

### Follow-up Discussion

The most important part of this segment is to examine both the facts and beliefs generated by the class in their "Everything We Know About..." list. Research indicates that students will retain their previous misconceptions — in preference to the new information — until they actively recognize and correct their own errors. Because of this, it is important to lead students to the correct ideas while identifying and correcting any misconceptions from the class list. After reviewing the list, encourage students to share the answers they got to the questions raised before viewing the program.

Raising a thought-provoking question is a good way to assess the overall depth of understanding. A couple of suggestions are listed below:

1. Explain why you think the dinosaurs disappeared from the Earth 65 million years ago.
2. How are fossils helpful in learning about dinosaurs?

### Follow-up Activities

- Ask your school's art teacher to help students make impressions, casts and molds as representations of the ways in which fossils were formed.
- As a simulation of how paleontologists try to identify the fossil bones of dinosaurs and reassemble them, have third or fourth grade students dissect owl pellets and analyze the bones contained in them by matching them against a bone chart for small mammals.
- Have students choose a specific period within the Mesozoic Era to research and create a diorama or illustration of dinosaurs from their chosen time period.

### Internet Resources

- [www.enchantedlearning.com/subjects/dinosaurs/index.html](http://www.enchantedlearning.com/subjects/dinosaurs/index.html)  
The Zoom Dinosaurs web site is an entertaining online textbook all about dinosaurs.
- [www.unmuseum.org/whatdino.htm](http://www.unmuseum.org/whatdino.htm)  
This site contains dinosaur animations, music, and facts.
- [www.cotf.edu/ete/modules/msese/dinosaur.html](http://www.cotf.edu/ete/modules/msese/dinosaur.html)  
This site, developed as part of the NASA "Classroom of the Future," allows children to explore the environment during the reign of dinosaurs with activities and lessons.

### Suggested Print Resources

- Berger, Melvin. *Did Dinosaurs Live in Your Backyard?* Scholastic Reference, New York, NY; 1998.
- Most, Bernard. *Dinosaur Questions*. Harcourt Brace, San Diego, CA; 1995.
- Nolan, Dennis. *Dinosaur Dream*. Scott Foresman, New York, NY; 1999.
- Norman, David. *The Humongous Book of Dinosaurs*. Stewart, Tabori & Chang, New York, NY; 1997.
- Shealy, Dennis. *Dinosaurs Alive!* Random House, New York, NY; 2001.

#### TEACHER'S GUIDE CONSULTANT

Conrad M. Follmer

25 years as a K-5 Science & Math Coordinator for a Pennsylvania public school system, currently an independent consultant to elementary schools.

#### TITLES

- |   |  |
|---|--|
| • ALL ABOUT AMPHIBIANS                      | • ALL ABOUT DINOSAURS                    |
| • ALL ABOUT ANIMAL ADAPTATION               | • ALL ABOUT ENDANGERED & EXTINCT ANIMALS |
| • ALL ABOUT ANIMAL BEHAVIOR & COMMUNICATION | • ALL ABOUT FISH                         |
| • ALL ABOUT ANIMAL LIFE CYCLES              | • ALL ABOUT FOOD CHAINS                  |
| • ALL ABOUT ANIMAL NEEDS                    | • ALL ABOUT MAMMALS                      |
| • ALL ABOUT BIRDS                           | • ALL ABOUT REPTILES                     |
| • ALL ABOUT BUGS                            |  |

Teacher's Guides Included  
and Available Online at:

**libraryvideo.com**  
The Leading Educational Video, DVD & CD-ROM Distributor

800-843-3620

**SCHLESSINGER**  
MEDIA  
— A DIVISION OF LIBRARY VIDEO COMPANY —

Teacher's Guide and Program Copyright 2000 by Schlessinger Media,  
a division of Library Video Company  
P.O. Box 580, Wynnewood, PA 19096 • 800-843-3620  
Executive Producers: Andrew Schlessinger & Tracy Mitchell  
Program produced and directed by Burrud Productions Inc.  
All rights reserved



## All About Dinosaurs

Grades K-4

This guide is a supplement, designed for educators to use when presenting this program in an instructional setting.

