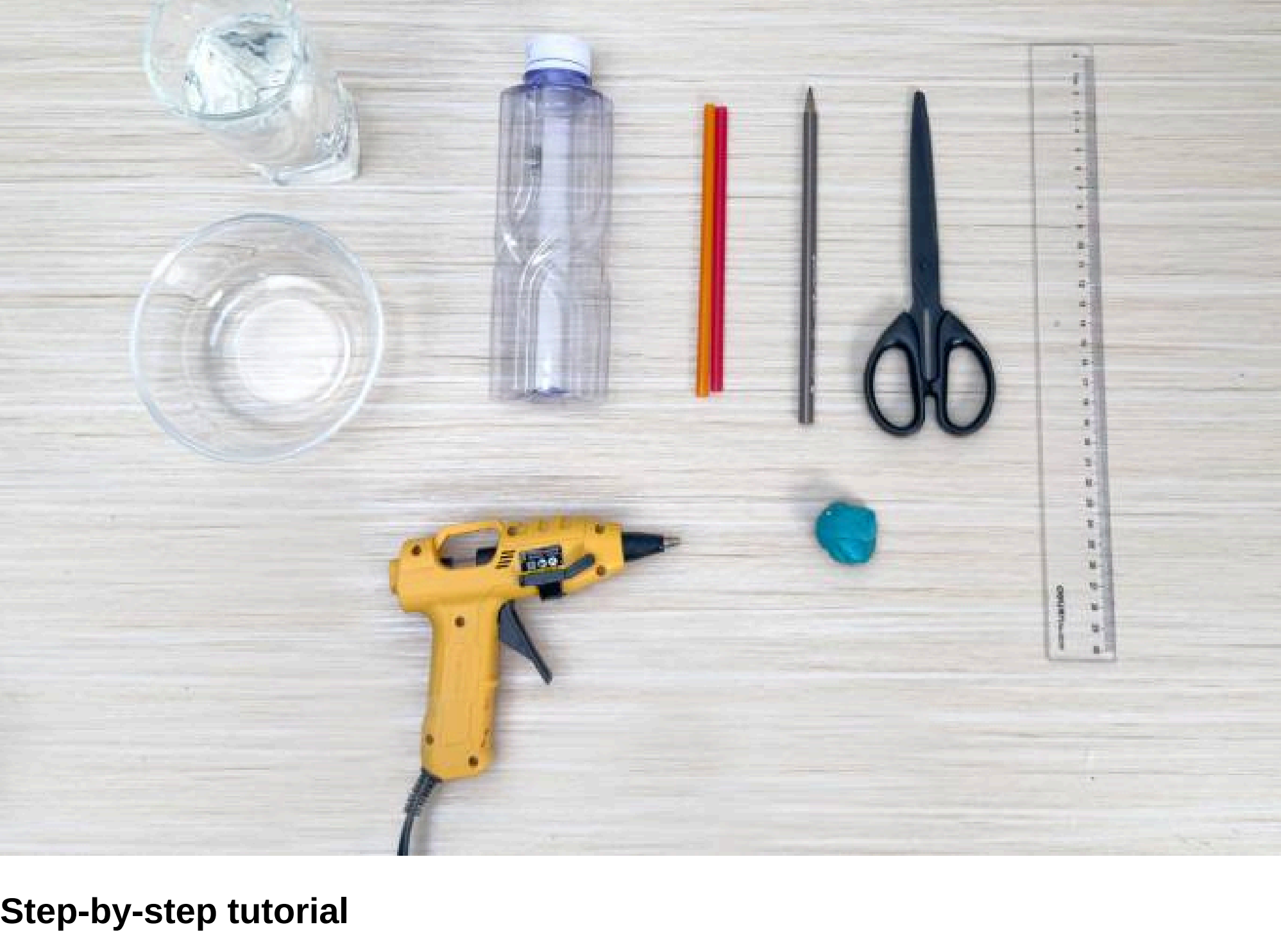


Create a mini pressure-controlled tap using just two straws and a water bottle! Control the water flow by adjusting the air pressure inside the bottle.

Materials Needed

Water
Glass bowl
Plastic bottle
Hot glue gun
Two 15cm straws
Pencil
Plasticine
Scissors
Ruler



Step-by-step tutorial

Step 1

Place the plasticine underneath the bottle cap.



