CHAPTER 1

Reading Maps of Different Kinds

The world we live in 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, some tell us about crops that grow there or the kinds of forests that are found in those areas. By studying them, we can know many things about the world.

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 - Antarctica

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

- Hang a political 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 he 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 such questions and ask each other.
- Look at the symbols shown on the map. Now try to find out the boundary of Telangana. Trace your finger along the boundary.
- Draw the symbol for the boundary of a state and the 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 and east of Telangana?
- In class VI, you have learnt to measure the distance 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.

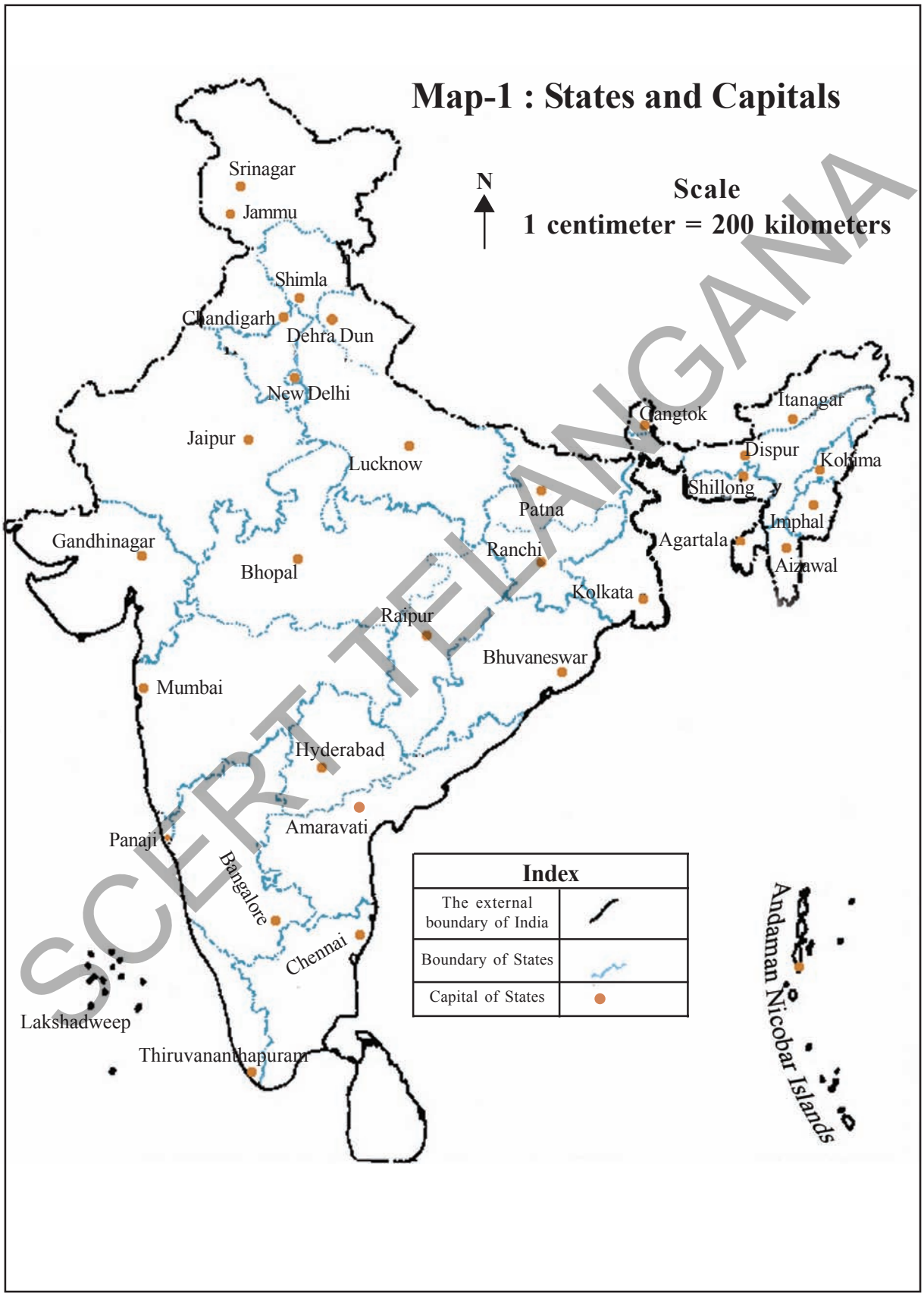
Symbols

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

If we are asked to show Delhi in the map of India, 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 Telangana 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 the 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. Delhi	*1. River*	*1. Playground*
2.	*2.*	*2.*
3.	*3.*	*3.*


Map-1 : States and Capitals
N
Scale
1 centimeter = 200 kilometers
Srinagar
Jammu
Shimla
Chandigarh
Dehra Dun
New Delhi
Jaipur
Lucknow
Patna
Ranchi
Gandhinagar
Bhopal
Kolkata
Raipur
Bhuvaneswar
Mumbai
Hyderabad
Amaravati
Panaji
Bangalore
Chennai
Lakshadweep
Thiruvananthapuram
Gangtok
Itanagar
Dispur
Kohima
Shillong
Imphal
Agartala
Aizawal
Andaman Nicobar Islands
Index
The external boundary of India
Boundary of States
Capital of States
SCERT TELANGANA

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 (mountains, plateaus, plains etc.) and depict the height of places.

