

SCIENCE SPAZA

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SOS - SAVE OUR SEAS!



LESS LITTER ... MORE BIODIVERSITY

ALL THE VARIETY AMONGST THE PLANTS AND ANIMALS IS CALLED THE **BIODIVERSITY** OF AN AREA. RIVERS, ESTUARIES AND THE OCEAN HAVE A LOT OF BIODIVERSITY - WHICH MEANS THERE ARE A LOT OF DIFFERENT PLANTS AND ANIMALS. **POLLUTION** - SUCH AS LITTER - KILLS PLANTS AND ANIMALS, WHICH MEANS **LESS BIODIVERSITY**.



An **estuary** is where a river empties into the sea and where the salt water from the sea mixes with the fresh water from the river.



environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Knowledge is Ncah!



MAKE YOUR OWN WATER CYCLE!

YOU WILL NEED:

- A BOWL
- SOME CLEAR PLASTIC
- SOME STRING
- SELLOTAPE
- WATER
- A 500ML PLASTIC SODA BOTTLE
- SCISSORS

1 CUT THE LID AS WELL AS THE SIDE OFF THE PLASTIC BOTTLE.



2 MAKE HOLES IN THE BOTTLE AND THREAD STRINGS THROUGH THEM.



3 ATTACH THE BOTTLE TO THE BOWL SO THAT IT SLOPES TOWARDS THE OPEN END. PLACE WATER IN THE BOWL.



4 COVER THE BOWL WITH THE CLEAR PLASTIC AND ATTACH IT WITH EITHER SELLOTAPE OR STRING.



5 PLACE A SMALL STONE OVER THE OPEN SIDE OF THE BOTTLE AND PLACE IT IN A SUNNY SPOT.



WHAT'S HAPPENING HERE?



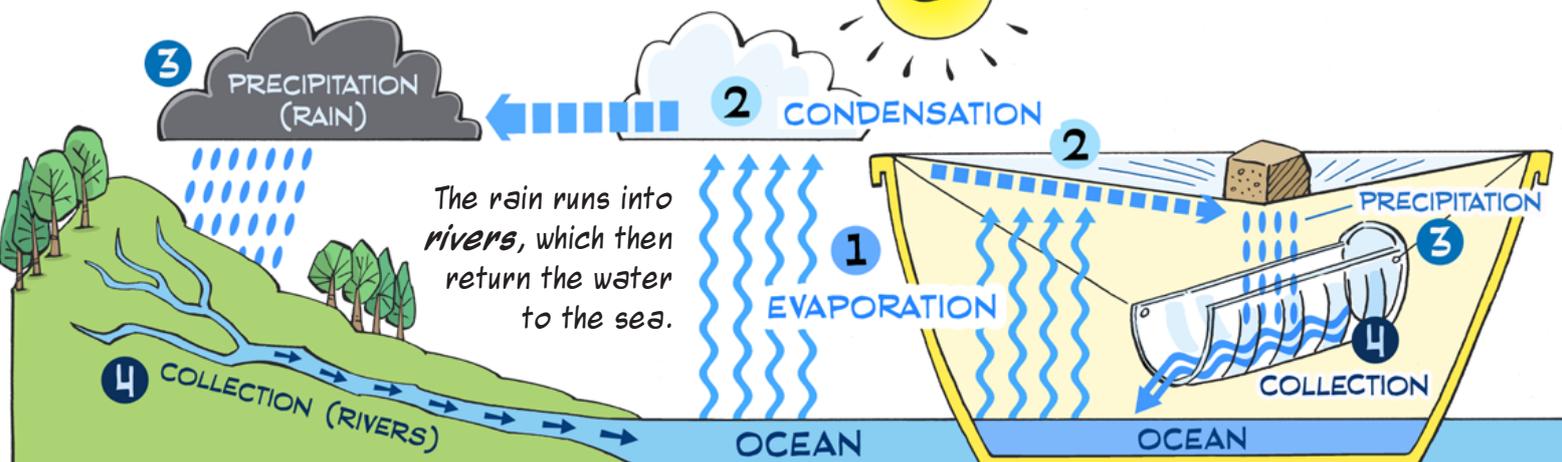
IN THE ACTIVITY YOU MADE A MODEL OF THE **WATER CYCLE**.

