

### **Video Review Exercise – Radioactive Age Dating (Radioactive\_Dating.mpeg)**

Watch the video and answer the following review questions.

1. How is time measured, provide examples.
2. What are the two Carbon isotopes discussed in the video? How do they differ?
3. How does carbon-14 form?
4. What is the daughter product of C-14 radioactive decay?
5. True or False: Both C12 and C14 are taken in by plants during photosynthesis.
6. What is the ratio of C14 to C12 atoms in plant material?
7. What does the term half-life mean? What is the half-life for C-14?
8. What types of geologic materials are amenable to C-14 dating?
9. How is carbon-14 extracted from geologic samples?
10. True or False: Computers in 1981 were much bigger than they are today?
11. What compound is marine fossil coral composed of? Is it possible to C-14 date coral?
12. True or False: C-14 can be used to reconstruct ancient pre-historic landscapes.
13. How far back in time can C-14 be used to age date geologic materials? What controls the limit to age dating?
14. What other radioactive isotopes can be used for numeric age dating?
15. Explain potassium-40 radioactive decay sequence? What is the half-life of K-40?
16. Provide examples of geologic materials that can be dated with K-40.
17. How is K-40 and Argon-40 measured in geologic specimens?
18. What is the half-life of U238? And what is its daughter product?