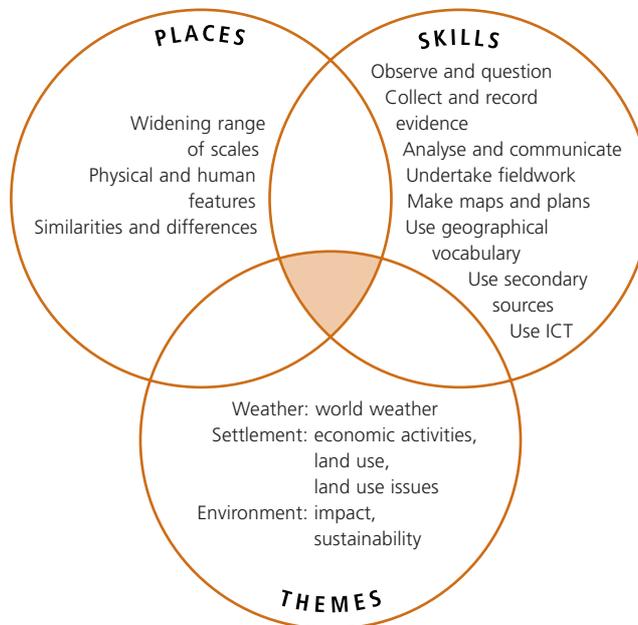


# Unit 11 Water

## ABOUT THE UNIT

This is a 'long' unit in which children learn about water supply around the world. They learn about the importance of clean water and investigate how it is supplied. They also consider who owns and manages water, and contrast water use at home with use in less economically developed countries.

The unit offers links to literacy, design and technology, ICT, science and the world of work.



## VOCABULARY

In this unit, children are likely to use:

- rain, shower, thunderstorm, drain, gutter, downpipe, sewer, tap, stopcock, hosepipe

They may also use:

- evaporation, condensation, pollution, filtering, reservoir, purification, irrigation, development

## RESOURCES

- local and large-scale maps and plans
- atlases
- *Thread of the Nile* produced by Birmingham Development Education Centre, or similar pack
- spreadsheet software
- laboratory equipment for cleaning water
- information from charities involved in water provision, eg *WaterAid*

## PRIOR LEARNING

It is helpful if the children have:

- investigated their local area, as in Units 1 and 6, for example
- investigated places beyond their local area, as in Units 4 and 10, for example
- developed geographical enquiry skills, including using maps, atlases and globes
- started to develop key geographical concepts – location, connections, similarity and difference, place and environment

## EXPECTATIONS

### at the end of this unit

*most children will:*

identify how people affect the environment and recognise ways people try to manage it for the better;  
begin to realise the importance of location in understanding water distribution;  
recognise how the presence or absence of water can change the character of places

*some children will not have made so much progress and will:*

have some understanding of where we can find water and how it gets to where it is needed

*some children will have progressed further and will also:*

identify a range of different people's viewpoints about water ownership;  
show how people can improve the environment through water conservation

## FUTURE LEARNING

Children may build on work in this unit by investigating water in a seaside landscape, *eg Unit 13*; in rivers, *eg Unit 14*; or in mountain environments, *eg Unit 15*.

They could also encounter ideas about water management and water-related events, *eg floods or droughts*, through the news, *eg Unit 16*.

