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: We need fresh water

- Fresh water
- Salt
- Teaspoon
- Glass for drinking out of
- Container for spitting into

Activity: Water play

Students will need a variety of items for water play. Suggested items include:

- a large plastic basin or a baby bath that holds several litres of water
- different-sized measuring containers (e.g. 1 cup, ½ cup, 1 L plastic soft-drink bottle, egg cup, tablespoons, teaspoons)
- some objects that float and some that sink.

Games

- A die or dice
- Scissors

Vocabulary

drink
rain
river
tank
wash
waste
water

Victorian Curriculum

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

MATHEMATICS
VC2MFM01

LOWER MURRAY WATER

Presentation Slides

Where does our water come from?

Talk to students about where water comes from. Prompt their thinking using the photos.

Rain runs into rivers and lakes or is collected in water tanks. Mildura's average annual rainfall is about 250–280 millimetres per year.

The Murray River supplies water:

- for primary production – crops, livestock
- for use in homes and industry
- to support ecosystems along the river
- for recreational use.

How do we use water?

Watch-Wonder-Write

Have students work in small groups, and take turns to explain how they use water at home. They listen to each other's answers, then draw or write the ideas they found most interesting.

OR

Acting out

Ask students to 'act out' a water use, using only actions – no words. Whisper to the student what they are to act out – for example, brushing teeth, washing the car, swimming at the pool, fishing in the river.

The class guesses what the student is doing.

Which washing machine uses the most water?

A front-loader uses about 50 litres of water per wash. A top-loader uses about 150 litres of water per wash.

Saving water

Discuss basic ideas for saving water that the children could do, and/or things they could look out for. Examples are:

- turn off the tap while brushing your teeth; use a glass of water to rinse
- tell your parents or carers if you see a tap dripping in the garden
- tell a teacher if you see a dripping tap (or dripping bubblers) at school
- have a short (3-minute) shower
- don't fill the bath right to the top.

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

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!

Taking it further

As a class, discuss and create a list of water-saving 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.

After we use water at home, where does it go?

After we use water at home, it goes down the drain and:

- into a septic tank in the backyard, where it eventually seeps into the ground

OR

- to a water-treatment plant.

At the water-treatment plant, solids are removed by filtering the water and then the water is treated with chemicals to make it clean. The treated wastewater is released into local waterways to be used again for various purposes, such as irrigating crops and sustaining aquatic life.

In some parts of the world, wastewater can be treated so that is pure enough to drink! This recycled water is safe and tastes like any other drinking water, bottled or tap.

Visit a water-treatment plant

Lower Murray Water runs tours at several local sites, including:

- Mildura
- Robinvale
- Swan Hill
- Kerang.

The tours are suitable for primary school students.

Tours are free and can be arranged for up to 30 people at a time. They generally run for 45–60 minutes.

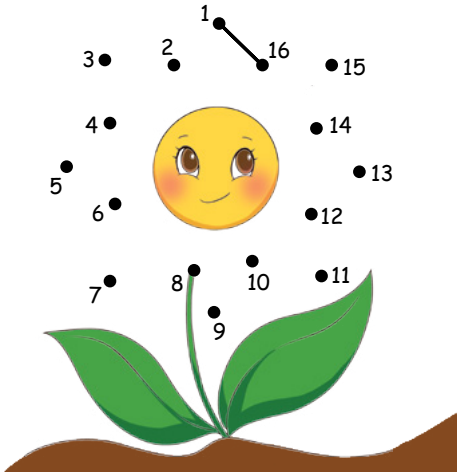
You need to book at least 2 weeks in advance.

Tours are led by a Water Treatment Plant Operator and an Engagement Officer.

To find out more or to book a tour, email comms@lmw.vic.gov.au.

Student Worksheet

2 Some suggestions for student drawings: at the swimming pool, pets or native animals drinking water, irrigation. Have some students take turns to show their picture to the class and describe it. Ask questions about the picture(s), in terms of how the water is being used, to stimulate class discussion.



3 Discuss with students why flowers need fresh water (not saltwater) to live and grow.

Expand on this with questions such as: Do you think your flower would be smiling if you forgot to water it?

If the school has a vegetable or other garden that students help look after, relate this aspect of water use to that garden.

6 This question links to the Class activity: Water play.

Games

GRAPEVINES & DRAINS

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

Sort It Out!

1. Cut out the cards. These could be pre-cut and laminated for the lesson.
2. Have students sort the cards into two groups: those showing a good use of water and those showing water being wasted.
3. The cards could also be used to play Snap! Or, print two sets and students could play a memory game.

Activities

Classroom activity

We need fresh water

Dissolve 2 teaspoons of salt in a glass of water for students to taste. (Have a container ready for them to spit this water into if they don't want to swallow it.)

- Ask a student (or students) to taste the water and describe the taste to the class.
- They might like to describe it without using words, just facial expressions!

Students at this level will probably realise that we cannot drink sea water because it 'doesn't taste nice'!

Classroom activity

Water play

Fill a large basin or a baby bath with water and have students experiment with an assortment of different-sized measuring containers. Consider questions such as:

- How many cups of water fill a 1-litre container?
- How many tablespoons of water can you get into an egg cup?

Taking it further: Students could also see which objects float and which don't.

Class discussion: At the end of the activity, ask students what we should do with the water. For example, they could water pot plants or plants in the school grounds.

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!