

## 2 IT'S RAINING! TEACHER'S NOTES

There are many ways to use the resource material provided in this package and the following day by day approach is just one suggestion. Please feel free to adapt and experiment with these ideas.

We are always keen to hear about how you are using this material and to receive your feedback about the resource.

EcoWater Solutions is developing a range of educational material relating to water and water use. A visiting speaker is also available to spend time with your class. Please contact us for further details.

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### Day One

- Talk with the class about rain, explore some of the sayings (“save for a rainy day”), and rhymes (“rain rain go away...”) about rain. What do these tell us about people’s attitudes towards rain?
- Do activities from activity sheets 1, 2, 3, 4, 7 and 8 provided.

### Notes

#### Activity Sheet 1

Auckland’s Sky Tower (328 metres) is about one third of a kilometre high so a child would be a mere dot beside a cubic kilometre of water!

Some other interesting facts ...284,000 cubic kilometres of precipitation falls into the oceans and 96,000 cubic kilometres of precipitation falls onto the land, 320,000 cubic kilometres of water is evaporated from the oceans and 60,000 from the land.

Rainfall varies around the Auckland region, for example there is a much higher rainfall in the water catchment areas of the Waitakere Ranges than there is in New Lynn. N.I.W.A. (375 2090) or Met Service (377 4834) may be able to help with rainfall data. Internet users can find up to date West Auckland weather information at <http://www.falkor.gen.nz/~weather/weather.shtml>

#### Activity Sheet 2

This activity is designed to help students visualise the huge volume of rain which falls each year and to let them do some lateral thinking!

#### Activity Sheet 3

Areas with lots of hard (‘impervious’) surfaces have less soakage and more run off than natural environments. This run off is faster and contributes to many modern problems including flooding, silting up of streams, and water pollution. This picture study activity aims to introduce students to these concepts.

#### Activity Sheet 4

The ideas in this picture strip follow on from module 1, Water Cycle and are developed further in module 5, Stormwater. The notion of aquifers being like “piggybanks of water” is a useful one to develop at this stage. Practical demonstrations using a sponge can be fun!

#### Activity Sheet 7

Humans and their pipe networks, interrupt the natural water cycle in many ways. This activity introduces students to the 3 networks for water ~ water supply, stormwater, and wastewater. These will be dealt with in later modules.

#### Activity Sheet 8

This is a popular activity. The finished instruments can be used in drama and creative music activities.

*It’s Raining! activity sheets 1, 2, 3, 4, 7 and 8*

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### Day Two

*These poetry and mythology books are in Henderson library. (We recommend the Jane Yolen book as an excellent starting point)*

*These Islands...a collection of New Zealand verse for Young People, by Gwenyth Jones. Pps. 48, 49, 50, 51.*

*Something Nothing...Hone Tuwhare, p. 29*

*Laura’s Poems, p. 43*

*Water Music...Jane Yolen, (poems completely on the subject of water), J8IYOL*

*Encyclopedia of World Mythology, 291.13 ENC, pp. 36-40. (Lots of material from different cultures from around the world on The Flood.)*

*Mythology, an Illustrated Encyclopedia, ed. Richard Cavendish, 291.13 MYT, on Australian, American, Chinese, Christian, Greek, Hindu, Jewish, Melanesian, Mithraic myths of The Flood, see index p. 299 for page references.*

- Listen to some of the stories and poems which deal with rain. Why do you think there are so many stories and poems about rain?
- Illustrate a ‘word picture’ created by one of these stories or poems ..... quote the appropriate lines underneath.
- Read class one of the myths involving rain. Choose a main character from this story and with the class, brainstorm good words and phrases to describe their personality. These can be words from the story as well as suggestions from the class. Students then draw a silhouette of this character and superimpose descriptive words on it.

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### Day Three

- Introduce students to Haiku. This Japanese poetry form captures the essence of an idea in just eighteen syllables spread over three lines of (5 + 8 + 5) e.g.

