

Activity 4B Rate of Condensation



Skills: Plan a fair test and identify the three types of variables, describe if a prediction was accurate based on results, recognise the features of different scientific enquiries

In Chapter 4 of the Student's Book, you have learnt some factors that would affect the rate of evaporation. You have learnt about conducting fair test investigations and identifying independent, dependent and control variables.

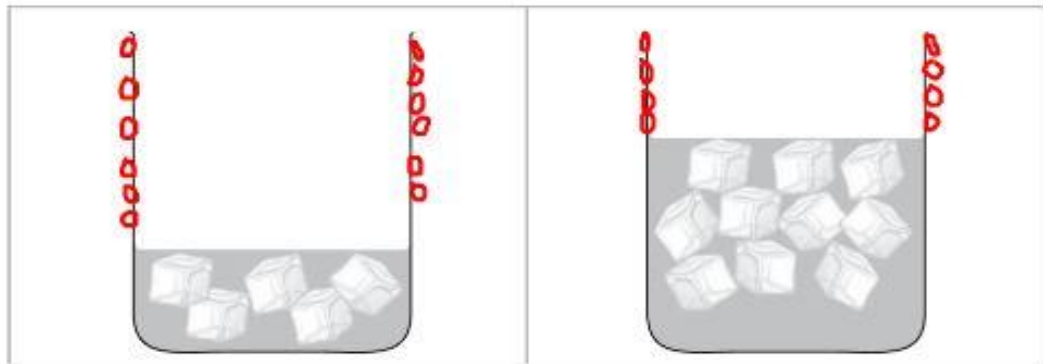
In this activity, you will be investigating a factor that would affect the rate of condensation of the water vapour found in the air.

Materials:

Water Two beakers Ice cubes

Method

- 1 Pour an equal amount of water at room temperature into each of the two beakers. Label the beakers A and B.
- 2 Put five identical ice cubes into the water in beaker A. Put ten identical ice cubes into the water in beaker B.
- 3 Leave both beakers to stand for 15 minutes.
- 4 In the boxes below, predict and draw what you will observe on the outside of each beaker after 15 minutes.



- 5 What process caused the observation in step 4? How does it happen?

The process is known as condensation. As water vapour in the air comes into contact with the cold glass, it turns into a liquid. This is because the water vapour loses heat to the cold glass.

- 6 State the independent variable in this investigation.

The number of ice cubes or temperature of the cold glass.

- 7 State the dependent variable in this investigation.

the dependent variable in this experiment is the amount of water droplets or condensation on the outside of the beaker.

- 8 State three control variables in this investigation.

Volume of water, temperature of the surroundings, time given for condensation to occur.

- 9 Circle the correct word below to conclude the investigation.

The (warmer / colder) the surface of the beaker of water, the greater the rate of condensation.

- 10 How accurate was your prediction based on the results of your investigation?

What type of scientific enquiry did you use for this activity and why?