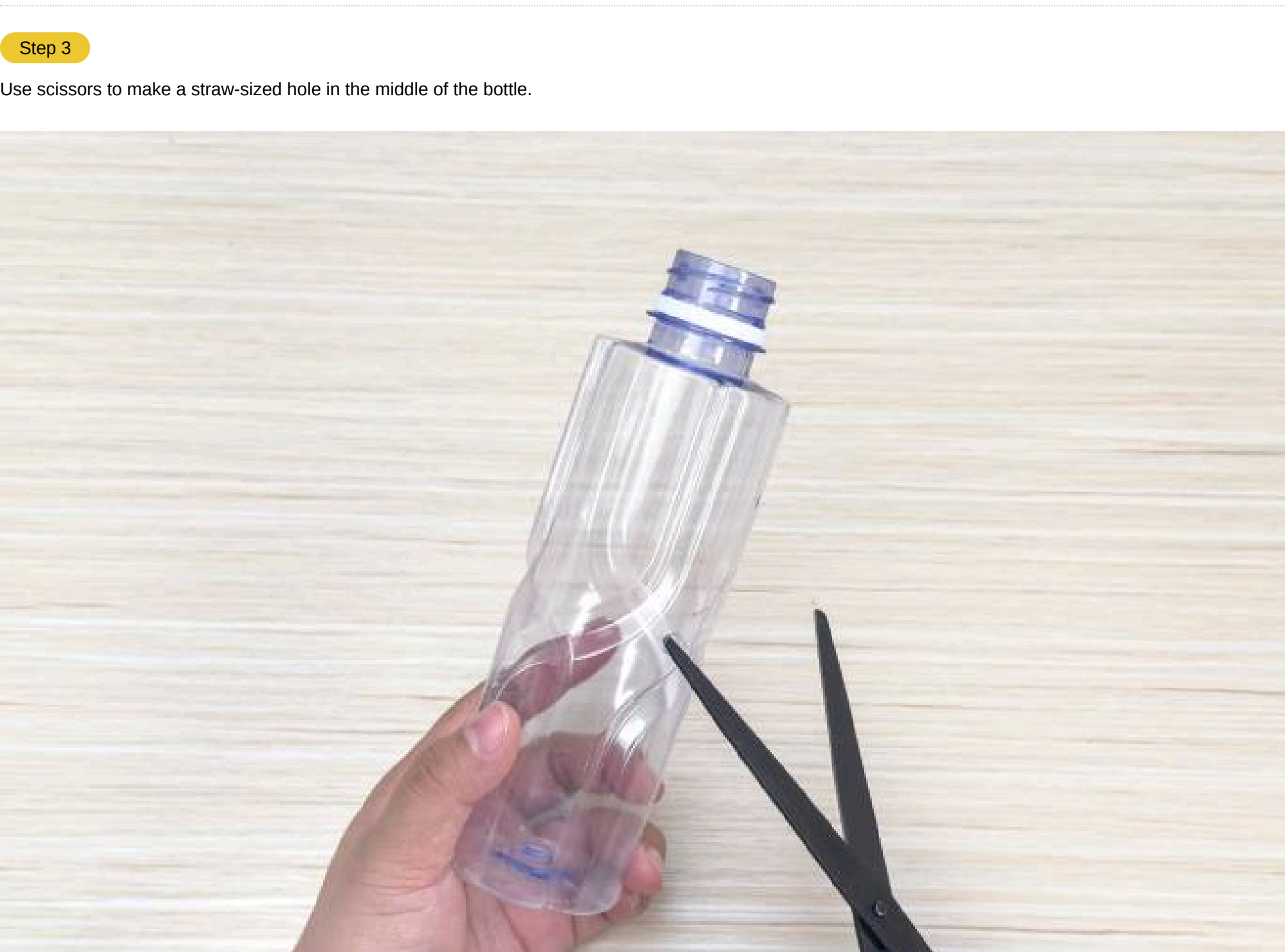
Step 2

Use the sharp end of the pencil to make a straw-sized hole in the centre of the bottle cap.



