

School water audit

» Lesson overview

In the previous lesson, students explored a number of alternative water sources to supplement dwindling water supplies. One key factor in managing water resources wisely is to reduce water wastage. It is important for students to recognise, through investigation, that they can make a difference by developing and helping to implement a 'Waterwise school action plan'.

» Lesson objectives

In this lesson, students:

- prepare and conduct a school water audit to develop an awareness of water usage in the school
- identify and communicate any problems/solutions for effective water management in the school
- write a draft action plan.

» Equipment

For the class

- A3 team charts produced in Lesson 9
- **Optional:** enlarged copy or overhead transparency of the 'Health and safety rules' sheet (Resource 11)
- enlarged copy or overhead transparency of the 'School water audit' (Resource 12)
- enlarged copy or overhead transparency of the 'Waterwise management program' (Resource 13)

For each team

- one page of the 'School water audit' (Resource 12) for their allocated area

» Preparation

- Approach each of the affected staff members to explain what is going to happen when student teams conduct their school water audit, and ask permission for your students to work in their area.
- Identify the types of allocated areas that apply to your school situation. One example of an area allocation is provided in Step 3.
- Locate the school water meter. Use the instructions on the Target 170 website <www.target170.com.au/How+to+read+your+meter> to read the meter.
- Draw up a large chart to collate the data collected by student groups in Step 5. Make sure that the headings align with the headings on the audit work sheets (Resource 12).
- For additional information, download Sydney Water's comprehensive primary school booklet, 'Every drop counts in schools' <www.sydneywater.com.au/Publications/FactSheets/EveryDropCountsInSchools.pdf#Page=1>.

» Lesson steps

1. Review the 'Alternative water sources' charts from the previous lesson. Explain that all of these alternatives are expensive. Ask students to suggest cheaper ways of extending our water supplies (reducing the amount of water that the community uses).

Explore ideas for reducing the amount of water that is used at school. Take students to the school water meter and show them how to read it. Record the reading. If possible, take readings at the same time of day for a week to record total water usage in the school. Calculate the average daily water use.

2. Tell students that they will undertake a school water audit to ascertain current water usage. Divide students into teams of three or four to complete the school water audit.

Prior to commencing the water audit, students should be advised of health and safety rules such as not to run in wet areas, and to wash their hands well with soap after investigating the toilets.

3. Teachers will need to designate specific areas in their school. When organised, allocate each team to one of the seven audit areas. The following are possible audit areas within the school grounds:

- boys' toilets
- girls' toilets
- staffroom, staff toilets, offices
- classroom taps (include library, learning support)
- bubblers and disabled/accessible toilets
- other rooms and buildings such as the canteen, hall, gym, store rooms and grounds person's room
- outdoor taps, irrigation and cleaning.

4. Use the enlarged copy of the first page of 'School water audit' (Resource 12) to model how students should complete the audit of their area. Separate students into their teams and allocate roles such as Recorder, Speaker and Manager. Outline safety rules and behaviour expectations. You can use the 'Health and safety rules' sheet (Resource 11) to discuss these with the class.

Give each team the one-page school water audit sheet that applies to their allocated area (Resource 12) and ask them to conduct their audit on behalf of the rest of the class.

5. When the teams finish their audit and return to the classroom, each spokesperson then presents to the class the problems identified and possible solutions. As a class, students form their draft action plan by collating all the problems/solutions tables into a single class list. The teacher records this information on a large previously prepared chart. Make sure that you use the headings from the audit work sheets.

6. As a whole class, formulate a 'Waterwise management program' (Resource 13) that outlines water-saving actions and performance targets. Note that the targets need to be realistic; consultation with the school community (e.g. grounds person) will be necessary for completion of the program. This list can then be presented formally to the school administration and/or relevant parents and friends, or parents and citizens, associations for action.

