

The Very First Dinos?



A team led by John Flynn, above, found this jawbone fossil of an early plant eater (right).



New finds shed light on early dinosaur history

Dinosaurs vanished from the earth some 65 million years ago. But when did they first appear? In October 1999, scientists moved closer to answering that question. An international team of paleontologists announced the discovery of what may be the oldest dinosaur fossils ever found.

The team, led by John Flynn of Chicago's Field Museum, found the jaws of two unknown dinosaur species in a riverbed on the island of Madagascar, off the east coast of Africa. The scientists believe the jaws belonged to prosauropods, plant eaters with small heads and long necks.

"I like to think of them being somewhat like kangaroos," says Flynn. "They probably walked about on four legs and stood up on two legs to feed. They didn't hop around, but they were similar in size to a small kangaroo."

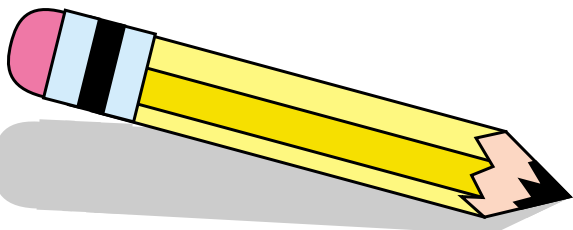
HOW OLD ARE THE BONES?

The precise age of the fossils has not been determined. The oldest known fossils are 228 million years old. These may be 2 million years older. "The very first dinosaurs may well be these things," says Neil Shubin, a dinosaur expert at the University of Pennsylvania.

The fossils shed new light on an important time in dinosaur history, when dinosaurs were dividing into meat eaters and plant eaters. Apatosaurus, a 36-ton plant-eating dinosaur that was one of the largest animals ever to walk the earth, is thought to have descended from prosauropods. "This find," says Flynn, "will help us understand what early dinosaurs looked like."

Reader's Response

- 1 Why do you suppose scientists are so interested in discovering when dinosaurs first appeared on the earth?
- 2 How do you think scientists can determine from an ancient jawbone that an animal was a plant eater?
- 3 Why does Flynn compare the prosauropod to a kangaroo?
- 4 Why would a long neck be an advantage to a plant eater?



Writer's Response

- 1 Why do you think the author chose this topic for an article in *Time for Kids*?
- 2 In the second and last paragraphs, the author makes sure readers know what a prosauropod and an apatosaurus are. Why is that important?
- 3 Why do you suppose the author chose the photographs that accompany this article?
- 4 Why do you suppose the author talked to Neil Shubin in addition to John Flynn?



Many writers think drafting is the hardest part of the writing process. They stare at a blank sheet of paper, and they just can't figure out how to get started. But I think drafting can be the best part of writing. It's the time when you try out

your ideas and see where they lead you.

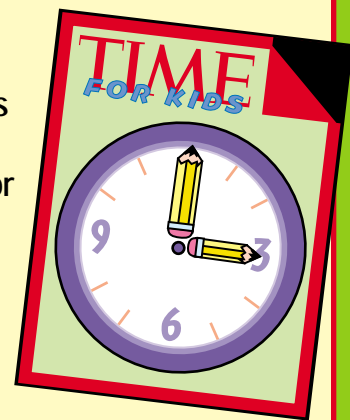
Imagine jumping headfirst into a swimming pool. That's what drafting is. You plunge into your ideas in whatever order they come to you. When you are drafting, you are thinking aloud on paper. But *don't* think about punctuation or rules of grammar or transitional sentences. Worry about those things later. This is your first draft. The idea is to get your ideas down on paper now. Then you can shape and revise those ideas in later drafts. You'll want each draft to be a little better—tighter, smoother, more complete—than the one before. Oh, and save *all* your drafts. You may find you like a sentence or paragraph you wrote in one of them and want to use it in your final draft.

WRITE TIME

Newsletters and magazines are full of articles like this one that are meant to provide information or to explain something. Choose a kids' magazine. Write an informative article for it.

Make an illustration or a chart that shows the relative size of the prosauropod and the apatosaurus. Add others you know about. Include the graphic in a brochure or a poster about dinosaurs.

Imagine that you were part of John Flynn's team of paleontologists. Write a postcard home about the discovery.



Accurate Adjectives

These sentences are fairly ho-hum and a little vague. Think of some adjectives that might be more accurate and descriptive to replace the ones below. Write your new and improved sentence on the line below each sentence.

1. I have a big dog.

2. You have pretty hair.

3. This is a delicious cake.

4. Mrs. Yamie gave us hard homework.

5. We live in the small house on the corner.

6. My brother has smelly feet.

7. That's a weird color.

8. You have a messy room.

9. It's a hot day today.

10. That's a cool car.

Card 12: The Very First Dinos?

Discussion Questions

Use these discussion questions to help build the students' reading skills.

1. Why do you think scientists are so interested in discovering when the first dinosaurs appeared on Earth?
2. How can a scientist tell from a jawbone that an animal was a plant eater?
3. Why would having a long neck be an advantage for a plant eater?

Vocabulary

Use these vocabulary words and definitions to aid the students' comprehension of the article.

1. **vanished**—disappeared
2. **international**—from all over the world, many countries
3. **paleontologists**—scientists who dig for fossils
4. **species**—specific animal groups
5. **prosauropods**—an early type of plant eating dinosaur with small heads and long necks
6. **precise**—exact
7. **fossils**—bones and other remains of animals that have turned to rock by being buried for millions of years
8. **determined**—found out
9. **apatosaurus**—a plant eating long neck dinosaur that used to be called brontosaurus
10. **descended**—came from

Card 12: The Very First Dinos? *(cont.)*

“Writer’s Response” Suggested Answers

Following are suggested answers for the “Writer’s Response” section on the back of the card.

1. Why do you think the author chose this topic for an article in *Time for Kids*?

The author probably chose it because he knows kids are always interested in dinosaurs and this discovery was big news.

2. In the second and last paragraphs, the author makes sure readers know what a *prosauropod* and an *apatosaurus* are. Why is that important?

He wanted to be sure readers knew exactly what the two words meant because the words are essential to understanding the article.

3. Why do you suppose the author chose the photographs that accompany this article?

He probably wanted to show one of the jawbones that were the center of this story. And the picture of John Flynn demonstrates the close attention to detail that it takes for his job.

4. Why do you suppose the author talked to Neil Shubin in addition to John Flynn?

It is likely that he wanted to question another expert to confirm the importance of this find.