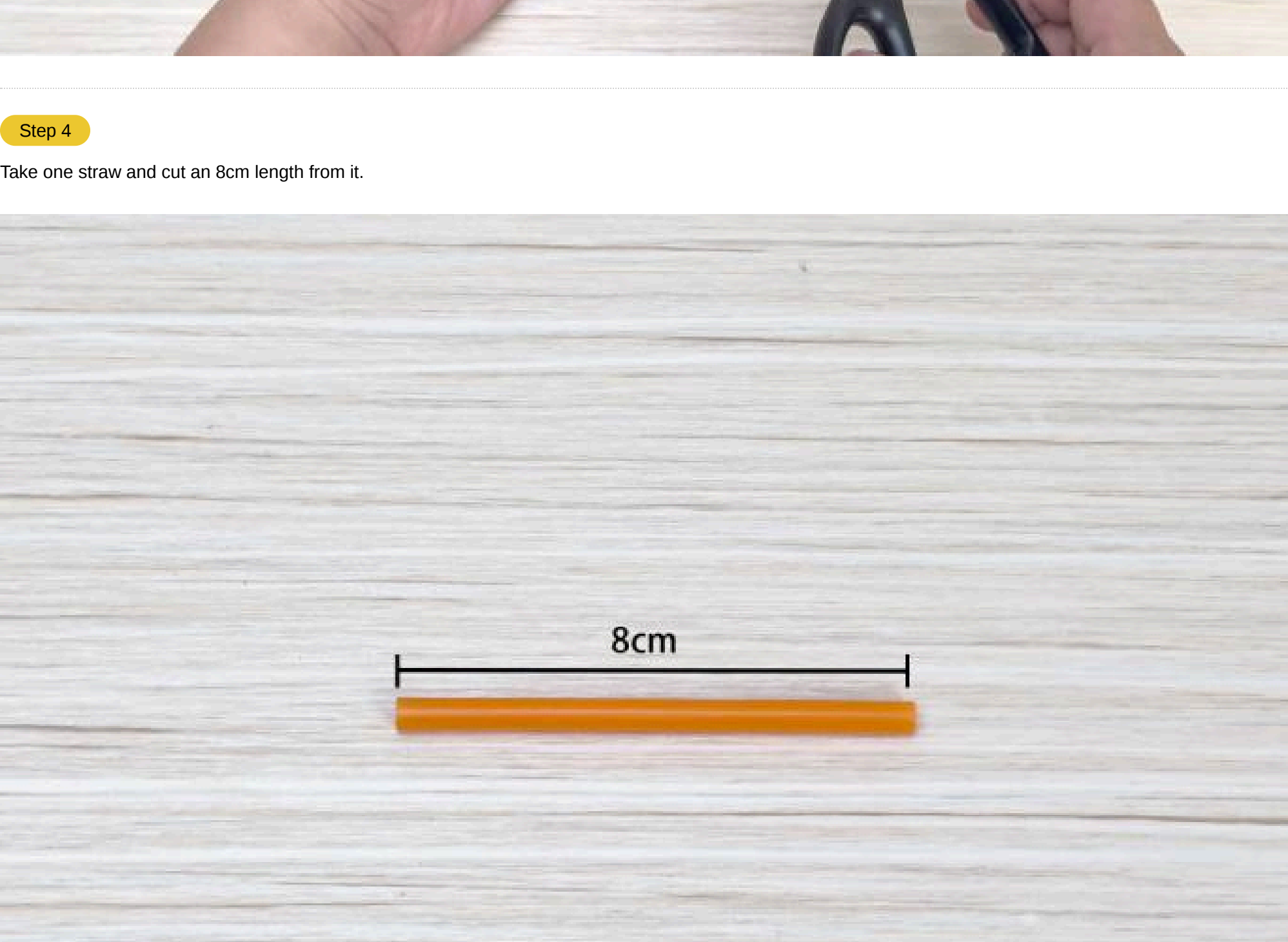
Step 3

Use scissors to make a straw-sized hole in the middle of the bottle.



