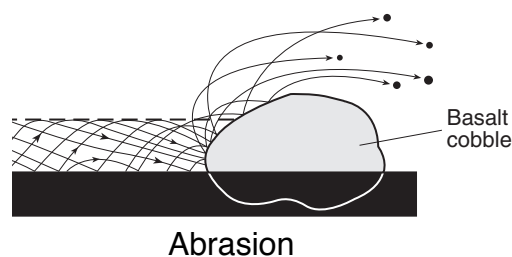
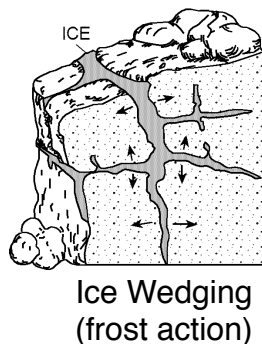
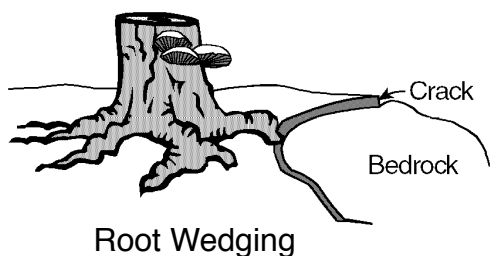
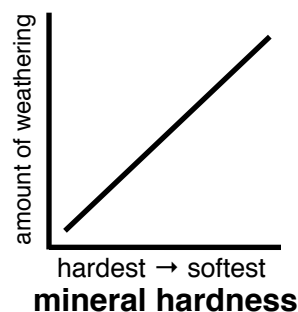
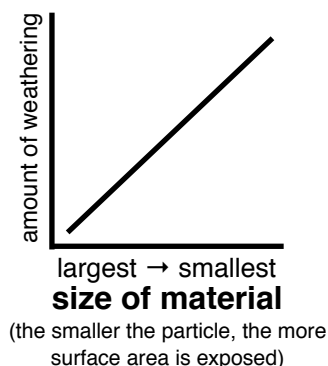


Weathering

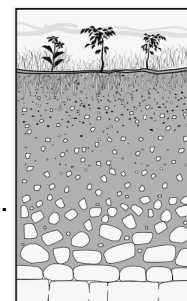
- The physical and chemical processes that change the characteristics of rocks on the Earth's surface.
- Weathering processes form **sediments** which include, from largest to smallest, boulders, cobbles, pebbles, sand, silt, and clay.
- **Physical weathering** is when rocks are broken into smaller pieces without changing chemical composition.



- **Chemical Weathering** is when rocks are changed chemically after contact with some other substance.
 - *Oxidation*- oxygen reacts with minerals forming oxides (for example, iron oxide, or rust)
 - *Carbonation*- carbonic acid reacts with minerals and dissolves them forming caves or sinkholes
 - *Hydration*- minerals absorb water causing them to weaken and crumble to clay
- **Climate** has a large impact on weathering.
 - In general, the wetter the climate, the more weathering takes place.
 - Hot and humid climates have a lot of chemical weathering
 - Cold and wet climates have a lot of physical weathering
- Weathering rates are also dependent upon **exposed surface area** and **mineral hardness**



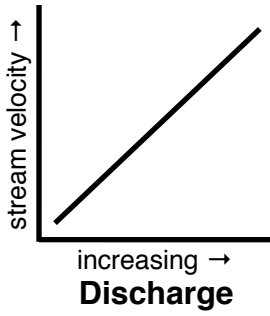
- **Soil** is the product of weathering and is made up of weathered rock particles and organic material (decaying plant and animal remains).
 - Soil develops into layers, or **horizons**, that become thicker over time with more weathering.



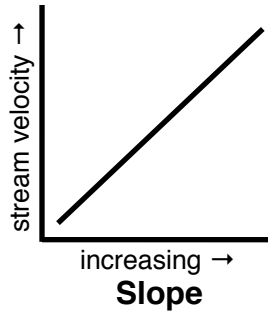
Erosion

- The transportation of sediments formed during weathering processes.
- The **force** behind all erosion is **gravity**, which cause streams and glaciers to flow.
- Evidence of erosion includes **transported sediments**, which are sediments that have been moved from where they formed. **Residual sediment**, on the other hand, remains in the place where it formed.
- **Erosional agents** include running water, glaciers, wind, waves, and gravity (mass movements).

- Running water and wind smooths and polishes rocks and glaciers scratch and gouge bedrock.
- ***Running water is the most predominant agent of erosion on earth.***



The more water in a stream,
the faster it will flow.



The steeper the slope, the
faster the stream will flow.



The faster the