

Knowledge is NCAH!

Working together for Water

HAVE YOU EVER WONDERED:

- WHY WATER IS SO ESSENTIAL?
- HOW WATER REACHES OUR TAPS?



DEMONSTRATION: BUILD A RAIN GAUGE

A **rain gauge** is an instrument used to measure how much rain has fallen.

WHAT YOU WILL NEED:

A 2-litre clear plastic bottle, water, scissors, sticky tape, sand, ruler, permanent marker



What to do:



- 1** Cut the top part off the bottle at the exact point where it starts to narrow.



- 3** Draw a line around the bottle at this level, labelled "Start".



- 2** Fill the bottom of the bottle with 2cm sand. This prevents the bottle falling over. Pour in just enough water so you can see the water level above the sand.



- 4** Use the ruler to draw a "ruler" (from the Start line) up the side of the bottle at 1cm intervals.



5

Turn the cut-off top upside down and insert it into the bottle. Secure it with sticky tape or glue.



6

Find a stable, open place to leave your rain gauge and remember to check it after rain! Throw out the rainwater after you have measured it, so your gauge is ready for the next rainfall.

Water is essential for life!

This is not only because our bodies are 70% water(!), but also because we use water for agriculture, industry and other important activities. The water that reaches our taps starts as rainwater and you've made a rain gauge to see how much (or how little!) rainwater your area gets. South Africa's average annual rainfall is about 45cm – that's half the global average! This means we're a "water stressed" country, so it's vital to treat our water as a precious resource!

Ask yourself: How many times have you used water this week? Together, make a list of the different ways your community uses water.

ARE THERE WAYS YOU GUYS COULD SAVE WATER?



CAREERS

DID THIS GET YOU THINKING? MAYBE YOU WANT TO THINK OF A CAREER AS A CIVIL ENGINEER, HYDROLOGIST, AQUATIC SCIENTIST OR ECOLOGIST!



WANT MORE KNOWLEDGE? SIGN UP NOW!

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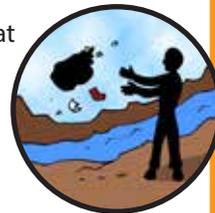
National Science Week

HOW DOES RAINWATER BECOME TAP WATER?

Rainwater seeps through the ground into streams and rivers which flow into dams. The water is then channelled into purification plants where it is cleaned. Only then is it pumped to our homes, factories and farms (yay!). After we use it, it goes down our drains to sewage treatment plants, which then release the treated water back into rivers or the sea.



Unfortunately, there are things that can go wrong in a water supply system! When this happens, diseases spread and our rivers and seas become polluted. Oh no!



CURRICULUM LINKS:

- **Knowledge area:** Life and Living, Environmental Studies
- **Themes:** Interactions and interdependence within the environment, Biosphere to ecosystems, Human impact on environment



Science Spaza is grateful to the South African Institute for Aquatic Biodiversity for assistance in the development of this resource. Science Spaza provides **free** curriculum-linked resources for science clubs. Register your science club online: www.sciencespaza.org, email: info@sciencespaza.org or SMS "Science Spaza" to: 0761737130. Science Spaza is an initiative of Jive Media Africa www.jivemedia.co.za. All rights reserved.

NRF South African Agency for Science and Technology Advancement