

## ES202 Video Exercise: Weathering and Mass Wasting

These review questions pertain to the Earth Revealed Video Series: Part 15 – Weathering and Part 16 – Soil and Mass Wasting. View both parts, while watching, take notes and answer the following review questions.

### Earth Revealed – Weathering and Soils

1. What is the significance of Cleopatra's Needle with respect to rock weathering?
2. List and discuss some examples of physical and mineralogical features of rock that affect resistance to weathering (e.g. what are some factors that make rocks easier or harder to weather over time).
3. List and briefly discuss two factors that control rates of weathering
4. Define exfoliation. Draw a sketch to show this process by which rock masses weather at the Earth's surface.
5. What physical properties render some rocks more prone to weathering than others,
6. What is the process by which buried rock masses are brought from their environment of formation within the Earth to the surface?
7. How is acid rain formed? Why is natural rainfall slightly acidic (with pH less than 7)? Why is acid rain such an environmental concern?
8. List and briefly discuss the three main types of soil horizons illustrated in the video. Draw a cross sectional sketch to accompany your answer.
9. What is a wind break and why is it used
10. List some examples why rock weathering and soil development are important to your survival on planet Earth.

## **Part 16 - Earth Revealed - Mass Wasting**

11. How many lives were taken as a result of the eruption and lahar at the volcano in Columbia? What types of hazards to human health and economy are associated with mass wasting processes?

12. What is "mass wasting"? How does it relate to weathering?

13. List and discuss three factors that control mass wasting processes.

14. What mass wasting process may transport material at greater velocities than debris flow?

15. What type of mass wasting causes the most annual economic damage in the U.S.?

7. List, discuss and summarize the 4 main types of mass wasting covered in the video. Explain what they are and how they work. Drawings are helpful.

8. Give three examples of how human land-use can enhance mass wasting processes.

9. What are the economic and social implications of mass wasting in urban and developed areas. Key your answer to how these factors might relate to Coastal Oregon.