**Video Study Guide: Earth Revealed
Episode 14: Intrusive Igneous Rocks**

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=14> . The index for these programs is online at <http://www.learner.org/progdesc/index.html?uid=78> . 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 factors contribute to the formation of magmas?
2. Discuss in detail the differences between mafic, intermediate, and felsic magmas.
3. How does cooling history relate to the texture of the resulting rock?
4. How do textural variations within the dike illustrate the effect of cooling history?
5. Discuss cooling and the formation of phaneritic, aphanitic, and glassy textures.
6. What is Bowen's Reaction Series and how does it describe magma crystallization?
7. How does water content affect the temperature of crystallization?
8. How does differentiation relate to the evolution of magmas?
9. How does magma composition relate to plate boundaries?
10. Describe the formation of intermediate (andesitic) magmas in subduction zones.
11. Describe granitic (felsic) rocks.
12. What are xenoliths and what do they represent?
13. Discuss the classification of intrusive igneous bodies.
14. Describe the formation of a batholith.
15. How does the study of igneous rocks help in our interpretation of earth history?
16. Compare and contrast igneous rocks found on the continents and ocean floor.
17. What can geologists learn from the study of intrusive igneous rocks?