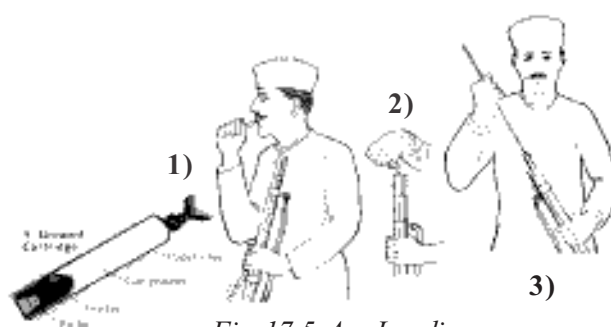


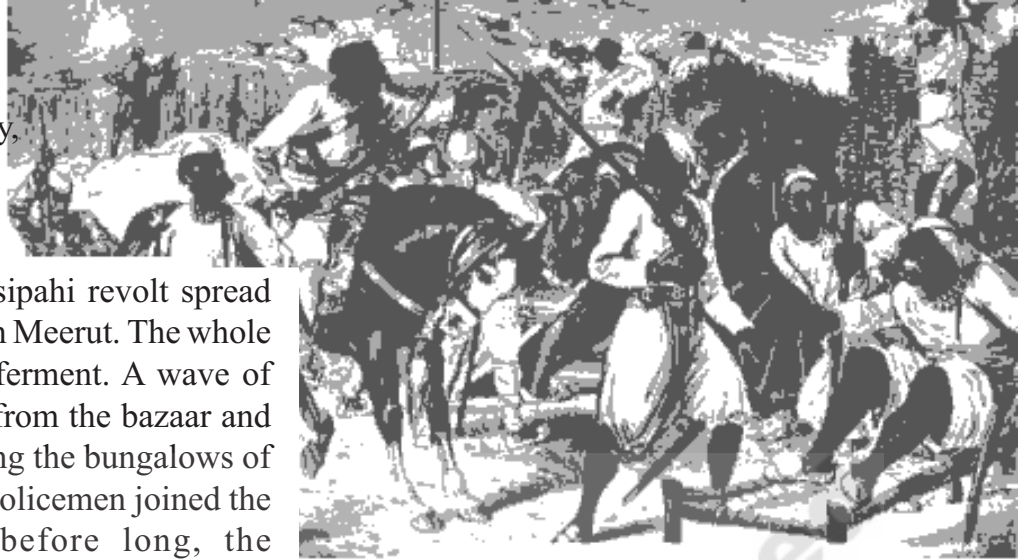
Fig 17.5 A - Loading a gun.

- 1) The soldier was supposed to tear open the paper case with his teeth.
- 2) He would pour the gun powder into the rifle.
- 3) He would then ram the bullet wrapped in paper into the rifle.

Place:

Meerut town

Date: Sunday
night - Monday,
May 10-11,
1857

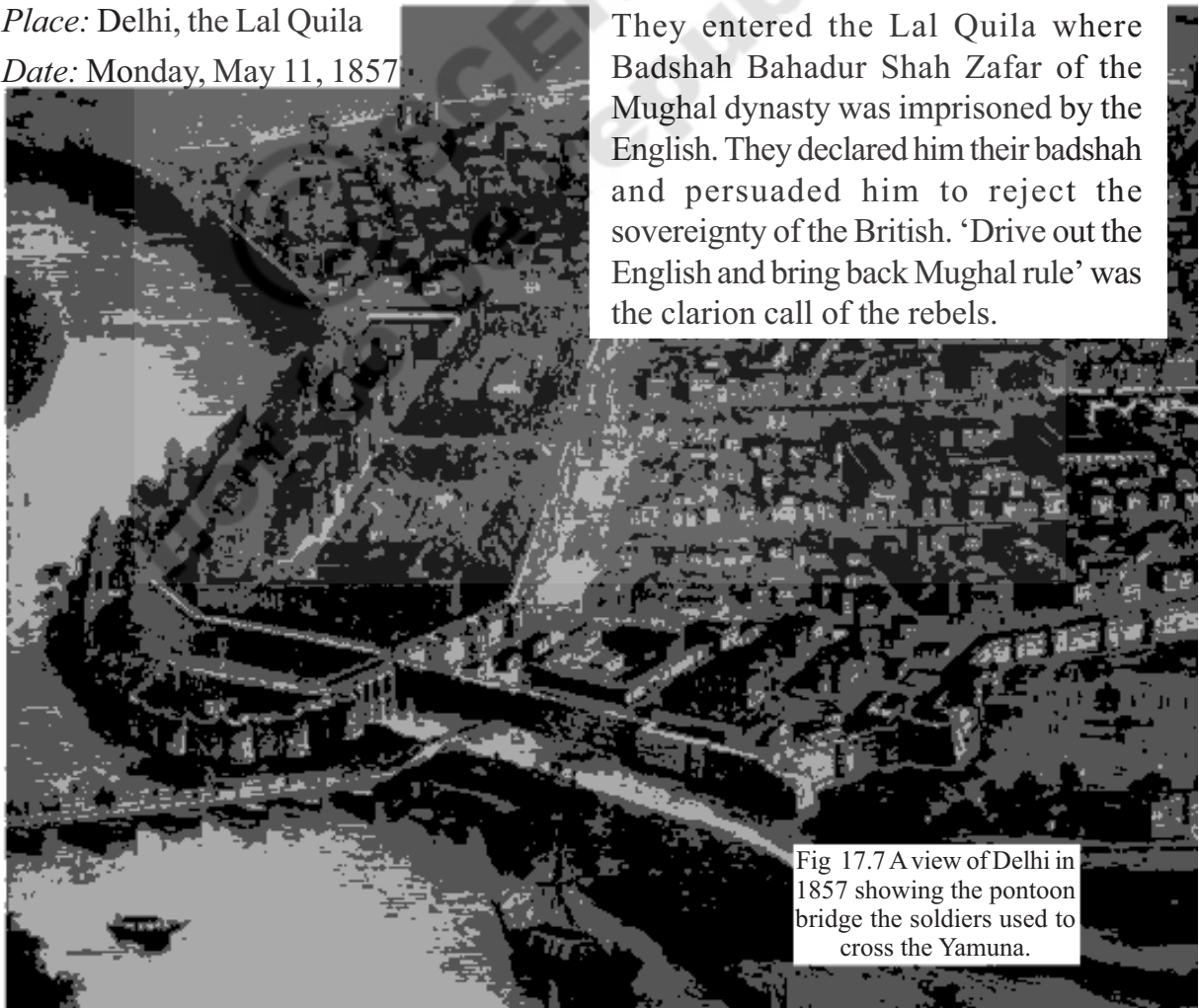


News of the sipahi revolt spread like wildfire in Meerut. The whole town was in ferment. A wave of people came from the bazaar and began attacking the bungalows of the English. Policemen joined the mobs and, before long, the bungalows and offices of the English were set afire. Many English people were killed.

Fig 17.6 A view of Sipahi revolt at Meerut in 1857.

Place: Delhi, the Lal Quila

Date: Monday, May 11, 1857



By daybreak the sipahis of Meerut had crossed the Yamuna and reached Delhi. They entered the Lal Quila where Badshah Bahadur Shah Zafar of the Mughal dynasty was imprisoned by the English. They declared him their badshah and persuaded him to reject the sovereignty of the British. 'Drive out the English and bring back Mughal rule' was the clarion call of the rebels.

Fig 17.7 A view of Delhi in 1857 showing the pontoon bridge the soldiers used to cross the Yamuna.

The Revolt Spreads

No sooner did this call go out, revolts against the English erupted in many places. *Sipahis* went on the rampage in the cantonments at Aligarh, Mainpuri, Bulandshahar, Attock and Mathura. The English were badly shaken. Their situation was, indeed, very delicate.



Fig 17.8 An illustration of Rani Lakshmi Bai.

There were a mere 45,000 English officers and soldiers in India. Against this, the number of Indian soldiers in their army was two lakh and thirty two thousand! It was these very *sipahis* who revolted. So who would now protect the lives and property of the English residents in the towns? The Indian sections of their army could not be

relied on. Consequently, many English soldiers were kept back to protect the English families. As a result, the revolt could not be suppressed immediately and it spread from place to place.

Many royal families, whose kingdoms had been taken away by the English, joined the revolt. Among them were the former Nawab of Awadh and the Maratha peshwa Nana Sahib. Armies of rebel *sipahis* and rulers from different corners of the country marched towards Delhi. Hope was in the air that the English would be driven away and Mughal rule and the earlier political order would be restored.



Fig 17.9 Tantia Tope

- ◆ Discuss why the idea of the Mughal empire brought the rebelling Indian people together.
- ◆ When you oppose something, you need an alternative in its place. Think of an example from your experience that brings out this need of an alternative.

Every Village in Revolt

The flames of revolt spread from *kasba* to *kasba* and village to village in Uttar Pradesh and Bihar. The peasants and *zamindars* took up arms together and had the English and their officers on the run. They stopped paying taxes to the British government. They tore up railway lines, burnt down police stations, courts, post & telegraph offices and uprooted the telegraph wires. These were the new things the English had introduced in India. As defeat stared the English in their faces, the Indian people became more and more courageous in their fight against British rule.

The rebels looted the houses and burnt the documents of many moneylenders. These moneylenders had become very powerful in the villages with the help of English laws.

The Revolt is Suppressed

Despite the widespread success of the revolt, the English slowly gained control over the situation.



Fig 17.10 Hanging the rebels.

The rebels fought bravely. But there were two major weaknesses among them. In every town or region, different groups of rebels fought separately against the English. They did not fight together. There was no combined and well-planned effort. So the English were able to tackle the rebels one by one in each area.

The rebels also faced a shortage of modern arms. The guns and cannons, cartridges and gunpowder they required were brought from outside India. Consequently, the rebels had to fight with old guns, arrows, spears and swords. How long could such weapons last in a contest against the more modern arms?

Even then, the speed with which the revolt spread frightened the English. So they behaved with great cruelty whenever they suppressed a rebel group. They killed the rebels in a most inhumane way and hanged their bodies from trees in the villages so that the village folk would ‘understand’ the consequences of revolt.

They tied some rebels to the mouths of cannons and blew them to bits. Many rebels went into hiding, moving from place to place to avoid being caught by the English. Many of them even went to places like Nepal to hide.

The English deported Emperor Bahadur Shah Zafar to far away Rangoon and it was there that the last Mughal emperor died. The revolt of 1857 was the biggest revolt to challenge the might of the English. After suppressing it, their hold over India became stronger and they ruled the country for the next 90 years.

- ◆ Choose the correct alternative:
- a) The rebels of 1857 AD wanted to (restore/remove)_____ Mughal rule.
- b) The weakness of the English army was that most of its soldiers were (Europeans/Indians)_____.
- ◆ What were the weaknesses of the rebel Indian armies?

because the English would not try to dethrone them.

In this way they established a close collaboration with the royal families of India. Similarly, the *zamindars*, too, were given many concessions and were assured that their property would be protected.

The *pundits* and *maulvis* were assured that the British government would not interfere in matters relating to Indian religions and would let the old traditions continue. There was also a promise that Indians would be included in the government. The truth is that the English had seen their Indian empire being snatched away in 1857. Now they directed their efforts towards giving all kinds of concessions to some of the elite powerful Indians, to conciliate them and ensure that they continued to support the English.

After the Revolt

It took the English more than a year to suppress the revolt of 1857. During this period, they changed many of their policies and adopted new ones. In 1858, Queen Victoria of England made an important declaration. She said Indian kings should rule their own kingdoms without anxiety



Fig 17.11 Bahadur Shah Zafar and his sons being arrested by Captain Hodson. After Aurangzeb there was no powerful Mughal ruler, but Mughal emperors continued to be symbolically important. When rebellion against British rule broke out in 1857, Bahadur Shah Zafar, the Mughal emperor at the time, was seen as the natural leader. Once the revolt was put down by the company, he was forced to leave the kingdom, and his sons were shot in cold blood.

Key words :

- | | |
|-------------------|--------------------|
| 1. Royal Charter | 5. <i>Jagir</i> |
| 2. <i>Subedar</i> | 6. Cantonment |
| 3. Sole right | 7. Colonies |
| 4. Demand | 8. <i>Maulvies</i> |

Improve your learning

1. Why did the European trading companies maintain armies in India? What role did these armies play in the business of the companies?
2. Why do you think the European armies were able to defeat the Indian armies in the 1700's and 1800's?
3. In 1857, who were the people of India who revolted against the English, and who were the ones who stayed away from the revolt? Explain why they acted the way they did.
4. In 1857, which soldiers felt their religious faith was being violated, and why?
5. In what ways did people revolt against the British in 1857?
6. What did the people who revolted in 1857 want to achieve?
7. In Queen Victoria's declaration of 1858, what complaints of the rebels did she try to address?
8. What are some similarities and differences between the way the Mughals and the English came to power in India?
9. Locate the sea route of Vasco da Gama from Portugal to India in the map.
10. Write a short note on the need of Unity to avert of foreign invasion.

Making of Laws in the State Assembly

In this section, so far we have been reading about how the people managed their public affairs – how they ruled or were ruled. We studied last year about tribal societies which were small and which managed all their public affairs through consultation in meetings and had a headman who carried out the decisions. In kingdoms and empires we saw how these matters were decided by Kings and their officials, how kings fought with each other to gain control over more people and lands. We also saw how chiefs and warriors controlled the lives of people and levied taxes from them at their will and used the money to build large palaces for themselves, to fight wars and also build some public utilities like tanks, canals and temples or mosques. We also saw how the British established their power so as to exploit the resources of our country and how this was resisted by our people.

Today we don't have any kings or warriors ruling us. We became independent of the British rule more than sixty years ago. So how do we rule ourselves now? You know that there are MPs, MLAs, Ministers, Chief Ministers and high officials. Are they like the kings of olden times? Can they do what they please? No. Modern governments are run according to laws. No one is above the law and all ministers and officials have to function according to laws. But who makes the laws? How are the laws made? Are they made as per the whims of the rulers? No. The laws are made by the Legislative Assemblies and Parliament. The Constitution of India lays down how these bodies can make laws. They make laws according to these procedures. In this chapter we will read in detail about how state legislatures make laws.



Fig 18.1 AP-Assembly

Here is a news item - let us try to understand what is being said in it about Andhra Pradesh Prohibition of Smoking and Health Protection Act 2002

Bill for ban on public smoking passed

HYDERABAD, MARCH 27.

Our Special Correspondent

The Andhra Pradesh State Legislative Assembly on Wednesday passed a bill providing for prohibition of smoking in places of public work or public use and in public service vehicles. It also provides for conviction and levying of fines ranging from Rs. 100 to Rs. 1,000 on those who contravene the provisions.

Some of the concerns expressed by the Opposition members include implementation of ban on sale of cigarettes within 100

metres of educational institutions, sale to those below 18 years and prohibition of advertisement of cigarettes. Others spoke of the effect it would have on the livelihood of tobacco farmers and pan shop owners. The Minister allayed their apprehensions.

The Minister said the legislation was necessary in view of the harmful effects of smoking on the health of people and in pursuance of the

Supreme Court directions given on November 2, 2001. Those contravening Sections 5, 6 and 10 relating to ban on smoking in public places and public service vehicles and display of no smoking board, would be punishable with a fine which may extend to Rs. 100 and for second or subsequent offence with a fine of Rs. 200 which may extend to Rs. 500.

Adapted from *The Hindu*
March 27-02

- ◆ News papers are often written with the assumption that they are read by adults. So first find out the word meanings – *conviction*, *allayed*, *apprehension*, *pursuance*, *contravening*, *implementation*.

- ◆ In the context of above news item fill in the following

- 1) A _____ was passed to prohibit smoking in public places (bill, custom, law, rule).
- 2) Prohibition of smoking does not include _____ (place of work, public vehicles, private garden, bus stand).

- 3) The legislation was in order to _____ the directions from Supreme Court (silence, punish, follow, dismiss).

- 4) The bill was passed in the _____ (Supreme Court, Ministry, Collectorate, Assembly).

- ◆ Does the newspaper article suggest that everyone had same opinion about the bill?
- ◆ What are the provisions for punishment mentioned in the newspaper?

