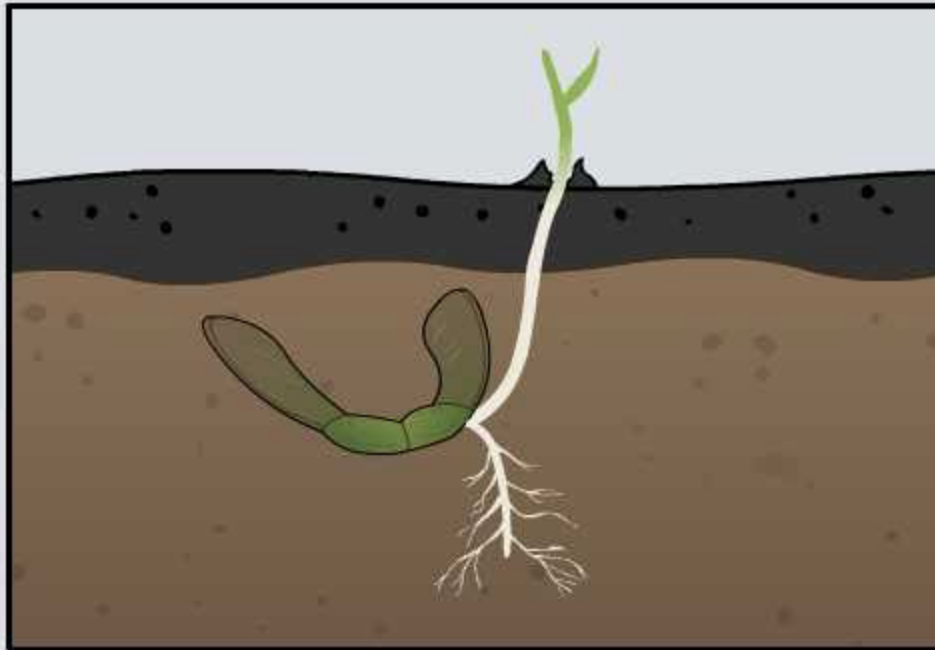


# Biological Weathering



What are the causes of biological weathering?



# Microorganisms and weathering

Lichen are a combination of algae and fungi that live together like a single organism.

Each organism provides resources that the other benefits from. For example, while the fungus provides shelter for the alga, the alga uses sunlight to make energy, which it shares with the fungus.

Lichen slowly break down rocks at the molecular level, using the minerals released from the stone as nutrients.



# Plants and weathering

Have you ever seen plants growing in cracks in the sidewalk, wall or rock? This happens because plants often use the wind to spread out their seeds.

When a seed falls into a crack it quickly germinates because of the moist and sheltered conditions.

However, as the seedling and its roots grow they put pressure on the crack, causing it to become deeper and/or wider.



Plants like ivy cause similar damage because they cling to buildings by root systems that penetrate cracks between bricks.

## How does biological weathering work?

**Biological weathering** is the disintegration of rock due to the actions of organisms such as bacteria, plants and animals.

Click "**play**" to find out more.



# Animals and weathering

Many types of animals, such as rabbits and moles, dig holes to look for food, or to create burrows for shelter.

If an animal digs into a crack in a rock it can cause it to shatter, split and break. The rock is then vulnerable to the freeze-thaw process and weathering by plants.



When an animal burrows it can also bring buried material to the surface, exposing it to weathering.

Rock can also be weathered by animals scratching it with their hooves or teeth while grazing.



What are some ways in which humans can cause weathering?

- Tourism:  
For example, archaeologists are concerned that ancient sandstone structures, like those found in the city of Petra, a World Heritage Site in Jordan, are being destroyed by people touching, walking and climbing on them.
- Vandalism and graffiti.

