

Lesson – Weathering

THE FOLLOWING VIDEO HAS BEEN APPROVED FOR
ALL AUDIENCES
BY THE EARTH SCIENCE TEACHERS ASSOCIATION OF AMERICA, INC.

THE VIDEO HAS BEEN RATED

1	INTELLIGENT UNDER 15 REQUIRES TEACHER ASSISTANCE
---	--

STRONG EARTH SCIENCE LANGUAGE, DETAILED DIAGRAMS, AND SUPER AWESOMENESS.

- I can define weathering
- I can differentiate between chemical & physical weathering
- I can state examples of chemical weathering
- I can state examples of physical weathering
- I can describe the factors that affect the rate & type of weathering
- I can explain soil formation

Weathering is the **breakdown of rocks** at or near Earth's surface

Chemical Weathering – a change in mineral or chemical composition

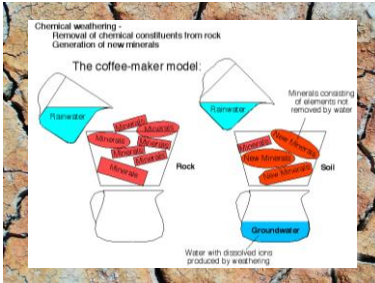
Physical Weathering – breaking into smaller pieces

- I can define weathering
- I can differentiate between chemical & physical weathering
- I can state examples of chemical weathering
- I can state examples of physical weathering
- I can describe the factors that affect the rate & type of weathering
- I can explain soil formation

Chemical Weathering

- Oxidation – when iron combines with water to make rust

- Hydrolysis (water)
 - Universal solvent
 - Can dissolve most rock materials



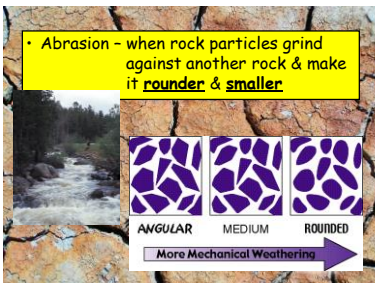
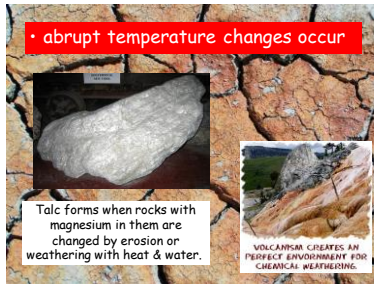
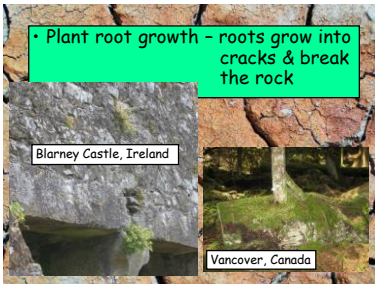
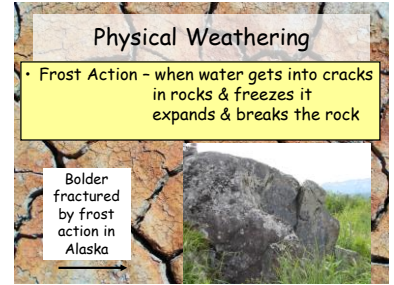
- Acids
 - Decaying organic matter mix with groundwater & aid in dissolving rocks

- Water combines with carbon dioxide in the air to form carbonic acid

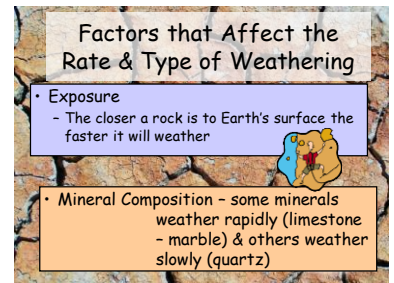
The mortar between the granite blocks has been dissolving in acid run-off and leaving stalactites hanging from the arch.

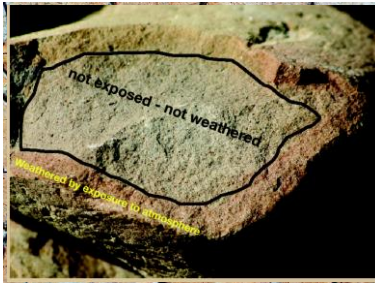


- I can define weathering
- I can differentiate between chemical & physical weathering
- I can state examples of chemical weathering
- I can state examples of physical weathering
- I can describe the factors that affect the rate & type of weathering
- I can explain soil formation



- I can define weathering
- I can differentiate between chemical & physical weathering
- I can state examples of chemical weathering
- I can state examples of physical weathering
- I can describe the factors that affect the rate & type of weathering
- I can explain soil formation





- Particle Size
 - When the rock is smaller there is more surface area for weathering to occur

For Example:
Think about sugar cubes vs. powdered sugar dissolving in a liquid

- Climate - in warm moist climates chemical weathering occurs more rapidly



Exposed bedrock underneath the Blarney Castle, Ireland

- I can define weathering
- I can differentiate between chemical & physical weathering
- I can state examples of chemical weathering
- I can state examples of physical weathering
- I can describe the factors that affect the rate & type of weathering
- I can explain soil formation

Soil Formation

- Soil - formed by **weathering** and **biologic activity**

- I can define weathering
- I can differentiate between chemical & physical weathering
- I can state examples of chemical weathering
- I can state examples of physical weathering
- I can describe the factors that affect the rate & type of weathering
- I can explain soil formation