**Topic: Mechanical and Chemical Weathering**

Weathering: the breaking \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_near Earth’s surface

|  |  |
| --- | --- |
| Mechanical Weathering | Chemical Weathering |
| 1. When \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ break rock into smaller pieces
2. Does\_\_\_\_\_ change the rock’s\_\_\_\_\_\_\_\_\_\_\_\_
3. **Frost Wedging**
	1. Water enters cracks and crevices in rocks
	2. Water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_the cracks

Examples: 1. **Unloading**
	1. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of rocks overlying igneous rocks
	2. **Exfoliation**: slabs of outer rock \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ loose

Examples:1. Biological Activity
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Examples: | 1. The transfer of rock into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ new compounds
2. Agents of Chemical Weathering
	1. Water

Examples:* 1. Oxygen

Examples:* 1. Carbon Dioxide

Examples:* 1. Spheroidal Weathering

Examples: |

Topic: Erosion & Mass Movements

**What is Erosion?**

Removal and\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from one location to another

**Agents of Erosion**



**Deposition**:

* Materials are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in another location
* Final stage of erosion

**How does wind erode soil?**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Sand Dunes
	+ Mounds or ridges of sand
	+ Wind also can cause them to move

**How do humans control erosion?**

* Planting \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ called windbreakers
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hillsides
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the contours of hills
* Rotating crops



**Soil**

Part of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the growth of plants

**Regolith**
Layer of rock and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that cover most of Earth’s land surface

Soil Formation

Weathering of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ that is carried away (Think rock cycle)

**Soil Formation Factors**

1. Parent Material
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the mineral matter in the soil
2. Time
	1. Important in all geologic processes
	2. The\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a soil has been forming, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ it will become
3. Climate
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on soil formation
	2. Influences of temperature and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ affect rate, depth and type of weathering
4. Organisms
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ organic matter in soil
5. Slope
	1. \_\_\_\_\_\_\_\_\_\_\_\_ slopes often have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ developed soils

**Soil Composition**:

45% \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
25% \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
25% \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5% \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Decayed remains of organisms


Soil Texture

1. Sand (large size)
2. Silt (feels like flour)
3. Clay (small size)
4. Loam (mix of all three; best for plants)

Mass Movements

**Mass Movement**

* The transfer of rock and soil \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_due to gravity
* Classified by

Mass Movement Types:

Why mass movements are more frequent?

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Droughts
* Less vegetation
* Increased storms

Human Prevention of Mass Movements:

* Increasing soil stability:
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ vegetation
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (maintaining) the landscape
	+ Effective \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

