

# Year 1

## Lesson 5

### Being a watersaver at school

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#### Learning objectives

Students will be able to:

- collect and analyse information on the ways water is used in the school.
- identify how water use can be reduced.

#### Learning outcomes

Subject	Strand & content descriptors
Science	<p>Science understanding</p> <ul style="list-style-type: none"> <li>• Living things have a variety of external features. (ACSSU017)</li> <li>• Living things live in different places where their needs are met. (ACSSU211)</li> </ul> <p>Science as a human endeavour</p> <ul style="list-style-type: none"> <li>• People use science in their daily lives, including when caring for their environment and living things. (ACSHE022)</li> </ul> <p>Science inquiry skills</p> <ul style="list-style-type: none"> <li>• Use a range of methods to sort information, including drawings and provided tables. (AC SIS027)</li> <li>• Represent and communicate observations and ideas in a variety of ways such as oral and written language, drawing and role play. (AC SIS029)</li> </ul>
Geography	<p>Geographical knowledge &amp; understanding</p> <ul style="list-style-type: none"> <li>• Environment: Environmental features of places can be observed, described and classified in different ways.</li> <li>• Environment: People affect the environments in which they live.</li> </ul> <p>Geographical skills &amp; inquiry</p> <ul style="list-style-type: none"> <li>• Planning, collecting and evaluating: Participate in a guided inquiry, using a range of information sources.</li> <li>• Collate information about the local area.</li> <li>• Processing, analysing, interpreting and concluding: Sort information and identify patterns.</li> <li>• Processing, analysing, interpreting and concluding: Draw conclusions based on their investigations and share these conclusions.</li> </ul>
Mathematics	<p>Number &amp; algebra</p> <ul style="list-style-type: none"> <li>• Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts. (ACMNA015)</li> </ul> <p>Statistics &amp; probability</p> <ul style="list-style-type: none"> <li>• Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays. (ACMSP263)</li> </ul>



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### Important questions

- Where and how do we use water in the school?
- Why is it important to save water?
- What are some simple ways to save water?
- How do plants 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.

### Logan School Achievement

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

Using a map of the school identify the places where water is used such as for toilet flushing, hand washing, drinking and irrigation.

Alternatively, take a tour of the school and mark the water outlets with coloured ribbon – blue for drinking, green for flushing, yellow for irrigation. Any leaking taps or cisterns could also be noted.

Calculate total for each category and display the results using suitable icons – such as taps, toilets and sprinklers or in other suitable formats.

Students can think of ways to save water at school. All the ideas should be listed and displayed. Activity sheet 8 'Simple ways to reduce water use at school' can assist you with this.

### Resource requirements

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

### Additional activities

#### Make a Watersaver Garden

- Make a mulch garden. With the assistance of the grounds person select a small garden area; mulch half the site using straw, grass clippings or similar material and leave the other section. Observe the differences between the two sites – check how the mulch keeps the garden cool and moist by carefully lifting the mulch and feeling the soil – you could also use a thermometer or moisture meter. Note how well the plants grow and for any animals near the mulch.
- Discuss why mulch saves water.
- Investigate suitable plants for the Watersaver garden; examine other plants in the school grounds, do they have adaptations that help them to conserve water? For example some plants have thick waxy, leaves that reduce transpiration; others have very small leaves or spikes (cacti) for the same purpose. Many Australian native plants have water saving adaptations.