

WATER CONSERVATION

Water is Important

Lesson time: 45 minutes + optional activities

Outcomes

By the end of this lesson, students will understand that:

- water is vital in our lives
- water is a resource that is valuable and scarce
- we need to use water wisely and conserve it where possible.

Materials

Activity: Watch-Wonder-Write

- Coloured pencils
- Paper

Activity: Making a rain gauge

- 1-litre container
- Plastic soft-drink bottle
- Scissors
- Sticky tape
- Marker pens
- Ruler
- · Glass of water
- Pebbles or marbles

Games

- Die
- Scissors



Vocabulary

community

conserve

drought

evaporate

litre

save

timer

waste

Victorian Curriculum

SCIENCE

VCSSU041, VCSSU042, VCSSU047, VCSIS050, VCSIS051, VCSIS052, VCSIS053, VCSIS054, VCSIS055

MATHEMATICS VC2MFM01





Presentation Slides



Why do we need to save water?

Watch-Wonder-Write

In groups, students identify uses for water at home and in the community. Students take it in turns to explain their ideas. They listen to each other's answers and then draw or write the ideas that they found most interesting.

Talk to students about the reasons why we need to save water. For example, discuss:

- clean drinking water
- how we grow the food we eat
- our natural environment, including trees, plants and animals
- how being water-wise saves us money.



How can we save water at home?

 Also discuss things we can do at home, such as taking short (3-minute) showers, and not filling the bath to the top.

Note: It is important to emphasise that it is okay to use water (e.g. we need to drink water to stay hydrated and healthy; we need to wash ourselves and our clothes), but it is not okay to waste it.

Ask the class to discuss the difference between using water wisely and wasting water. For example:

- leaving the tap running while brushing your teeth wastes water, but turning the tap off and using a glass of water to rinse with is a wise use of water
- having a long shower wastes water a short one will get you just as clean!



What happens when there is not enough water?

Drought is what we call a time when we haven't had enough rain, and so there is not enough water. Dryland farms (non-irrigated farms) will not produce as much as in other years. If drought lasts more than a year, water levels in dams will drop. This will mean less water for farmers and communities to use. Farmers won't be able to produce crops. If water flow is reduced significantly through the Murray, then the local environment will be affected. In some parts of Australia, during drought, communities have had to bring in water by truck every day (e.g. Stanthorpe in Queensland ran out of water in 2019).

Taking it further

As a class, discuss and create a list of watersaving ideas and estimate how much water each idea uses or saves. Using this list, have students store this information as a simple table. Then demonstrate to students how to construct a basic column or picture graph using this data.

Student Worksheet

- 1 Some suggested answers:
 - By me: Drinking, cooking of food, washing ourselves (and teeth etc.), washing our clothes
 - At home: Watering the garden, cleaning the house, washing the car, pets to drink
 - In the community: Growing of food, home for wildlife (e.g. fish, frogs), fun (e.g. swimming in the pool, boating, fishing)
- 2 Show the students a 1-litre container so they can base their estimates on this.
- Bathroom: Fix dripping taps put a bucket under the tap and collect the water until the tap is fixed. Have shorter showers you could use an egg timer or the timer from one of your board games to know when to get out after 3 minutes! Install a dual-flush toilet and don't use a full flush if a half flush will do. Turn off the tap while brushing your teeth you can use 1 litre with the tap off and up to 5 litres per minute with the tap running! Don't fill the bath right to the top.

Kitchen: Save the water used to wash vegetables to put on plants. Only use the dishwasher on a full load.

Laundry: Only use the washing machine on a full load.

Car: When washing the car, use a bucket of water rather than having the hose going all the time.

Garden: Use a trigger nozzle so the hose only runs when you press it. Water plants early in the morning or in the evening, when it is cooler. This way, water will not evaporate (turn into steam) in the hot sun, and more water will get to the plants' roots! It also helps to mulch around trees and shrubs to prevent evaporation. And, re-use water from the house if possible by tipping it on the garden.

For more water-saving tips, visit lmw.vic.gov.au and seach for 'water saving' using the top-right search bar.

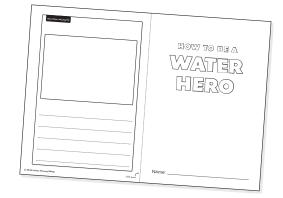
- 4 Answers will vary.
- 5 Answers will vary.
- 6 How to be a Water Hero

Creative artwork

Using the 'Booklet' file, print pages for students so they can make their own booklet.

This could also be a cutting and pasting exercise. Students could cut out pictures from magazines and brochures. If there is time, and students have lots of tips, make extra copies of this page.

You may want to have a short class discussion to get students started with their tips.



Games



Students can play the game in small groups or in teams.



Memory!

- 1 Cut out the cards. These could be pre-cut and laminated for the lesson.
- 2 You will need two sets of cards.

Students play in pairs. They shuffle the cards and lay them face-down in rows on the table. The first player turns over two cards. If the cards are identical, the player keeps the cards and has another go. Otherwise, they turn the cards over again and the other player has their turn.

They continue playing until all the cards are paired. The player with the most pairs is the winner.



Group activities

Classroom activity

Making a rain gauge

- 1 Take the lid off the bottle and carefully cut the top third off the bottle.
- **2** Put a layer of pebbles in the bottom of the bottle and pour in some water to just above the pebbles.
- 3 Stick a length of sticky tape up the side of the bottle. Use the marker pen to draw a line on the tape at the water line. This is the 'zero line'.
- 4 Use the ruler and marker pen to mark a line for every centimetre up the bottle, starting at the water line.
- **5** Turn the top of the bottle upside down and put it inside the bottle. This will act as a funnel to collect the rain. Tape it in place.
- **6** Take your rain gauge outside and put it somewhere secure away from trees.
- 7 Next time it rains, you will be able to tell how much water you collected!



Take-home activity

Toilet leak test

Do you have a leaking toilet at home? A leaking toilet wastes a lot of water. It could be wasting as much as 300–1000 litres of water every day! Ask a parent or carer if you can test your toilet for leaks. Put a drop of food colouring in the toilet tank. Do not flush the toilet. Does the water in the toilet bowl become coloured too? If it does, then your toilet has a leak!