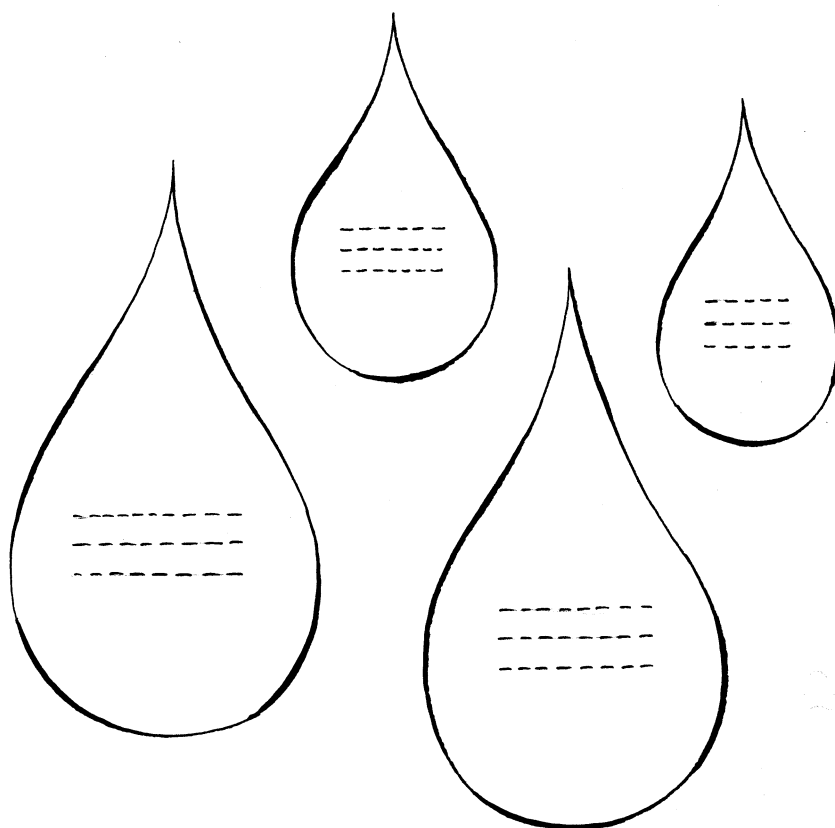
*Rain when you want it*

*A blessing, boon and benison*

*Talk to El Nino (Pam Sellars)*

Your school library may have other examples of Haiku

- Students compose their own haiku about rain. Sometimes the raindrop's place in the water cycle can be a good inspiration. So too is the story of what happens to raindrops once they reach the earth. (see picture strip in activity sheet 4)
- Copy haiku onto cardboard 'raindrops'. Once decorated, these can be suspended from the ceiling / window frames, or combined into colourful mobiles.



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### Day Four

*It's Raining! activity sheet 5*

- Working in small groups, students cut out raindrop characters from activity sheet 5. These are arranged to form a simple narrative sequence, pasted into place and speech bubbles &/or added. As with the Day Three activity, a raindrop's place in the water cycle can be a good inspiration. So too is the story of what happens to raindrops once they reach the earth. (see picture strip in activity sheet 4)

## Day Five

- This activity is a fun way to help students understand the impact of raindrops on the landscape. You will need a large sandpit, some pebbles, twigs, leaves and a hose with a spray nozzle.



LIGHT SPRAY

HEAVY SPRAY

- Build four similar sized 'mountains' out of sand. Two of them should have 'rocks, trees and bushes' (twigs, leaves & pebbles) and the other two should be plain sand.
- Spray two different types of mountains with a light spray and record the results at 1 minute intervals. (a recording table is supplied on activity sheet 6)
- Spray the other two types of mountains with a heavy spray and record the results at 1 minute intervals. (a recording sheet is provided)
- Compare how long it took to erode the plain sand mountain with how long it took to erode the mountain with rocks, trees and bushes.
- Here is a good activity for small group problem solving and is designed to reinforce student understanding of this topic. It could be adapted as an assessment activity  
"Design an experiment to show whether hard surfaces such as roads, buildings and carparks cause more run off and less soakage of rain water"

*hose & fine nozzle*

*pebbles, twigs, leaves*

*sand pit*

*It's Raining! activity sheet 6*

For further assistance, contact Sue Langton, EcoWater's Educational Advisor

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Sue has worked as researcher, information centre coordinator and a teacher in secondary schools. Her teaching skills are in Science, Biology and information skills. She is able to assist Waitakere City teachers in the following ways:

- participate in syndicate / departmental planning sessions
- provide professional development sessions for groups of teachers about NZCF linked learning opportunities within the themes of water and water use
- provide a 'helpdesk' service for student research enquiries about water and water use
- supply a range of resource materials with links to other relevant organisations such as Watercare Services and the Auckland Regional Council
- arrange for a visitor from EcoWater Solutions to work with your class as part of a about water / water use study