The Constitution of India provides for a Legislature for every State. The legislature of every State consists of the

Governor and one or two Houses. The legislatures in the State are either bicameral (consisting of two Houses) or unicameral (consisting of one House). The Lower House is always known as the Legislative Assembly and the Upper House wherever it exists as the Legislative Council. At present very few States have bicameral legislature.

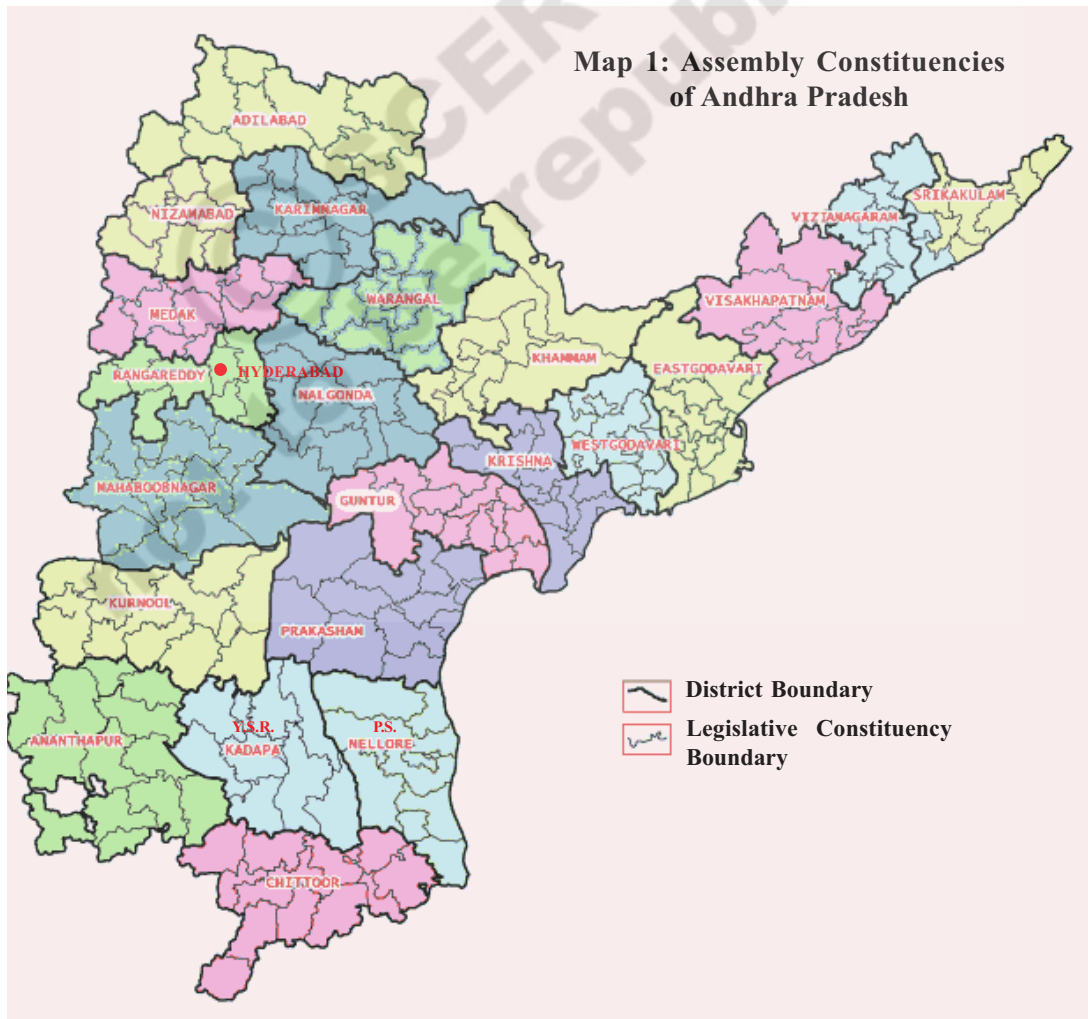
Legislative Assembly

This is the most important body for making the laws for the state. The Government of Andhra Pradesh which is responsible for implementing these laws and also formulating policies for the

welfare of the state is largely composed of Members of the Assembly. Our state Assembly has 294 members (MLAs) who are elected by the people just as panchayat members are elected.

The normal tenure of the Legislative Assembly of every State is of five years but it may be dissolved earlier by the Governor. Likewise its term can be extended by one year at a time by the Parliament during National emergency.

The State Legislature must meet at least twice a year and the interval between any two sessions should not be more than six months.



In Andhra Pradesh, laws are made by the state legislature which has two chambers:

Chamber	Member	Short Form
Legislative Assembly	Member of Legislative Assembly	MLA
Legislative Council	Member of Legislative Council	MLC

Assembly Constituency

Each of these 294 members is elected from a constituency. Thus there are 294 constituencies in the state. The number of constituencies in a state will depend upon its population. A constituency in Andhra Pradesh has about 1,70,000 voters. You may remember that all men and women of 18 years of age or above have the right to vote. They have to get their names registered as voters in the area where they live. All voters of one constituency will vote to elect one member for the Assembly.

Each constituency comprises of a number of villages, towns and cities. Or big cities like Vijayawada is divided into three constituencies. Look at map of Andhra Pradesh. You can see that districts which have larger population have more constituencies while those with less population have fewer constituencies.

Election of MLA

Usually elections to the state legislative assembly are held once in every five years. Persons aspiring to become MLAs contest these elections. Various political parties field their candidates. There are also individuals who contest election and do not belong to any political party. They are known as “Independents”. To contest elections a person should be a citizen of India, and should have completed twenty

five years of age. He or she should not hold any office of profit under the State or Central government and should possess such other qualifications as may be prescribed by law.

In elections political parties play a major role. All political parties and candidates come out with election manifestos. These manifestos are descriptions of programmes that they intend to undertake and promises that are relevant to the local context. The candidates and their supporters conduct campaign by holding meetings and visiting the voters door to door.

- ◆ Make a list of political parties which are active in your area and the state along with their symbols.
- ◆ If you were to contest elections from your district, prepare an Election Manifesto – your promises to the constituency people.
- ◆ Some people feel that contesting in elections requires spending huge amounts of money which is possible only for very rich people. Do you agree with this?
- ◆ If only rich people are able to contest elections how will it affect the decisions taken in the Assembly?



Fig 18.2

- ◆ Here are images (Fig 18.2 & 18.3) from a calander published by Election Commission. They show different aspects of elections in our country from different times. Based on these images discuss with your teacher or elders what changes have occurred during the last many years.

On the election day people vote one by one. The officer in the booth is responsible for checking the identity of the voters. In most cases the Election Commission has given Voter Identity Cards to all voters. These cards have to be shown to the officer. The voters do not reveal whom did they vote for; it is a secret.



Fig 18.3

- ◆ Why do you think this has to be kept a secret?
- ◆ Examine the Photo Identity Card of your parents and try to prepare an imaginary Identity Card for yourself with all the details.

After voting, all votes are counted on a scheduled date and candidate who secures the highest number of the votes is declared elected.

- ◆ Suppose, In a constituency 1,50,000 votes were polled. Following is the number of votes polled for various candidates. Who do you think will be declared as elected?

Ellamma	45,000
Raghavulu	44,000
Narasimha	16,000
Gulam Mohammad	20,000
Badeyya	15,000
Pooja	10,000

- ◆ To what extent do you think this winning candidate really represents the opinions and needs of the people of the constituency?

Find out with the help of your teacher:

- ◆ The name of your constituency _____
- ◆ Identify three other constituencies in your district _____
- ◆ The name of the MLA _____
- ◆ Identify the reserved constituencies in your district _____
- ◆ Who all in your family voted in the last elections _____, _____

Formation of Government

We have read that there are 294 constituencies in AP. Now what happens after elections? Look at **Table 1**. It shows results after an assembly election.

We see that the political party A got 156 candidates and the political party B won second largest number of candidates, i.e. 92. The party which has more than half the number of seats is considered to have got majority. If any law has to be made they can easily get it passed as more than half the members will support it. The majority party (in this case the political party A) members will elect one member among themselves as their leader. He or she will be made the Chief Minister of the state by the Governor. The Chief Minister will select from among party MLAs to be ministers. Together they will be called the Cabinet (or ministry). In popular terms the Cabinet is also called the 'Government'. The Cabinet is responsible for implementation of the laws, for

Table 1	Political Party	No. of Candidates Elected
1	Political Party - A	156
2	Political Party - B	92
3	Political Party - C	18
4	Political Party - D	10
5	Political Party - E	7
6	Political Party - F	4
7	Political Party - G	2
8	Political Party - H	1
9	Political Party - I	1
10	Political Party - J	3
Total		294

implementing development plans and for preparing and passing new laws and welfare schemes in the Assembly.

Table 2	Political Party	No. of Candidates Elected
1	Political Party - P	202
2	Political Party - Q	50
3	Political Party - R	11
4	Political Party - S	11
5	Political Party - T	8
6	Political Party - U	3
7	Political Party - V	9
Total		294

Table 3	Political Party	No. of Candidates Elected
1	Political Party - Abcd	110
2	Political Party - Mnop	99
3	Political Party - Wxyz	45
4	Political Party - Stuv	40
Total		294

- ◆ Look at **Table 2** showing results of another Assembly elections. Can you find out which party could have formed the Government?
- ◆ Suppose after an election seats among various parties are distributed as in **Table 3**. Discuss with your teacher how a new government could be formed.

In case no single party gets more than half of the seats, two or more political parties come together to form a

Free Distribution by Govt. of A.P.

Government. It is called Coalition Government.

Council of Ministers

The Chief Minister allots different ministries to the members of the Cabinet - he or she makes someone a Finance Minister, another Education Minister or Home Minister, and so on. The Minister directs the policy of the departments under his or her charge. These policies are implemented according to the rules by officials of the departments. The ministry is responsible for preparing policies and plans which are submitted to the Assembly for approval. After the approval of the Assembly the ministry formulates rules and methods for implementing them and takes action to implement them.

While each ministry works independently, major policies, etc. are decided upon by the entire cabinet – so if anything goes wrong the entire cabinet and especially the Chief Minister is held responsible for it. The entire cabinet also takes the credit for good work done.

The State Assembly

All MLAs together elect a person as the Speaker. The Speaker conducts the Assembly meetings – he or she decides what should be discussed, when and who will speak in what order. If any one disobeys, Speaker has the power to punish them.

As mentioned above, the Assembly has to approve all laws, policies and levying of taxes by the government. Before giving its approval the members discuss the proposals very carefully and different

points of views are expressed. Thus the benefits and ill-effects of such measures are discussed in great detail. These are also reported through news papers and TV to the public.

The MLAs also keep track of all developments in their constituencies and from time to time place the problems faced by the people before the Assembly. The minister of the concerned department has to make enquiries and reply to all such questions. The minister individually and the entire cabinet along with the Chief Minister are responsible to the Assembly – that is they have to answer any question raised by a member with regard to their work. If the

answer is not satisfactory, the members may force the concerned minister to resign.

The Making of Laws

How do the assemblies make laws? Usually laws are drafted by the ruling party as it alone has the majority support in the Assembly to pass the law. However, on some issues a member can also propose a law and it can be adopted if the majority supports it. Let us look at the procedure for making a law in detail.

Before a law is passed, the proposed law is called a 'Bill'. After being passed by both the chambers and approval by the Governor it becomes a law and is called an 'Act' of the state legislature.

Legislative Council

Earlier we said that Andhra Pradesh has two houses. The second house is called the Legislative Council. It has been in existence in two spells from 1958-1985 and from 2007 till today. It is a permanent house. Members of this house, known as MLCs are elected for six years after every two years one-third of its members retire. To contest in this house, a person should be citizen of India and above 30 years of age. He or she should not hold any office of profit under the State or Indian government and must possess such other qualifications as may be prescribed by the Parliament. It consists of 90 members.

Composition

- ◆ 30 members (1/3) are elected by the MLAs.
- ◆ 30 members (1/3) are elected by the members who were elected to Local Bodies like panchayats and municipalities.
- ◆ 7 or 8 members (1/12) are elected from Graduates.
- ◆ 7 or 8 members (1/12) are elected from Teachers.
- ◆ 15 members (1/6) are nominated by the Governor.

In order to make any law in the state, it has to be approved by of both the houses.

Governor : Governor of a state is appointed by the President of India. Her/his job is to ensure that the state government is functioning according to the Constitution of India. Governor appoints the Chief Minister and other members of the council of ministers. The constitution vests in the Governor all the executive powers of the State government.

Find out who is the governor of Andhra Pradesh.

System of Reservation

It has been observed that it is very difficult for weaker sections of the population, like the dalits or adivasis to fight and win elections. As such very few of them get elected to the assemblies. In order to ensure that they are adequately represented in the Assemblies the Indian Constitution reserve certain constituencies for the Scheduled Castes and Scheduled Tribes.

Reserved Constituencies in Andhra Pradesh State Legislative Assembly:

Total Number of Constituencies :	294
Constituencies Reserved for SCs :	48
Constituencies Reserved for STs:	19

- ◆ Many people feel that similar reservation of seats for women too should be ensured. What do you feel?

The minister who brings the Bill will describe in detail the reason for the new law in the Assembly. There will be a lot of discussion and sometimes opposition from different MLAs. There could be suggestions to improve the provisions in the Bill. A small committee consisting of both ruling party and opposition members is set up to discuss these suggestions. After taking all such aspects and necessary changes into account it will be first approved by the Cabinet. Then it will be placed before the Assembly for voting. If more than half the members of the Vidhan Sabha accept the bill it will be passed and taken to Vidhan Parishad. If the Vidhana Parishad passes it, then it will be sent to the Governor for approval. After his or her approval the Bill will be called an Act and published in gazettee.

Discussions in the Assembly

Let us read an *imaginary* example of discussions that can take place in the Legislative Assembly.

MLA (1) : Honourable Speaker, due to lack of rains for the past three years, the groundwater level in my constituency has reduced to a great extent. Government has not taken any steps in this regard. Moreover, there has been an increase in the number of borewells. I wish to know from the Honble Minister the steps being taken for underground water and Hydrology.



Fig 18.4

MLA (2): Hon. Speaker, yes it is true. The situation in my constituency is no better. The work of the officials is not satisfactory. The people have to walk a long distance to fetch drinking water.

MLA (3): Hon. Speaker, the Government should provide money to strengthen the bunds of the tanks, remove the silt, and should take suitable steps to store the rain water during rainy seasons. Moreover, trees should be planted on the bunds to prevent breaching of the tank bunds.

MLA (4): Hon. Speaker, the Government is aware of the situation. It has already taken up the necessary measures to prevent further damage. The Mandals affected by the depletion of groundwater have been identified.

MLA (5): Hon. Speaker, the opposition should appreciate the steps taken and should offer constructive suggestions. They should not unnecessarily criticise the Government. Bunds were built on the hill slopes in my constituencies and as a result there has been considerable rise in the level of groundwater in my constituency. Government officials are within the reach of the people.

MLA (6): Hon. Speaker, the Industrial units in my area are discharging polluted water into the river and there is considerable effect on the health of the people. I would like to know the steps being taken by the government in this aspect. Drinking water is a serious issue in my constituency.

Minister: Hon'ble Speaker, the Government has great concern for the health of the people. It has taken up all the remedial and protective measures in the drought prone mandals, such as development of tanks, plantation of trees, and banning sand mining. The Government takes into consideration the suggestions of the honourable members and also seeks the support of all for the successful implementation of the programme.

- ◆ What would be your response on the above issue if you were an MLA?
- ◆ What is the difference between the role of a ruling party MLA and an opposition party MLA?

Key words :

1. Manifesto
2. Cabinet
3. Speaker

Improve your learning

1. Name the few areas related to life of people on which laws should be made.
2. Your school belongs to the department of School Education. Find out some laws which is be applicable to your school (students, teachers, headmaster/ principal/ PTA).
3. There is a law that no child from the age of 6-14 should remain out of school. What steps should be taken to implement this law? Discuss among yourselves with the help of your teacher.
4. Suppose you are a member of AP Legislative Assembly, which issue will you raise for the making of law and why? Explain with example.

