

USING THE SCIENTIFIC PROCESS TO STUDY HUMAN EVOLUTION

This worksheet complements the Click and Learn [Using the Scientific Process to Study Human Evolution](#).

INSTRUCTIONS

As you proceed through the slides, watch the embedded video clips, and answer the questions below in the space provided.

QUESTIONS

Slides 1-4:

1. Why is context important when studying fossils?
2. Briefly explain what the **Principle of Superposition** and **Principle of Association** tell us about fossils.

Principle of Superposition:

Principle of Association:

3. What do geologists mean when they say fossils were deposited “at the same time”?
4. Why might this create problems for a geologist?
5. Briefly explain how radiocarbon dating works.



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6. How far back can radiocarbon dating be used to determine the age of fossils?

7. What kind of dating do geologists use for older fossils?

8. This method for dating older fossils works best on volcanic rock, but very few fossils are preserved in volcanic rock. Discuss how scientists are still able to use this method to determine the approximate age of fossils found in other layers.

Slide 5: Watch the video with Dr. White describing what he refers to as the “Paleo Pipeline.”

9. The “Paleo Pipeline” is an example of the scientific process used to study fossil evidence. Describe the key steps in each phase of the Paleo Pipeline.

Search:

Recovery:

Preparation:

Analysis:

Publication:



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Slide 6:

10. What does all science begin with?

Slide 7: Watch the video with Dr. White and answer the questions on the slide.

11. a. What was his question?

b. What was the evidence?

c. What was his conclusion?

Slides 8-10:

12. What evidence suggests that humans and dinosaurs never coexisted?

Slides 11-15:

13. Identify the key elements of the scientific process and the skills scientists use as they engage in the scientific process.

14. Did humans make stone tools that were 2.6 million years old? If not, who may have made them?

Slide 16:

15. Does the scientific process have an end? **Explain** your answer.



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Slides 17-18:

16. What were the two questions Dr. White and his colleagues asked about human evolutionary history?

17. How did Dr. White and his colleagues test the first question?

Slides 19-21:

18. What evidence suggests that modern humans have existed for at least 80,000 years?

19. What evidence suggests that the human lineage has changed?

Summary:

20. Summarize what you have learned about using the scientific process to study human evolution.

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