LEARNING OBJECTIVES	POSSIBLE TEACHING ACTIVITIES	LEARNING OUTCOMES	POINTS TO NOTE
CHILDREN SHOULD LEARN		CHILDREN	
<b>Where can we find water locally? Where can we find water in the world?</b>			
<ul style="list-style-type: none"> <li>to obtain information from maps and an atlas</li> <li>about world weather patterns</li> <li>about physical and human features</li> </ul>	<ul style="list-style-type: none"> <li>Ask the children to note as many clues to the presence of water as possible, using a map of the area around the school. Then ask them to use an atlas to identify places with very high and very low rainfall.</li> </ul>	<ul style="list-style-type: none"> <li>obtain information from a map</li> <li>locate the main desert regions on a world map</li> </ul>	
<b>How does water get to where it is needed?</b>			
<ul style="list-style-type: none"> <li>to make maps and plans</li> <li>to use secondary sources</li> <li>to investigate water supply at local and world scales</li> </ul>	<ul style="list-style-type: none"> <li>Ask the children to walk around the school grounds and mark on a plan all signs of water movement, eg <i>downpipes, gutters</i> and, possibly with the assistance of a school keeper, investigate where water enters and leaves the school, and find out what a stopcock is.</li> <li>Divide the children into small groups and ask them to work out how they would transport water from another tap in the school grounds to their classroom if their nearest tap were not working.</li> <li>Ask the children to find out how water is taken to farmland (irrigation), using photographs from <i>Thread of the Nile</i>, or similar resource pack.</li> </ul>	<ul style="list-style-type: none"> <li>record information on a map</li> <li>draw a flow chart to show where water enters and leaves the school</li> <li>understand how water can be transported</li> </ul>	Design and technology: there are opportunities to link work on irrigation with the workings of a water pump.
<b>Who uses water? What do they use it for?</b>			
<ul style="list-style-type: none"> <li>how water is used in the world</li> <li>to investigate similarities and differences</li> <li>about land use patterns</li> <li>to use ICT to record data</li> </ul>	<ul style="list-style-type: none"> <li>As a class, compile a list of the various uses of water. Divide the children into groups and ask them to sort the list into categories – home, farms, industry, leisure, others.</li> <li>Read to the class <i>Bringing the rain to Kapiti Plan</i> by Verma Aardema.</li> <li>Ask the children to keep a diary of water use in the home for a week. Explore the issue of wasting water and discuss what happens to water once it has been used.</li> <li>Ask the children to record their use of water in the home on a spreadsheet. Discuss with the children the patterns of water consumption and how reducing consumption might improve the environment.</li> </ul>	<ul style="list-style-type: none"> <li>understand that water is a universal need</li> <li>understand that access to water varies in different parts of the world</li> <li>understand the issue of wasting water and what happens to water once it has been used</li> </ul>	Literacy: children could compare their water usage diaries with other diaries. They could think about the impact the audience and purpose of the activity has had on their use of language.  IT: use of spreadsheets to record data (Unit 5D).
<b>Is all water usable? How can water be made usable?</b>			
<ul style="list-style-type: none"> <li>to observe and question</li> <li>to collect and analyse evidence</li> <li>use secondary sources</li> </ul>	<ul style="list-style-type: none"> <li>Discuss with the children what makes water dirty. Ask the children to collect water samples and examine their smell and appearance (BUT NOT TASTE) and carry out experiments to find out how water may be cleaned, eg <i>boiling, filtering</i>. Ask them to consider whether there are things in the water that cannot be seen.</li> <li>Ask the children to find out from the library about times when people did not have clean water and how changes were brought about. They may also find out what is meant by ‘usable water’ and the comparative importance of a plentiful supply of clean water.</li> <li>Visit a sewage treatment plant.</li> </ul>	<ul style="list-style-type: none"> <li>know about times when people did not have clean water and how changes were brought about</li> <li>know what is meant by usable water</li> <li>understand the comparative importance of clean water and plentiful supply</li> </ul>	Science: there are opportunities to link this work to health and safety and changing and separating materials (Units 4D and 5D).  Literacy: these activities can be used to highlight the purpose of research and to emphasise the importance of establishing a ‘brief’ for the kinds of note to be made.
<b>Who owns water? Who pays for water? What jobs are involved in providing our water?</b>			
<ul style="list-style-type: none"> <li>about a land use issue</li> <li>about jobs in a settlement</li> <li>about the environmental impact of a local activity</li> </ul>	<ul style="list-style-type: none"> <li>Ask the children to label selected items with the name of their owner, eg <i>scissors, felt pens, personal items, litter, jugs of clean and dirty water</i>.</li> <li>Discuss with the children water bills and the breakdown of costs, how a water company can own water, whether water belongs to everybody, and who owns rain.</li> <li>Ask the children to use secondary sources to find out about the work of aid agencies in water provision in less economically developed countries and how building wells in farming areas can affect the local environment.</li> </ul>	<ul style="list-style-type: none"> <li>understand the difficulties associated with the notion of owning water</li> <li>know about aid agencies’ work on water provision in less economically developed countries</li> </ul>	World of work: learning about the jobs connected with water supply and water distribution at home and overseas.
			SAFETY – All off-site visits must be carried out in accordance with LEA and school guidelines.