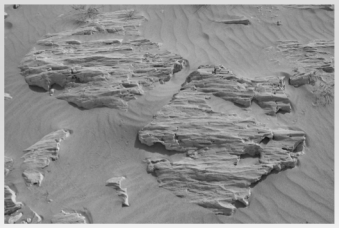
Breaking it Down

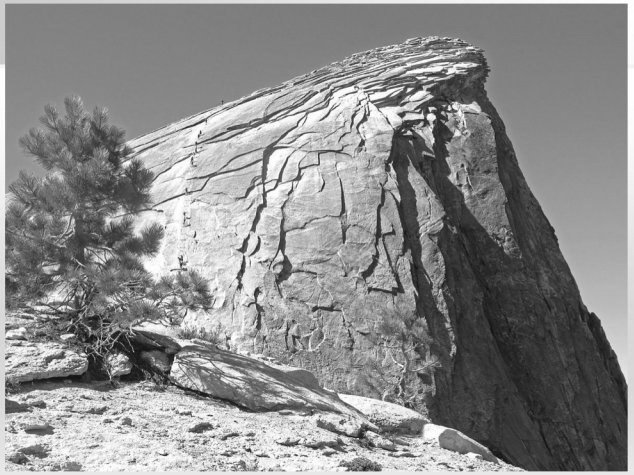
- Weathering – the process by which natural forces break down rocks.
- 2 types:
  - Physical (mechanical)
  - Chemical

Mechanical = Physical

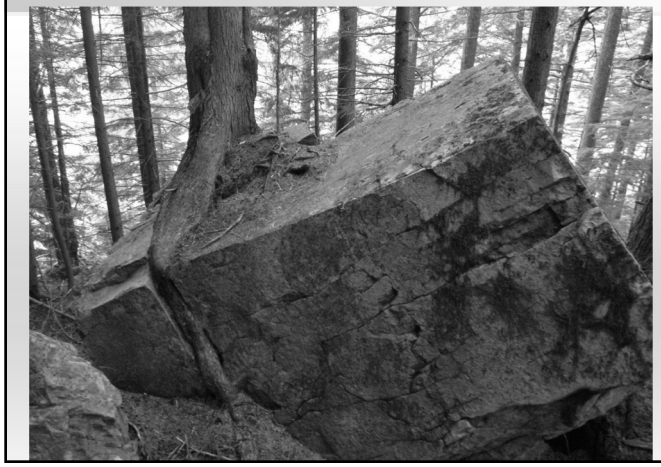
- Physical (mechanical) weathering – breaking up of rocks by physical forces.
- Rocks are split apart, but what they're made of doesn't change.
- Examples:
  - Ice wedging
  - Pressure release
  - Plant root growth
  - Abrasion



Ice Wedging

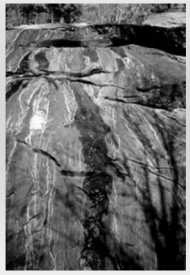


Plant Root Growth



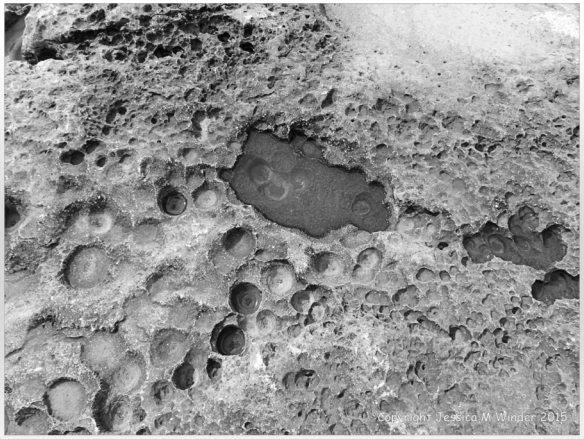
Chemical = Composition Change

- **Chemical Weathering** – the breakdown of rocks by chemical reactions that change the rock's composition.



- Minerals in rocks react with:
  - Air
  - Water

Dissolving



Rusting

- Most minerals contain iron.
- The iron reacts with oxygen & water in the air and forms rust.
- Rusting produces a reddish color.

Weathering occurs at different rates

- Most weathering takes a very long time.
- The rate of weathering can depend on:
  - **Surface area** – the more surface exposed, the faster it will break down.
  - **Rock composition** – different types of rocks break down faster than others.
  - **Climate** – water and heat aid in chemical weathering, while freezing and thawing help in mechanical weathering.