

Answer Guide

Evolution: Life Through Time

- 1. Brachiopods.** They are among the most common finds in the fossil record. In some places, we find so many brachiopod fossils that the rocky ground is practically made of them. Brachiopods were one of the first animals to evolve a hard shell.
- 2. It preyed on a variety of sea creatures that were living at the time.** These included squid-like animals, sharks, and other *placoderms*. Like all *placoderms* (PLACK-oh-durmz)—the first fishes with jaws—*arthrodires* had bony plates covering their head. They also had a special joint that allowed their head to tilt upward as their jaw opened down. This enabled them to open their mouths extra wide.
- 3. Flowers and Fruit.** The first plants used spores to reproduce, and then plants began to produce seeds. Fruit didn't evolve for another 200 million years!
Coal.
- 4. Synapsids.** Mammals evolved from this group and are now the only synapsids on Earth. The distinguishing skeletal feature of synapsids is a single opening at the back of the skull—other groups have two or none.
Humans/Mammals.

Grades 3-5

- 5. A Venn Diagram allows students to visually look at the similarities between two things. Students will write details about how *Anchiceratops* and *Majungasaurus* are different in the outer circles. Then they will write the similarities where the circles overlap.**
Same: Time period (Cretaceous), Dinosaurs
Different:
***Anchiceratops:* Walked on all fours, ate plants, beak instead of teeth, bulky, horns.**
***Majungasaurus:* Walked on two legs, ate meat, legs not as stocky, large teeth, no horns**
- 6. Birds.**
- 7. Opposable thumbs.** This means that the thumb curves around to meet the tips of the other fingers. These specialized hands are ideal for grasping. Many primates use them to grip branches as they move through the trees.
- 8. 96%, Neanderthals.**
- 9. Answers will vary.**