Biological Weathering - Teacher's Notes

Biological Weathering

Mosses and lichen (pictured) are often the first of a series of colonising plants that break down rocks. These ancient simple plants use their roots to exploit any cracks or weakness in rocks to break them into sand and gravel. Sand and gravel is then colonised by more complex plants such as sundews and flowering plants.
Mosses and lichens need constant moisture because they have very simple root systems.

Moss and lichen on a rock near Wyalcatchem

Moss Graffiti

Select an outside wall in your school that does not get too hot or use an old piece of plasterboard. If you are using a wall, it is a good idea to inform school management and the cleaners first or your living graffiti may be cleaned off! There is no student worksheet for this but many short You Tube clips are available.

Materials

- A bucket half full of water
- About a handful of moss. (Look between the cracks of pavers or on the south side of walls and trees)
- Half a tub of yoghurt

- A blender or very hard working student with scissors
- A thick paint brush
- A water spray bottle

Method

1. Wash all the soil and grit out of the moss by sloshing it about in a bucket of water.
2. Blend the yoghurt and moss together.
3. You may need to add a little water to mix the green sludge to a paint-like consistency
4. Thickly paint a message in sludge on the wall or plasterboard. (Earth Science ROCKS!)
5. Spray with water to keep damp
6. Your success depends on local climate. Moss likes cool damp air.

Root systems are very efficient at slowly moving apart rocks. This tree root has prized apart the limestone cliff in Mosman Park on the Swan River.
This crack in coastal limestone may have taken a couple hundred years to reach its present size.

There may be areas in your schoolyard or on the pavement outside your school where tree roots are splitting sealed pathways or games areas.