

## CHAPTER 2

# LET US MAKE A MAP

*You must have come across many maps - of your state, India and the world. With the help of maps, we can locate a place and learn about its nature and surroundings. In this chapter we will learn about maps and how they are made.*

### PICTURES AND MAPS

You must have seen pictures or photographs of many places. There are many differences between pictures and maps. Here is a picture of Daulat's classroom. On page 83 there is a map of the same classroom. Do you find any difference between them?

1. In a picture objects are generally shown the way they look. In a map, objects are not shown as they actually look, but with the help of symbols.
2. A picture is generally made in such a way that a viewer feels that she/he is looking at the scene or object from one side on the ground. A map is made such that the person feels that she/he is looking at it from above or from the sky.

### HOW IS A MAP MADE?

One day, when the teacher was showing the class some maps, Daulat asked, "Sir, how are these maps made? How can you show such a large place on such a small piece of paper?"

The teacher replied, "Tomorrow we will make a map of our classroom. Then you will know exactly how a map is made. So when you come tomorrow please bring with you a ruler, matchsticks and a piece of chalk."

### Select Your Symbols

Next day the students set out to make a map of their classroom. The teacher said, "First you must make a list of all the objects in the room that cannot be moved, like cupboard, doors, windows, black-board etc."

Daulat and his classmates made the list and wrote it on the board. Their teacher then reminded them that objects are shown on a map with the help of symbols. The class was asked to choose symbols for every object in the list.

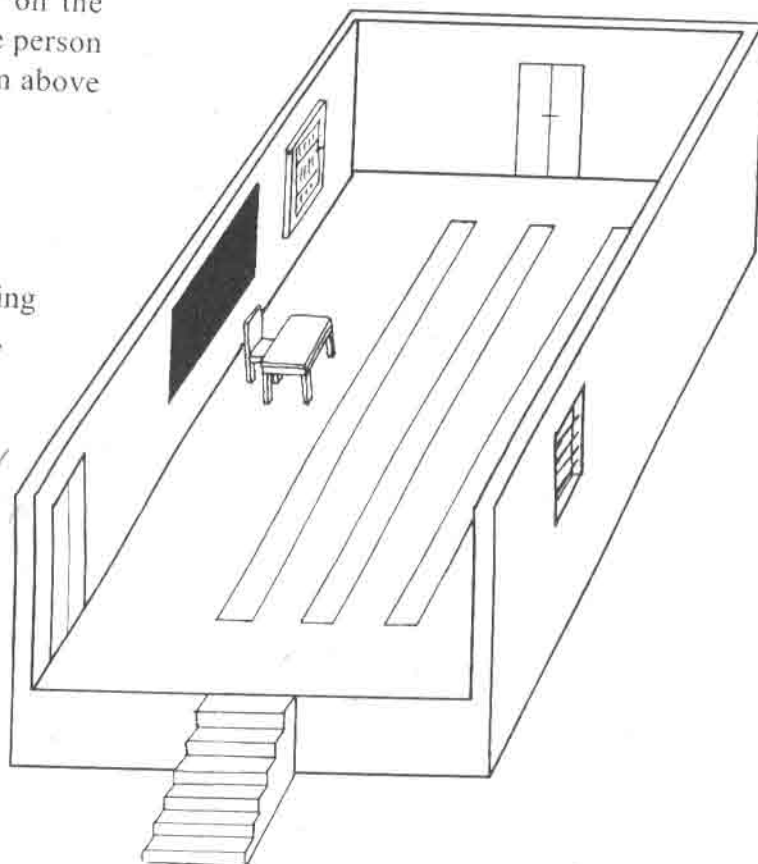


Figure 1 : Picture of Daulat's Classroom

### Index of Symbols

Objects	Symbols
Cupboard	
Door	
Window	
Road	
Blackboard	
Steps	

### Face the North

The children sat in groups of four. The teacher asked them to sit facing the north.

### Measure the Classroom

The teacher told the class, "You have to make a small map of a big classroom. To do this you have to first measure the length and breadth of the classroom."

Daulat and his classmates set out to measure the wall facing the north, using a ruler. The length of the wall equalled six rulers.



### 'One Ruler Equals One Matchstick'

The teacher said, "A wall measuring six rulers will have to be made smaller to fit into a small piece of paper. So let us take one matchstick to be equal to one ruler. This means that in our map the north wall will be the length of six matchsticks."

Daulat placed six matchsticks in a line, and the north wall was made.

The wall in the east was also measured with the same ruler. It was nine rulers long. The class therefore placed nine matchsticks in a line to show the east wall.