5. Suppose there is a state under the name of Purabgarh with MLA seats of 368. After an election different political parties got following seats:

Party A	=	89
Party B	=	91
Party C	=	70
Party D	=	84
Others	=	34
<hr/>		
Total	=	368

Read the above table and answer the following questions:

- Of the 368 seats how many seats are needed for getting a majority to form a government in the state?
 - Which is the single largest party after this election?
 - Can the single largest party form the government? If not, what can be the possible alternatives to form the government?
 - How would a coalition government be different from a one party government?
6. At present very few States in our country have a bicameral legislature. Can you name them?
7. Write an imaginary dialogue for the following picture in the context of the chapter.



Implementation of Laws in the District

In the previous lesson we saw how laws are made and how welfare and development plans are made. But how are they implemented? Do you think people elect even those who implement them? Do you think once the laws are made people implement them themselves? You would be knowing how these things are done. Can you share in your class how the following are done:

- i. Building dams and canals
- ii. Supplying electricity to houses
- iii. Running ration shops
- iv. Running trains
- v. Printing currency notes
- vi. Collecting taxes from people
- vii. Preventing child labour and educating all children
- viii. Defending the borders of the country
- ix. Identifying those below poverty line and implementing schemes for their benefit
- x. Preventing people from stealing from other people's houses

- ◆ You may have heard of many kinds of government functionaries. Can you name a few and discuss what they do?

We saw in the last lesson that there are various departments of the government to do various kinds of activities. These departments are under the control of ministers, but they have a large number of officials who carry out the orders of the government. Some of these officials are posted in the state capital like Hyderabad from where they plan the implementation in all parts of the state. At the same time

the entire state is divided into a number of districts and most departments have their offices in the districts also for the implementation of the government's laws and plans. There are 23 districts in Andhra Pradesh.

- ◆ What is the name of your district and where is its head quarters?

Each district has a District Collector & Magistrate who coordinates the work of all departments in the district. Let us learn more about their work.

The District Collector & Magistrate of Nallavaram

Here is an imaginary district of Nallavaram. This district has the following Mandals - Garipalli, Mallepalli, Narasapet, Gurthur. The office of the district magistrate of the Nallavaram is in Nallavaram town.

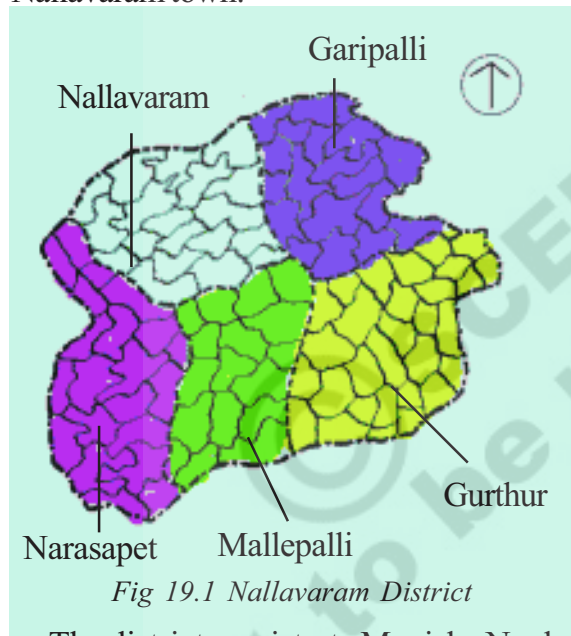


Fig 19.1 Nallavaram District

The district magistrate Manisha Nagle, reaches her office at 10:30 every morning. At 11:30 today there is a meeting of the officers of all departments in the office. The heads of all the departments have come for the meeting. The Collector asks the head of each department about the progress of the work during the previous month. She also asks them about the problems they face in the work. The meeting continued till about 2 O'clock in the afternoon.

After the meeting, Manisha Nagle goes through files. There is a stack of files. Each file deals with the activities of different

departments. She reads them and writes her comments or orders on them. It is about 3.00 PM when Manisha Nagle finishes looking at the files. From 3.00 PM. to 4.30 PM everyday she meets the people of the district. People from all the Villages come to meet her with their problems.

Some farmers of Mallepalli mandal had come to discuss the absence of irrigation in their village. Their tanks were dry for two years. This year the crops failed. They wanted to know if their loans could be waived and if they can get some repair work on tank bund. In the neighbouring villages tank bunds were repaired. They wanted such work to be done in their village as well.

Manisha Nagle told them that since their village was not in the state list of drought affected areas they could not get any loan waiver. Collector suggested that they approach the MLA and present their problems. She promised to instruct the concerned department to attend to the tank bund of the village.

At 5.00 A.M. on the next day morning, Collector received a phone call from a town in Narasapet Mandal. The cotton stored at the ginning mill there caught fire in the night. People were trying to put out the fire. The fire service had already reached the area. It was necessary to ensure that fire did not spread to neighbouring areas. Nagle immediately left for Narasapet Mandal. She rang up the Superintendent of Police and the civil surgeon and asked them to come along.

The Collector reached Narasapet at around 7.00 AM and went straight to the cotton ginning mill. A lot of the cotton had been destroyed but the fire was now under



Fig 19.2 District Collector at the cotton factory.

control. The Municipal Chairperson and the police officers were also there. The Collector asked them about the extent of damage. The Chairperson told her that two labourers in the mill had suffered from severe burns and had been admitted to hospital. A few houses nearby had also been burnt down.

Nagle announced a compensation of ten thousand rupees each to the owner of the houses, which were burnt and promised to inquire into the causes of fire. The Collector then visited the injured labourers at the hospital. She also announced a relief payment of twenty thousand rupees each to the two labourers.

On the way back she visited the Municipal Office. It was pointed out that due to encroachment in many parts of the city the fire engine arrived late. Sidewalks of the roads were encroached by shop keepers. Many houses and other offices illegally extended their boundary walls beyond the permitted limits. This was creating traffic jams in many parts of the town. She talked to the Municipal Officials

and asked them to take strict actions during the next few weeks and report to her at the next monthly meeting. Manisha Nagle reached Nallavaram only after it was dark.

Nallavaram is an imaginary district. But what you saw the Collector of Nallavaram doing is the work that they are expected to do in every district.

- ◆ What explanation did Collector give for not waiving the loan for farmers?
- ◆ Who were the other officials mentioned in the incidents?
- ◆ Who were the non-officials mentioned in the above incidents?

Tahasildar (MRO) and Village Revenue Officers

You may have noted that Nallavaram district is divided into different Mandals. There are many villages in each of these Mandals. In the map here, you can see that Nallavaram is divided into many Mandals. Many villages together form a Mandal. Just like in the district headquarter there are different offices at the Mandal. There are Mandal Officers of Development, Revenue, Education, agriculture, and so on.

- ◆ Find out the name of your Mandal.
- ◆ Name some of the Mandals in your district.

Among others, the Revenue Officer keeps the land records. If you live in a village or own land, you may know that your parents have some record for the land that is owned by them. All the land all over the country is measured and this information is kept in these offices. They also have maps of the land showing land owned by different people, showing crops, tanks, drainages, wells, neighbouring plots, roads, hillocks, and so on. These documents become extremely useful. If there is a dispute between the boundaries of land owned by two individuals, maps and written documents can be used for settling it. Or, if someone buys or sells the land this information needs to be written in this office as well. These maps also have records of the forest or uncultivated grazing lands. So if someone encroaches into these lands, they can be evicted.

It is the responsibility of the Village Revenue Officer and Mandal Revenue Officer to keep track of these records of the land. They also have the responsibility for updating and issuing ration cards.

How Laws are Implemented

To understand this, first we need to understand an actual law. In the previous chapters we have read about the significance of groundwater, how it has historically been important in our agriculture development etc. We also have

Free Distribution by Govt. of A.P.



Fig 19.3 Village Accountant with land records

perennial rivers and forest areas. Yet today we find in many parts of Andhra Pradesh that borewells are dug up to 1,500 feet or more. In the long run it may not be viable to have such system of irrigation, or drinking water.

Andhra Pradesh Water, Land and Trees Protection Act, 2002

It is important to protect these resources for the benefit and survival of the next generations. In this connection, the Government of Andhra Pradesh enacted the Andhra Pradesh Water, Land and Trees Protection Act in 2002. It is being implemented from 19-04-2002. Some of the features of this law are:

- a. Permission from Mandal Revenue Officer is essential to drill/ dig new well.
- b. Specific depth and distance should be maintained between the wells to avoid unnecessary competition.

- c. Steps to prevent wastage of rain water.
- d. Industrial units should have waste water treatment plants.
- e. Protection of Drinking water.
- f. In the regions affected by groundwater depletion sand quarrying from river beds is prohibited.
- g. Social forestry to be taken up on large scale.
- h. Cutting trees without permission is prohibited. When a tree is cut, two saplings should be planted.

After the law was passed, government formed an authority to implement the act. It was called the Water, Land and Trees Protection Authority or WALTA. If you look carefully, in order to implement a law like this – it is necessary that different departments of the government work together. You can note that forest department has to be taken into account, because forests are important for saving water and the department in charge of Industry to ensure that the factories are not polluting water.

So we can build a table such as the following to show how different persons in the government could be responsible for implementing the law:

Department	Subject
Groundwater Department	Registration of Rigs, Sand Mining, classification of Groundwater basins, etc.
Municipal Administration & Urban Development Department	Construction of Rain-water harvesting structures, tree planting, permission for construction of new buildings.
Mines and Geology Department	Monitoring Sand Mining in water bodies
Forest Department	Granting permission for felling trees

Now if this law is properly implemented what will it mean? Considering the following possibilities, can you identify which departments will be responsible if their activities are to be evaluated – it is possible that there are more than one department which looks at them:

- ◆ Satyavathi is a farmer who wants to dig a new borewell, and there is another borewell in her neighbouring land. What rules will she have to follow?
- ◆ Padmanabham wants to build a new house and is thinking of collecting sand from the river bed near the house.
- ◆ Apparao is a contractor who wants to start a stone quarry near the forest.

Thus, in a democratic country like ours there are different roles played by elected representatives and appointed government officials. In many ways these are different from the way kings and priests dictated different aspect of our lives. That is not to say that all different forms of marginalisation, disparities and discrimination have gone away from the society. But we can work towards achieving them.

Key words:

Magistrate
Loan waiver
V.R.O
Ginning

Project work :

1. Conduct an interview of your teacher, or any government school teacher as to how she or he was appointed. To which department of government do they report to? Has the teacher been transferred? How are they promoted or punished? Who is responsible for their salaries? If they have complaints about working conditions whom do they report to?
2. What has been their experience in implementing new rules like – ensuring enrolment of children to school; mid-day meals; or any other program? Make a presentation of your findings in classroom.

Improve your learning

1. Make a list of activities done by the District Collector.
2. Correct the following statements :
 - a. Law is implemented by the elected representatives.
 - b. Collector is in charge of a Mandal.
 - c. People approach Mandal Officer to solve the problems of the entire district.
 - d. Tahasildar (MRO) keeps the record of land revenue.
3. Why do you think land records are kept at village and mandal levels? What are the important functions of these persons?
4. In the last two chapters we studied about law making and those who implement them – compare their roles in the following table:
 - a) has to contest elections; b) are part of different departments of government;
 - c) responsible for making laws; d) responsible for implementing laws;
 - e) usually elected for 5 years; f) are appointed into jobs;

Member of Legislative Assembly	Persons in Administration

5. Here is another brief description of Manisha Nagle. Read this carefully and compare with the text given under the head “Mansabdar’s and Jagirdars” in chapter 16 and “Captains of the troops’ - The *amaranayakas*” in Chapter 15 and fill the following table.

Manisha Nagle has been the Collector of Nallavaram for last 5 months. Before being appointed as a Collector, she worked as Deputy Secretary in the Ministry of Public Health Department, in the state capital. It is possible that she may be transferred as a Collector of another district or taken back to the State Secretariat. She is an employee of the Indian Government. Often some of them also have to go to Delhi and work for the central government, etc. They are all selected through an examination conducted by the government.

Item	Government employees	Amara Nayakas	Mansabdars
Process of selection			
Paid through			

Caste Discrimination and the Struggle for Equality

Caste system has created one of the major forms of inequality in our country. For centuries people have fought against this discrimination and our constitution too strives to end it. Elimination of caste discrimination has been one of the major aims of our governments. Let us read how caste system works and what steps have been taken to end caste inequality.

A large number of people in our country think of themselves as belonging to some caste or the other. They even put the names of their castes as a part of their own names. Usually people of a caste follow some common customs, worship some particular deity etc. Many people who follow the caste rules, also marry only within their own caste. In olden days people of one caste also followed the same profession or work, though in our times this is changing fast. Thus you can see that the caste system creates some bonds among a particular group of people and separates them from other groups of people.

- ◆ Can you discuss in the class to what extent these points are true in your area and to what extent they have changed?

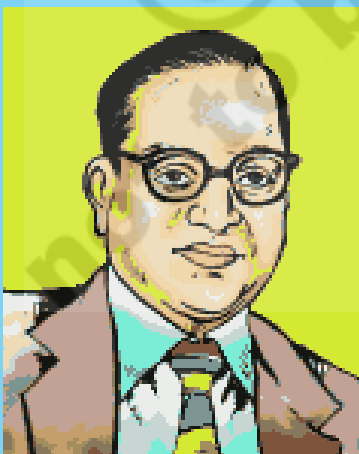
However, the caste system has also given rise to great inequalities and discrimination in our society. Let us see how this happens.

People are engaged in different kinds of work like teaching, carpentry, pottery, weaving, fishing, farming etc. to earn a livelihood. However, certain kinds of work are valued more than others. Activities like cleaning, washing, cutting hair, picking garbage are seen as tasks that are of less value and people who do this work are seen as dirty or impure. This belief is an important aspect of the caste system. In the caste system, communities/ groups of people were placed in a sort of ladder where each caste was either above or below the other. Those who placed themselves at the top of this ladder called themselves upper caste and saw themselves as superior. The groups who were placed at the bottom of the ladder were seen as unworthy and called “untouchables”. Caste rules were set which did not allow the so-called “untouchable” to take on work, other than what they were meant to do. For example, some groups were only allowed to pick garbage and remove dead animals from the village. But they were not allowed to enter the homes

of the upper castes or take water from the village well, or even enter temples. Their children could not sit next to children of other castes in school. Thus upper castes acted in ways, which did not give the so-called “untouchables” the same rights as they enjoyed.

- ◆ In what ways do you think the caste system promotes inequality among people?

When some people are not allowed to do what they want to do – like acquire education, or take up jobs of their choice, we can say that they are facing discrimination. Dr Bhimrao Ambedkar, one of the great leaders of India, shares his first experience of caste-based discrimination, which took place in 1901 when he was just nine years old. He had gone with his brothers and cousins to meet his father in Koregaon which is now in Maharashtra.



Dr B.R. Ambedkar
(1891- 1956)

Chairperson of the committee for drafting of the Constitution of India and the first Union Law Minister of India.

“Long did we wait, but no one turned up. An hour elapsed and the station master came to enquire. He asked us for our tickets. We showed them to him. He asked us why we tarried. We told him that we were bound for Koregaon and that we were waiting for father or his servant to come, but that neither had turned up and that we did not know how to reach Koregaon. We were well-dressed children. From our dress or talk no one could make out that we were children of the untouchables. Indeed the station master was quite sure we were Brahmin children and was extremely touched at the plight in which he found us. As is usual among the Hindus, the station master asked us who we were. Without a moment’s thought I blurted out that we were Mahars. (Mahar is one of the communities which are treated as untouchables in the Bombay Presidency.) He was stunned. His face underwent a sudden change. We could see that he was overpowered by a strange feeling of repulsion. As soon as he heard my reply, he went away to his room and we stood where we were.

Fifteen to twenty minutes elapsed; the sun was almost setting. Our father had not turned up nor had he sent his servant, and now the station master had also left us. We were quite bewildered, and the joy and happiness, which we felt at the beginning of the journey, gave way to a feeling of extreme sadness.

After half an hour the station master returned and asked us what we proposed to do. We said that if we could get a bullock-cart on hire we would go to

Koregaon, and if it was not very far we would like to start straightway. There were many bullock-carts plying for hire. But my reply to the station master that we were Mahars had gone round among the cart men and not one of them was prepared to suffer being polluted and to demean himself carrying passengers of the untouchable classes. We were prepared to pay double the fare but we found that money did not work. The station master, who was negotiating on our behalf, stood silent, not knowing what to do.

Source: Dr B. R. Ambedkar, Writings and Speeches, Volume 12, Edited Vasant Moon, Bombay Education Department, Govt. of Maharashtra.

