**Video Study Guide: Earth Revealed  
Episode 15: Weathering and Soils**

Read the questions first. Then answer them while watching this episode of "Earth Revealed". If you miss it in class you are still responsible for the viewing this segment and answering the questions. The video is available online at [http://www.learner.org/vod/video.html?sid=78&po=15](http://www.learner.org/vod/video.html?sid=78&po=17) . The index for these programs is online at [**http://www.learner.org/resources/series78.html#**](http://www.learner.org/resources/series78.html). If you do not have an internet connection at home, view it after school or during study hall in the media center. Each segment is 30 minutes long.

1. What happened to Cleopatra's Needle?
2. Why does rock material change when exposed to surface conditions?
3. Discuss mechanical weathering.
4. Describe exfoliation, and the fracturing of rock due to pressure release.
5. What is ice wedging?
6. How much does water expand when it freezes?
7. Discuss chemical weathering.
8. How do mechanical and chemical weathering work together to disintegrate rock?
9. What are the principle agents of chemical weathering?
10. How does rain water become acidic?
11. How do climate and temperature affect the rate of weathering?
12. Discuss chemical weathering, mineral stability, and how they relate to the order of crystallization.
13. Discuss the formation of acid rain and its impact on surface materials.
14. Discuss the formation of soils and soil horizons.
15. What circumstances led to the Dust Bowl of the 1930's?
16. How do irrigation practices affect the long term health of soils?
17. What have you seen blowing away from the equipment in every scene during the last 10 minutes of this episode?
18. Why is soil one of our most important natural resources.