FILTRATION & EROSION

ULYSSES PHILOMATHIC LIBRARY SCIENCE AT HOME

THE STEP BY STEP

1 - Set out two cups, poke small holes in the bottom of each cup (using a needle, fork, scissor tip, etc), and fill each with soil.

2 - In one cup, plant the grass seed. Leave the other cup "dirt only."

3 - Water regularly and leave the seeded cup in the sun and in a few days you'll have a cup full of grass!

4 - Place each cup inside a second cup (with no holes in it) or place each cup in a bowl or on a plate (you want to catch the liquid that comes out of the cup)

5- Fill each cup with water until water is flowing out of the holes in the bottom of the cup. Be careful not to spill water over the side of the cup, you want all the liquid to be going "through" the cup. Compare the water that is coming out of the grass cup with the water coming out of the dirt cup.

ADDITIONAL QUESTIONS

Which cup filtered the water better? If you had to drink one, which one would it be?

What is different between the two cups? How is the grass filtering the water and slowing erosion?

If plants filter groundwater and reduce soil erosion, how do plants shape the landscape around you?

Which plants in your yard or community help filter water or control erosion? Are there changes you can make that will improve filtration or slow erosion?

ADDITIONAL RESOURCES

Can plants slow soil erosion?
https://www.scientificamerican.com/article/can-plants-help-slow-soil-erosion/

EPA: plants and water filtration
https://www3.epa.gov/safewater/kids/pdfs/activity_grades_4-8_plantsinwaterfiltration.pdf

Landscape: rain gardens
https://ag.umass.edu/landscape/fact-sheets/rain-gardens-way-to-improve-water-quality

Soil Experiments for Kids
http://www.fao.org/3/a-i7957e.pdf

Weathering and Erosion
https://www.youtube.com/watch?v=R-Iak3Wvh9c