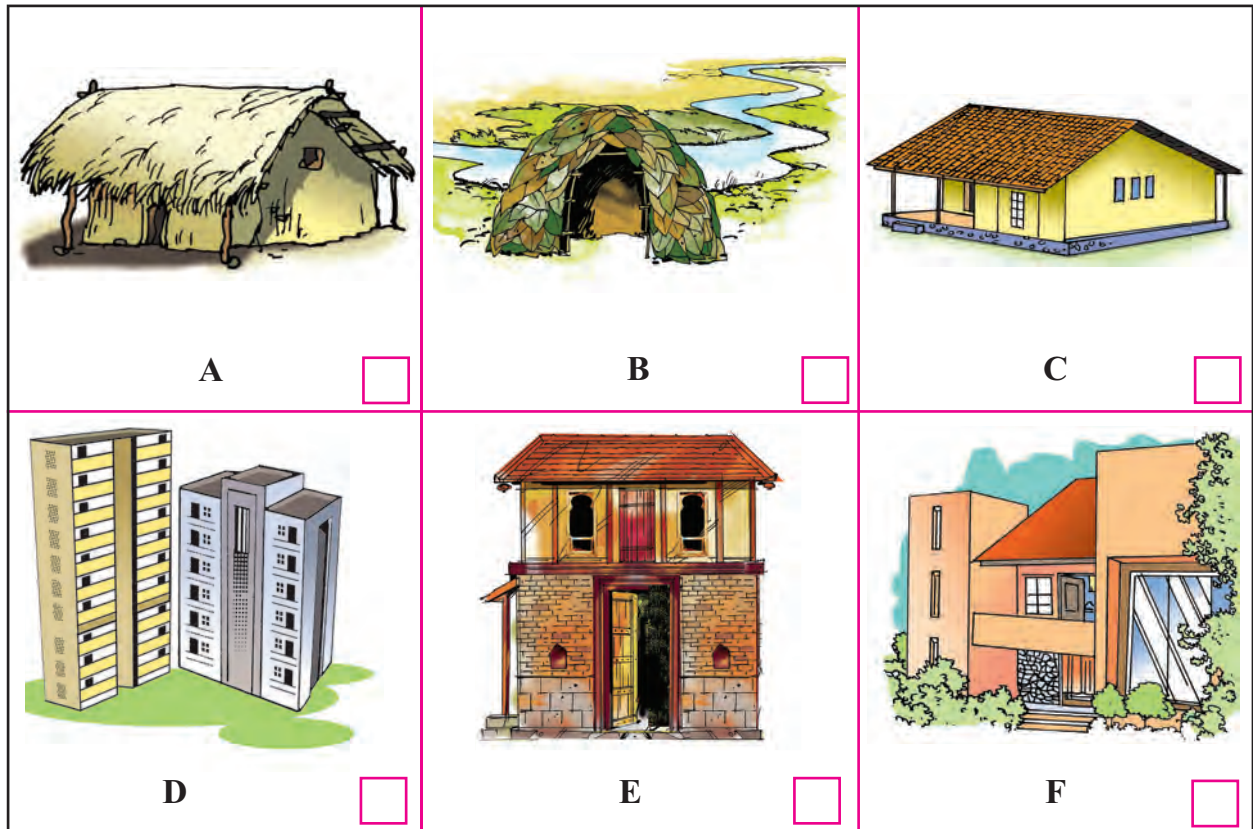


11. Our Home and Environment

Try this.



On the way to your school, or market, or when you travel to another town, you see many things. Observe carefully the houses that you see. Note the construction, shape, building material and other aspects of the different houses. Do some of the houses resemble the specimens shown above ?