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

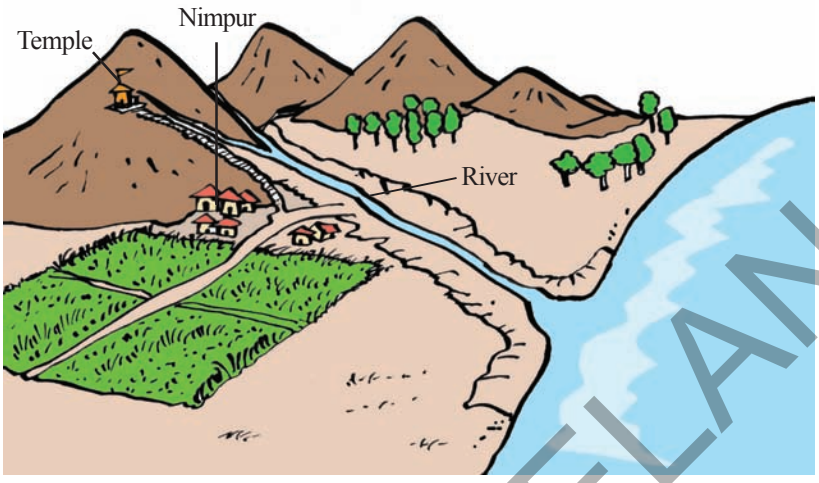


Fig 1.5 Drawing of "Nimpur" Village

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 should show all the 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 Height on Land

All heights on the land are calculated from the sea level. Since all the 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 given 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 the sea level is the temple?
- How many meters above the sea level is the top of the hill?

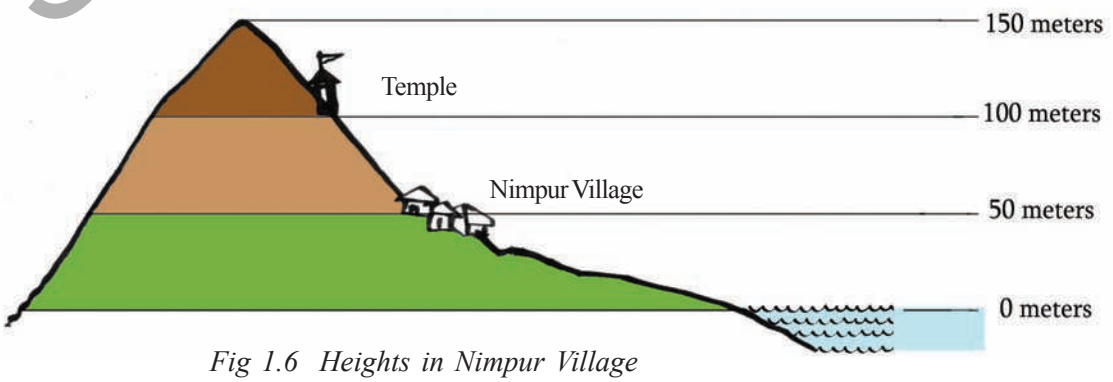


Fig 1.6 Heights in Nimpur Village

Showing Height 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 – firstly, areas which are between 0 meter to 50 meters 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 the height zone 51-100 meters will have a height of above 50 meters but below 100 meters. Height is shown in different shades of colours.

- Look at the map of Nimpur showing height. 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 India or Telangana in your atlas or wall map. Find out the range of heights and colours for the places given below by reading the index.

Contour Lines

A contour is a line joining places with equal heights on the map. On the map of Nimpur, you would have seen 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 are shown in irregular shapes depending upon the land form. These lines 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 each other. If the slope of the land is gentle, then the contour lines will be quite far from each other.

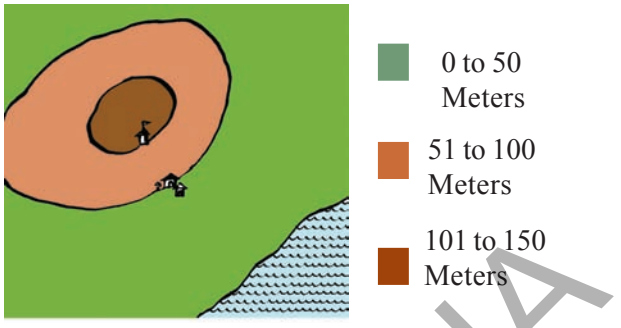


Fig 1.7 Figure of Nimpur Village showing heights

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 Telangana, you can identify the Godavari slopes in the Eastern part. If you travel westwards from the slopes, you will reach the hills in 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 height 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.

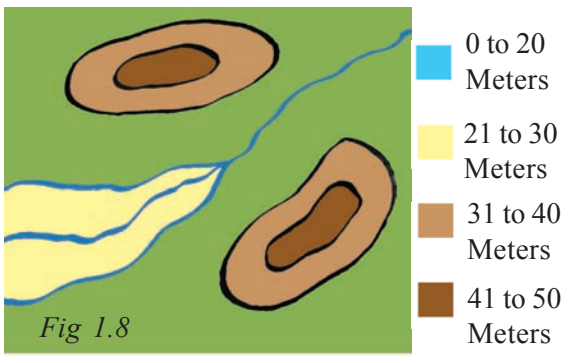


Fig 1.8

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 phenomenon, 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, 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 figures 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?

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 height?
4. What differences do you find between the life style of people living on high altitudes and low altitudes?
5. How are maps helpful to people?
6. Read the para 'Contour Lines' on page 5 and comment on it.
7. Observe the Telangana map given and list out the areas of districts which are below 150 MSL.