

Water in our environment

Focus Area

Syllabus Link

Unit of Work

Stage 1

Human Society and Its Environment

Wet & Dry Environments

Teacher notes

Rationale

Students will learn about:

- people's responsibilities of wet environments
- the relationship between water and people
- the breakdown of water available to people and other living things.

Students will learn how to identify water environments locally, nationally and globally and identify wise and unwise use of water.

Links across Key Learning Areas

- HSIE Unit of Work – Stage 1 *Wet and Dry Environments* (Board of Studies 1998).
- Science & Technology task - Stage 1, *Brush Your Teeth!* (Sydney Water).
This task demonstrates the amount of water used when brushing your teeth with – a tap left running, a tap turned on and off during brushing and finally, when using a glass.

Outcomes

ENS1.6: Demonstrates an understanding of the relationship between environments and people.

Resources

- Sydney Water website: www.sydneywater.com.au
- Sydney Water stickers
- 'Every Drop Counts in Schools' (Sydney Water)

Classroom organisation:

- whole class tasks
- smaller groups to research maps, complete charts, brainstorm ideas.

Timeframe

The *Water in Our Environment* learning sequence would take place over a series of sessions. The learning sequence is designed so that teachers can use all or part/s of the sequence that are suitable to the needs and interests of the class.

Equipment:

- atlases, maps, local street directory
- charts (see learning sequence)
- worksheet: Investigation Report.

Learning sequence

Students will identify water environments locally, nationally and globally. This task demonstrates the amount of water available to humans and other living things.

Preparation

- Using an atlas or wall chart, and appropriate pages from local map or street directory, students locate all the wet areas in:
 - the world
 - Australia
 - local area
- Develop a chart - Wet environments. For example:

THE WORLD	AUSTRALIA	LOCAL AREA
Pacific Ocean Antarctica	Murray River Sydney Harbour	Creek Canal

- Make comparisons. Look at the map of Australia. Discuss if there are more wet or dry areas. Discuss where there are mainly wet areas and dry areas. Compare Australia to other countries in the world using an atlas.
- Question: *How much water is there on earth? How much can we actually use and drink?* About 70% of the earth's surface is covered in water. Water also exists in the atmosphere. The breakdown can be represented as follows:







▪ oceans and seas	=	97%
▪ polar ice caps and glaciers	=	2.25%
▪ underground	=	0.74%
▪ fresh water in lakes and rivers	=	0.01%

More information can be found in the Sydney Water publication, 'Every Drop Counts in Schools.'

- Demonstrate and discuss these facts to students as follows. Ask students to decide which container represents each. This could be done as a Think (on your own) – Pair (with a partner) – Share (with group):
 - oceans and seas = average laundry bucket (about 10L)
 - polar ice caps and glaciers = glass of water (approximately 225ml)
 - underground = a small vitamin bottle (approximately 75ml)
 - fresh water in lakes and rivers = one drop of water.

Task

- Brainstorm how we use water in our lives.
- Students draw pictures and / or make lists of the water their family uses, the school uses, and a local environment uses (for example a recreational park).
- Look at local area map. Students imagine if one house/family uses water for several purposes then how much water would all the people that live or work in that community including schools, shops, parks etc would use. List water uses by a suburb.
- Brainstorm wise and unwise uses of water by developing a class chart.
- For example:

ME		MY FAMILY		THE COMMUNITY	
					

- Discuss the ten water saving messages and identify who can follow these – Me /Family/Community. The messages are:
 1. use the half flush button when you can
 2. report a dripping tap
 3. turn off the tap when you brush your teeth
 4. have shorter showers
 5. wash art brushes in a bucket or ice cream container, not under a running tap
 6. use a broom instead of the hose to clean pathways
 7. water the base of the plant, not the leaves
 8. wash cars on the lawn with a bucket
 9. water the garden with a watering can
 10. wash vegetables, fruit and dishes in a plugged sink, not under a running tap.
- Complete Investigation Report: *We Won't Waste Water!* Students draw pictures to illustrate the water saving messages. Look at Sydney Water stickers and resource materials for ideas.

Follow-up/reflection

Students choose favourite water saving message and enlarge into a poster. Display the ten water saving messages in assembly area or school foyer. Students explain their water saving message to their class, at assembly and/or to another class in the school.

Investigation Report: We won't waste water!

<p>Use the half flush button where you can</p>	<p>Report a dripping tap</p>	<p>Turn off the tap when you brush your teeth</p>	<p>Have shorter showers</p>	<p>Wash art brushes in a bucket or ice cream container not under a running tap</p>
<p>Use a broom instead of the hose to clean pathways</p>	<p>Water the base of the plant, not the leaves</p>	<p>Wash cars on the lawn with a bucket</p>	<p>Water the garden with a watering can</p>	<p>Wash vegetables, fruit and dishes in a plugged sink, not under a running tap</p>