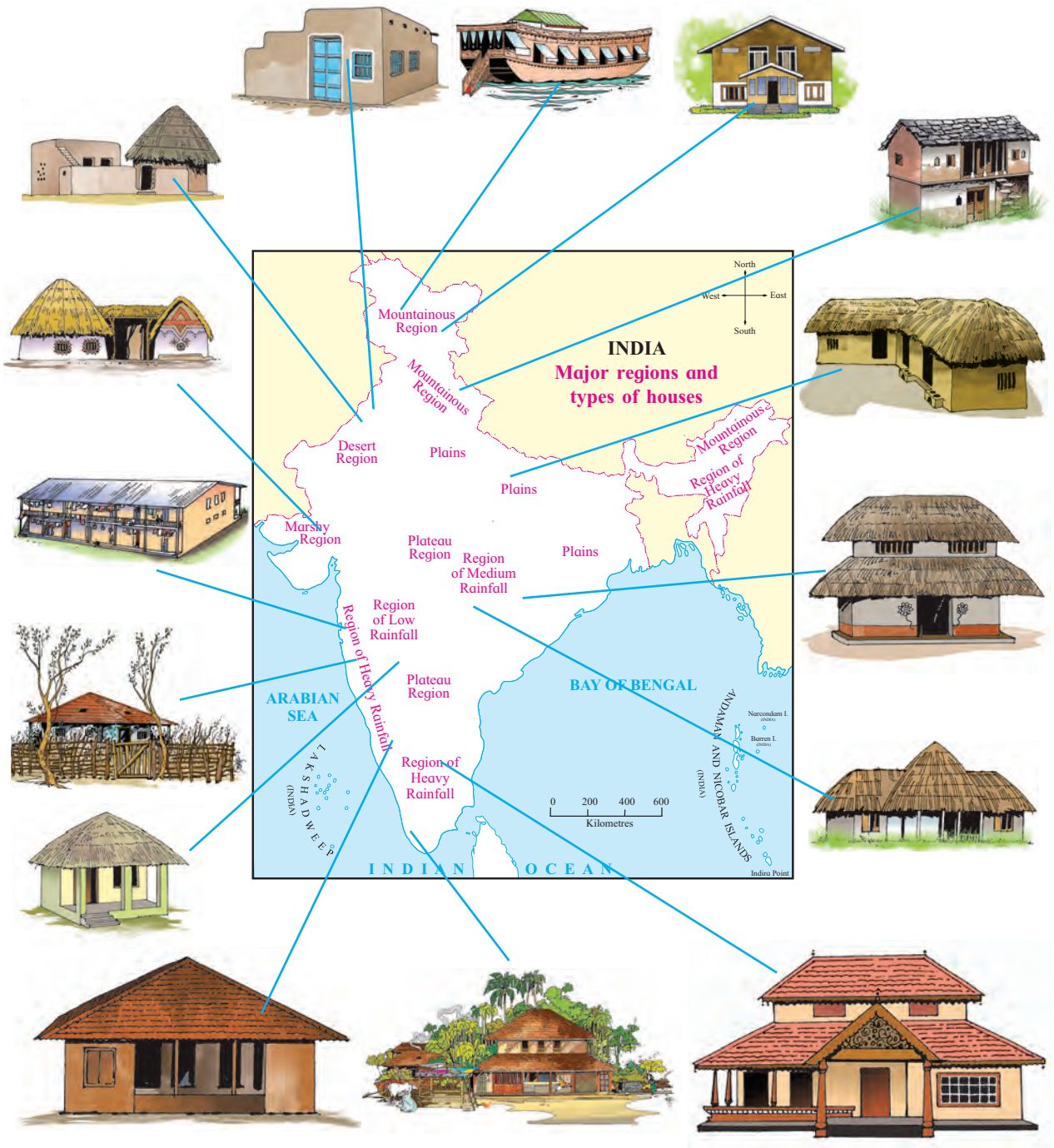
- (1) What materials are used for building houses ?
- (2) Compare any two types of houses that you saw and note down the differences.
- (3) What are the different things from which a house gives us protection ?
- (4) In what way are the houses 'A', 'B' and 'C' different ? Which of them appears to be the safest ?

- (5) Which of the above houses are mainly seen in cities ? Which are seen mainly in the rural areas ?
- (6) Think about your own environment and the climate there and choose the most suitable house for yourself by putting a '✓' in the box near the picture.

We saw different types of houses in the pictures. Their main uses can be listed as follows:

- * A shelter
- * A resting place
- * Protection against the sun, the wind, the cold and the rains
- * Protection from wild animals
- * Keeping ourselves safe from anti-social elements.