- ◆ Despite the children offering money the cartmen refused them. Why?
- ◆ How did people at the station discriminate against Dr Ambedkar and his brothers?
- ◆ How do you think Dr Ambedkar felt as a child, when he saw the station master's reaction to his statement that they were Mahars?
- ◆ Have you ever experienced prejudice or witnessed an incident of discrimination?
- ◆ How did this make you feel?

Imagine how difficult it would be if people could not move easily from one place to the other, how insulting and hurtful it is to have people move away, refuse to touch you or allow you to drink water from the same source as they do.

This small incident shows how a simple task of going from one place to another in a cart was not available to the children – even though they could pay the money. All the cart men at the station refused to take the children. They acted in a discriminatory manner. So, clearly, as this story shows us, caste based discrimination is not only limited to preventing dalits from undertaking certain economic activities but it also denies them the respect and dignity given to others.

An example of Discrimination in schools

Omprakash Valmiki is a famous dalit writer. In his autobiography, *Joothan*, he writes, *"I had to sit away from the others in the class, and that too on the floor. The mat ran out before reaching the spot I sat on. Sometimes I would have to sit way behind everybody, right near the door...sometimes they would beat me without any reason."* When he was in Class IV, the headmaster asked Omprakash to sweep the school and the playground. He writes, *"The playground was way larger than my small physique could handle and in cleaning it, my back began to ache. My face was covered with dust. Dust had gone inside my mouth. The other children in my class were studying and I was sweeping. Headmaster was sitting in his room and watching me. I was not even allowed to get a drink of water. I swept the whole day,...From the doors and windows of the school rooms, the eyes of the teachers and the boys saw this spectacle."* Omprakash was made to sweep the school and the playground for the next couple of days and this only came to an end when his father,

who happened to be passing by, saw his son sweeping. He confronted the teachers and then walking away from the school holding Omprakash's hand, he said loudly for all of them to hear, "*You are a teacher...So I am leaving now. But remember this much Master...(He) will study right here...in this school. And not just him, but there will be more coming after him.*"

- ◆ Why do you think Omprakash Valmiki was being treated unequally by his teacher and his classmates?
- ◆ Imagine yourself as Omprakash Valmiki and write four lines about how you would feel if you were in the same situation as him.

When persons are treated unequally, their dignity is violated. The dignity of Omprakash Valmiki was violated because of the way in which he was treated. By picking on him and making him sweep the school, because of his caste, Omprakash Valmiki's schoolmates and teachers hurt his dignity badly and made him feel as if he was less than equal to all other students in the school. Being a child, Omprakash Valmiki could do very little about the situation that he was in. It was his father who, on seeing his son sweep, felt angry by this unequal treatment and confronted the teachers.

Has it always been like this?

No. There was a time when there was no caste system. We saw the lives of hunter gatherers and tribes. They did not have any caste system. Some aspects of the caste

system emerged in the times of the Vedas in which the four major caste groups – Brahmana, Kshatriya, Vaishya and Shudra are mentioned. Later on many new aspects like untouchability and restrictions on marriage, eating together, etc. emerged. It was said that lower castes should serve and obey the higher castes. These ideas spread all over India including Andhra Pradesh in the times of the kingdoms you studied about in chapters 13 and 14. As these ideas spread, many people also criticised them. Thinkers like Buddha, Mahavira, Ramanuja, Basava, Kabir, Vemana, etc. criticised the idea of some people being superior by birth and felt that all people irrespective of their birth or profession can perform good deeds and attain salvation. You will read about them in greater detail in later chapters.

Striving for Equality

You read about the establishment of British rule and the beginnings of struggle against it. The struggle for freedom from British rule also included within it the struggle of large groups of people who not only fought against the British but also fought to be treated more equally. Dalits, women, tribals and peasants fought against the inequalities they experienced in their lives.

In the nineteenth and twentieth centuries, several social reformers fought to create a new social system based on freedom, equality, brotherhood, human dignity and economic justice. They include Jyotirao Govindarao Phule, Savitri Bai Phule, Periyar E.V. Ramasami Naickar, Sri. Narayana Guru and Ayyankali.

Jyotirao Govindarao Phule also known as Mahatma Jotiba Phule was a social reformer from Maharashtra. Jotiba Phule and his wife Savitri Bai Phule were pioneers of women's education in India. In 1873 he founded the Satyashodhak Samaj (Truth Seekers Society), which was devoted to securing human rights and social justice for low-caste people.



Jyotirao Govindarao Phule (1827-1890)

He is most known for his efforts to educate women and the lower castes as well as the masses. He, after educating his wife, opened a school for girls in India in August 1848.

Savitri Bai Phule was the first headmistress of the country's first school for girls in Pune. She devoted her life to educating dalits. She started a night school for agriculturists and labourers. She died while serving plague patients.



Savitri Bai Phule (1831-1897)

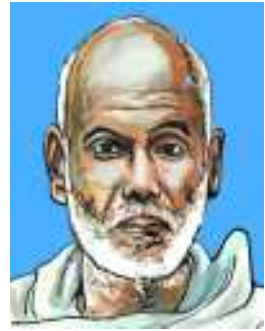
Periyar is known as a rationalist and the leader of the lower caste movement in South India. He aroused people to realise that all men are equal, and that it is the



Periyar E.V. Ramasami (1879-1973)

birthright of every individual to enjoy liberty and equality.

Sri Narayana Guru, born in Kerala, preached brotherhood for all and fought against the ill effects of the caste system. He led a quiet but significant social revolution and gave the watchwords 'One Caste, One Religion, One God for all men'.



Sri Narayana Guru (1856-1928)

When India became a free nation in 1947 our leaders too were concerned about the different kinds of inequalities that existed. The people who wrote the Constitution of India, a document that laid out the rules by which the nation would function, were aware of the ways in which discrimination had been practised in our society and how people had struggled against this. Many leaders of these struggles such as Dr. Ambedkar had also fought for the rights of the dalits.

So these leaders set out a vision and goals in the Constitution to ensure that all the people of India were considered equal. This equality of all persons is seen as a key value that unites us all as Indians. Everyone has equal rights and opportunities. Untouchability is seen as a crime and has been legally abolished by law. People are free to choose the kind of work they wish to do. Government jobs are open to all people. In addition, the Constitution also placed responsibility on the government to take specific steps to realise this right to equality for poor and other such marginal communities.

The two ways in which the government has tried to implement the equality that is guaranteed in the Constitution is first through laws and second through government programmes or schemes to help disadvantaged communities. There are several laws in India that protect every person's right to be treated equally. In addition to laws, the government has also set up several schemes to improve the lives of communities and individuals who have been treated unequally for several centuries. These schemes are to ensure greater opportunity for people who have not had this in the past.

One of the steps taken by the government includes the mid-day meal scheme. This refers to the programme introduced in all government elementary schools to provide children with cooked lunch. Tamil Nadu was the first state in India to introduce this scheme, and in 2001, the Supreme Court asked all state governments to begin this programme in their schools within six months. This programme has had many positive effects. These include the fact that more poor children have begun enrolling and regularly attending school. Teachers reported that earlier children would often go home for lunch and then not return to school. But now with the midday meal being provided in school, their attendance has improved. Their mothers, who earlier had to interrupt their work to feed their children at home during the day, now no longer need to do so. This programme has also helped reduce caste prejudices because both lower and upper caste children in the school eat this meal together. In Andhra Pradesh in almost all the rural schools,

mid-day meal is prepared by the members of women self help groups, who are invariably from deprived classes, and in quite a few places, dalit women have been employed to cook the meal. The mid-day meal programme also helps reduce the hunger of poor students who often come to school and cannot concentrate because their stomachs are empty.

- ◆ What is the mid-day meal programme?
- ◆ Can you list three benefits of the programme?
- ◆ How do you think this programme might help promote greater equality?

While government programmes play an important role in increasing equality of opportunity, there is much that needs to be done. While the mid-day meal programme has helped increase the enrolment and attendance of poor children in school, there continues to be big differences in our country between schools that the rich attend and those that the poor attend. Even today there are several schools in the country in which dalit children, like Omprakash Valmiki, are discriminated against and treated unequally. These children are forced into unequal situations in which their dignity is not respected. This is because people refuse to think of them as equal even though the law requires it.

One of the main reasons for this is that attitudes change very slowly. Even though persons are aware that discrimination is against the law, they continue to treat people unequally on the basis of their caste,

religion, disability, economic status and because they are women. It is only when people begin to believe that no one is inferior, and that every person deserves to be treated with dignity, the present attitudes can change. Establishing equality in a democratic society is a continuous struggle and one in which individuals as well as various communities in India contribute to.

Key words :

1. Untouchability
2. Scheme
3. Constitution
4. Autobiography

Project work:

1. Find out about a government scheme in your area. What does this scheme do? Whom is this scheme intended to benefit?
2. Discuss with your parents or grandparents about how caste system functioned in their younger days and find out what has changed and what has not. Prepare a report and present it in the class.

Improve your learning

1. What is the difference between being punished for a mistake and being discriminated against? Was the child Ambedkar being punished or discriminated against?
2. Do you think it is possible to make friends across castes – what kind of problems will you have to overcome for this?
3. Our constitution abolished the practice of untouchability and declared it to be a crime. Do you think it has been fully abolished in practice?
4. Why do you think people want to marry within their caste? Will this help to preserve caste inequality?
5. How can your school help in ending caste based inequalities?

Livelihood and Struggles of Urban Workers

In Chapter 12, we read about workers in a paper mill. Most paper mill workers were like Anand – they get high wages, bonus (share of profit of the company), Provident Fund (savings for future) and other allowances. They also get healthcare and housing facilities. Such workers constitute only a small section of all workers in India. We also learnt about other kinds of workers in the same paper mill - Umar and Pushpa who get low wages and do not get any other allowances or facilities required for a decent living. Most workers in India are like Umar and Pushpa. In this chapter we will learn about why and how workers negotiate with their employers for a decent life through their organisations and laws. We will also learn about an organisation working for those who work on their own.

We have learnt that government makes laws in the interest of the people. Laws are also made to protect the welfare of workers employed in fields, factories, private and government offices. Factories which are properly registered with the government are expected to follow these laws and provide better wages and other facilities required for workers. Governments also have Labour Departments which have the responsibility to ensure that these laws are followed. If the laws are not followed workers can file cases in courts. At times, factories protect the welfare of only a section of workers who are called the ‘Regular Workers’ and those called ‘Casual’ or ‘Contract workers’.

However, there are many factories which do not get properly registered with the government. Let us look at the conditions of workers in few such factories closely.

Working as ‘Permanent Workers’ in Factories

Read the following accounts of two factories in Kothur which is a new industrial town located about 30 kilometres from Hyderabad in Mahabubnagar district. This was recorded in 2002.

Fibrotex (not its real name), a large scale factory producing fibre glass began working in 1976. In 2002, out of 570 workers, 140 were permanent workers; 60 workers were employed on casual basis and they were called badli workers, i.e. they replaced permanent workers in

case of their absence and about 300 workers were employed daily on contractual basis. (A permanent worker cannot be dismissed without a proper procedure and payment of compensation while other workers can be removed easily.)

This factory has a Trade Union. Initially it was set up with the encouragement of the company which wanted a union which will be more agreeable to its policies. Soon the Union developed into a strong workers' organisation as workers participated in the union actively. It negotiated with the management to fix wages etc.

All workers get wages fixed through agreements with the union and medical facilities through Employees' State Insurance (ESI) and Provident Fund (PF). The Trade Union secured other benefits also – health checkup in big private hospitals, leave in case workers become sick, safety-wear in the work place, safe drinking water in the factory, educational allowance for workers' children, conveyance allowance and also leave travel allowance. They also get loans from the company when needed and the company has also provided quarters for them to live in. The company also took interest in training workers who have been working for long in the factory, sending them to foreign countries to improve production quality. The Trade Union also made agreements with factory owners to regularize contract labourers after a definite period of work.

The Trade Union of Fibrotex was quite active in the town as well. This had helped

many other small Trade Unions in other factories to improve their bargaining power from their employers.

Trade Union

A Trade Union is an organisation formed by workers to protect their interests. If every single worker has to negotiate with the employer separately, they will not be in a strong position. However, if all of them together negotiate, their position will become much more stronger. Trade Unions negotiate on behalf of all workers with government and the employers. They seek to ensure proper wages, other benefits and decent working conditions for their members. Collectively with their member workers they secure social security benefits, medical facilities, houses, Provident Fund and pension. If any worker is harassed or is in need of help, the Trade Union takes up his or her cause. Unions adopt a variety of measures like negotiations, filing cases in the law courts and even strikes or stoppage of work to pressurise the employers.

The details of workers' salaries (in 2002) in Fibrotex are as follows:

<i>Permanent worker</i>	<i>Rs.4500 – 10,000 per month</i>
<i>Badli workers</i>	<i>Rs.3000-4000</i>
<i>Contract / casual labourers</i>	<i>Rs.58 per day for eight hours</i>

As you can see most of the benefits are available only to the 140 'Permanent Workers'. While about 360 of workers called badlis and contract workers get low salary, and few benefits like Provident Fund and ESI.

- ◆ What is the difference between a permanent worker and a badli worker?
- ◆ Suppose a casual worker in Fibrotex gets 20 days of employment in a month, calculate the difference between the monthly salary of a permanent worker and casual labourer.
- ◆ Invite one or two factory workers who are getting ESI and PF benefits to class and collect more details about how these facilities are made available to her / him and the steps a worker has to follow to get these benefits. You may also invite a parent of your class also to talk about these things.

KRS Medicines Factory

This company (not a real name) mixes and packs medicines for another big medicine company. It employed about 118 workers of whom about 104 workers were employed as daily casual workers. That is only 14 workers were regular and permanent and were used for the skilled work of mixing the chemicals to prepare the medicine powder. They were paid about Rs. 1500 to Rs 2500 per month and had a security of employment. They also got ESI and PF. The remaining 104

workers who were engaged on a daily basis mainly did the packaging and labelling of the medicine. About 56 of them were women. These daily workers were engaged by a labour contractor who was told everyday by the manager how many workers to engage. These workers mainly came from nearby villages and were usually illiterate. The women workers had to work for about 12 hours a day and were paid just Rs.30 and the men were paid for about Rs.42 for the same work. This is much below the minimum wage fixed by the government for this kind of factories. The managers do not allow the workers to form any Trade Union and threaten that they will close down the factory if any union is formed.

These days a large number of companies are adopting policies similar to this company and reducing the number of regular workers and replacing them with contract and casual workers.

- ◆ Why was no Trade Union allowed to form in KRS Medicines Factory?
- ◆ Why do you think there were more women in the 'contract worker' category rather than in the category of 'permanent workers'?
- ◆ Do you think it is correct to pay women workers less for the same kind of work than men?
- ◆ Do you think it would have been different if the workers had been educated and literate?

Working on Construction Sites and Brick Kilns

Bindhani, her husband and ten year old daughter work in a brick kiln in a village in Ranga Reddy district. She is not a resident of this village but comes from a village in Odisha where they have a small plot of land. They had taken a loan of twenty thousand rupees and could not repay it and were at the verge of selling their land when a sardar, a contractor who was recruiting workers for brick kilns in Andhra Pradesh approached them. He offered them an advance of Rs.10,000 so that they could repay a part of their debt. They would have to work for six months in a brick kiln and they would also be paid additional wages and provided with a hut to live in. The work will start in December and end in June when they could return to till their land. That is how Bindhani and her family came to work in the kiln. They are not alone in this as almost two lakh such workers from Odisha come to Andhra Pradesh to work in brick kilns. It is also common to see thousands of worker families from Andhra Pradesh go to other states like Tamil Nadu and Maharashtra to work in kilns of those states.



Fig 21.1 Construction Labour

Bindhani wakes up around four o'clock in the morning to prepare some kanji. Her husband is still sleeping after working till about 2 o'clock in the morning. She wakes up her daughter and both of them get ready to work. They have to fetch water and mix sand and clay and prepare the clay for making bricks. They begin work around 5 AM in the morning and work non-stop till about 9 o'clock when they take a break for tea. By then her husband too joins them and he puts the clay in moulds. Once the clay has been shaped into bricks the daughter smoothens them and marks the seal of the company on the bricks. These are then allowed to dry and then loaded on bullock carts and taken to kilns for baking. The work goes on continuously till about 2 o'clock in the night. Bindhani and her husband work for nearly 14 to 16 hours. They don't want to

stop work because they are paid according to the number of bricks they make. They are paid about Rs 108 per every thousand bricks they make.



