

Year 3

Lesson 5

Being a Watersaver at school

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Learning objectives

Students will be able to:

- recognise the many ways water is used in the school
- identify how water use can be reduced.

Learning outcomes

Subject	Strand & content descriptors
Science	Science understanding <ul style="list-style-type: none">• Earth's resources, including water, are used in a variety of ways. (ACSSU032) Science as a human endeavour <ul style="list-style-type: none">• Science knowledge helps people to understand the effect of their actions. (ACSHE051)
Geography	Geographical knowledge & understanding <ul style="list-style-type: none">• Space: Maps are geographical tools to locate and represent places and their relationship to other places.• Space: Our use of natural resources and disposal of waste affects the environment. Geographical skills & inquiry <ul style="list-style-type: none">• Observing and questioning: Determine which questions prompt geographical inquiry• Use appropriate materials, geographical tools or equipment to collect data or observations, using formal measurements and digital technologies and spatial technologies as appropriate.

Important questions

- Where do we use water in the school?
- What do we use it for?
- Why is it important to save water?
- What are some simple ways to save water?

Background information – dealing with drips

Schools are mini cities meeting the needs of hundreds of students and staff daily, including the water required for drinking and washing.

Heavy water use areas in schools include ovals, gardens and toilets. Becoming a Watersaver school will assist staff and students to learn about water conservation and reduce water bills.



Linking locally

Many of our local schools and businesses have implemented an array of water saving initiatives and are now prospering from environmental and economical benefits. An example is John Paul College.

Water conservation can be achieved by changing watering practices or through technological developments such as water timers and infrared urinals. Mulching (using organic matter such as straw or sugar cane to reduce evaporation) garden beds, improving oval irrigation and monitoring taps and bubblers can help save water.

John Paul College

John Paul College brought water efficiency to its 35-hectare Daisy Hill campus in 2006, soon following with energy and waste efficiency initiatives. The school has already reduced water consumption by 73%, energy consumption by almost 20% and waste by 35%—by establishing:

- 10 tank farms storing up to 500,000-litres
- a pool plant that recycles backwash water and minimizes chemical use
- efficient ways of managing sports fields, grass, gardens and vegetation
- waterless urinals, low-flow showers and water-off taps
- bores, ponds and waterways that manage storm-water and provide ecosystems
- 44 solar panels generating more than 12 megawatts/ year
- retrofitting and building projects to maximise building efficiency
- water and power management software platforms that help continually measure, monitor and minimise consumption—supported by a first-of-its-kind 3D model of the campus
- 60 recycling stations that feed into four for segregation, collection and off-campus reuse
- awareness and behavior modification programs across the campus and curriculum including integrated waterwise education, a 24/7 website promoting initiatives and resources, a student environmental council, and community awareness activities fostering responsible stewardship of scarce resources.

Lesson plan – dealing with drips

This lesson provides a framework for students to identify and develop tools to investigate how water is used in the school and to develop and implement initiatives to conserve water.

Students investigate a map or image of the school and identify the places where water is used, along with familiar behaviours such as toilet flushing, hand washing and drinking ensure they consider other uses such as irrigation and cleaning.

Using suitable ICT tools or other methods students highlight key points, which are then grouped according to a consistent and logical theme (e.g. water for cleaning, water for gardens; and water for health).

Students are then engaged in identifying methods to gather data on how water is used and in particular whether behaviours or practices are wasteful.



Depending on the area of water use that each student is examining, research methods could include:

- Bubblers: observational survey – How are people using the bubblers? How long do they run for? Do people fill drink bottles or drink straight from the bubbler?
- Classroom sinks: survey - Does the sink have a plug; what is the sink used for; can the water be reused on the garden?
- Gardens: How are gardens and lawn areas watered? Are garden beds mulched? What time of the day are gardens watered?

Using the information collected in the investigation, students develop a plan to implement a key initiative or initiatives designed to reduce water use at the school. **Activity sheet 8 'Simple ways to reduce water use at school'**, using the TAP process will assist.

The plan should include a summary, the findings of their investigation, a rationale for their initiative and consideration of how students or other members of the school community will be encouraged to adopt water conservation behaviours.

Resource requirements

- School map
- Activity sheet 8 'Simple ways to reduce water use at school'
- Student self evaluation sheet 1