Make friends with maps !



The above figure shows a map of India and the types of houses that are common in the respective regions since ancient times. Note how the construction or structure of the houses changes from region to region.

(1) Regions of heavy rainfall

(2) Regions of medium rainfall

(3) Regions of low rainfall

(4) Desert regions

(5) Marshy regions

(6) Mountainous regions

(7) Plains.

(a) Observe the map and the pictures of houses and complete the following chart.

Sr. No.	Region	Type	Shape / Construction	Building material	
				Roof	Walls
1.	Plains	Flat-roofed house	Rectangular	Wood, earth	Stone, earth
2.					
3.					
4.					
5.					

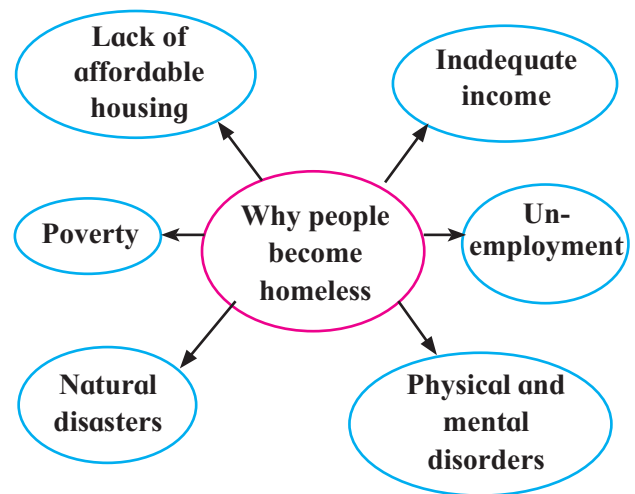
(b) Find and note down the reasons why these differences occur in the construction of houses according to the regions.

People build houses to suit the climate of their region, using the natural resources that are available. Differences in the construction and building materials give rise to the different types of houses.

Water, food, clothing and shelter are the basic needs of every human being. However, these needs are not fulfilled in the case of each and every person. Then the following situations arise –

Around us, we see many people who lack shelter. They seek shelter at the roadside, on footpaths, under bridges, in tumbledown buildings, in railway or bus stations and even on open grounds. Many people are forced to be ‘homeless’ because they have insufficient or no means of livelihood.

A section of our society being homeless is a social problem. That is why, the government implements many schemes to provide homes to the homeless. In some of the cities, the government makes ‘night shelters’ available to the homeless.



We all have a right to clean potable water, sufficient food, a safe shelter and education.



