

Cross-Curricular Discussion: Q

Directions: The following list of discussion questions is provided to help you take notes, brainstorm ideas and test your thinking in order to be more actively engaged in class discussions related to this article. All questions in this section are related to topics covered in "[What makes a dinosaur?](#)"

EARTH AND BIOLOGICAL SCIENCES

Discussion questions:

1. What are the four major eras of Earth's history, and what happened to life during each one?

2. What are the three periods of the Mesozoic era, and what happened to dinosaurs and other reptiles during each period?

3. How are fossils formed and preserved?

4. What general features did many theropods have in common? What are some examples of well-known dinosaurs that belonged to the theropods?

5. What general features did many sauropods have in common? What are some examples of well-known dinosaurs that belonged to the sauropods?

6. What general features did many ornithischians have in common? What are some examples of well-known dinosaurs that belonged to the ornithischians?

Extension prompts:

7. What are some very common fossils of marine animals that were wiped out during the Permian-Triassic and Cretaceous-Tertiary extinctions?

8. What evidence in terms of the diversity of ornithischians, when compared with theropods and sauropods, could indicate that our current knowledge about ornithischians may be very incomplete or flawed?

ENGINEERING AND EXPERIMENTAL DESIGN

Discussion questions:

1. How could DNA analysis of living species potentially shed light on the relationships among extinct animals?

2. Where might it be possible to find DNA or amino acid sequences of extinct species in order to analyze and compare them?

Extension prompts:

3. How might you automate the process of looking for key similarities and differences among bones of different species?