

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 Bhubaneswar 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.

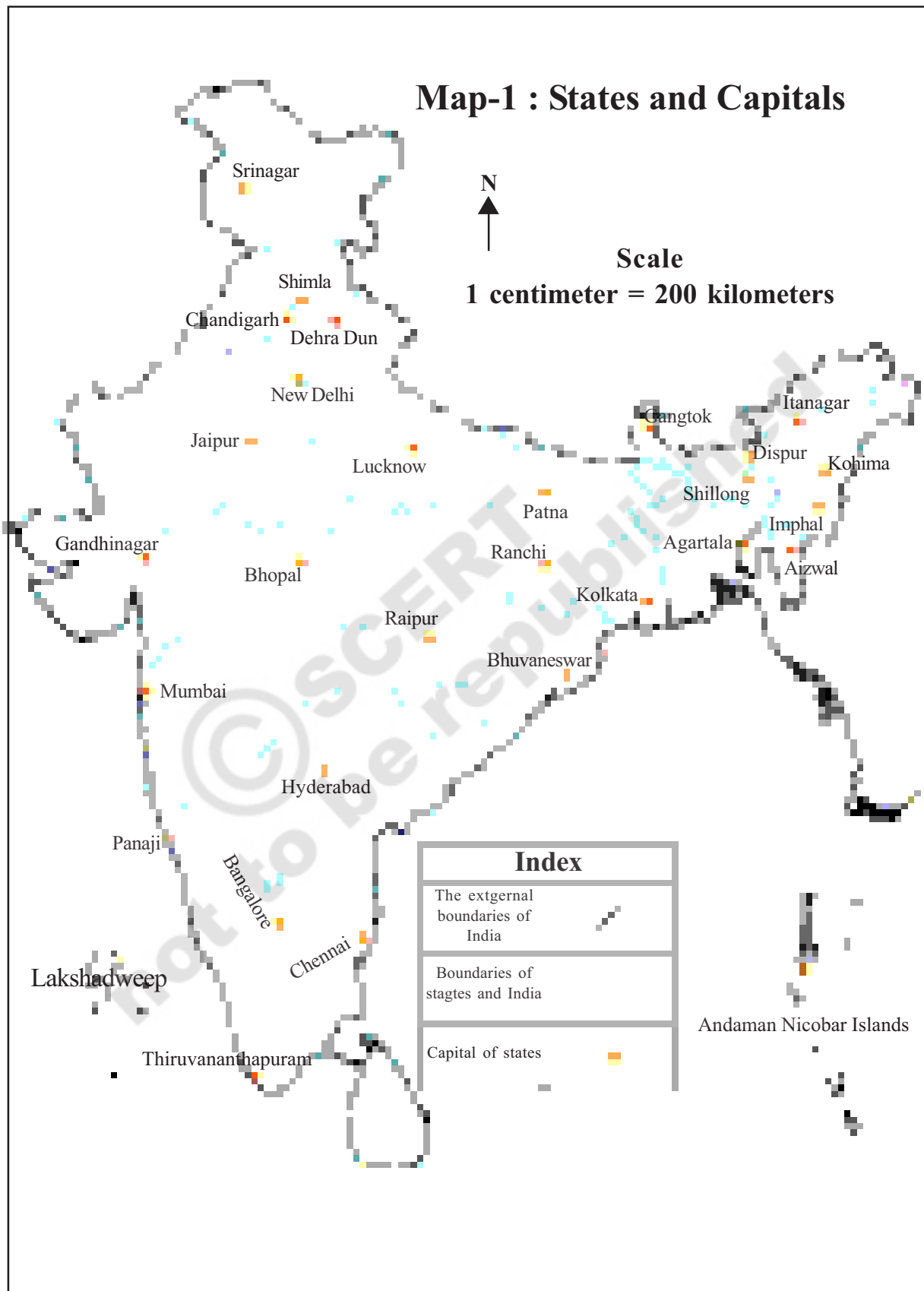
Symbols

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.



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:

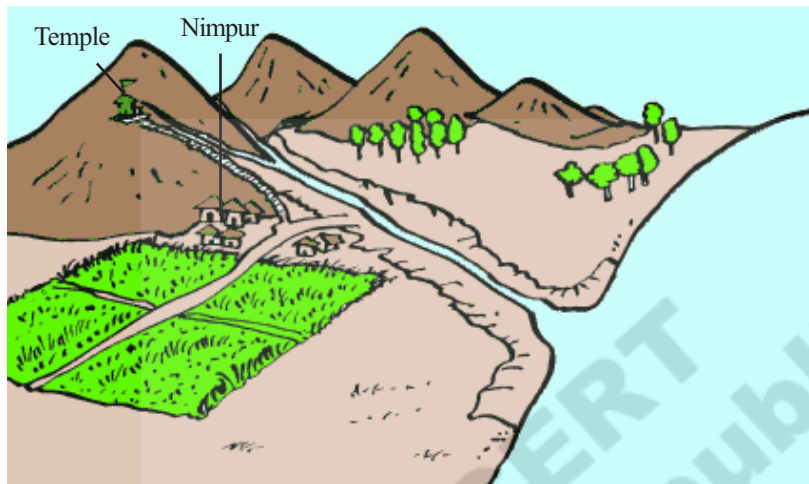


Fig 1.5 Drawing of "Nimpur" Village

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?