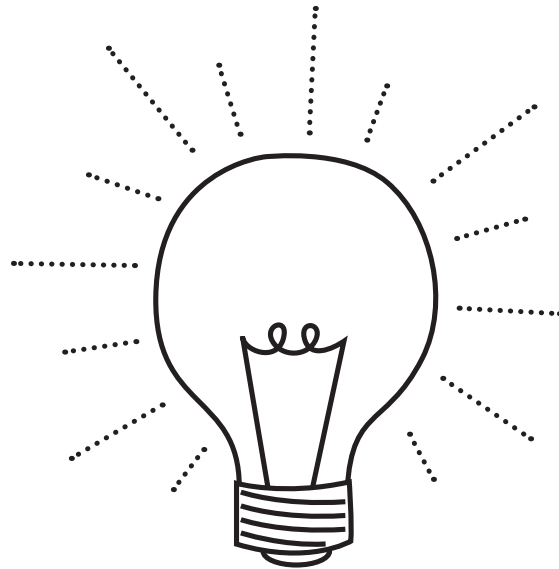
7. Explain that, in Lesson 12, students will use the data that the class collected to individually complete a report outlining their Waterwise school action plan to present to the school administration or environment committee as required for the assessment task (Resources 1 and 14).

8. At the end of this lesson, focus students' thinking on the actions that individuals within the school can take to reduce water wastage. Ask students to list three personal actions that they can take to save water in the school. Collate student ideas and record on butcher's paper for prominent display in the classroom.

Ideas could include:

- turning off the tap straight away
- collecting water used in activities that can then be used in the garden
- taking short showers
- using the half-flush button on the toilet.

••• Health and safety rules



- › Move into your groups quickly and quietly
- › Speak softly
- › Stay with your group
- › Perform your role
- › Walk in and around buildings, showing respect to staff and classes
- › Wash your hands with soap after visiting toilets
- › Use equipment such as the stopwatch and tape measure carefully
- › Stay dry
- › DO NOT touch hot water taps

Resource 12

❖ School water audit: Boys' toilets

Toilets

Number of toilets _____

Type of toilet single flush dual flush

Number of leaking/running toilets _____

Urinals

Number of urinals _____

Type of urinal continuous flush pull chain motion sensor

Number of leaking/running urinals _____

Handbasins

Number of taps _____

Number of leaking/dripping taps _____

Problems and solutions

» Problem	» Solution	» Who is responsible for repairing?

Resource 12 (continued)

❖ School water audit: Girls' toilets

Toilets

Number of toilets _____

Type of toilet single flush dual flush

Number of leaking/running toilets _____

Handbasins

Number of taps _____

Number of leaking/dripping taps _____

Problems and solutions

»Problem	»Solution	»Who is responsible for repairing?

Resource 12 (continued)

❖ School water audit: Administration offices, staffroom

Toilets

Number of toilets _____

Type of toilet single flush dual flush

Number of leaking/running toilets _____

Urinals

Number of urinals _____

Type of urinal continuous flush pull chain motion sensor

Number of leaking/running urinals _____

Handbasins

Number of taps _____

Number of leaking/dripping taps _____

Showers

Number of showers _____

Number of leaks _____

Problems and solutions

» Problem	» Solution	» Who is responsible for repairing?

Resource 12 (continued)

❖ School water audit: Classrooms, library, art room

Toilets

Number of toilets _____

Type of toilet single flush dual flush

Number of leaking/running toilets _____

Handbasins

Number of taps _____

Number of leaking/dripping taps _____

Problems and solutions

»Problem	»Solution	»Who is responsible for repairing?

Resource 12 (continued)

❖ School water audit: Bubblers, disabled toilet(s)

Bubblers

Number of bubblers _____

Type of bubbler spring loaded push button
 lever tap other

Number of leaking/dripping bubblers _____

Number of damaged bubblers _____

Disabled toilets

Number of toilets _____

Type of toilet single flush dual flush

Number of leaking/running toilets _____

Handbasins

Number of taps _____

Number of leaking/dripping taps _____

Problems and solutions

»Problem	»Solution	»Who is responsible for repairing?

Resource 12 (continued)

❖ School water audit: Other rooms/buildings on site

Toilets

Number of toilets _____

Type of toilet single flush dual flush

Number of leaking/running toilets _____

Urinals

Number of urinals _____

Type of urinal continuous flush pull chain motion sensor

Number of leaking/running urinals _____

Handbasins

Number of taps _____

Number of leaking/dripping taps _____

Showers

Number of showers _____

Number of leaks _____

Problems and solutions

»Problem	»Solution	»Who is responsible for repairing?

Resource 13

❖ Waterwise management program

Black spots (in priority order)	Water-saving actions	Performance target
» Classrooms	Dripping tap in Year 1 classroom to have washer replaced	Groundsperson to repair by end of week
» Bubblers		
» Toilets and showers		
» Other buildings		
» Outdoors—grounds		
» Outdoors— playground areas		