

Weathering to Soil

Weathering of Granite

- **Granite** is primarily composed of **quartz** and **feldspar**.
- Weathering processes such as wind, rain, and frost wedging break down granite to form different soil textures.

Quartz

- **Quartz** is very resistant to chemical weathering but feldspar weathers easily. Because quartz is resistant to weathering it tends to form **sand** size grains.

Feldspar

- **Feldspar** on the other hand weather easily into **clay** minerals.

SILT

- **Silt** is mainly composed of quartz and feldspar minerals.
- It is created by processes that are capable of splitting sand-sized quartz crystals of rocks. The main process is **abrasion** during river transport, wind transport, and glacial movement.
- Silt is formed in semi-arid environments.

Weathering of Limestone

- Limestone is a sedimentary rock created from the remains of dead sea creatures and is predominately made up of calcium carbonate.
- Cracks run through limestone and allow water to pass easily through the rock.
- Water acts as an acid when it contacts calcium carbonate, dissolving the limestone.

Carbonation

- **Carbonation**- removal of rock in solution by acidic rainwater. In particular, limestone is weathered by rainwater containing dissolved CO₂ (carbon dioxide)

Hydrolysis

- **Hydrolysis - the breakdown of rock by acidic water to produce clay and soluble salts.**

OXIDATION

- **Oxidation - the breakdown of rock by oxygen and water, often giving iron-rich rocks a rusty-colored weathered surface**