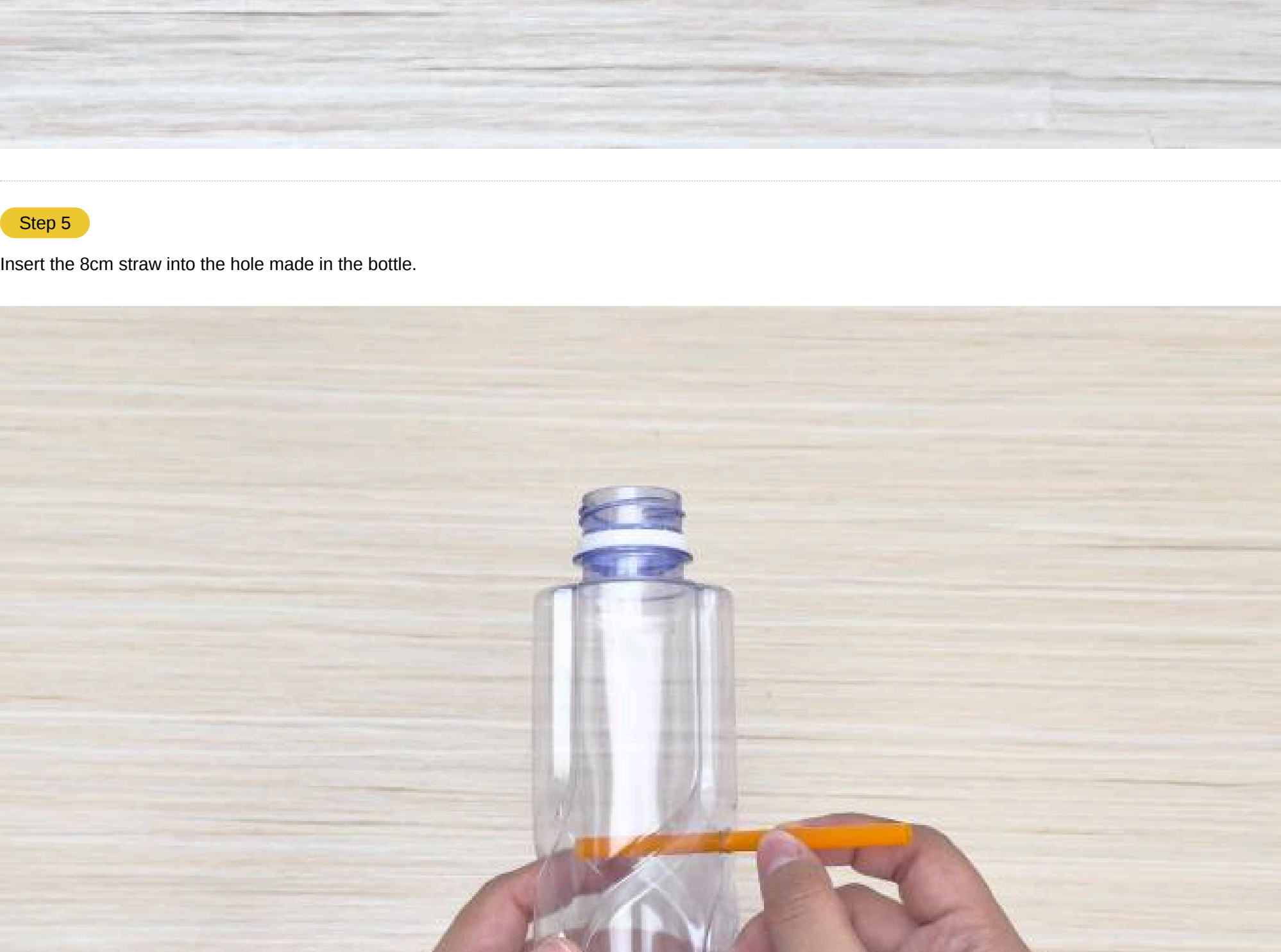
Step 4

Take one straw and cut an 8cm length from it.



Step 5

Insert the 8cm straw into the hole made in the bottle.



Step 6

Use the hot glue gun to secure the straw to the bottle. Wait patiently for the glue to cool and set. Be careful with the hot glue to avoid burns.



Step 7

Insert the other 15cm straw into the hole in the bottle cap.



