

7. Air

There are many things we need every day. But what is the thing that we cannot do without for even a few minutes? Try holding your breath, and you will know the answer.



Activity

This is something you can do with your friends. Find out how many times you breathe in a minute. Notice what happens to your chest when you breathe in. Also, what happens to it when you breathe out. Do you breathe faster after running or cycling? Record what you find out in your scrapbook. Compare your findings with those of your friends.

We need air to breathe every minute of our lives. Animals and plants also need air to live.

Air all around

Air covers the whole earth like a big, invisible blanket. (Something that is invisible cannot be seen.) If you could travel up into the sky, the air would become thinner. Finally, there would be no air. This place outside the earth's blanket of air is called **space**. Then how do astronauts breathe in space? They carry air with them. So do mountaineers, who climb high mountains, where there is less air.



There is air all around the earth.



The air becomes thinner as we go up.

What is air?

Air is a mixture of gases. That means there are many gases mixed in air. You know about one already. It is water vapour, the gaseous form of water. How can you be sure that there is water vapour in air?



Activity

Put some ice or very cold water in a cup. Place the cup on a table. Soon you will see drops of water outside the cup. Where does the water come from? The water vapour in the air cools when it comes near the cup and changes into water.



There are many other gases in air. **Oxygen**, **nitrogen** and **carbon dioxide** are three of them. Of these, oxygen is the most important to us. We need it to live.

Smoke and dust

Air also has smoke and dust. Smoke forms when we burn something. It may be wood, coal, garbage, dry leaves or firecrackers. When something burns, some tiny unburnt pieces, called **soot**, are formed. Soot rises with smoke and gives smoke its colour. Soot and smoke are carried by air.

Cars, scooters, buses and trucks give out smoke and soot. So do factories. The smoke from factories and vehicles has harmful gases. The smoke from factories also has the dust of things made in factories. All these things make the air dirty. Breathing dirty air can make us ill.

