

Year 2 Science

Water challenges

Australian Curriculum links: Year 2 Science

Earth's resources are used in a variety of ways (ACSSU032)

People use science in their daily lives, including when caring for their environment and living things (ACSHE035)

Sustainability cross-curriculum priority

In this culminating activity, students use their understanding about how people use and manage water to respond to hypothetical scenarios about water shortages. It is similar to the **No water today with a puppet** activity that uses the **No water pictures**. In this activity, students discuss 'what if' scenarios: possible reasons for the shortages, possible consequences and ways to manage the situation. Alternatively students can discuss the 'No water' pictures instead.

Equipment

For the class

- water shortage scenario cards (resource 1) or **No water pictures**

For each group

- A3 paper to record possible solutions and consequences

Preparation

Prepare 'what if' water scenario cards, with text or images from the ideas listed in Resource 1. Alternatively, print the 'No water' pictures. Use scenarios that are suitable for the class.

Source a fiction text about a water shortage or change in the amount of water available in a community. Suitable books include:

Base G. 2001. *The waterhole*. Penguin, Melbourne. (Excellent for teaching the impact of a drying waterhole for animals across the globe.)

Hooper M & Coady C. 1998. *The drop in my drink – The story of water on our planet*. Frances Lincoln, London, UK. (Explores where water comes from, how it behaves, and why it matters.)

Oxenham H, Stephens B & Brown K. 2008. *Whizzy's incredible journeys pick-a-path book*. Queensland Government, Brisbane. (Enables early years' teachers to use narrative fiction to engage students in learning about water conservation and the water cycle.)

Rosenfeldt R. 1980. *Tiddalik: The frog who caused a flood*. Puffin Books, Melbourne. (An adaptation of an Aboriginal story about a thirsty frog that drank up all the rivers)

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and billabongs in the land. The other animals had to find a way to get the water back.)

Strauss R. 2007. One well. ABC Books, Sydney. (Uses the analogy that all the water on Earth is contained in one well and explores a range of topics such as the water cycle, how water is recycled, and how water is used.)

Lesson steps

1. Review student ideas about what we use water for at home and at school.
2. Ask students whether they have experienced water shortages or have had to survive on a limited supply of water for some reason. Discuss why water shortages or restrictions might occur.
3. As a class, discuss a specific water shortage scenario and talk about what might have caused the water shortage and the possible consequences of the shortage to humans. Record students' ideas.
4. Have students suggest ways that they could manage the situation. Discuss possible risks involved including hygiene and safety.
5. In groups, discuss a scenario from Resource 1 or the 'No water' pictures. Students record possible reasons for the shortages, possible consequences to humans and ways to manage the situation. Discuss ways that water can be conserved to help prevent water shortages.
6. Ask groups to record their ideas in both writing and drawing, and then present their ideas to another group or to the whole class. Display the scenarios and students' ideas on the display board.
7. Conclude the lesson by reading a text about a water shortage (see preparation).

Resource 1 Water shortage scenarios

Water shortage scenarios

Use the following ideas to prepare 'what if' cards for the students.

1. What if the water coming out of the taps looked dirty? How might it affect our use of the water? What could we do about the dirty water?
2. What if you could only have a specific amount (for example, bucket or jerry can) of water each day? How could you manage the water available to you? Teacher's note: This could be a real-life scenario; for example, during a natural disaster.
3. What if the water supply where you live was to be cut off for a specified period of time? What could you do?
4. What if we had a limited supply of water? How might it affect our life-style and what could we do about it?
5. What if we had to pay for the water that runs down our drains at school or at home? How could we re-use or reduce the water?
6. What if it didn't rain enough in the wet season to fill our dams and tanks? What can we do to make the water last longer?
7. What if you could only take a limited supply of fresh water on a camping trip to the beach? Could you use salt water for anything and, if so, how?