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Activities

Radioactive Dating

Name: _____ Date: _____

Radioactive elements help scientists solve mysteries about Earth's history and how life evolved. You'll find out more in this Planet Diary activity.

Directions

- Start with this video on Dating Fossils from PBS Online. Read the introduction on the right, then click the video. Turn the captions on and use the video controls to pause or rewind. Use the information to answer Workspace questions 1 through 3.
- Take a closer look at Radiocarbon Dating. Follow the arrows in the diagram to trace how carbon-14 forms and decays. Then answer questions 4 and 5.
- Look at the graph of the amounts of carbon-14 and nitrogen-14 below the diagram. Answer the last question.

Workspace

1. What does the uranium in a rock eventually turn into as a result of radioactive decay?

2. How does a scientist use the amount of radioactive material in a rock to learn how old it is?

3. How old are the oldest rocks found on Earth?

4. How does carbon-14 form?

5. Over time, what happens to the original carbon-14?

6. Based on the graph, how long does it takes for the amounts of carbon-14 and nitrogen-14 to become equal?

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