Fig 21.2 Cotton Pickers

They normally manage to make about 1000 bricks a day. If they fall ill they will not be able to earn anything. In this way they work day and night for nearly 6 months – on some days they just can't work as they grow too tired or ill. They usually eat broken rice and dal and on some days some vegetable. At the end of the six month period they often just manage to clear the advance they got and actually have to go back empty handed. Sometimes they manage to take home about four or five thousand rupees.

Such is the story of lakhs of brick makers all over the country. They are given advance by a contractor; they are taken to far off states whose languages they do not know; they work day and night for five to six months with their family and children and earn just enough to clear the advance they had taken. In some cases even when people are too tired to work, they are forced by the contractor to work. They live like bonded slaves. Whenever these workers bring their plight to the government, government officials intervene and 'free' these 'bonded labourers' from brick kilns and contractors and send them home. Since they have no other employment opportunity at home they are again forced to take advances from the contractor and come back to the kilns again. There are no Trade Unions that fight for their rights as they are migrant workers and spread out in a number of sites.

- ◆ Can you calculate how many days it will take them to clear the advance of Rs 10,000 they got from the *sardar* (Contractor)?
- ◆ What is the average wage for one person per day in this work?
- ◆ Why there are no Trade Unions in brick kilns?
- ◆ Do you think government should help workers to form Trade Union among brick kiln workers?
- ◆ In what way can the government help brick kiln workers to improve their working conditions?

- ◆ What kind of machines, tools and sources of power are used in brick production?
- ◆ What kinds of skills are needed for this job? How are they acquired?
- ◆ Why do you think they are made to work in distant states?

Ensuring Workers' Rights - A Global Concern

Ever since the Industrial Revolutions about which you have studied in Chapter 10, workers all over the world have been fighting for a dignified life and a just share of their produce. They have fought for several kinds of securities and rights:

1. **Right to Productive and Safe Employment:** so that every worker can work according to his or her skill and capacity and work under safe conditions without endangering their health.
2. **Right to Leisure and Rest:** so that they have time to rest from their tiring work and also have time to attend to other cultural and social interests.
3. **Right to Employment Security:** so that every worker knows that he/she has an employment which will ensure her/him a livelihood and will not be arbitrarily thrown out of work. If it is inevitable for a company to remove a worker he or she should be paid adequate compensation for the loss of work.
4. **Income Security:** so that every worker has adequate and regular income for taking care of the needs of their families and savings for living a dignified life in their old age.

5. **Work Security:** so that when they fall ill or meet with an accident, they can get proper care and get paid for the period of illness.
6. **Skill Improvement:** so that they can improve their skills and capabilities while at work.
7. **Collective Voice:** so that they can form unions to express their problems and needs without fear and negotiate with the employers as a group rather than as individuals.



Fig 21.3 Knife Sharpeners

Over the last two hundred years workers all over the world have fought to get these rights recognized, even though they may not be implemented in all places. In most countries the governments have agreed that these are basic needs of workers and made laws that ensure workers these rights.

Read the previous sections again and colour the whole box (in the next page) against rights and benefits available to workers. If only a part of workers are covered, shade a part of the box depends on the proportion of coverage. Cross mark the box if no right/ benefit is available.

S.No	Rights	Fibrotex	KRS Medicine Factory	Brick Kilns
1.	Right to Productive and Safe Employment			
2.	Right to Leisure and Rest			
3.	Right to Employment Security			
4.	Income Security			
5.	Work Security			
6.	Skill improvement			
7.	Right to Collective Voice			

Informal Work and Workers in Towns

In Andhra Pradesh and other states of India, towns and cities are becoming bigger and bigger. People are rapidly shifting from villages to these towns. But many of them do not get sufficient regular employment there and end up doing a variety of odd jobs. They sell vegetables or other items, make and sell snacks, work in tea stalls and in small factories, stitch cloth, load and unload in market places and work as domestic maids, etc. Many of them also produce goods at home – weaving clothes, papads, pickle, doing embroidery, etc. and are engaged through ‘putting out’ system. Most of these activities do not get registered with government. Workers of these kinds can be called informal workers and the nature of such work is called informal work.



Fig 21.4 Workers laying cables

What is common about all these areas of employment is that they require very little capital or skill training but the employment is both irregular and very low paying. As such, these workers are in a very vulnerable position. Unlike ‘permanent workers’ in factories and offices who get employed and paid regularly, these workers simultaneously do several jobs in a day - they may distribute newspaper in the morning, work in a tea shop in the day time and cook in some houses in the night. This keeps them busy throughout the day without any rest. In most cases all members of their families including children work to earn. So the children usually remain uneducated. When faced with financial problems they try to cut expenditure – like taking children out of schools or cutting down on food or medicines. Even after all this, they are not able to meet their needs. They are forced to take small loans from friends and relatives and at times from moneylenders. Almost all of them are heavily indebted to these moneylenders and often have to work for them.



Fig 21.5 Road Laying Work

Most of them do not have any Trade Union to defend their rights. As we mentioned earlier, the number of such workers is increasing constantly in the country. They are increasing not only because people are moving in from villages, but also due to the closing down of old large factories and mills. The workers of these factories now have to join the ranks of the casual workers.

Looking at these problems some trade unionists of Gujarat formed what is considered the largest trade union of the informal workers in the world. Let us know more about it.

Self Employed Women’s Association (SEWA)

In 1971, a small group of migrant women cart-pullers in Ahmedabad’s cloth market approached Textile Labour Association (TLA) to help them in improving their housing facilities. TLA was an oldest and largest textile workers’ union with which

Mahatma Gandhi was closely associated. The Union helped these women to form SEWA in 1971 which later became a Trade Union in 1972.

Since then SEWA grew continuously, with women working in different occupations becoming its members. SEWA members have no fixed employee employer relationship and depend on their own labour

for survival. They barely have any assets or working capital. Any self-employed women can become a member of SEWA by paying Rs.5 as membership fee. The SEWA helps self-employed women in addressing their grievances, improving their work culture and to become financially self-reliant in running their businesses. Hawkers, vendors selling vegetables, fruits, fish, eggs and other food items, household goods and new and old clothes, workers working in houses like weavers, potters, bidi and agarbatti workers, papad rollers, readymade garment workers, artisans, manual labourers and service providers like agricultural labourers, construction workers, contract labourers, handcart pullers, head-loaders, domestic workers and laundry workers, cattle rearers, salt workers, gum collectors, etc. became members of SEWA.

About 13 lakh workers in 9 states in India are now members of SEWA. The SEWA is also running a bank cooperative for its members and provides health insurance facility. The SEWA also helps its members in marketing their produce and ensuring them fair wages. Do you think such organisations could be of some help in improving the conditions of hundreds of women self-employed in selling vegetables on roadsides, market places and on streets in Andhra Pradesh?

Key words :

1. Compensation
2. Provident Fund
3. Badli Worker

Improve your learning

1. Compare the condition of a worker in brick kiln, a permanent worker and a contract worker in a factory.
2. Can you make a list of jobs done by casual and self employed workers in your area?
3. Make a list of different types of unions discussed in this chapter. Fill in the table:

Company in which union was working	Type of labour	Main problems	Suggested solution

4. Talk to a Trade Union member (leader) or invite him to the classroom and find out his/her life history. Specifically find out, why did he/she join the union, what are their rights as a union member, what are their duties as a union member.
5. Interview a domestic worker or a casual worker in your area and find out about their work, earnings, and to what extent the seven rights are available to them.

Folk Religion

Discuss the following questions in your class :

1. Which goddesses are worshipped in your area?
2. Which gods are worshipped in your area?
3. Which saints, pirs and babas have you seen your family pay their respects to?
4. Which animals and trees have you seen people worship?
5. Do you know how people worship?
6. How are the deities worshipped and who conducts the worship?
7. In which languages are the deities addressed by the worshippers?

You may have listened to conversations like the following:

Lakshmi: In recent months, my children have been falling ill repeatedly.

Sammakka: My husband also had been unwell for the last one month.

Yellamma: I think our goddess Muthyalamma is angry with us. We should offer her a special worship to appease her. Let us take Bonalu and sacrifice a cock to the Goddess.

Ramaraju: My daughter is very weak and does not eat properly.

Suresh: Why don't you go to the Pir Baba's dargah and ask the Maulvi to tie a tawiz ? She will become all right.

Many people in our country worship and pay reverence to gods in large temples, churches or mosques. On the other hand people also worship many village deities. Who are these popular deities and how and when and by whom are they worshipped?

There are a large number of village deities – some of them belong to particular castes, or particular villages or even particular families. Some of the more common goddesses are as follows:

Pochamma: Pochamma is the most popular folk goddess of Andhra Pradesh. In every village, there is a small shrine dedicated to her. This is distinct from temples to Gods like Rama or Shiva. A very simple temple under a neem tree with goddess in the form of a stone inside, is built. In modern towns and cities these temples are built with some architecture and with a stone idol inside.



Fig 22.1 & 22.2 Here are two idols of Pochamma.

In the villages on special occasions people of all castes go to the shrine with *bonalu*. They wash the deity and clean the shrine area. There are no priests and people pray according to their customs and traditions with flowers, etc. in their own language: “Mother, we have seeded the fields, now you must ensure good crop.” “My daughter is sick, you must cure her.” “Mother, keep away all infectious diseases and evils from our family.” They offer a part of the *bonam* and sometimes also offer a chicken or sheep.

Maisamma: She is believed to protect the cattle. Among the cattle sheds, a niche is whitewashed and decorated with “*Kumkuma*” and called as ‘Maisamma Goodu’. In many places Katta-Maisamma is also worshipped as a goddess of water and is worshipped in the form of a small stone on the tank bund. People believe that she will ensure that the tank will be filled. Thus, due to her blessings the crops flourish.



Fig 22.3 Maisamma

Gangamma: She is a water goddess who protects fishermen who go out into the sea. It is believed that the poor and the orphans are protected by the goddess Gangamma.

Yellamma: Yellamma is also called as Polimeramma, ‘Maritemma’, ‘Renuka’ Mahankali, Jogamma, Somamma and by



Fig 22.4 Yellamma



Fig 22.5 Potharaju

other names. It is believed that she guards the boundaries of the village and will not allow any disease or evil to enter the village. People mainly pray to her to prevent epidemics like cholera.

Potharaju: The farmers of Andhra Pradesh believe that Potharaju looks after their agricultural lands and crops and protects the crops from dreadful diseases, thieves and animals. The farmers keep a small stone painted white in a corner of their fields. The worship of Potharaju is very simple. Prayers are offered to the deity when the crop is harvested. He has sisters who are called by various names like Peddamma.

Beerappa and Katama Raju: They are worshipped by cowherd and shepherd communities. They are considered protectors of cattle and sheep. Have you heard of the story of Beerappa and Akkamankali – how Beerappa a poor shepherd worked and fought to marry Kamarathi and how his sister helped him? Have you heard of the story of Katama Raju who fought against the kings of Nellore for the grazing rights of the animal herders?

- ◆ You may have participated in the worship of many of these village and community deities and may also have been to some of the temples of Shiva or Vishnu. Can you compare how the worship is conducted in these places? What are the similarities and differences? Discuss in the class.

It is a general practice to offer animal sacrifice in most of the folk festivals. This results in the killing of thousands of such animals. Keeping this in mind the sacrifice of any animal or bird in any religious worship is banned in our State.

Community Worship of Folk Deities

Many of the folk gods and goddesses were actually local heroes who either died fighting in defence of their people or were themselves wronged by the powerful people of their times. Common people believed that such persons attained special powers to help people or cause problems if not worshipped. Two such folk heroines who laid down their lives in defence of the tribal people were Sarakka and Sammakka in whose honour a *Jatara* is conducted.

Sammakka, Sarakka (Medaram) Jatara:

It's a celebration by the tribal people of Taadwai mandal in Warangal District at Medaram village. People from Andhra Pradesh, Maharashtra, Madhya Pradesh, Odisha, Chattisgarh, Jharkhand assemble to celebrate the *jatara*. Nearly one crore people attend it.

The Story: 'Medaraju', was a tribal chief who was under the Kakatiya kings. His wife was Sammakka and their daughter was Sarakka and his son was Jampanna. He had a son-in-law named 'Pagididda Raju'. Once, due to drought Medaraju could not pay the tribute to the Kakatiya King who sent his army. Medaraju's entire family led the men and women of the tribe in the fierce battle. All of them got killed in the battle. Jampanna also fought bravely till his last breath and died in 'Sampenga Vaagu' to



Fig 22.6 Installation of goddess Sammakka on the platform



Fig 22.7 Scenes from Medaram Jatara

prevent the Kakatiya army from crossing the stream. Hence it is called 'Jampanna Vaagu'. Sammakka and Sarakka fought against the army and sacrificed their lives for the sake of their tribe.

The tribal people of the entire region venerated them for their courage and sacrifice and to this day celebrate the Medaram *Jatara* in their honour.

The Medaram *Jatara* is organised every two years. This is a three day fair. Sammakka and Sarakka are the formless goddesses. Caskets representing them are brought from the forests in an elaborate procession, gaily decorated and placed on the platform under a tree. At that time devotees feel the spirits or goddess has taken possession of them. The people offer 'Bangaram', jaggery, to the goddess.

Moharram (Peerila) and Urs

The Muslims too pay respects to heroes who fought against evil. One such festival is Moharram which commemorates the battle of Karbala in Iraq in which the grandson of Prophet Mohammad was killed. Processions (*Peeri*) with decorated Tazias are taken out in which people of all



Fig 22.8 Ajmeer Dargah



Fig 22.9 Ameenpeer Dargah

communities participate. A *peeri* is prepared with bamboo strips in a dome shape. It is covered with glittering clothes. A bamboo pole is fixed in the dome to handle the *peeri* and at the top metallic crescent or palm shape is attached to it. Finally, it is garlanded with flowers and coconuts.

Similarly, Urs or anniversaries of Muslim saints who lie buried in various parts of the state are celebrated. People visit the *dargahs* in large number, offer flowers and *chadar* or sheets on the grave, and listen to the singing of Qawwalis. They believe that in this way they will receive the '*barkat*' or blessings of the *pir* or saint. People who seek some specific blessings like children or job, etc. come to the *dargahs* and pray there.

Dargah is built on the tombs of Sufi saints who propagated Sufism. The tomb or dargah of a sufi saint becomes a place of pilgrimage to which thousands of people of all faiths throng. Often people attribute sufi masters with miraculous powers

(*Karamaths*) that could relieve others of their illnesses and troubles.

Ameenpeer Dargah – A symbol of Religious Tolerance

Ameenpeer Dargah in Y.S.R Kadapa District, which is Khajapeerullah Hussaini's tomb was founded around 400 years ago. In memory of his great grandson, Syed Shah Arifullah Hussainy, Urs is celebrated for seven days in which both Hindus and Muslims participate. Offerings of sandal wood paste (*Gandhapu Chandanam*) on the first day, '*Chadar*' offer on the second day and '*Mushaira*' on the third day take place in this seven day Urs in a grand manner. Qawwali programme is held during the nights.

Bonalu

Bonalu is one of the folk festivals popular in the Telangana region of Andhra Pradesh. The Goddesses are worshipped by offering food, which is later shared among the family members.

Women folk participate in the procession carrying 'Ghatams' or ornamented pots filled with flowers on their heads. The women devotees also carry brass vessels or clay pots filled with cooked rice and decorated with neem leaves. The male dancers who accompany them are known as Pothurajus, who lead the procession by lashing whips and holding neem leaves.

- ◆ If you have participated in any of these *jataras* or *urs* or *bonalu*, describe them in your class room and discuss their important features.
- ◆ How are these different from the worship of village deities or worship in large temples or mosques?

The antiquity of Folk Traditions

Many historical books tell us that such folk gods were worshipped in very old times also. We learn about the worship of *nagas* (snakes), trees, *yakshas* and *yakshinis* even some 2500 years ago. The *Palnati Virula Katha* written by Srinatha around 1450s mentions the worship of Potharaju. In turn Vallabharaya's *Kridabhiramamu* written around the same time describes in detail the worship of the *Palnati Veeras*, *Mailara* and many mother goddesses in Warangal.

