Preparatory to Year 1 Science
How does water change?

Australian Curriculum links:
Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013)
Year 1 Science
Everyday materials can be physically changed in a variety of ways (ACSSU018)
Sustainability cross-curriculum priority

In this lesson, students explore the properties of water using their senses. This activity is useful as a quick introduction to the topic. For a similar in-depth lesson plan for Year 1 refer to **What can water do? likewise**, **solid, liquid and gas** is a Year 5 version of this activity.

Equipment

For the class

- interactive whiteboard, display board or butcher's paper and markers
- kettle with water
- a jug of drinking water
- trays of ice cubes
- Whizzy's incredible journeys pick a path book

The Water Cycle poster

For each student

- small clear plastic cup
- ice cube

Preparation

Start this lesson outside and undercover.

Steam is dangerous. Demonstrate the safe use of steam with the children. Check all safety and risk assessment issues when setting up and using a kettle with students present.

Prepare a 'Why water is special' display board or chart.

Take photos of the students' investigation of the three forms of water for display.

Lesson steps

1. Ask students to think of water and their experiences of it. Just as scientists start with questions, ask students to share any questions or queries they have about water. Explain that water is very special and today they will begin to find out why.

2. Remind students they will be working like scientists to observe and describe. They will use their five senses to find out what water looks like, sounds like, smells like, feels like and tastes like.
3. Give each child a clear cup with water in it.
4. Ask students to use their sense of sight, smell, taste and touch to observe and describe the water in their cup. Record students' descriptions of liquid water.
5. Safety message – remind students that not all clear, colourless liquids are water. Explain to students that they should never taste or drink a liquid that looks like water unless they know that it is water that has been treated and is safe to drink.
6. Hand a piece of ice to each student. Students again use their senses to explore some of the properties of water in ice form. Ask students to predict what will happen to the ice cube as they hold it. Students observe the solid ice change to a liquid.
7. Tell students that we are going to observe one more type of water: I wonder what it could be? The clues are that this type of water is very hot and you must only observe and use it safely. Reinforce what the safety expectations are.
8. Before you turn on the filled kettle, ask students to predict what will happen to the water.
9. During their careful observations ask students to look to see if the water changes. Tell students that they will only make observations by looking, listening, and smelling from a distance.
10. Focus on the literacy elements of identifying and describing water by highlighting terminology e.g. vapour, steam and descriptive language.
11. Discuss why tasting or touching water when it is water vapour is dangerous.
12. Explain that you can see the steam because it is made of tiny water droplets. As the hot steam rises, the steam disappears. This is because the water droplets are breaking up into invisible water vapour (gas). The water is still there as an invisible gas.
13. Ask students what the air feels like on a hot and humid day: have they felt the clammy water in the air against their skin?
14. Review student ideas about water recorded during the activity and read the 'Family journey' and the 'Tree journey in Whizzy's incredible journeys. Direct students to follow Whizzy carefully and remember where he goes and how he changes.
15. Discuss how Whizzy changed from liquid water into water vapour on these journeys and how the artist showed this in the pictures.
16. Display the water cycle poster and discuss the different forms that Whizzy takes on **all** the journeys shown. Explain that this is a Queensland poster and ask why there is no ice (or snow) represented.
17. Finish by discussing how special water is and why we need to use water wisely.
18. Ask students to identify Whizzy's water-saving tips to the family in 'Whizzy's incredible journeys'. What other water-saving ideas can they suggest? Students draw and label water-saving tips discovered and suggested.
19. Record students' descriptions of the different forms of water and water saving tips on the 'Why water is special' display board or poster.