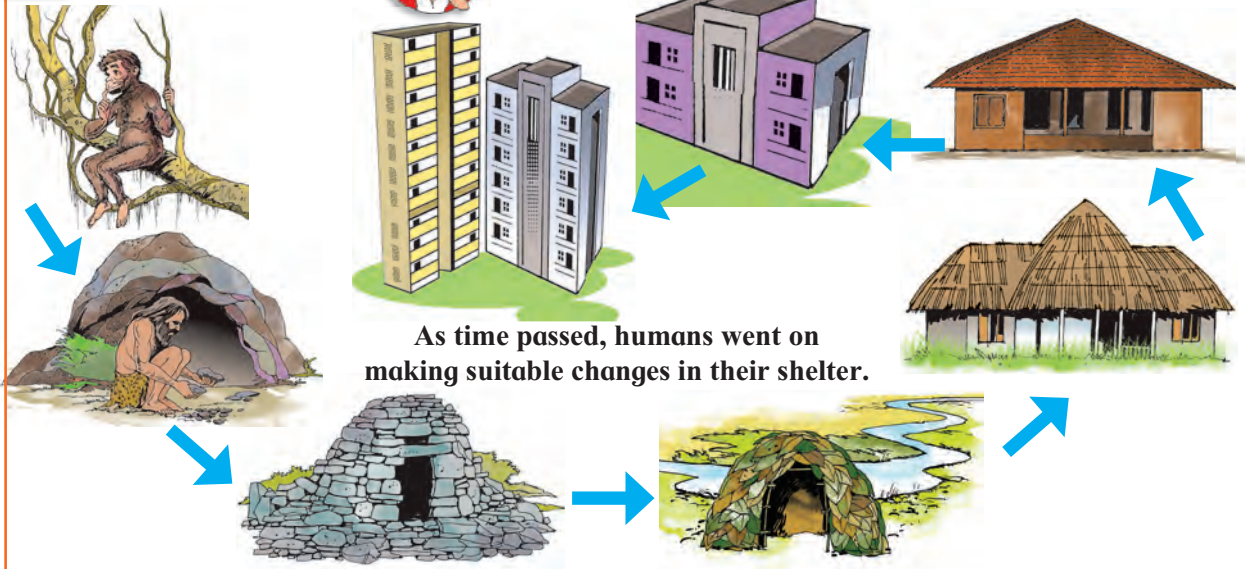
Shelters on a foot path

What's the solution ?



Construction work is going on opposite Ajit's house. That means constant loud noise and a lot of dust in the air. Ajit and his family have to suffer this all the time. What can Ajit do to find a way out of this problem ?

Do you know ?



As time passed, humans went on making suitable changes in their shelter.

Try this.



Visit a place where construction work is going on. List the materials that you see there. Obtain information about the pollution in that area.

Material	Original source
Bricks	
Cement	Limestone
Iron	
Wood	
Water	
Rubble	
Glass	Sand
Floor Tiles	
Sand	
Roof Tiles	
Tin Sheets	

Compare your own list with your friends' lists. Find the original sources from which construction material is obtained and note them down in the above chart.



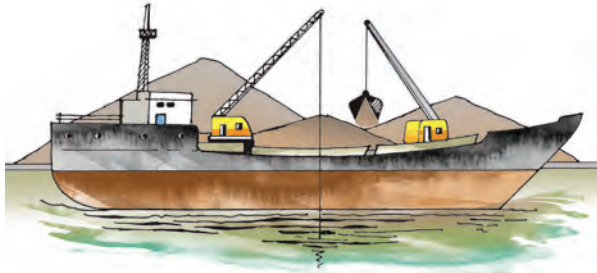
Visit to a construction site

Always remember –

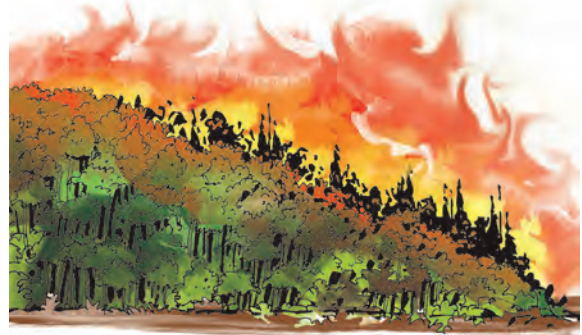


Though there are so many different types of houses, everyone is attached to their own house. It is not only the walls and doors and windows and the roof that make up a house. It is the people who live in that house and their love and affection for one another that turns a house into a home.

Use these pictures to discuss how environmental pollution affects us.



A launch extracting sand



Forest fire



Felling trees and forests



Quarrying



Drawing excess water

The population of the world is increasing all the time. That is why, houses are being built in large numbers. Natural resources have to be used in very great quantities to build these houses. They are obtained using the methods listed below. These methods are harmful to the environment and lead to the pollution of air, water and soil and also cause noise pollution.

- Digging up hills for quarrying
- Extracting sand from seashores and riverbeds
- Extracting stone and earth from the ground
- Drawing out excessive amounts of groundwater
- Felling trees to clear land
- Filling up ponds, lakes, streams, rivers, creeks and low-lying areas to reclaim land.

Because of growing urbanization, land which was previously being used for agriculture and similar other purposes is now being used to build roads and to raise settlements. When this leads to shortage of agricultural land, forestland is used for

agriculture. Trees are felled in great numbers and forests are reduced.

Energy is needed to produce construction material. It is used on a very large scale to prepare bricks from soil, cement from limestone, glass from sand and so on.

