

Reading and Making Maps

Maps tell us several things about different places: where they are; whether they are on the sea or on a mountain or in a desert; how hot or cold or rainy they are; what kind of trees and plants grow; what kind of people live - the language they speak, the work they do, their buildings, etc. You can know many details about a place from maps. Of course not everything is shown on one map - you may have to consult different maps [physical maps, administrative maps, historical maps, etc.] to get all the information. Shall we learn how to make and read a map?

District Map (political)

You may have seen several maps in your classroom such as the map of India and map of Andhra Pradesh etc... Today, we will study the map of our own district.

- Bring two or three copies of the map of your district to the class.
- Locate your village/town, the nearby villages and towns, rivers, streams, water bodies, etc.
- Look for information such as roads, railway station, etc.
- Can you work out the distances between different places shown on the map?

A Game

Form two groups, one team of students should select a place on the map.

Write it down on a piece of paper secretly, give this paper to the teacher. Second team can ask questions about the place. Now first team can answer

these questions only as yes or no. eg: Team two can ask questions like, Is this place in kurnool district? Is this place by the sea coast? Is this name of a district head quarter?

When the team finally finds out the place, reverse the roles and play again. The team which finds out the name of the place with the minimum number of questions will be the winner.

Way to Mallika's house- Sketch Map

Laila and Mallika met each other at Red Cross service activity in Srikakulam. There they became close friends. Mallika lives in Venkatapuram village while Laila lives in Adilabad. Laila planned to visit Mallika's house in the coming holidays. She wrote a letter asking Mallika how to reach her house from the Bus stand. Mallika was happy about her friend's proposed visit. She sent the details of location of her house with a sketch map.

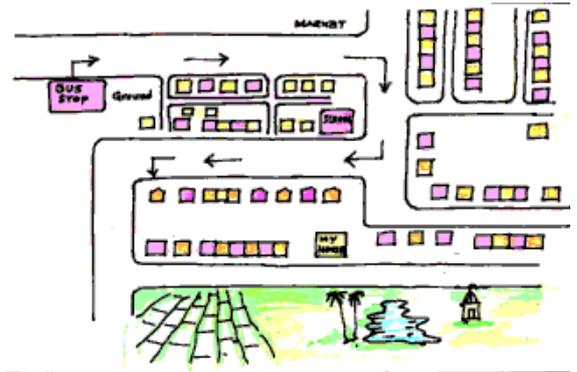


Fig: 1.1 Sketch showing way to Mallika's house

- Can you draw a sketch map of the route from your school to your house?
- Do you reach Mallika's house from the bus stand with the help of the sketch map?
- How many turnings did Laila take to reach Mallika's house? Are there any landmarks at the turnings?
- Are all the buildings shown in the sketch to their actual size?
- Can you tell in which direction Laila walked (North or East)?
- Can you tell the distance from the bus stop to Mallika's house?

We cannot answer the last two questions with the help of the above map. This actually

landed Laila in a problem. She had no idea of the distance from the Bus stop to the house. When she reached Mallika's house she said, "Oh! Malli I am tired. You did not mention the distance in your sketch. If I knew it was so far away I would have taken an auto," Laila said.

"Sorry, Laila, I forgot to mention the distance," replied Mallika. "Anyhow if you take an auto in future please mention that you have to reach South Venkatapuram - that is where this house is situated," said Mallika.

"How can I know the South or North of Venkatapuram?" Laila asked.

"It is simple. Now you reached my house which is in the South of the village, the opposite side is North. Do you know how to find directions in a place?" asked Mallika.

Directions

Look at the following picture carefully:

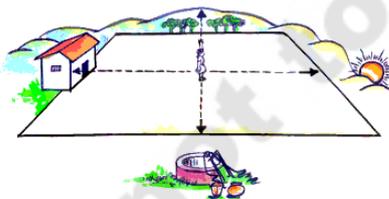


Fig: 1.2 Identification of directions

The girl in the middle is facing the rising Sun. Now fill the following table:

S.No	Direction	Object
1	East	Sun, hills
2	South	
3	North	
4	West	

If you stand facing the East, all things to your right hand side will be towards the South; all things to your left will be towards the North; and all things behind you will be to the West.

