



Name: _____

Class: _____ Date: _____

Which Cleans Best?

An activity of "A hardy plant is helping to save Lake Uru Uru"

Can a lake that has too much plastic and toxic waste be made clean again using just plants? Read "A hardy plant is helping to save Lake Uru Uru" (pages 16, *What's Up* May 2024) to find out how this is being done.

1. Watch this video on how the Uru Uru team uses totora plants to clean the lake.

Uru Uru Team (Bolivia) — Equator Prize 2023 Winner

➤ <https://youtu.be/KdP6aWmoQDM?si=z2zwX4gO1OgW9F4y>

(Equator Initiative, 10 Nov 2023)

2. Based on the *What's Up* story, fill in the details below.

Totora plant
What it is:
What makes it suitable for cleaning toxic water:
How the Uru Uru team places it in Lake Uru Uru:
Who the totora planters are:
The benefits of cleaning up Lake Uru Uru:
What the locals use it for (other than cleaning the lake):

3. The process of using plants to clean up soil, groundwater, and wastewater is called phytoremediation. In groups, carry out this simple experiment to demonstrate this.

a) Prepare the following items:

- A plant with roots intact (e.g. leeks), artificial plants, small stones, or marbles.
- Soil
- Three disposable water bottles
- Three beakers

b) Watch this video to see how the experiment is conducted.

DIY: Filter Groundwater Experiment

➤ <https://youtu.be/MaKKurZkVSE?si=-dZZCrDd6IHmwjO6>
(BJWSA, 24 Feb 2023)

c) Carry out the experiment with your group.

- Lay the bottles horizontally and cut out a large hole in the middle of each one. Fill each bottle half full with soil.
- Uncap the bottles. Place the plant (with roots) in one bottle, and stones in another. The third bottle should contain only soil.
- Place the bottles on a raised platform and place a beaker at the end of each spout.
- Add equal amounts of water to each bottle till it overflows and collects in the beakers.
- Place a beaker over the scale below. Look directly into the beaker. Slide it down the rows of letters starting from Row 1. Stop at the first row of letters that cannot be seen and record its number. (The clearer the water, the higher the number.)
- Fill in the table on the right. Repeat the experiment using other materials.

Scale: to measure turbidity	
1	W K O L Q W E A
2	W K O L Q W E A
3	W K O L Q W E A
4	W K O L Q W E A
5	W K O L Q W E A
6	W K O L Q W E A

Material	Reading

The material that cleans the water best is _____.

Experimenting on different materials helps us decide which one works well in filtering dirty water.