



Water

Let's be sustainable

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Topic 3: On the surface or under the ground

Introduction

In Topic 3, students will learn about groundwater and surface water (e.g. rivers, lakes, bores, tanks, waterholes etc.). They will participate in an activity that demonstrates how an aquifer is formed. They will also start to explore the idea that not all water is clean, so we should use it for different purposes, depending on where it is accessed.

Topic 3 is delivered in two parts, each of which may take several lessons to complete.

Topic 3 is part of six topics that can be taught individually or together to form a complete unit of work. Visit the 'For educators' section of the website to access the other topics.

Learning outcomes

- Students will be able to explain the difference between surface water and groundwater and describe one or more of these specific sources (e.g. lakes, aquifers, creeks etc.).
- Students will understand how aquifers form.

Resources

Part 1

- 'Ground water' fact sheet
- 'Surface water' fact sheet
- 'Waterholes, rock holes and springs' fact sheet
- Computers with internet access
- Resources about water sources (e.g. books, posters, pamphlets, websites etc.)
- Water sources in your community (with the potential for an excursion)
- Access to Google Earth or the SA Water website www.sawater.com.au

Part 2

- 'Creating an aquifer' instructions (the resources required for this activity can be found on the sheet)
- Plastic drop sheet or newspaper
- Soil sample from the local community (optional)
- Camera or phone to take video/photographs



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Lesson steps

Part 1

In this lesson, students will research three sources of water: groundwater, surface water and waterholes, rock holes and springs. To begin their research, provide students with the **'Ground water'**, **'Surface water'**, and **'Waterholes, rock holes and springs'** fact sheets.

These sheets provide basic information, but students will need to use other resources (e.g. books, internet, etc.) to find further information.

If your community has a particular source of water, you may wish to limit student's research to this source only.

As students research, discuss the sources of water. You may also wish to visit any examples of these sources in your community. This could include bores or wells (where groundwater may be extracted), rivers, lakes, dams or catchments (even if they are dry).

If your community does not have a local water source, Google Earth can be used to view water sources outside your community.

You may also find some information about your community's water supply on the 'What's in your water?' page of the SA Water website www.sawater.com.au/community-and-environment/water-quality/in-your-area-whats-in-your-water

This is a good opportunity for students to see where their water comes from (before it comes out of the tap). It is also a good chance to discuss the wise use of water, particularly if you can visit dry river beds or lakes. This reinforces the idea that water is not an unlimited resource.

Part 2

Depending on the resources available, this activity can be done in pairs or as a whole class demonstration. Follow the instructions on the **'Creating an aquifer'** sheet to demonstrate how an aquifer is formed.

Once this is completed, students may wish to discuss the soil composition in your community and repeat the experiment with locally collected soil samples. What can students surmise about local groundwater from this activity?

Extension options

Explore how the seasons (wet and dry) affect the sources and amount of water available in your community.