You would have noticed by now that the folk deities are worshipped quite differently from the Gods in large temples, mosques or churches.

Most of these deities are worshipped by people irrespective of their caste or religion or economic status. For example,

even Muslim farmers participate in many of the rituals of village gods. Similarly people of all religions throng to the dargahs to seek the blessing of the *peers*. They tie strings on a tree or on the walls of the dargah making a vow in return for the wishes granted. They request the *pirzadas* to prepare *tawiz* for them to drive away evil spirits, etc.

The intermixing of Village deities and High Religious traditions

In India, there has been a constant process of interaction between different kinds of people and their religions leading to intermixture of traditions. Thus religious beliefs which originate in folk worship and folk wisdom are adopted by higher religions and the folk religious beliefs adopt a lot from the higher religions.

Thus high religious traditions too worship *peepul* tree, snakes and the mother goddess. This is how the integration of snakes, trees animals, and birds in the present Puranic religion took place. Gradually the village deities became part of the worship of deities like the Buddha, Shiva or Vishnu or Durga. You can see snakes, lions, nandi, and trees being worshipped as part of their worship too.

In the case of Islam this took a different form. The high religion of Islam believes in strict monotheism or worship of one and only God – Allah. However, the folk followers of Islam began to rever Sufi saints and believed that worshipping at the dargahs will solve their problems. So a very strong tradition of pilgrimages to dargahs and urs developed in which people of all faiths participate.

Folk Wisdom and Higher Religion

Many saints like Kabir, Yogi Vemana and many sufi saints who came from the common people expressed their deeper religious ideas. They also combined the ideas preached by the higher religions with that of the common people. Read the following lines of Yogi Vemana who lived about 300 years ago and composed poems of great wisdom in Telugu.

“Without personal experience, the mere repetition of scriptures will not remove fears. Just as darkness is never dispelled by a mere painted flame.”

“The six tastes are diverse, but taste is one; various are the creeds regarding the truth, but truth is one; and saints differ among themselves, while he on whom they meditate is one.”

“Bald heads, matted hair, daubing ashes, recitations, religions dress! No man is a saint who is not pure in heart.”

Such ideas and wise sayings became part of ordinary people’s thinking.

Key words :

1. Folk Deities
2. *Jatara*
3. Urs
4. *Peeri*
5. *Bonamu*

Project work :

1. Get detailed information from your grand parents about any *Jatara* of your area. Prepare a report.
2. Collect stories about any of the folk deities of your area and prepare a small booklet about it.

Improve your learning

1. What elements do you think are common in the worshipping of most of the village deities?
2. When people from the villages go to towns and settle down there do they continue to worship their old village deities? How do they do it?
3. Why do you think people use different languages while worshipping different kinds of deities?
4. Do you think the way people worship the village deities is changing now? What kind of changes do you see?
5. Point out the Main places of important jataras and urs in Andhra Pradesh Map?

Devotional Paths to the Divine

You may have seen people perform rituals of worship, or singing *bhajans*, *kirtans* or *qawwalis*, or even repeating the name of God in silence, and noticed that some of them are moved to tears. Such intense devotion or love of God is the legacy of various kinds of *bhakti* and Sufi movements that have evolved since the eighth century. In class VI you would have read about the Bhakti poems of Alvars and Nayanars who were worshippers of Vishnu and Siva, respectively. Soon kings and chiefs built large temples for these gods and made land grants and other gifts to perform various rituals. Temple worship became elaborate, complex and expensive. Specially trained priests performed the rituals. People belonging to some castes were not allowed to even enter the temples. Soon, a reaction set in against such rituals and inequalities. New ideas on devotion to god emerged. Read on to know about it.

Philosophy and *Bhakti*

Shankara, one of the most influential philosophers of India, was born in Kerala in the eighth century. He was an advocate of *Advaita* or the doctrine of the oneness of the individual soul and the Supreme God which is the Ultimate Reality. He taught that Brahman, the only or Ultimate Reality, was formless and without any attributes. He preached renunciation of the world and adoption of the path of knowledge to understand the true nature of Brahman and attain salvation.

Ramanuja, born in South India in the eleventh century, was deeply influenced by the Alvars. According to him the best means of attaining salvation was through intense devotion to Vishnu. Vishnu in His grace helps the devotee to attain the bliss of union with Him. Ramanuja also to a large extent ensured a place for people of lower castes in temple worship. He propounded the doctrine of *Vishishtadvaita* or qualified oneness according to which the soul even when united with the Supreme God remained distinct. Ramanuja's doctrine greatly inspired the new strand of *bhakti* which developed in north India subsequently.

Basavanna's *Virashaivism*

We noted earlier the connection between the *bhakti* movement and temple worship. This in turn led to a reaction that was best represented in the *Virashaiva* movement initiated by Basavanna and his companions like Allama Prabhu and Akkamahadevi. This movement began in Karnataka in the mid-twelfth century. The Virashaivas argued strongly for the equality of all human beings and against Scriptural ideas about caste and the treatment of women. They were also against all forms of ritual and idol worship.

These are *vachanas* or sayings attributed to Basavanna:

*The rich
Will make temples for Shiva.
What shall I,
A poor man
Do?
My legs are pillars,
The body the shrine,
The head a cupola
Of gold.
Listen, O Lord of the meeting rivers,
Things standing shall fall,
But the moving ever shall stay.*

- ◆ What were the major ideas expressed by Basavanna?
- ◆ What is the temple that Basavanna is offering to God?

The Saints of Maharashtra

From the thirteenth to the seventeenth centuries Maharashtra saw a great number of saint-poets, whose songs in simple Marathi continue to inspire people. The most important among them were Jnaneshwar, Namdev, Eknath and Tukaram as well as women like Sakkubai and the family of Chokhamela, who belonged to the “untouchable” Mahar caste. This regional tradition of *bhakti* focused on the Vitthala (a form of Vishnu) temple in Pandharpur, as well as on the notion of a personal god residing in the hearts of all people.



Fig 23.1 A fireside gathering of ascetics.

These saint-poets rejected all forms of ritualism, outward display of piety and social differences based on birth. In fact, they even rejected the idea of renunciation and preferred to live with their families, earning their livelihood like any other person, while humbly serving fellow human beings in need. A new humanist idea emerged as they insisted that *bhakti* lay in sharing others' pain. As the famous Gujarati saint Narsi Mehta said, "Vaishnavas are those who understand the pain of others."

This is an *abhang* (Marathi devotional hymn) of Sant Tukaram:

*He who identifies
with the battered and the beaten,
Mark him as a saint,
For God is with him.
He holds
Every forsaken man
Close to his heart,
He treats
A slave
As his own son.
Says Tuka,
I won't be tired
to repeat again,
Such a man
Is God
In person.*

- ◆ Why do you think Tukaram considers the friends of the poor and suffering as the real devotees of God?

Here is an *abhang* composed by Chokhamela's son:

*You made us low caste,
Why don't you face that fact, Great Lord?
Our whole life – left-over food to eat.
You should be ashamed of this.
You have eaten in our home.
How can you deny it?
Chokha's (son) Karmamela asks
Why did you give me life?*

- ◆ Discuss the ideas about the social order expressed in these compositions.

Nathpanthis, Siddhas and Yogis

A number of religious groups that emerged during this period criticised the ritual and other aspects of conventional religion and the social order, using simple, logical arguments. Among them were the *Nathpanthis, Siddhacharas* and *Yogis*. They advocated renunciation of the world. To them the path to salvation lay in meditation on the formless Ultimate Reality and the realisation of oneness with it. To achieve this they advocated intense training of the mind and body through practices like *yogasanas*, breathing exercises and meditation. These groups became particularly popular among low castes. Their criticism of conventional religion created the ground for devotional religion to become a popular force in northern India.

Islam and Sufism

The saints had much in common with the Sufis, so much so that it is believed that they adopted many ideas of each other. Sufis were Muslim mystics. They rejected

outward religiosity and emphasised love and devotion to God and compassion towards all fellow human beings.

Islam propagated strict monotheism or submission to one God. It also rejected idol worship and considerably simplified rituals of worship into collective prayers. At the same time Muslim scholars developed a holy law called *Shariat*. The Sufis often rejected the elaborate rituals and codes of behaviour demanded by Muslim religious scholars. They sought union with God much as a lover seeks his beloved with a disregard for the world. Like the saint-poets, the Sufis too composed poems expressing their feelings, and a rich literature in prose, including anecdotes and fables, developed around them. Among the great Sufis of Central Asia were Ghazzali, Rumi and Sadi. Like the *Nathpanthis*, *Siddhas* and *Yogis*,



Fig 23.2 Mystics in ecstasy.

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the Sufis too believed that the heart can be trained to look at the world in a different way. They developed elaborate methods of training using *zikr* (chanting of a name or sacred formula), contemplation, *sama* (singing), *raqs* (dancing), discussion of parables, breath control, etc. under the guidance of a master or *pir*. Thus emerged the *silsilas*, a genealogy of Sufi teachers, each following a slightly different method (*tariqa*) of instruction and ritual practice.

A large number of Sufis from Central Asia settled in Hindustan from the eleventh century onwards. This process was strengthened with the establishment of the Delhi Sultanate, when several major Sufi centres developed all over the subcontinent. The *Chishti silsila* was among the most influential orders. It had a long line of teachers like Khwaja Moinuddin Chishti of Ajmer, Qutbuddin Bakhtiar Kaki of Delhi, Baba Farid of Punjab, Khwaja Nizamuddin Auliya of Delhi and Bandanawaz Gisudaraz of Gulbarga.

The Sufi masters held their assemblies in their *khanqahs* or hospices. Devotees of all descriptions including members of the royalty and nobility, and ordinary people flocked to these *khanqahs*. They discussed spiritual matters, sought the blessings of the saints in solving their worldly problems, or simply attended the music and dance sessions.

Often people attributed Sufi masters with miraculous powers that could relieve others of their illnesses and troubles. The tomb or *dargah* of

a Sufi saint became a place of pilgrimage to which thousands of people of all faiths thronged.

- ◆ If you have ever been to a dargah describe it to your friends in the class. How do people show respects to the *Pir* and what do they pray for there.

New Religious Developments in India

The period after the thirteenth century saw a new wave of the *bhakti* movement in north India. This was an age when Islam, Hinduism, Sufism, various strands of *bhakti*, and the *Nathpanths*, *Siddhas* and *Yogis* influenced one another. We saw that new towns and kingdoms were emerging, and people were taking up new professions and finding new roles for themselves. Such people, especially crafts persons, peasants, traders and labourers, thronged to listen to these new saints and spread their ideas. Some of them like Kabir and Baba Guru Nanak rejected orthodox customs and beliefs.

Poets like Bammera Potana, Annamacharya, Chaitanya Mahaprabhu, Tulsidas and Surdas accepted existing beliefs and practices but wanted to make these accessible to all.

Potana who lived the life of a peasant in the village Bammera near Warangal, composed the famous *Mahabhagavatamu* in Telugu. Potana was called a '*Sahaja Kavi*', a natural poet. He wrote to express his natural devotional feelings in a lucid poetry.

Thallapaka Annamacharya (1408–1503) was a popular saint-composer of Andhra Pradesh and is revered as '*pada kavita pitamaha*'. Annamayya dedicated his life for composing and singing the glories of Lord Venkateswara of Tirupati. His compositions were mostly extempore in spoken dialect unlike in the classics of the age which were written in the classical (*Grandhika*) style. In '*Annamacharya Charitramu*' it is said that Annamayya composed thirty two thousand *keertanas* on Lord Venkateswara.

In his *keertanas*, he took up subjects such as morality, dharma and righteousness. He was one of the first few who opposed the social stigma towards the untouchable castes in his era. In his sankeertanas, "*Brahmam Okkate Parabrahmam Okkate...*" and "*E Kulajudainanemi Evvadainanemi...*", he describes that the relationship between God and human is the same irrespective of the later's color, caste and financial status, in beautiful yet powerful usage of words.

తందనాన ఆహి - తందనానపురె

తందనాన భళా - తందనాన

బ్రహ్మమొక్కటె పరబ్రహ్మమొక్కటె పర

బ్రహ్మమొక్కటె పరబ్రహ్మమొక్కటె ...

నిండార రాజు నిద్రించు నిద్రయు నొకటే

అండనే బంటు నిద్ర అదియు నొకటే ...

మెండైన బ్రహ్మణుడు - మెట్టుభూమి యొకటే

చండాలుడుండేటి సరిభూమి యొకటే ...

- Annamacharya Keertana

Chaitanya Mahaprabhu (1486–1534) was a Vaishnava saint and social reformer in eastern India (present day Bangladesh and West Bengal). Chaitanya was a notable proponent for the Vaishnava school of *Bhakti yoga* (meaning loving devotion to Krishna/God) based on the philosophy of the *Bhagavata Purana* and *Bhagavad Gita*. He propagated community singing of Bhajans and dancing with devotion. He worshipped the forms of Krishna and popularised the chanting of the ‘*Hare Krishna*’ mantra.

Kancherla Gopanna (1620 - 1680), popularly known as Bhakta Ramadasu, was a 17th century devotee of Sri Rama and a composer of Carnatic music. He is one among the famous *vaggeyakaras* (same person being the writer and composer of a song) in the Telugu language. He is renowned for constructing a famous temple for Sri Rama at Bhadrachalam. He composed devotional lyrics to Rama which are popularly known as *Ramadaasu Keertanalu*. He wrote *Dasarathi Shatakamu*, a collection of nearly 108 poems dedicated to Lord Rama.

ఏ తీరుగ నను దయ చూచెదవో, ఇన వంశోత్తమ రామా
నా తరమా భవ సాగరమీదను, నలిన దళేక్షణ రామా
శ్రీరఘునందన సీతా రమణా, శ్రీతజన పోషక రామా
కారుణ్యాలయ భక్త వరద నిను, కన్నది కాసుపు రామా...

- Ramadasu Keertana

- ◆ Can you name some *vaggeyakaras* and their *Keertanas*?

Tulsidas conceived of God in the form of Rama. Tulsidas’s composition, the *Ramcharitmanas*, written in Awadhi (a language used in eastern Uttar Pradesh), is important both as an expression of his devotion and as a literary work. Also contemporary was Shankaradeva of Assam (late fifteenth century) who emphasised devotion to Vishnu, and composed poems and plays in Assamese. He began the practice of setting up *namghars* or houses of recitation and prayer, a practice that continues to date.

This tradition also included saints like Dadu Dayal, Ravidas and Mirabai. Mirabai was a Rajput princess married into the royal family of Mewar in the sixteenth century. Mirabai became a disciple of Ravidas, a saint from a caste considered “untouchable”. She was devoted to Krishna and composed innumerable



Fig 23.3 A painting of Mirabai.

bhajans expressing her intense devotion. Her songs also openly challenged the norms of the “upper” castes and became popular with the masses in Rajasthan and Gujarat.

A unique feature of most of the saints is that their works were composed in regional languages and could be sung. They became immensely popular and were handed down orally from generation to generation. Usually the poorest, most deprived communities and women transmitted these

songs, often adding their own experiences. Thus the songs as we have them today are as much a creation of the saints as of generations of people who sang them. They have become a part of our living popular culture.

- ◆ Have you listened to any such old *bhajans* in your mother tongue? Find out who composed them. Write down some of them and discuss their meaning in the class.

A Closer Look: Kabir

Kabir, who probably lived in the fifteenth-sixteenth centuries, was one of the most influential saints. He was brought up in a family of Muslim *julahas* or weavers settled near the city of Benares (Varanasi). We have little reliable information about his life. We get to know



23.4 A painting of Kabir working on a loom.

of his ideas from a vast collection of verses called *sakhis* and *pads* said to have been composed by him and sung by wandering *bhajan* singers. Some of these were later collected and preserved in the *Guru Granth Sahib*, *Panch Vani* and *Bijak*.

Kabir's teachings were based on a complete, indeed vehement, rejection of the major religious traditions. His teachings openly ridiculed all forms of external worship of both Hinduism and Islam, the pre-eminence of the priestly classes and the caste system. The language of his poetry was a form of spoken Hindi, widely understood by ordinary people.

Kabir believed in a formless Supreme God and preached that the only path to salvation was through *bhakti* or devotion. Kabir drew his followers from among both Hindus and Muslims.