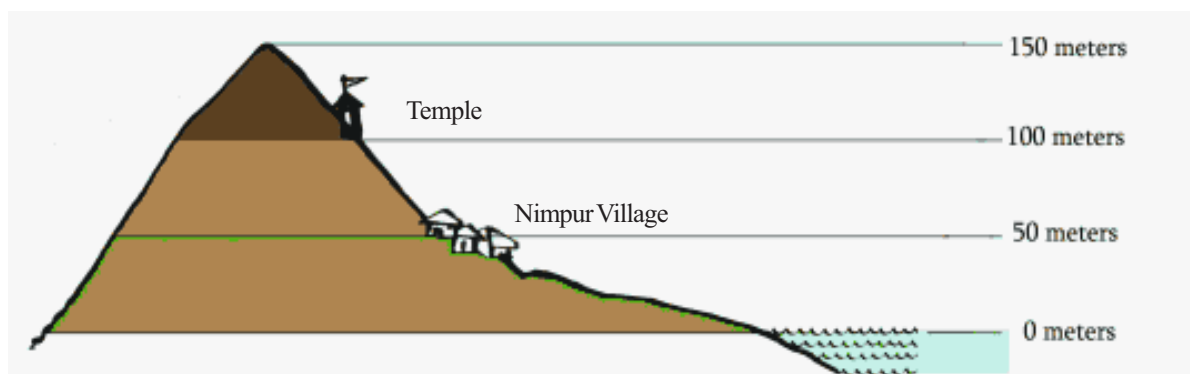


Fig 1.6 Heights in Nimpur Village

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.		

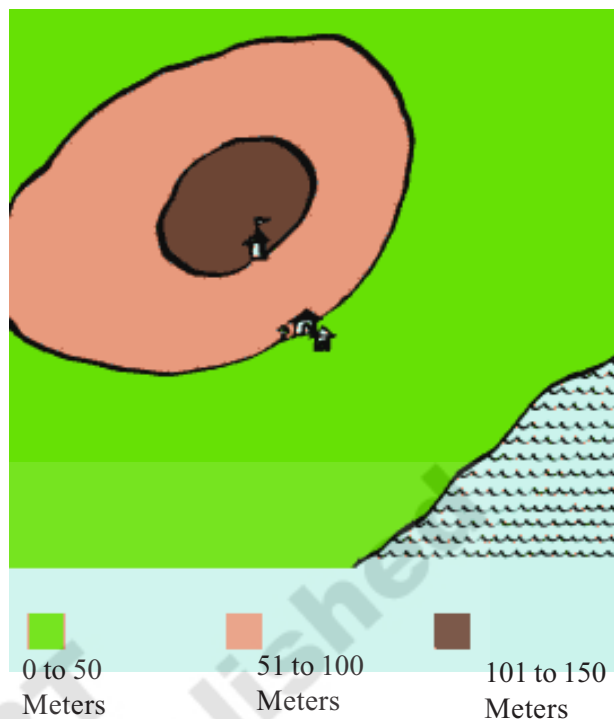


Fig 1.7 Map of Nimpur Village showing heights

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?

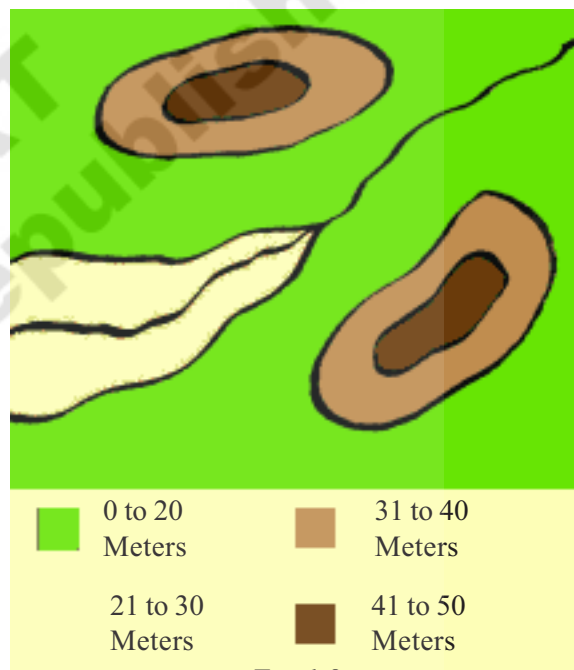


Fig 1.8

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?