



Investigate the journey of a river

Follow water through the environment and explore the changes to water quality over time.

Land uses in your local area	
Land Use	Water Usage
e.g. Cricket ground	e.g. Sprinklers

Follow the journey of a river through the catchment

Add the following items into separate small jars or containers with lids labelled 1 to 15.

1. A tablespoon of soil/dirt
2. 5-10 broken pieces of twigs or sticks
3. A teaspoon of clay in water
4. A teaspoon of chocolate drink powder
5. 3 drops yellow food colouring and 1 square of toilet paper
6. 10 sultanas
7. Tablespoon of detergent
8. 10 small rocks
9. 5 small pieces of aluminium foil - scrunched into balls
10. ¼ piece of A4 paper ripped in strips
11. Small plastic bag cut into pieces
12. Tablespoon of vegetable oil
13. Tablespoon of charcoal
14. 20cm of plastic string or fishing line
15. Tablespoon of sand





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Pre-fill all the jars or containers with one ingredient in each. Fill up a large clear bucket or plastic aquarium with 2 litres of water and place it in the middle of your room or space.

Arrange your students in a circle around the water container and hand out the jars or containers. Remind them to keep the lids on. Explain that you are going on a journey following a water through the environment over time.

Read the following story of water, or make up your own, and ask the students to add the item in their jar to the container of water. There are 15 items to add during the story during 11 steps. At some steps you will add the contents of more than one jar.

If you have a small group you can remove some of suggested items. This works best in the story when the contents of more than one jar is being added to the container of water, e.g. at Step 1, 4, 6 or 7. If you have a larger class you can do multiple jars of the same contents.

	Item	Purpose	Issue	Step
1.	Soil	Soil erosion	Land clearing	1
2.	Plant	Land clearing		1
3.	Clay	Erosion	Agriculture	2
4.	Chocolate drink powder	Fertiliser		3
5.	Yellow water / tissue	Sewage	Urbanisation	4
6.	Sultanas	Poo		4
7.	Detergent	Car washing		5
8.	Rocks	Building material	Construction	6
9.	Foil	Industry	Mining	6
10.	Paper	Rubbish	Waste	7
11.	Plastic	Rubbish		7
12.	Vegetable oil	Petrol	Industry	8
13.	Charcoal	Bushfire	Climate Change	9
14.	Plastic line	Fishing line	Recreation	10
15.	Sand	Beach erosion		11





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The story of a river

Think about a time in Australia when there weren't any cities or towns. Australia's First Peoples lived on the land in a sustainable way; the waterways were healthy and pristine environments. The water was crystal clear and good to drink. The waterways meant life for people, plants and animals. But with time, new people settled here from all over the world and the waterways began to change.

Thriving towns and farms of all sizes sprang up across the country, always sticking close to the waterways because for them - water was life too.

Trees were cut down to make room for farms and more towns. The ground was bare, and when it rained, dirt and plant material was washed into the rivers.

1. ADD content from jars 1 & 2 into the container of water to represent erosion and land clearing.

The cleared land was used for livestock and to grow food. The animals made tracks in the dirt when they went to the river to drink.

2. ADD content from jar 3 into the container of water to represent erosion.

To help the plants grow, fertiliser was used.

3. ADD content from jar 4 into the container of water to represent fertiliser running into the river.

Some houses and towns didn't have suitable toilets and pipes, and everything went straight into the river.

4. ADD content from jars 5 & 6 into the container of water to represent sewage.

All the cleaning materials used for homes and gardens were also washing into the river.

5. ADD content from jar 7 into the container of water to represent detergents.

Use the large wooden or plastic spoon or tongs to stir up the water. Look at what is happening to the water! Just imagine how your local river would have looked, it probably smelled too.

As the number of people continued to grow across Australia, there was a need for more and more houses and buildings. Mining helped find the materials for the roads and buildings.

6. ADD content from jars 8 & 9 into the container of water to represent mining material.





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People were not always putting their rubbish in the bin, and more and more rubbish ended up in our rivers and oceans.

7. ADD content from jars 10 & 11 into the container of water to represent rubbish.

Waste from towns, factories, cars and trucks washed into the rivers too.

8. ADD content from jar 12 into the container of water to represent oil and chemicals.

Many areas across Australia were impacted by the bushfires; the rain helped put out the fires but also washed ash and plant material into the river.

9. ADD content from jar 13 into the container of water to represent burnt bushland.

People loved visiting their local rivers and beaches. These areas were used for fun and enjoyment, like swimming, picnicking and fishing. Sometimes not everything was taken home again.

10. ADD content from jar 14 into the container of water to represent recreation.

Many people wanted to live near the coast and lots of trees and plants were removed to make room for more houses and boat harbours. This could change the way the sand and beaches move.

11. ADD content from jar 15 into the container of water to represent beach erosion.

What do you think happens next? Join the discussion: What can we do to stop these things getting in the waterways and the ocean?

Clean-up our waterways

Students can use plastic strainers to remove the floating pollution and discuss ways of stopping it returning. Once the water has settled, students can scoop off the cleaner water into a separate container.

The story continues:

Students at the local school wanted to clean up the water. As a community they went out to pick up rubbish from the riverbank and beaches.

12. Use the strainer to REMOVE the floating pollution.

Students joined up with their local Landcare group to plant trees, shrubs and grasses along the river bank and help protect the sand dunes.

13. Pour the dirty water slowly through the folded paper towel or filter paper in the funnel to REMOVE the dirt, rocks and sand pollution.

We can work together to help keep our waterways healthy