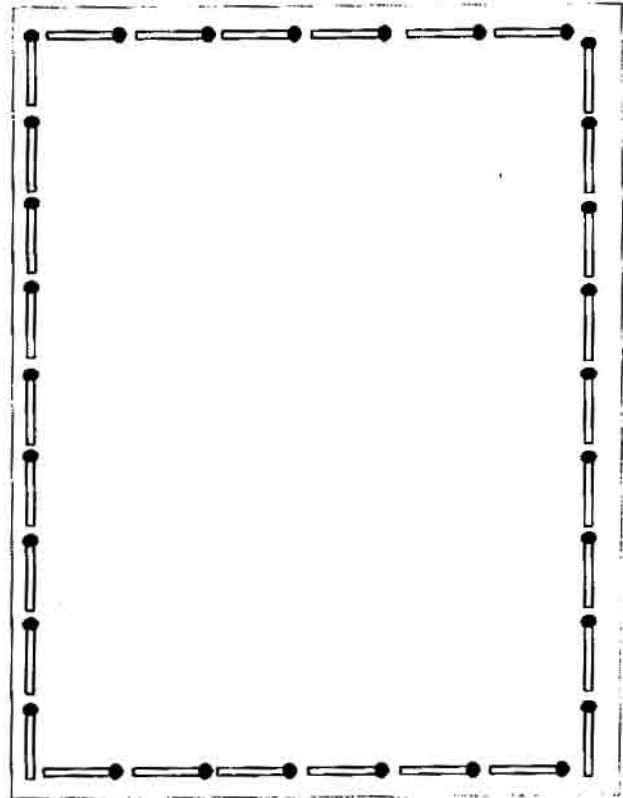


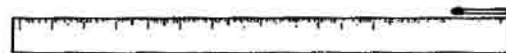
Fig. 2. The 'matchstick map'

The south wall was six rulers long and the west wall was nine rulers long. The students therefore arranged their matchsticks accordingly.

When all the four walls were made by arranging the matchsticks, straight lines were drawn along them. Then the matchsticks were removed. See Figure 2.

### Scale

The teacher said, "You have measured the class walls with a ruler, and to draw the map you used one matchstick to show the length of one ruler. This means that in your map, if the distance between two objects or places is one matchstick, it is actually one ruler on the ground. This, then, is the scale of your map."



1 matchstick = 1 ruler

"Every map has a scale. With this scale we can find out about the actual distance between two places or objects shown on the map," said the teacher.

### Fill in the Symbols

The four walls of the classroom had been drawn. Next, all the objects in the classroom had to be shown in their correct position. The symbol for the door of the classroom was, therefore, marked in the map in the same direction as it was actually located in the classroom. In the same way, the cupboard and windows were marked in the correct direction. Daulat's map was finally ready (see fig. 3).

### Correct Your Orientation

When all the maps were made, they were compared with each other. Daulat noticed that Ramu and Uttara had made maps in a different way. The teacher said, "The orientation of these maps is different. Ramu and Uttara had drawn the north wall of the classroom towards the right side of the paper. This is not correct. The north wall should be drawn towards the top." Ramu and Uttara, therefore, corrected their maps.

This was how the map of Daulat's classroom was made. Now make a map of your own classroom with the help of your teacher. First of all let us revise what we had learnt from the example of Daulat.

### ALWAYS REMEMBER

1. A map is always made in a such a way that a person feels she/he is looking at the place from the sky above.
2. In a map, all objects, walls, roads, etc. are shown by symbols.
3. To make a map, the actual distances are measured and reduced according to the scale.
4. The north in a map is always towards the top margin. All the objects in the map are plotted in the same direction as they are on the ground.

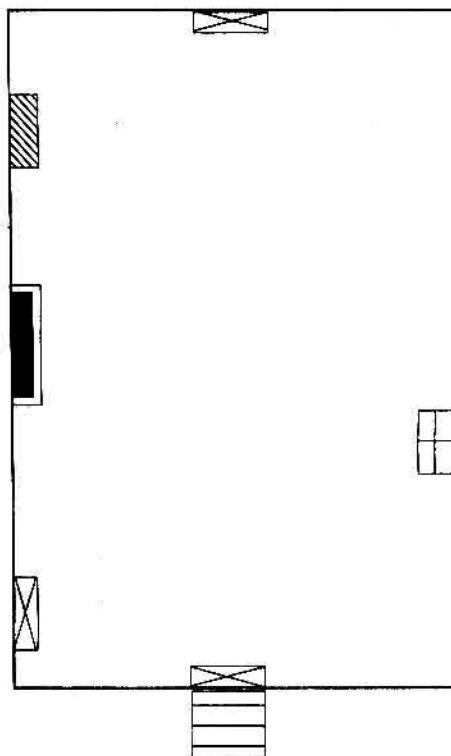


Figure 3 Map of Daulat's Class-room

INDEX	
Door	
Window	
Almirah	
Blackboard	
Stairs	

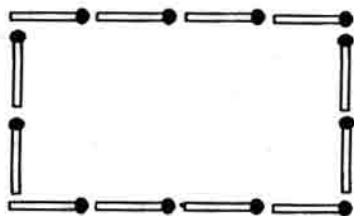
## MAKE A MAP OF YOUR CLASSROOM ON THE GROUND

1. First of all, stand in one place and **identify all the four directions**. After this, make teams of four and sit facing the north.
2. **Make a list of the objects** in the class which cannot be moved. **Make symbols** for each of these objects.
3. **Prepare a sketch** of your class room on a piece of paper and complete it with the symbols you have made.
4. **Measure** the walls with a ruler. Then write on the blackboard how many rulers long each wall is.
5. **Put one matchstick** on the ground for each ruler length and in this way make the four walls with matchsticks.
6. **Draw straight lines** along the matchsticks with a chalk . Then remove the matchsticks.
7. Observe all the objects in the classroom and note their position. **Plot these objects in the right place** in your map using the symbols you have made.
8. Compare your map with those of your friends and **correct your mistakes** if there are any.
9. Now look at all the objects in your classroom once again and compare them with your map - have you placed all the objects in their proper position? Are the length and breadth of the classroom correct?