Rain Falls From the clouds – which is called **precipitation**.

The water vapour **condenses** to make clouds.



The sun makes the water **evaporate** from the sea to make water vapour.



The rain runs into **rivers**, which then return the water to the sea.



KEEPING OUR SEAS CLEAN

AS YOU SAW IN THE WATER CYCLE, WATER FROM RIVERS ENDS UP IN THE SEA. LITTER IN THE RIVERS IS ALSO CARRIED DOWN TO THE SEA.

THE DEPARTMENT OF ENVIRONMENTAL AFFAIRS' "SOURCE TO SEA" PROJECT WORKS AT KEEPING RIVERS CLEAN SO THAT OUR OCEAN IS ALSO CLEAN. THE "WORKING FOR THE COAST" PROGRAMME MAKES SURE LITTER IS PICKED UP AT MANY BEACHES AND ESTUARIES ALONG THE SOUTH AFRICAN COASTLINE.

LITTER IS **NOT** NCAH!



These two initiatives not only ensure our oceans are litter free, but they also provide jobs for people, allowing them to create a better life for themselves.



CAREERS:

Marine Biologists study sea creatures and plants. This ranges from large creatures (like whales) all the way to microscopic creatures (like plankton) and everything in-between. They also see how changes in the environment, such as pollution, will affect sea life. They play an important role in protecting biodiversity.

Conservationists protect and preserve the environment and wildlife. They work towards ensuring that the earth and everything that lives in it are given the best chance of survival. This may include helping make new laws or rehabilitating a natural area that has been damaged.

Recycling is a job that helps save the environment, including rivers and the sea, as well as making a living for people. Materials such as metal, glass, wood, plastics or paper can be sold and reused to make new products.



Jabulile Nhleko works for the Department of Environmental Affairs as an Estuarine Ecologist. She studies estuaries to see how the plants, animals and environment need to work together to have a healthy ecosystem. From what she learns, she can then advise on how to best manage estuaries. She has also worked as a river health scientist and at the moment is working at getting her PhD (Doctoral degree).

CURRICULUM LINKS

- **Grade 7 and 8: Life Orientation** – Health, social and environmental responsibility (environmental health)
- **Grade 7: Natural Sciences** – Life and Living (biodiversity), Grade 8 – Life and Living (Interactions and interdependence within the environment).

Knowledge is NCAH!



LIVING SEAS!

NO LITTER OR POLLUTION IN THE SEA MEANS LOTS OF DIFFERENT PLANTS AND ANIMALS - OR LOTS OF **BIODIVERSITY**.

UNSCRAMBLE THE LETTERS TO FIND WORDS THAT YOU HAVE LEARNED ABOUT IN THIS WORKSHEET, AS WELL AS CREATURES THAT CAN BE FOUND BECAUSE THERE IS NO LITTER.



STARUPE

REVDISITYOIB

NAOCE

BCRA

WLAHE

ISHF

LARCO

WLAHE

HISTRASF

SHARK

STARFISH

FISH

BIODIVERSITY

WHALE

OCEAN

CORAL

CRAB

ESTUARY

START YOUR OWN SCIENCE SPAZA

Do you want to start a science club at your school? Send us the following information, and Science Spaza will contact you.

School: _____

Name: _____

Telephone number: _____

Email address: _____

Postal address: _____

Visit www.sciencespaza.org, email info@sciencespaza.org, sms or WhatsApp us on 076 173 7130 or write to us at PO Box 22106, Mayor's Walk, 3208.

WE WANT YOUR
FEEDBACK!

SEND US A PHOTO OF YOUR CLUB DOING THE ACTIVITY OR ARRANGE YOUR OWN CLEANUP OF A LOCAL WATER SOURCE - YOU WILL BE SAVING MARINE BIODIVERSITY.



ENVIRONMENTAL PROTECTION & INFRASTRUCTURE PROGRAMMES

Environmental Protection and Infrastructure Programmes (EPIP) are aimed at addressing environmental management challenges in South Africa. Working with the Coast is one of the focus areas of EPIP and facilitates the rehabilitation of coastal environments.

The Source to Sea initiative aims to tackle land-based waste and litter in hot spot communities located near rivers and catchments and preventing such litter and waste to enter waterways and ending up in the sea.