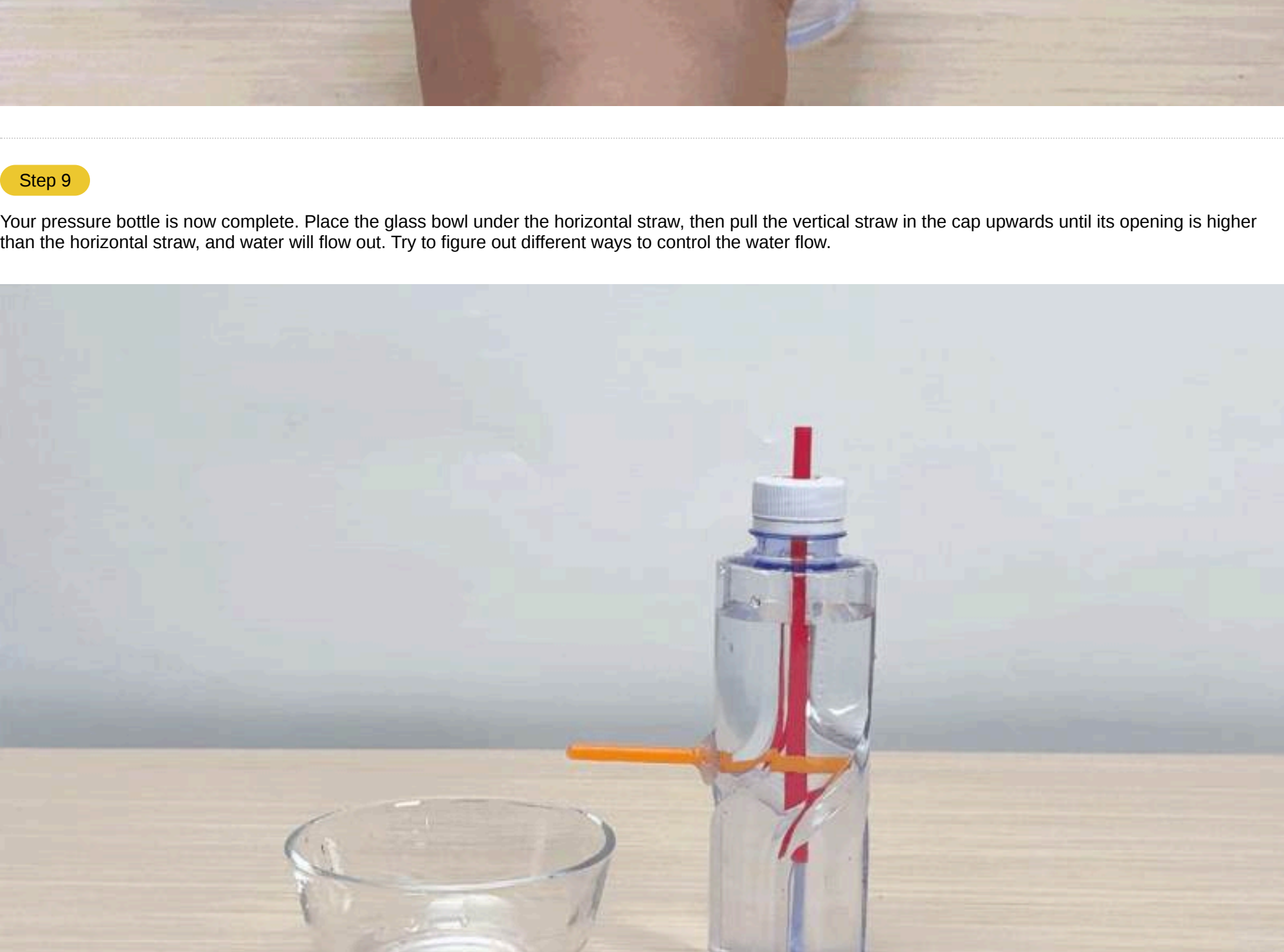
Step 8

Next, firmly cover the opening of the straw in the bottle with your finger. Pour water into the bottle and quickly screw the cap on tight. Make sure the vertical straw is below the bottle straw before removing your finger. Ask an adult for help if this is difficult to do alone.



Step 9

Your pressure bottle is now complete. Place the glass bowl under the horizontal straw, then pull the vertical straw in the cap upwards until its opening is higher than the horizontal straw, and water will flow out. Try to figure out different ways to control the water flow.



The Science Behind It:

Initially, the air pressure inside and outside the bottle is equal, preventing water from flowing out (and air from entering). When you pull the vertical straw out of the water, air rushes in and increases the pressure, pushing the water out through the horizontal straw!