

WEATHERING & EROSION ACTIVITY

Name: _____

Date: _____

Part 1: Mechanical Weathering

<http://ees.as.uky.edu/sites/default/files/elearning/module07swf.swf>

Click "NEXT" 2 times

1. Frost Wedging: (click the red thermometer)
 - What property of water makes frost wedging possible?
 - Describe HOW this process occurs.

Click "NEXT"

2. Exfoliation:
 - What causes this to occur?
 - What does the end result look like?
 - What type of rock is most likely to show this?

Click "NEXT" 3 times

3. Tree Roots: (click the blue "grow")
 - Describe HOW this process occurs.

Click "NEXT"

4. Abrasion:
 - Describe HOW this process occurs.
 - Where is this most likely to occur?

Part 2: Chemical Weathering (same website)

Click "NEXT"

5. Dissolution:
 - Where is this most likely to occur?
 - What role do climate AND acids play?

Click "NEXT"

6. Oxidation:
 - What is the more common name for this process?
 - Where is this most likely to occur?

Click "NEXT"

7. Hydrolysis:
 - Where is this most likely to occur? (be sure to add info on warm vs cold)
 - Explain how hydrolysis affects soil in tropical rainforests.

SUMMATION: (found under "soil Resources" at bottom of Hydrolysis information)

8. Summarize the relationship between soil erosion and soil formation.

Part 3: Shape It Up

<http://www.kineticcity.com/mindgames/warper/>

Click START and complete the chart. Play again until you've seen ALL the scenarios below.

(circle the correct choice)

(circle the correct choice)

	Wind	Water	Volcano	Glaciers	100 yrs	10,000 yrs	2,000,000 yrs
	Wind	Water	Volcano	Glaciers	100 yrs	10,000 yrs	2,000,000 yrs
	Wind	Water	Volcano	Glaciers	100 yrs	10,000 yrs	2,000,000 yrs
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9. Which of these four forces is NOT a force of erosion?
10. Click “LEARN MORE” and give a one sentence summary for each force.
- Volcanoes –
 - Water –
 - Glaciers –
 - Wind –

Part 4: Erosion

<http://www.pbs.org/wnet/nature/lessons/breaking-it-down/video-segments/1702/>

Watch “Hawaiian Coastal Cliffs” video segment. (~~pause the video before Water Erosion segment~~)

11. Were the Hawaiian coastal cliffs mainly created by coastal water erosion?
12. What is the main force behind a landslide?
13. Based on your new knowledge, which of the following do you think played a greater role in the formation of these cliffs: chemical or mechanical weathering? WHY?

Watch “Water Erosion” video segment.

14. There were three places with flowing water (road, river, and waterfall). Which has the greatest velocity?
15. What is the relationship between velocity and the size of sediment particles being transported?
16. What measures have Hawaiians taken to prevent their homes from landslides?
17. Will the mesh seen in the clip prevent weathering? WHY or WHY NOT?
18. What is the ultimate end result of these efforts?