Types of Weathering

Weathering describes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Weathering effects \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and naturally occurring rocks like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_wearing down into hills *(over millions of years).* **Example** of manmade object that has been weathered- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Two Main Types** |  |
| **Mechanical/Physical Weathering** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rocks with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ WITHOUT changing their chemical composition. |
| 1. Ice wedging/Frost Action   http://cf067b.medialib.glogster.com/media/62/62386655ab0a761d031bb34de98deb85751b4d8fbb7fc5eca5e3b82d3b9e2903/frost-wedging.gif | An example of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ change.  PROCESS: Water freezes in cracks/spaces and **\_\_\_\_\_\_\_\_\_\_\_\_\_**forcing **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.  \*The main cause of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are weathered quickly this way due to this b/c they are exposed to warm temperatures during the day and freezing at night. |
| 1. Pressure   http://gcsegeographyfirsthand.weebly.com/uploads/7/6/9/2/7692446/5247440.jpg?292 | \*Occurs when **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  It is then able **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. The outer layers are then stripped away called-**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**and can cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  --------------------------------------------------------------------  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** can cause pressure too by wedging their\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. As the roots grow and expand, they can put pressure on the rocks to split. |
| **Chemical Weathering** | Occurs when rocks and minerals undergo changes in their composition as the result of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| 1. Hydrolysis | Caused by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is the main agent of chemical weathering b/c it dissolves some minerals and carries them away |
| 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Can occur when rocks containing \_\_\_\_\_\_\_\_\_\_\_come into contact with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ will form. |
| 1. Plant ACIDS | When naturally occurring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ come into contact with rock, minerals will be dissolved. The rock is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |

Effects of Climate on Weathering –

* The **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**of a particular region determines how fast weathering occurs.

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| **Chemical Weathering** | **Mechanical Weathering** |
| Most rapid in areas with lots of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ temperatures. | Will occur rapidly in places where there is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| Tropical areas | Temperate area; colder mountains |

Why is weathering so important???? Leads to the formation of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.