

YOU WILL NEED:

bucket or aquarium,
three-quarters filled with water

3 clear plastic cups
paper towel

Air

Gases are all around us, but we can't see them. Air is actually a mixture of different gases. Does air take up space? Let's find out.

1 Turn one cup upside down over the water. Slowly push the cup under water as shown.

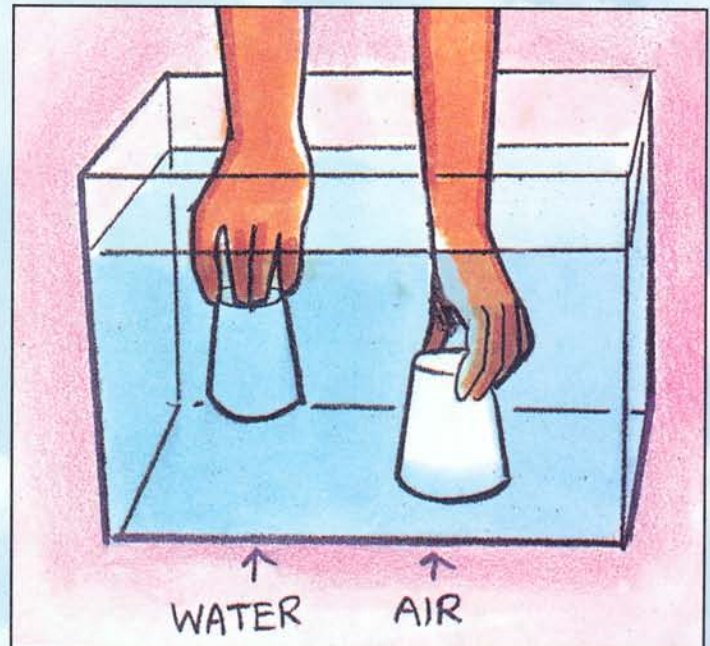
2 Look carefully at the cup when it is underwater. What is inside the cup? Would you say the cup is empty, or is it full of something?



3 Keep the cup under water. Now take a second cup and lower it into the water so that it fills up with water. Now turn this cup upside-down.

4 You should now have one upside-down cup filled with air and one upside-down cup filled with water.

5 Hold the air-filled cup below the water-filled cup as shown.



It's Really There!

6 Tilt the lower cup so that bubbles flow up into the higher cup that contains the water. What do you see? You have just "poured" air from one cup into the other. Try to pour it back and forth, from one cup to the other.



7 Now take both cups out of the water. Take a dry cup and wad up a paper towel and stuff it into the bottom of the dry cup, as shown.



8 Turn this cup upside down and lower it into the water. What do you observe? Pull the cup straight up so that it comes out of the water. Look at the towel. Is it wet or dry? What kept the water from reaching the towel?