Here is a composition of Kabir:

*O Allah-Ram present in all living beings
Have mercy on your servants, O Lord!
Why bump your head on the ground,
Why bathe your body in water?
You kill and you call yourself "humble",
But your vices you conceal.
Twenty-four times the Brahmana keeps
the ekadasi fast,
While the Qazi observes the Ramzan.
Tell me why does he set aside the eleven
months
To seek spiritual fruit in the twelfth?
Hari dwells in the East, they say
And Allah resides in the West,
Search for him in your heart, in the heart
of your heart;
There he dwells, Rahim-Ram*

A Closer Look: Baba Guru Nanak

We know more about Guru Nanak (1469-1539 AD) than about Kabir. Born at Talwandi (Nankana Sahib in Pakistan), he travelled widely before establishing a centre at Kartarpur (Dera Baba Nanak on the river Ravi). Irrespective of their former creed, caste or gender, his followers ate together in the common kitchen (*langar*). The sacred space thus created by Guru Nanak was known as *dharmsal*.



23.5 Baba Guru Nanak as a young man, discussion with holy men.

The number of Guru Nanak's followers increased through the sixteenth century under his successors. They belonged to a number of castes; but traders, agriculturists, artisans and craftsmen predominated. This may have something to do with Guru Nanak's insistence that his followers must be householders and should adopt productive and useful occupations. They were also expected to contribute to the general funds of the community of followers.

The ideas of Guru Nanak had a huge impact on this movement from the very beginning. He emphasised the importance of the worship of one God. He insisted that caste, creed or gender was irrelevant for attaining liberation. His idea of liberation

was not that of a state of inert bliss but rather the pursuit of active life with a strong sense of social commitment. He himself used the terms *nam*, *dan* and *isnan* for the essence of his teaching, which actually meant right worship, welfare of others and purity of conduct. His teachings are now remembered as *nam-japna*, *kirt-karna* and *vand-chhakna*, which also underline the importance of right belief and worship, honest living, and helping others. Thus, Guru Nanak's idea of equality had social and political implications. This might partly explain the difference between the history of the followers of Guru Nanak and the history of the followers of the other religious figures of the medieval centuries, like Kabir, Ravidas and Dadu whose ideas were very similar to those of Guru Nanak.

Key words :

- | | |
|--------------------|---------------------|
| 1. <i>Advaita</i> | 5. <i>Bhakti</i> |
| 2. Salvation | 6. <i>Yogasanas</i> |
| 3. <i>Alvars</i> | 7. <i>Bijak</i> |
| 4. <i>Nayanars</i> | 8. <i>Abhang</i> |

Improve your learning

- Fill in the blanks:
 - Ramanuja was influenced by the _____.
 - _____, _____ and _____ were advocates of *Virashaivism*.
 - _____ was an important centre of the *Bhakti* tradition in Maharashtra.
- Describe the beliefs and practices of the *Nathpanthis*, *Siddhas* and *Yogis*.
- What were the major ideas expressed by Kabir? How did he express them?
- What were the major beliefs and practices of the Sufis?
- Why do you think many teachers rejected prevalent religious beliefs and practices?
- What were the major teachings of Baba Guru Nanak?
- For either the *Virashaivas* or the saints of Maharashtra, discuss their attitude towards caste.
- Why do you think ordinary people preserved the memory of Mirabai?

Project work :

- Find out whether in your neighbourhood there are any dargahs, gurudwaras or temples associated with saints of the *bhakti* tradition. Visit any one of these and describe what you see and hear.
- For any of the saint-poets whose compositions have been included in this chapter, find out more about their works, noting down other poems. Find out whether these are sung, how they are sung, and what the poets wrote about.

Rulers and Buildings

Figure 24.1 shows the first balcony of the Qutb Minar. Qutbuddin Aybak had constructed this around 1199 AD. Notice the pattern created under the balcony by the small arches and geometrical designs. Can you find two bands of inscriptions under the balcony? These are in Arabic. Notice that the surface of the minar is curved and angular. Placing an inscription on such a surface requires great precision. Only the most skilled craftsmen could perform this task. Remember that very few buildings were made of stone or brick 800 years ago. What would have been the impact of a building like the Qutb Minar on observers in the thirteenth century?

Between the eighth and the eighteenth centuries kings and their officers built two kinds of structures: the first were forts, palaces and tombs – safe, protected and grandiose places of rest in this world and the second were structures meant for public activity including temples, mosques, tanks, wells, caravan *serais* and *bazaars*. Kings were expected to care for their subjects, and by making structures for their use and comfort, rulers hoped to win their praise. Construction activity was also carried out by others, including merchants. They built temples, mosques and wells. However, domestic architecture – large mansions (*havelis*) of merchants – has survived only from the eighteenth century.



Fig 24.1

Figure 24.1: Qutb Minar is five storeys high. The band of inscriptions you see are under its first balcony. The first floor was constructed by Qutbuddin Aybak and the rest by Iltutmish around 1229. Over the years it was damaged by lightning and earthquakes and repaired by later kings.



Fig 24.2a Screen in the *Quwaat al-Islam* mosque, Delhi.

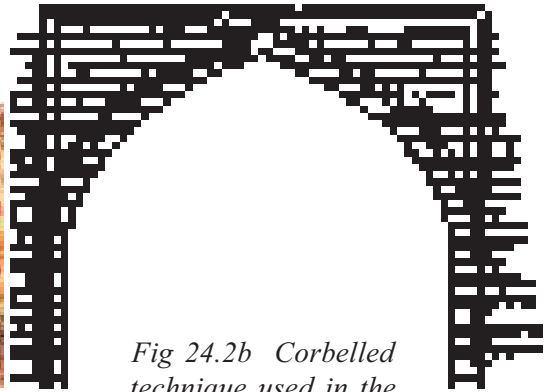


Fig 24.2b Corbelled technique used in the construction of an arch.

Engineering Skills and Construction

Monuments provide an insight into the technologies used for construction. Take something like a roof for example. We can make this by placing wooden beams or a slab of stone across four walls. But the task becomes difficult if we want to make a large room with an elaborate superstructure. This requires more sophisticated skills.

Between the seventh and tenth centuries architects started adding more rooms, doors and windows to buildings. Roofs, doors and windows were still made by placing a horizontal beam across two vertical columns, a style of architecture called “trabeate” or “corbelled”. Between the eighth and thirteenth centuries the trabeate style was used in the construction of temples, mosques, tombs and in buildings attached to large stepped-wells.

- ◆ Visit old temples or Masjids near your place and look for examples of trabeate style (style in which the roof is supported by beams placed on pillars).

- ◆ This way of supporting the roofs required placing pillars near each other and large open halls could not be built. Can you figure out why?

Temple Construction in the Early Eleventh Century

The Kandariya Mahadeva temple dedicated to Shiva was constructed in 999 AD by King Dhangadeva.

Fig. 24.3b is the plan of the temple of the Chandela dynasty. An ornamented gateway led to an entrance, and the main hall (*mahamandapa*) where dances were performed. The image of the chief deity was kept in the main shrine (*garbhagriha*). This was the place for ritual worship where

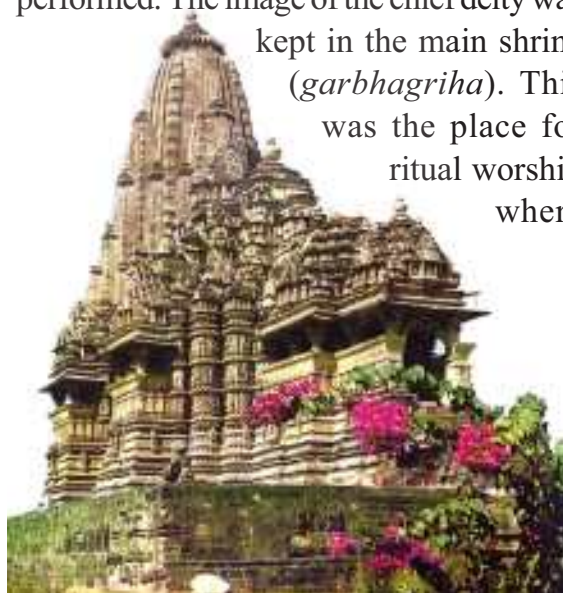


Fig 24.3a The Kandariya Mahadeva Temple of lord shiva.

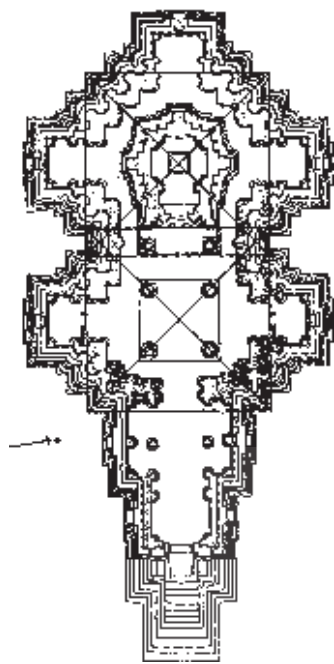


Fig: 24.3b

only the king, his immediate family and priests gathered. The Khajuraho complex contained royal temples where common people were not allowed entry. The temples were decorated with elaborately carved sculptures.

The Rajarajeshvara temple at Thanjavur had the tallest *shikhara* amongst temples of its time. Constructing it was not easy because there were no cranes in those days and the 90 tonne stone for the top of the *shikhara* was too heavy to lift manually. So the architects built an inclined path to the top of the temple, placed the boulder on rollers and rolled it all the way to the top. The path started more than four kilometres away so that it would not be too steep. The path dismantled after the temple was constructed.

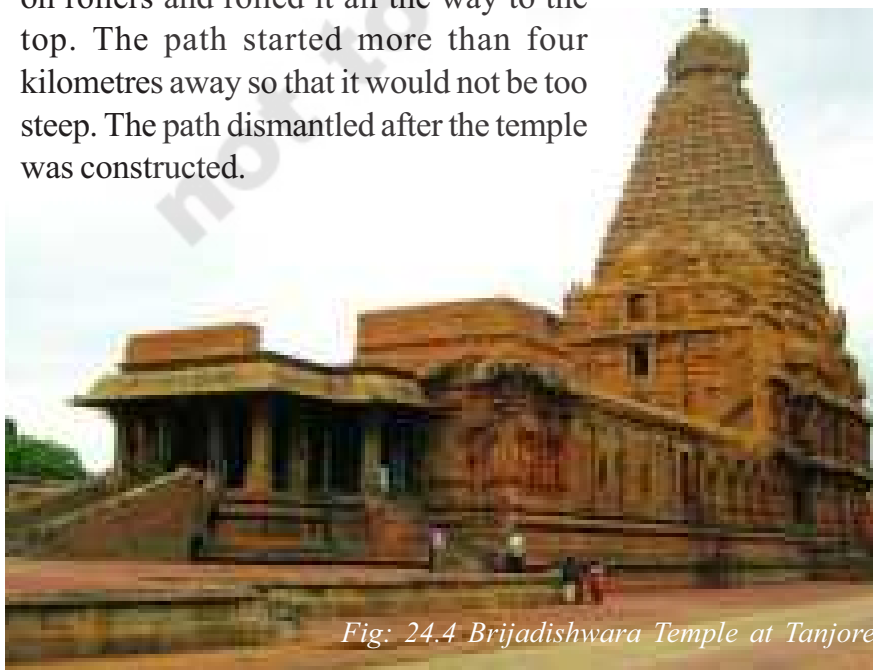


Fig: 24.4 Brijadishwara Temple at Tanjore

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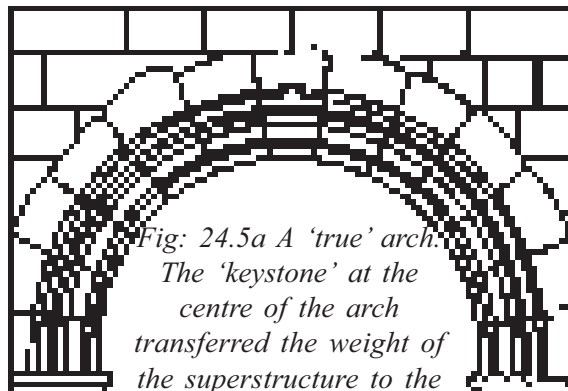


Fig: 24.5a A 'true' arch. The 'keystone' at the centre of the arch transferred the weight of the superstructure to the base of the arch.



Fig: 24.5b True arch; detail from the Alai Darwaza (early fourteenth century). Quwwat al-Islam mosque, Delhi.

A new way of building

Two technological and stylistic developments are noticeable from the twelfth century:

(1) The weight of the superstructure above the doors and windows was sometimes carried by arches. The roof too used this principle and was converted into vaults and domes. This architectural form is called "arcuate".

- ◆ Compare Figures 24.2a and 24.2b with 24.5a and 24.5b.

(2) Limestone cement was increasingly used in construction. This was very high quality cement, which, when mixed with stone chips hardened into concrete. This made construction of large structures easier and faster. Arches, domes and limestone mortar were used extensively in buildings after 1190 AD. Take a look at the construction site in Figure 24.6.

- ◆ Describe what the labourers are doing, the tools shown, and the means of carrying stones.



Fig: 24.6 A painting from the Akbar Nama (dated 1590-1595), showing the construction of water gate at Agra Fort.

- ◆ Do you think these new techniques could be used to build large halls and tall buildings?

Building Temples, Mosques and Tanks

Temples and mosques were beautifully constructed because they were places of worship. They were also meant to demonstrate the power, wealth and devotion of the patron. Take the example of the Rajarajeshvara temple. An inscription mentions that it was built by King Rajarajadeva for the worship of his god, Rajarajeshvara. Notice how the name of the ruler and the god are very similar. The king took the god's name because it was auspicious and he wanted to appear like a god. Through the rituals of worship in the temple one god (Rajarajadeva) honoured another (Rajarajeshvara).

You may recall that the Kakatiya capital city – Orugallu was so designed as to have the temple of Svayambhu Shiva at the centre. This was built by the Kakatiyas to proclaim their power and status as independent kings.

The largest temples were all constructed by kings. The other, lesser deities in the temple were gods and goddesses of the allies and subordinates of the ruler. The temple was a miniature model of the world ruled by the king and his allies. As they worshipped their deities together in the royal temples, it seemed as if they brought the just rule of the gods on earth.

The kings and nobles endowed the temples with land, gold and jewels so that worship of the gods could be carried on a

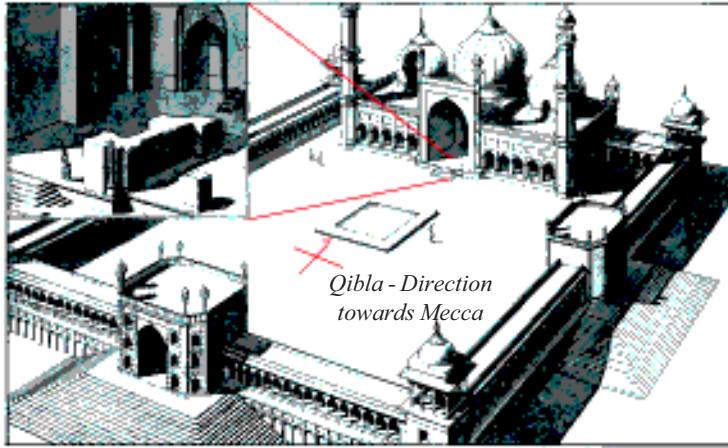


Fig 24.7 Plan of the Jami masjid built by Shah Jahan in his new capital at Shahjanabad 1650-1656.

grand scale. By 1200 AD most of these temples had become elaborate institutions which employed hundreds of artisans, dancers, musicians, priests, administrators, servants, etc. They collected taxes from the villages, lent money on interest to traders, etc. organised fairs and markets to which thronged buyers and sellers of goods. Several *mathas* of Saivaite and Vaishnavite sects were established around these temples. These temples thus became centres of political and economic power. Kings and rulers wanted to associate their names with these temples by organising their coronation ceremonies in the temples and by making large gifts to them and by adding to the constructions.

Muslim Sultans and Padshahs did not claim to be incarnations of god but Persian court chronicles described the Sultan as the "Shadow of God". An inscription in the Delhi mosque explained that God chose Alauddin as a king because he had the qualities of Moses and Solomon, the great law-givers of the past. The greatest law-giver and architect was God Himself. He created the world out of chaos and introduced order and symmetry.