Mallika said that let us play a game to understand more about directions.

Look at the picture on the right. Now everyone has to ask one question.

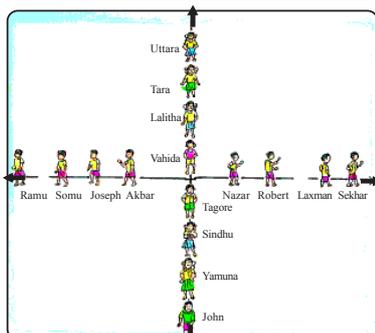


Fig: 1.3 Directions

- Lalitha is towards direction of John.
- Lalitha is towards direction of Uttara.
- Nazar is in direction of Sekhar.
- Nazar is towards direction of Ram.
- Lakshman is towards direction of Somu.
- Lakshman is also towards direction of Sekhar.
- Tara is in the direction of John.

After doing this exercise Laila said, "Wow! Now I understand that direction is always relative to something! The same place may be East or South or North or West depending upon from where we are looking at it."

- Identify directions in your class room and form a similar line and ask similar questions.

Directions on a map

Usually maps are prepared in such a manner that the North direction is at the top of the map and the South side is at the bottom. So, the East side is on the right and the West side is on the left.

In some special cases maps may be made with the South on the top or on the left side. However, in such cases a special mention will be made on the map and a North direction arrow is given.

Hang a political map of Andhra Pradesh on the wall. Answer the following questions after looking at the map:

- In which direction is Chittoor to Hyderabad?
 - In which direction is Hyderabad to Medak?
 - In which direction is Vijayawada to Nellore?
 - Is Karimnagar located on the South to Kurnool?
 - If you want to go from Mahabubnagar to Warangal in which direction will you travel?
- Make more such questions and ask each other.

'Scale' or distances on a map

On this pleasant evening Mallika took Laila to see the village stream and they walked over the bridge. The bridge has 6 lamp posts at equal distance. The distance between each post is about 100 metres. The entire length of the bridge is about 500 metres. Look at the following picture:

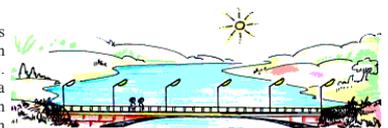


Fig: 1.4 Laila and Mallika walking on the bridge

When they came back Laila wanted to draw a sketch of the bridge and the lamp posts on a paper so that she can take it with her. When she was drawing the lamp posts she took care to draw them at equal distances. The distance between the first and last lamp posts was about 5 centimetres. Her sketch was much smaller than the actual bridge.

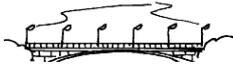


Fig: 1.5 Laila's sketch of the bridge

Measure the total distance in Laila's sketch map from lamp post one to lamp post six. The actual distance between two lamp posts is

While on the sketch the distance between two lamp posts is only cm, and the total distance is only cms. You might have observed that Lila drawn the lamp posts equally.

We can write down the relation between the distance on the bridge and in the sketch in the following way:

5 cm on the sketch map = metres on the bridge
 1 cm on the sketch map =metres on the bridge

This is called the 'Scale'.

We use Scale for showing the actual distance on the ground in a reduced manner on a map.

Maps always mention the Scale they use and we can find out the actual distances between places using the Scale.

In the above sketch, the distance between Srikakulam and Tekkali is given in the form of a line. The actual distance between these places is 50km.

Measure the line joining the two places and find out the distance on the map.

Actual distance between Srikakulam and Tekkali: _____

Distance between Srikakulam and Tekkali on the map: Can you find out the Scale of the map?

