

Baring All!

Activity prepared by Landcare Education - ph 92964727

Aim: To create 3D land formations using sand, mulch and soil. For this activity students need to consider how they will create particular land formations, as well as consider how they would reduce erosion caused by water on their land formation.
The teacher will test the durability of the student's models by pouring water from a watering can over the surface of each model.

VELS links: Domains and Levels: Geography (4) Science (3,4,5)

Materials: Mulch – composed of sticks, leaves, bark and woodchips
Soil
Sand

Questions to ask the students prior to starting

What are some land formations?

What is erosion?

What are some different types of erosion?



Steps in activity

1. Students construct a landscape using some of the examples of land formations given by students
2. Students will need to consider the best way to reduce erosion caused by water on their model landscape
3. Ask the students to reveal what type of land formation(s) they have constructed and what they have done to minimise erosion
4. Put each landscape model to the test by pouring water over them from a watering can.
5. Discuss with students ways of reducing soil erosion.

Background information

Land formation – If all the plant material is removed from a given area what remains is the lay of the land or in other words a particular land formation. Such things as mountains, hills, gorges, valleys, plains and cliffs are examples of land formations, which form a major part of the natural landscape.

Erosion – Naturally, mountains will eventually become plains as gravity, coupled with other erosive processes such as wind, rain and chemical activity slowly but constantly attack these structures. It can take many millions of years for a mountain to be reduced to flat country. You would have to live a very, very long time in order to see such landscape changes.



Humans have managed to speed up the erosive process in some areas by doing such things as removing vegetation. Vegetation removal not only sees the loss of plants, whose roots bind the soil together, as well as use the water that falls in an area, but the organic material that is added to the soil by these plants is also removed. The organic material enables water to filter gently through to the soil so that the water can be used where it falls, it also protects the soil from the impact of wind and water. Wind and water erosion are major contributors to soil loss in areas where vegetation has been removed.

Questions to ask at the end of the session

What could we do to our landscape models to reduce the amount of erosion that has occurred on them?

Answer: Cover the landscape feature with a layer of mulch, which will reduce the speed at which the water moves through to the precious soil below.

What can be done in the environment around us to reduce erosion?

Answer: Plant trees and other plants such as grasses, ground covers and shrubs and make sure that the ground is covered by a layer of organic material.

Extension activity

Spying on roots – pg 28

Buxton C (1989) *Our Land: Landcare Activities for Upper Primary*. Department of Conservations Forests and Lands, Victoria.

This activity has students growing plants from seed in cardboard milk containers. The activity extends over a number of weeks, as students have to monitor root development through a window created in the side of the container. Through observation the students see the benefits roots have in binding the soil thus minimising the impact water and wind have on soil loss.