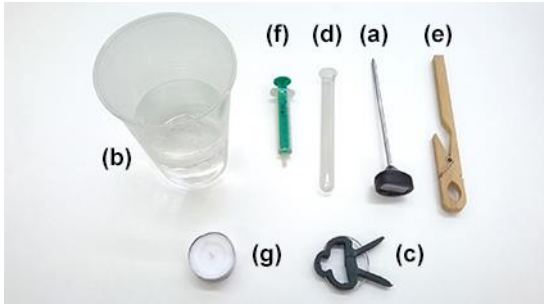


Heat 2: Water stores heat

1 Apparatus and materials

Your materials



- 1 digital thermometer (a)
- 1 *lighter*
- 1 plastic cup 500 ml (b)
- 1 plant clip (c)
- 1 test tube (d)
- 1 test tube clamp (e)
- 1 syringe 5 ml (f)
- 1 *stopwatch*
- 1 tea light (g)
- 250 ml cold water

1.1 Safety information

The materials may be used only as instructed by your teacher or as described in the experimentation instructions.

2 Preparing the experiment



1. Place the test tube vertically in a plant clip. Check whether it stays up.



3. Slowly dispense the water from the syringe into the test tube.



5. Place the thermometer in the test tube and measure the water's temperature.



2. Fill the syringe with 4 ml of water.



4. Press the ON button to turn on the digital thermometer.

3 Conducting the experiment

Conduct the experiment according to the instructions.



1. Heat the water in the test tube until the display shows 40°C. Your partner blows out the tea light.



2. Place the test tube back in the plant clip. Wait until the temperature stops increasing. You now have your starting temperature. Enter it in the table.

3.1 Assignment 1

Start the stopwatch and read the water's temperature after each minute. Enter it in the table.

	Starting temperature at 0 min	Temperature after 1 min	Temperature after 2 min	Temperature after 3 min
Temperature [°C] [degrees Celsius]				

	Temperature after 4 min	Temperature after 5 min	Temperature after 6 min	Temperature after 7 min
Temperature [°C] [degrees Celsius]				

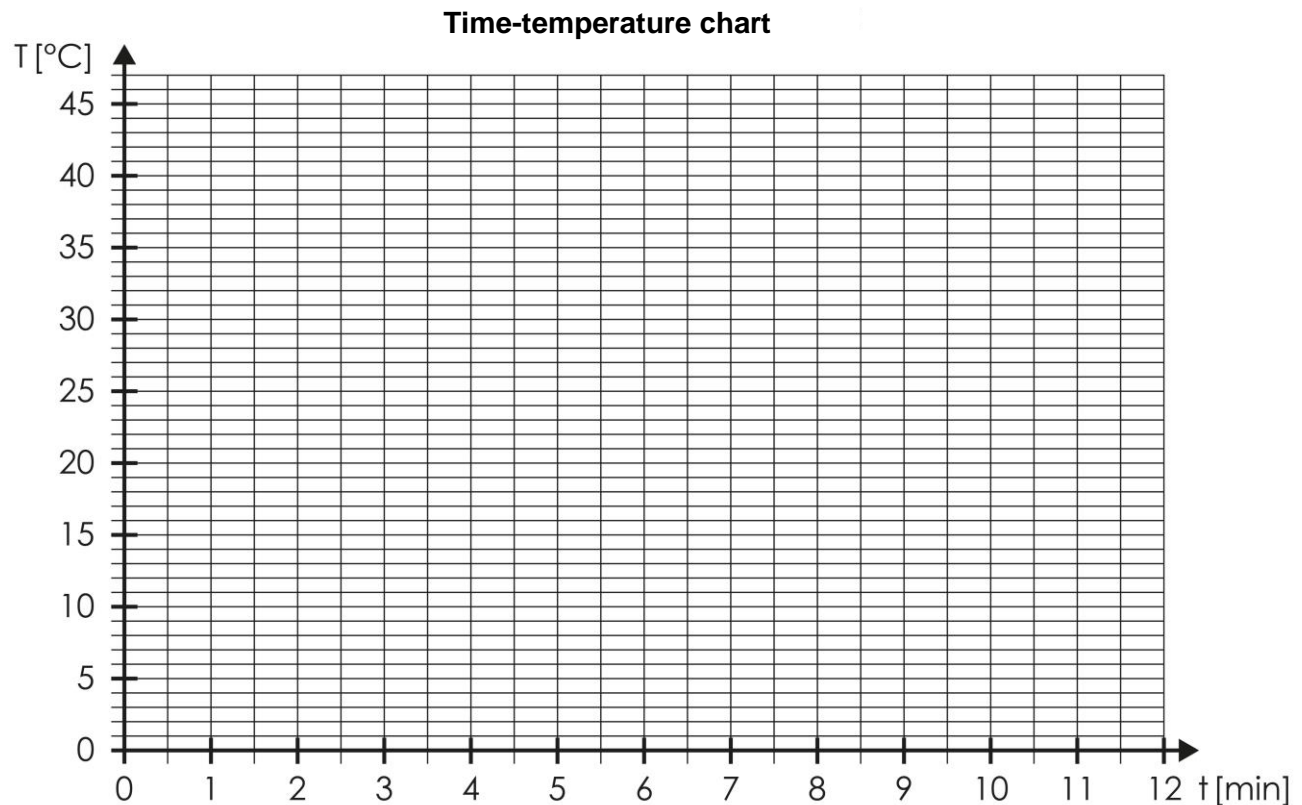
3.2 Assignment 2

Look at the temperature values in the measurement table. What do you notice?

3.3 Assignment 3

Enter the values from your table on the time-temperature chart.

Round your measured values to whole numbers, e.g., $30.7^{\circ}\text{C} \rightarrow 31^{\circ}\text{C}$



3.4 Assignment 4

Fill in the missing words.

heat, heated, room temperature, increases, decreases

In the experiment water is _____. The water absorbs the _____ of the flame. The water's temperature _____. If you put the test tube down, the temperature _____. If you allow the water to sit long enough, it reaches _____ again.