Where does the energy come from ? It is produced using natural fuels like coal, natural gas or mineral oil. These natural fuels can be used only once. They get consumed when we use them. Moreover, burning these fuels leads to air pollution. It takes lakhs of years for these sources of energy to form in nature. That is why, it is necessary to bring into use other sources of energy such as solar energy or wind energy which are available in plenty and which do not cause pollution. These are non-exhaustible sources of energy.

All living things need shelter. Like humans, some other living things also build shelters using various materials in their environment. But last year we saw that their shelters are eco-friendly and temporary. We should also be able to make permanent houses that are eco-friendly.

Some characteristics of eco-friendly houses –

- Minimum consumption of natural resources
- Use of non-exhaustible sources of energy such as biogas, wind energy and solar energy
- Recycling of water
- Recycling of garbage
- Avoiding artificial materials and artificial colours
- Provision for natural light and ventilation in the house

An eco-friendly house



Do you know ?



Underwater shelters

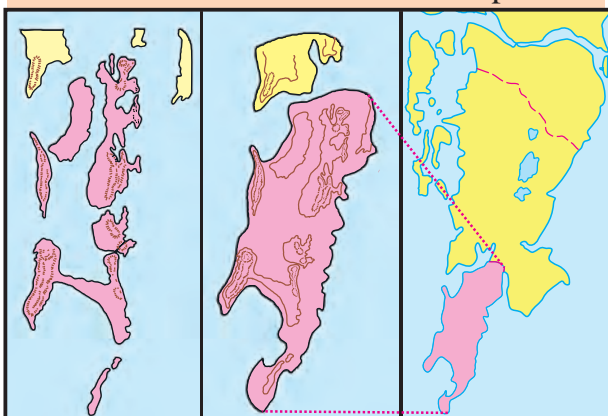


Water tourism has now become an important occupation. In some places, there are underwater shelters for tourists. From these shelters, we get a direct view of the sea-bed and the amazing marine life. Such shelters are observed in the coastal regions of Europe and North America.

Do you know ?



The city of Mumbai comprises seven islands. The portions of water bodies between them were filled with stone and earth to create land. Later, settlements, roads and industries were developed on



Group of seven islands

Mumbai city

Brihanmumbai metropolis

this land. Because this ‘reclaimed’ land is in a low-lying area, it easily gets waterlogged when there is a heavy downpour.

What we have learnt –



- We observe a variety in the types of house construction in regions of different climate.
- Houses are built to suit the climate of that region.
- Different materials, all obtained from nature, are used to build houses.
- We should be judicious in using energy.
- It is necessary to increase the use of non-exhaustible sources of energy.
- It is necessary to build eco-friendly houses.
- We must take care that the environment is not harmed.

Use your brain power!



For what purpose do birds use their nests ?

What's the solution ?

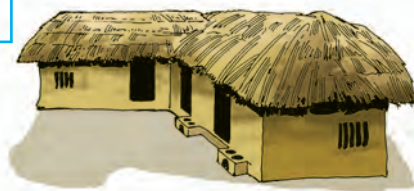


What can we do to build houses without harming the environment ?

Discuss your solutions in the class.

Exercises

1. (a) Which of the following houses would be suitable in a mountainous region? Put a '✓' in the appropriate box. Give reasons for selecting that house.



- (b) What materials will you mainly use for building a multi-storeyed house? Choose the correct option.

- (a) Mortar / coal / cement / bricks
- (b) Cement / bricks / cotton / iron
- (c) Iron / cement / mortar / bricks

2. Arrange the following considerations from the most to least important in house-building.

- (a) Luxury
- (b) Structure
- (c) Climate

3. Write the following.

- (a) List the eco-friendly things in your house.
- (b) Which of the gadgets in the house can be run on solar energy ?

4. What are the types of pollution that can be observed at a construction site ?

Activities

- (1) Prepare a model of an eco-friendly house.
- (2) Prepare and present a street play with the help of your teacher to raise public awareness regarding the prevention of any kind of harm to the environment.
- (3) With people's participation, hold an exhibition to display the significance of the biodiversity in your area.

* * *



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