## MAPS OF DIFFERENT SCALES

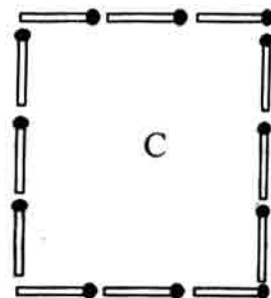
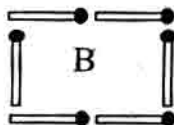
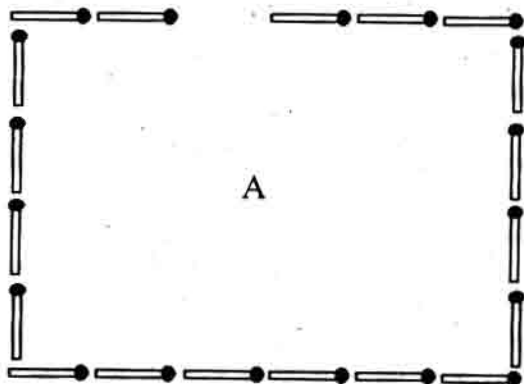
You used one matchstick to show the length of one ruler. If you want to make a bigger map, you may use two matchsticks instead of one to show the length of one ruler. The size of the map will then be doubled. In this way you can make maps of different sizes.

Here is a map of a class room drawn on a scale of one matchstick = one ruler.



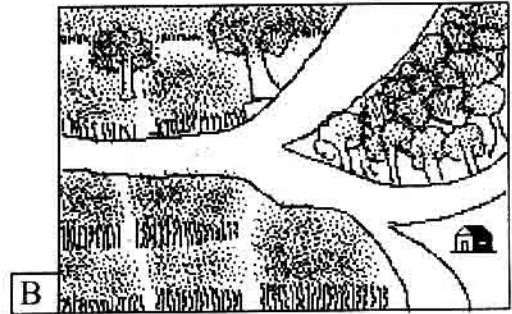
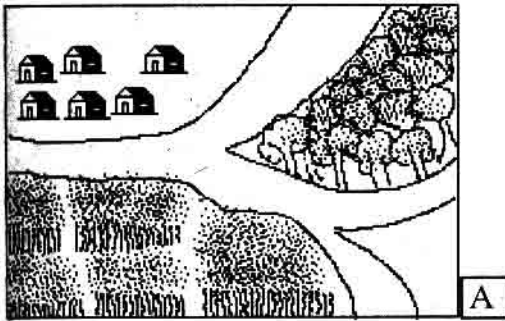
- i) How many rulers long is the northern wall?
- ii) How many rulers long is the western wall?

If we were to prepare the map of the same classroom with the scale of one matchstick = 2 rulers which of these maps would it be similar to?

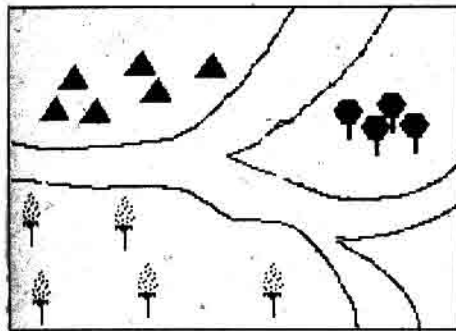


## EXERCISES

You can see pictures of two places here. The map of one of the two places is also given. Which picture does the map represent? Find out with the help of the symbols given in the index below.



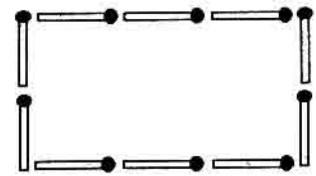
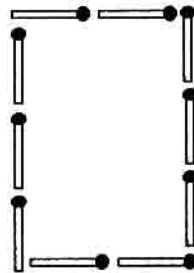
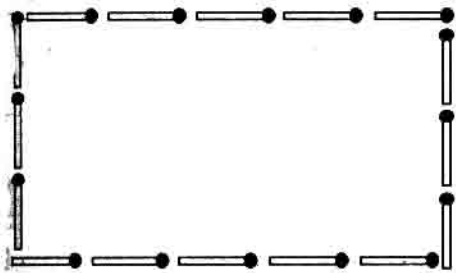
MAP



INDEX

	Fields
	Houses
	Forest
	Road

2. Monu made a map of his kitchen. The south wall of the kitchen was 2 rulers long. The east wall was 3 rulers long. Monu used the scale of one matchstick = one ruler. Now, can you tell which is Monu's map.



- Make a map of Monu's kitchen with the scale 1 matchstick = half ruler.