Free Distribution by Govt. of A.P.

As each new dynasty came to power, kings wanted to emphasise their moral right to be the rulers. Constructing places of worship provided rulers with the chance to proclaim their close relationship with God, especially important in an age of rapid political change. Rulers also offered patronage to the learned and pious, and tried to transform their capitals and cities into great cultural centres

that brought fame to their rule and their realm.

It was widely believed that the rule of a just king would be an age of plenty when the heavens would not withhold rain. At the same time, making precious water available by constructing tanks and reservoirs was highly praised. Sultan Iltutmish won universal respect for constructing a large reservoir just outside *Dehli-i kuhna*. It was called the *hauz-i Sultani* or the "King's Reservoir".

Rulers often constructed tanks and reservoirs – big and small – for use by ordinary people.

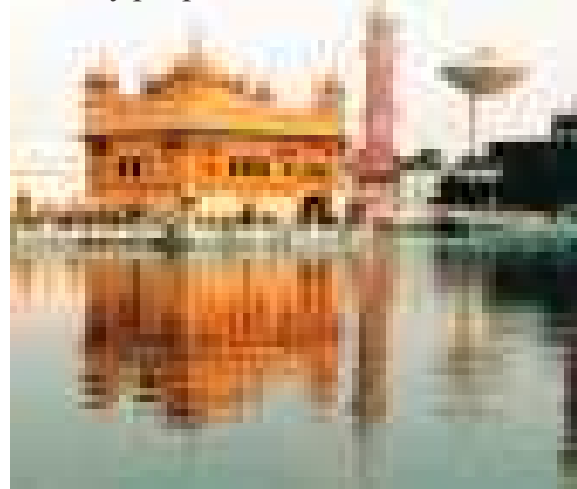


Fig 24.8 Harmandar Sahib (Golden Temple) with the holy tank in Amritsar.

- ◆ You have read about the shrines of village gods and you have also read about elaborate temples and mosques – why do you think the village shrines and the temples or mosques are so different?

Why were Temples Destroyed?

Because kings built temples to demonstrate their devotion to God and their power and wealth, it is not surprising that when they attacked one another's kingdoms, they often targeted these buildings. In the early ninth century when the Pandyan king Shrimara Shrivallabha invaded Sri Lanka and defeated the king, Sena I (831-851), the Buddhist monk and chronicler Dhammakitti noted: "he removed all the valuables... The statue of the Buddha made entirely of gold in the Jewel Palace... and the golden images in the various monasteries – all these he seized." The blow to the pride of the Sinhalese ruler had to be avenged and the next Sinhalese ruler, Sena II, ordered his general to invade Madurai, the capital of the Pandyas. The Buddhist chronicler noted that the expedition made a special effort to find and restore the golden statue of the Buddha.

Similarly, in the early eleventh century, when the Chola king Rajendra I built a Shiva temple in his capital he filled it with prized statues seized from defeated rulers. A list included: a Sun-pedestal from the Chalukyas, a Ganesha statue and several statues of Durga; a Nandi statue from the eastern Chalukyas; an image of Bhairava (a form of Shiva) and Bhairavi from the

Kalingas of Odisha; and a Kali statue from the Palas of Bengal.

Sultan Mahmud of Ghazni was a contemporary of Rajendra I. During his campaigns in the subcontinent he also attacked the temples of defeated kings and looted their wealth and idols. Sultan Mahmud was not a very important ruler at that time. But by destroying temples – especially the one at Somnath – he tried to win credit as a great hero of Islam. In the political culture of the Middle Ages most rulers displayed their political might and military success by attacking and looting the places of worship of defeated rulers.

- ◆ In what ways do you think the policies of Rajendra I and Mahmud of Ghazni were a product of their times? How were the actions of the two rulers different?

Imperial Style of the Vijayanagara Period

The city of Vijayanagara was developed by the Rayas to act as the imperial capital of entire South India. Thus they wanted it



Fig: 24.9 Virupaksha Temple in Hampi.



Fig 24.10a Lotus Temple.



Fig 24.10b Queen's Bath.

to reflect all the important imperial building traditions. They built large temples for Sri Virupaksha, Ramachandra, Krishna and Vitthala using a style that had been developed by Chola and Pandya emperors of Tamil Nadu. This included the *Vimanas* and the *Gopurams*. The Rayas paid special attention to the *Gopurams* which were now built on a scale and height as never before. It consisted of a first floor usually built of solid granite and a series of upper floors made of brick and *chunam*. These structures of immense scale must have been a mark of imperial authority that often dwarfed the towers on the central shrines, and signaled the presence of the temple from a great distance. They were also probably meant as reminders of the power of kings, able to command the resources, techniques and skills needed to construct these towering gateways. Other distinctive features include *mandapas* or pavilions and long, pillared corridors that often ran around the shrines within the temple complex. Let us look closely at the Virupaksha temple.

The Virupaksha temple was built over centuries while inscriptions suggest that the earliest shrine dated to the ninth-tenth century. It was substantially enlarged with

the establishment of the Vijayanagara Empire. The hall in front of the main shrine was built by Krishnadevaraya to mark his accession. This was decorated with delicately carved pillars. He is also credited with the construction of the eastern *Gopuram*. These additions meant that the central shrine came to occupy a relatively small part of the complex.

The halls in the temple were used for a variety of purposes. Some were spaces in which the images of gods were placed to witness special programmes of music, dance, drama etc... Others were used to celebrate the marriages of deities. And yet others were meant for showing the replica of deities which were distinct from those kept in the small central shrine.

While the Vijayanagara rulers built these temples on the Tamil Nadu models, they also built elaborate secular royal buildings which were modelled on the style and techniques of the Sultanate architecture. The famous Lotus Mahal (named so by British visitors), Queen's Bath and the Elephant Stables are examples of this style. You can see the use of arches and domes in these buildings. They were covered with *chunam* plaster and decorated with

elaborate floral and bird designs. It appears that these were buildings in which the kings and their nobles lived and displayed their wealth and cosmopolitan taste. However, these buildings do not just copy the designs of the sultanate buildings. They combined designs and features of southern temples with the arches and domes. This can best be seen in the Lotus Mahal, which was probably a place where the kings held their meetings.



Fig 24.10c Elephant's stable.

- ◆ Why do you think emperors of large kingdoms tried to use different styles of buildings?

The most impressive remain of Vijayanagara, the Mahanavami Dibba is a very high platform, of 55 feet that is as tall as a five floor building, and 11000 feet in area. Its height was increased at least three times during two hundred years. The sides of the platform were covered with sculptures of various kinds. It did not have a complete building on the top. The platform was covered by cloth shamiana or pandal supported by wooden pillars. On this platform the Vijayanagara kings held their Navaratri Puja and held their Dussera court in which all their subordinate chiefs, *nayakas* and officers paid their tributes to the Emperor. Ambassadors from Europe and other sultanates also attended the festival.

Gardens, Tombs and Forts

Under the Mughals, architecture became more complex. Mughal emperors were personally interested in literature, art and architecture. In his autobiography, Babur described his interest in planning and laying out formal gardens, placed within rectangular walled enclosures and divided into four quarters by artificial channels.

These gardens were called *chahar baghs*, four gardens, because of their symmetrical division into quarters. Beginning with Akbar, some of the most beautiful *chahar baghs* were constructed by Jahangir and Shah Jahan in Kashmir, Agra and Delhi (see Fig 24.11).

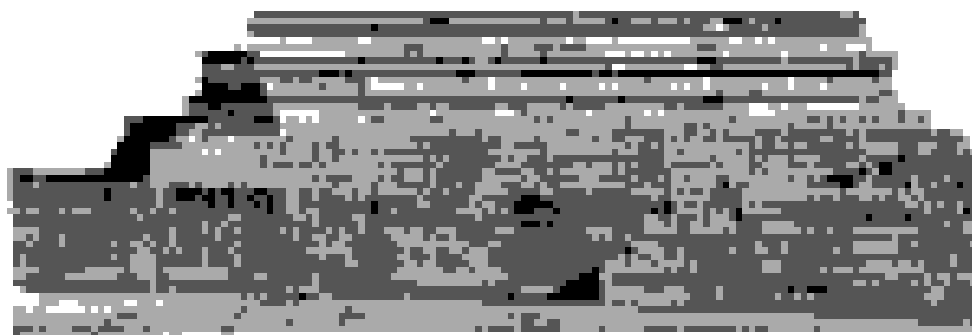


Fig 24.10d Mahanavami dibba

There were several important architectural innovations during Akbar's reign. For inspiration, Akbar's architects

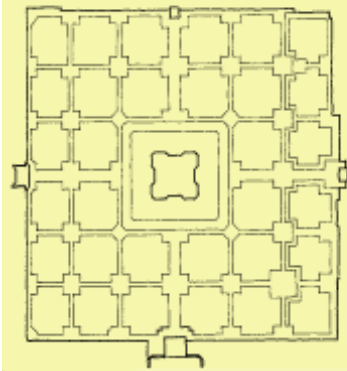


Fig: 24.11
Mughal chahar baghs.

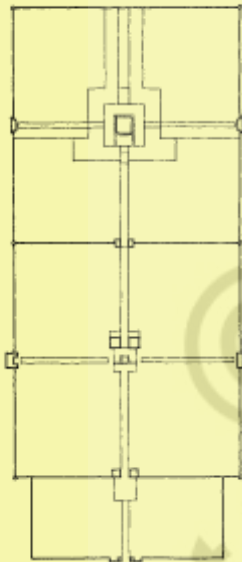


Fig 24.11a The chahar bagh in Humayun's Tomb, Delhi

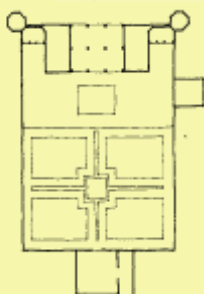


Fig 24.11b Terraced chahar bagh at Shalimar gardens, Kashmir.

turned to the tombs of his Central Asian ancestor, Timur. The central towering dome and the tall gateway (*pishtaq*) became important aspects of Mughal architecture, first visible in Humayun's tomb. It was placed in the centre of a huge formal *chahar bagh* and built in the tradition known as "eight paradises" or *hasht bihisht* – a central hall surrounded by eight rooms. The building was constructed with red sandstone, edged with white marble.



Fig: 24.12 A painting of Babur supervising workers laying out a chahar bagh in Kabul. Note how the intersecting channels on the path create the characteristic chahar bagh design.



Fig: 24.13 Tomb of Humayun, Can you see the water channels?

It was during Shah Jahan's reign that the different elements of Mughal architecture were fused together in a grand harmonious synthesis. His reign witnessed a huge amount of construction activity especially in Agra and Delhi. The ceremonial halls of public and private audience (*diwan-i khas* or *am*) were carefully planned. These courts were also described as *chihil sutun* or forty-pillared halls, placed within a large courtyard.

Shah Jahan's audience halls were specially constructed to resemble a mosque. The pedestal on which his throne was placed was frequently described as the *qibla*, the direction faced by Muslims at prayer, since everybody faced that direction when court was in session. The idea of the king as a representative of God on earth was suggested by these architectural features.

The connection between royal justice and the imperial court was emphasised by Shah Jahan in his newly constructed court in the Red Fort at Delhi. Behind balcony of the emperor's throne were a series of *pietra dura* inlays that depicted the legendary Greek god Orpheus playing the flute. It was believed that Orpheus's music could calm ferocious beasts until they

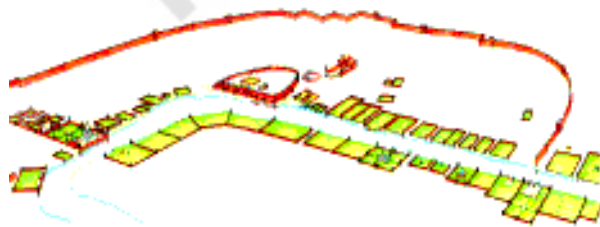


Fig: 24.14 A reconstruction from a map of the river-front garden city of Agra. Note how the garden palaces of the nobles are placed on both banks of the Yamuna. The Taj Mahal is on the left.



Fig: 24.15 Tajmahal in Agra.

resided together peaceably. The construction of Shah Jahan's audience hall aimed to communicate that the king's justice would treat the high and the low as equals where all could live together in harmony.

In the early years of his reign, Shah Jahan's capital was at Agra, a city where the nobility had constructed their homes on the banks of the river Yamuna. These were set in the midst of formal gardens constructed in the *chahar bagh* format. The *chahar bagh* garden also had a variation that historians describe as the "river-front garden". In this the dwelling was not located in the middle of the *chahar bagh* but at its edge, close to the bank of the river.

Shah Jahan adapted the river-front garden in the layout of the Taj Mahal, the grandest architectural accomplishment of his reign. Here the white marble mausoleum was placed on a terrace by the edge of the river and the garden was to its south. The new city of Shahjahanabad that he constructed in Delhi, the imperial palace

commanded the river-front. Only specially favoured nobles – like his eldest son Dara Shukoh – were given access to the river. All others had to construct their homes in the city away from the River Yamuna.

- ◆ You are an artisan standing on a tiny wooden platform held together by bamboo and rope fifty metres above the ground. You have to place an inscription under the first balcony of the Qutb Minar. How would you do this?

Key words :

1. Inscriptions
2. Monuments
3. Dynasty
4. Architecture
5. Coronation Ceremony



Fig: 24.16 Decorated pillars and struts holding the extension of the roof in Jodh Bai palace in Fatehpur Sikri. These follow architectural traditions of the Gujarat region.

Improve your learning

1. How is the “trabeate” principle of architecture different from “arcuate”?
2. What is a *shikhara*?
3. What are the elements of a Mughal *chahar bagh* garden?
4. How did a temple communicate the importance of a king?
5. An inscription in Shah Jahan’s *diwan-i khas* in Delhi stated: “If there is Paradise on Earth, it is here, it is here, it is here.” How was this image created?
6. How did the Mughal court suggest that everyone – the rich and the poor, the powerful and the weak – received justice equally from the emperor?
7. The rich and powerful construct large houses today. In what ways were the constructions of kings and their courtiers different in the past?
8. Find out whether there is a statue of, or a memorial to a great person in your village or town. Why was it placed there? What purpose does it serve?
9. Visit and describe any park or garden in your neighbourhood. In what ways is it similar to or different from the gardens of the Mughals?

ACADEMIC STANDARDS

Time should be spent in making sure that children comprehend the passages given in text. In between questions are useful in this context. These questions are of different types that would include the aspects reasoning, cause and effect, justification, mind mapping / concept mapping, observation, analysis, thinking and imagination, reflection, interpreting etc. The key concepts have been discussed subconceptwise in every chapter with examples and also given in the form of keywords.

- 1) **Conceptual understanding:** Promoting learning of basic concepts through inquiry, discussion, reflection giving examples through case studies interpreting, observation etc.
- 2) **Reading the text (given), understanding and interpretation :** Occasionally there are case studies about farmers, labourers in factory, or images that are used in text which do not directly convey the concept. Time should be given for children to grasp the main ideas, interpret images etc.
- 3) **Information skills:** Textbooks alone cannot cover all different aspects of social studies methodology. For example children living in an urban area can collect information regarding their elected representatives or children living in the rural area can collect information about the way irrigation / tank facilities are made available in their area. These information may not exactly match with that of the textbooks and will have to be clarified. Representing the information that they have collected through projects are also an important ability. For example if they collect information about a tank – they may decide to draw an illustration or map etc along with written material. Or represent the information collected through images or posters. Information skill includes, collection of informatic tabulation / records and analysis.
- 4) **Reflection on contemporary issues and questioning:** Students need to be encouraged to compare their living conditions along with that of different regions or people from different times. There may not be a single answer to these situations of comparison. Giving reasons for certain happening process and justification of informatic and interpretative.
- 5) **Mapping skills:** There are different types of maps and pictures used in the textbook. Developing ability related to maps as abstract representation of places are important. There are different stages of developing this ability, from creating a map of their classroom to understanding height, distance as represented in a map. There are illustrations, posters and photographs used in the textbook, these images often relate to the text and are not merely for visual effect. Sometimes there are activities like write a caption or read the images that are about architecture etc.
- 6) **Appreciation and Sensitivity:** Our country has vast diversity in terms of language, culture, caste, religion, gender etc. Social studies does take into consideration these different aspects and encourages students to be sensitive to these differences.