SCIENCES

States of water

BOX NOTICE

Name of the activity	The states of water
Activity duration	1h
Material needed	States of water box, bottles, a freezer, a stove, a pan, a jar with a lid
Number of pupils involved (per box)	The whole class

Step 1: Prerequisites

In order to complete this activity, it is strongly advised to have access to a freezer and to a heat source. Since this activity contains dangerous manipulations, it is advised that the teacher creates the experiments in front of the class. However, in the "Creating ice" experiment, you may ask your pupils to carry out the experiment themselves: warn them that they have to be careful or the experiment could fail.

Additionally, the experiments for this box are more difficult to achieve than in the other boxes: you may need to try the experiments before doing them with your class to ensure that you get the technical aspects right.

Step 2: Discussion about water

Start of by asking your pupils what they know about water. They may already know about its three states, do they know their properties?

Step 3: Storytelling

Use the story and ask your pupils to draw the states of water on the documents you will find in the Storytelling section, and as they are mentioned in the story. Then, discuss: what are the properties of water?

Step 4: Experiments

Follow the experiments as indicated in the Creation of the elements file. As indicated above, make sure to respect all safety measures and to practice beforehand if needed.

If you do not have access to the materials or are unsure about how to perform the experiments, you may provide simpler ones to your pupils. For example, ask them what happens when you freeze water, or when you make it boil: does water take more room? Less room? You may then illustrate this by putting a bottle of water in the freezer: it will grow larger since ice takes more space than liquid water. Then, boil some water: gas expands and takes as much space as it can. Use this data to complete sequence 2!