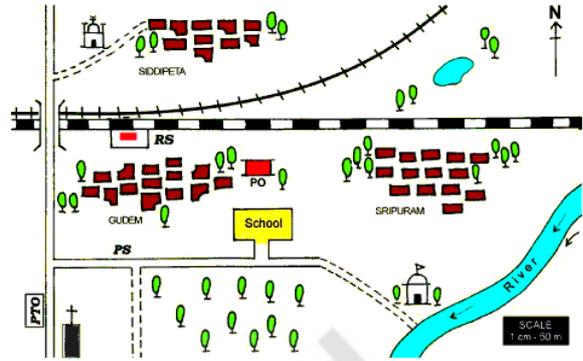
If it is one cm on the map, what will be the actual distance on the land?
 1 cm = Km

Now try to look at the district map and find out its Scale. Then measure the distance from your village or town to a few other villages and towns.

Symbols

You know that maps are too small for us to draw pictures of the things shown on them. For example, we cannot draw the real school or bus stand or Mallika's house as it will take too much space on the map. Therefore, we always show things on a map with the help of symbols. You may have

noticed that in the district map villages and towns are shown with dots and circles. Map makers prepare symbols appropriate to their needs. But some common symbols which are called 'Conventional Symbols' are also used. The following is a complete map with symbols, Scale and proper orientation:



Map 1: Study the map to find out how to use the symbols

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Based on the map in the previous page answer the following questions:

- In which direction of the church is the river flowing?
- What kind of road is present on the South of Sripuram village?
- Which type of railway line is located near Sripuram?
- In which direction of railway station is the police station?
- Name the village that lies north to railway track.
- Imagine you are in the school shown on the map. Which direction will you face if you are coming out of your school?

Key words
Sketch
Map
Scale
Direction

Improve your learning

1. Collect different kinds of maps and study them. Clarify from your teacher if you have any doubts.
2. Find out the distance from your mandal headquarter to the district headquarter by converting map distance into actual distance.
3. Why is the actual distance on the ground to be reduced on the map?
4. Face towards East, stretch your hands and say directions (e.g. North, South). Next time change the face direction and continue the exercise.
5. Explain the need of symbols while preparing maps.
6. Draw the symbols representing different water bodies, worshipping places and public offices to show on the map.
7. Sketch your house and convert it into a map.
8. In your observation what are the important features of a map?

9. Project

Prepare a map of your classroom by following these instructions:

- a) First find the four directions in your classroom by facing the North.
- b) Make a list of all the walls, doors, windows, blackboards, almirahs etc. which you want to show on the map. Make symbols for each of them in your notebook.
- c) Draw a sketch map of the classroom with walls and location of the objects you want to show. Take care to draw the northern wall on the top side of the sketch.
- d) Now, divide into small groups and measure the length of each of the walls with the help of a scale. Write down the distances on the sketch map.
- e) Draw a map of the class room by selecting appropriate Scale. It can be one centimeter for one meter. So if a wall is 7 metres long, you will have to make a line 7 centimetres long on paper.
- f) After making the outer walls, draw the symbols for windows and doors at the right places. Then draw the symbols for other objects like almirah, black board, table etc.
- g) Make an index of the symbols you have used in the map and also mention the Scale.
- h) Compare the map you have made with those of your friends and correct if there are any errors.

Globe - A Model of the Earth

One evening Sundar & Kalpana were looking at the moon and Sundar asked, "If I went to the moon what would the earth look like? What can I see from there?" Kalpana told him that they could easily find out from the internet. Later she showed him some pictures of the earth taken from the moon. This is how it looked:



Fig: 2.1 Earth rise on the Moon

Doesn't the Earth look like a blue moon? It looks blue because a large portion of the Earth is covered with oceans. In the above photograph we can see only one part of the earth which receives sunshine.

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♦ Can you explain why the bottom portion of the Earth is not visible in this photograph?

The Earth is like a ball

From this picture you can see that the shape of the Earth is like that of the Moon.

Bring to the class room some globes. Ensure that every group of five to six students has a globe. Globe is a model of the Earth – it shows the shape of the Earth, the land and water, the continents and oceans and the main countries of the world.



Fig: 2.2 A Globe

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