

#### **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**

## Lesson

• 1-litre jug

# **Experiment**

- Large container or tub to fit in sink
- Timer
- Measuring jug

# Game

- Die
- Scissors



# Vocabulary

appliance

average

conserve

consumers

consumption

evaporate

efficiency

estimate

rating

#### Victorian Curriculum

#### SCIENCE

VCSSU056, VCSIS065, VCSIS066, VCSIS067, VCSIS068, VCSIS069, VCSIS070, VCSIS071, VCSIS072



# **Presentation Slides**



#### How to read a WELS label

Water-rating labels advise consumers about the water efficiency of products.

Information on the labels includes:

- the star rating the more stars, the better the water efficiency
- the rate of water consumption (such as flow rate, litres per flush or litres per wash), which lets you estimate how much water the product will use
- registration and product details.

The short (1 minute) video explains how to read a WELS label.



# Which appliances in your home have a WELS label?

Ask students to think about appliances in their home. Brainstorm as a class. Answers could include:

- taps
- showerheads
- washing machines
- dishwashers
- toilets
- garden irrigation systems.

Then talk about buying appliances and making purchasing decisions.

- Have they been to a store and seen these labels?
- Do they know if their parents or carers have considered this information when they have bought appliances?
- Are water-efficient appliances more expensive?

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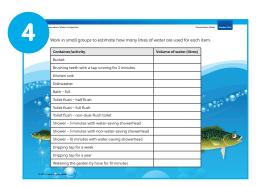


#### How much water could you save per wash?

This question starts students thinking about comparing appliances in terms of water use.

By using the front-loader instead of the top-loader, you could save 132 - 64 = 68 litres per wash.

The Saver family would save  $68 \times 5 = 340$  litres per week.

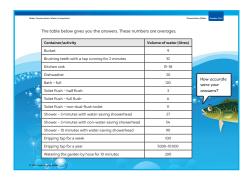


Work in small groups to estimate how many litres of water are used for each item.

# Watch-Wonder-Write

Show students a 1-litre container. In groups, students guess how much water (in litres) might be used by the items in the table.

The following slide shows the average volumes of water used.



Discuss the answers with the class, and talk about other ways to save water. For example:

- Don't rinse dishes under a running tap.
  If you have two sinks, fill the second one with rinsing water. If you have only one sink, stack washed dishes in a dish rack and rinse them with a pan of hot water.
- Use a front-loader washing machine with a high star rating.
- Install a water tank to collect rain water.
- Use mulch on garden beds to reduce evaporation.

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 water.

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!

#### Extension activity 1

Use the data collected and discuss with students how they could display the recorded data as a column graph.

## Extension activity 2

Reinforce the importance of conserving water. Read the beginning of the online book Whizzy's Incredible Journeys\* with students and continue on with the 'family journey' when asked to choose a path.

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<sup>\*</sup>resources.qld.gov.au/\_\_data/assets/pdf\_file/0006/1407642/ whizzys-incredible-journey.pdf

# **Student Worksheet**

- 1 Suggested answers include:
  - taps
  - toilets
  - showerheads
  - · washing machines
  - dishwashers.
- 2 Answers will vary, but could include:
  - when brushing your teeth, use a glass of water to rinse, instead of leaving the tap running
  - keep your shower to less than 3 minutes
  - only use the dishwasher when it is full
  - sweep paved areas instead of hosing them with water
  - using a water-efficient hose nozzle
  - use drip irrigation to water the garden.
- **Experiment:** Supervise students to do the experiment. When finished, discuss the results as a class by asking the following questions.
  - Do you see any patterns in the results?
  - Is this a fair test?
  - What do you think makes a fair test?
  - Is there anything that doesn't make this a fair test?
  - What went well in the experiment?
  - What was difficult?
  - Do you have a suggestion for a different way to do the experiment?

- 4 Taking it further: Discuss with students other ways to present their ideas using a graphic organiser.
- 5 Family Water Detective

# Take-home activity

Students put their learning into practice at home, seeing first-hand how their actions affect their daily water use.

It is important to emphasise to students that we need water for health and hygiene. It is vital! But water is scarce, so what can we do every day to use water wisely?

# Game



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



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