Case Details

Case Title:

Finding Barney

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Grade Level(s):

Middle School

Subject(s):

Earth Science

Summary:

PBS is hosting "Finding Barney" contest. Middle school students will create a puppet show based on an archeological dig that found human bones and dinosaur fossils in proximity of each other. Students will present their winning puppet show to a local Kindergarten class.

Adapted from:

Ford, A. L., & Sheehan, E. (2008). Who let the bones out? Retrieved July 14, 2009 from: http://www.cse.emory.edu/cases/casedisplay.cfm?case_id=904

Suggested Citation:

McKenzie, Y. M., & Pokorny, J. J. (2009). *Finding Barney*. Retrieved June 03, 2012 from Emory University, CASES Online Web site: http://www.cse.emory.edu/cases/casedisplay.cfm?case_id=3167

Notes:

This case was adapted from: Ford, A. L., & Sheehan, E. (2008). Who let the bones out? Retrieved July 14, 2009 from Emory University, CASES Online Web site: http://www.cse.emory.edu/cases/casedisplay.cfm?case_id=904 This case includes a PowerPoint presentation that was created by Darby Proctor, reprinted with permission.

Learning Objectives:

1. Examine and interpret primary data, examining the validity of their own and others' interpretations and formulating a scientific argument.
2. Describe the principles of uniformitarianism and relate them to stratigraphic layering and geological age.
3. Distinguish relative from absolute dating.
4. Describe the process of radioactive decay and how it permits radiocarbon dating and potassium-argon dating of fossil material.
5. Describe the process of radioactive decay and radioisotope dating.
6. Construct stratigraphic models showing how fossils of different ages can be near each other but in different stratigraphic layers.

7. Accurately diagram and label artifacts as they are observed

National/State Standards:

Georgia Performance Standards
SCSh1. Students will evaluate the importance of curiosity, honesty, openness, and skepticism in science. (NSES Content Standard A)
S6E5. Students will investigate the scientific view of how the Earth's surface is formed. (NSES Content Standard D)
c. Describe processes that change rocks and the surface of the Earth
f. Describe how fossils show evidence of the changing surface and climate of the Earth
g. Describe soil as consisting of weathered rocks and decomposed organic material.