**Before Viewing:** Research in learning suggests that it is important for the teacher to discover what the students know — or think they know — about a topic, at the start of a new unit, so that their accurate conceptions can be validated and reinforced, and their misconceptions identified and corrected. Therefore, after reviewing the pre-viewing discussion questions provided for your class, create a "Everything We Know About..." list. Preview key vocabulary words and have students raise additional questions they hope will be answered by this program. Most importantly, students should be told that as "science detectives" they must listen closely, so that after viewing the program, they will be able to tell whether or not the facts/beliefs they put on their list were scientifically accurate.

**After Viewing:** After a brief discussion about the program, challenge your "science detectives" to prove or disprove the accuracy of the facts they put on their "Everything We Know About..." list. Discuss what else they learned and use the follow-up questions and activities to inspire further discussion. Encourage students to research the topic further with the Internet and reading resources provided.

**SCHLESSINGER**  
**SCIENCE LIBRARY**

## Program Summary

Many millions of years before humans lived, dinosaurs made their appearance, thrived and then disappeared from the Earth. We call that time the Age of the Dinosaurs. Humans did not appear until 63 million years after dinosaurs became extinct! The reptiles that we know as dinosaurs came into existence during the Mesozoic Era, a time of warm climates, lots of swamps and huge green plants. They thrived for almost 170 million years through the three periods of the Mesozoic Era, finally disappearing at the end of the Cretaceous Period approximately 65 million years ago.

The word dinosaur comes from Greek words meaning “terrible lizard.” During the Mesozoic Era, the dinosaurs that roamed the Earth varied in size, appearance and habits as much as all the different animals that we are familiar with today. In the Triassic period, dinosaurs began to appear. Later on, in the Jurassic period, other large dinosaurs like the huge Apatosaurus developed. During the Cretaceous period, dinosaurs became most abundant. Giant creatures like Tyrannosaurus rex shared the Earth with dinosaurs as small as chickens! By the end of the Cretaceous period, though, dinosaurs had disappeared from the planet.

While we may never know exactly what color dinosaurs were, scientists agree that all of them had small brains, four limbs and were hairless. Some walked on two legs, some on four; some ate only plants and some were strictly meat eaters. Many plant-eating dinosaurs were covered with heavy plates or armor that provided protection from meat-eaters. Others had the ability to run fast and could escape from predators.

Many dinosaur fossils have been discovered by paleontologists — people who study fossils — buried in the Earth’s crust. Some fossils were formed when dinosaurs sunk and died in tar pits. Other plants and small animals became fossils when they got trapped in sticky tree resin which hardened into amber. But not all fossils are the actual remains of living things. Sometimes scientists find impressions such as footprints made by animals long ago. Paleontologists have learned a lot about dinosaurs just from the location and layout of fossil remains.

Many scientists believe that the extinction of the dinosaurs occurred after a huge meteorite hit the Earth, filling the sky with tons of dust and blocking out the sunlight for months. Plants could not survive and the climate became cold. Dinosaurs could not adapt to the changing conditions and became extinct.

## Vocabulary

The following words are included for teacher reference or for use with students. They are listed in the order in which they appear in the video.

**dinosaur** — Land-dwelling reptiles that lived during the Mesozoic Era and became extinct around 65 million years ago. The word “dinosaur” means “terrible lizard” in Greek.

**reptile** — Cold-blooded animals with backbones and scales that breathe air and lay leathery eggs.

**amphibians** — Cold-blooded animals with backbones and smooth, moist skin. They spend part of their lives in water and part of their lives on land.

**Mesozoic Era** — The time beginning about 230 million years ago and ending 65 million years ago. This was the Age of Dinosaurs.

**Triassic Period** — Over 200 million years ago. The period of time when reptiles and the first mammals evolved.

**Jurassic Period** — Around 200 to 150 million years ago. The time of dinosaurs and mammals related to horses and elephants.

**Cretaceous Period** — The period of time from around 150 million years ago when dinosaurs dominated the Earth until 65 million years ago, when they abruptly disappeared.

**herbivores** — Animals that eat only plants.

**carnivores** — Animals that eat other animals.

**predators** — Animals who hunt and kill other animals for food.

**prey** — Animals that are eaten by predators.

**fossils** — The remains or evidence of living things buried in the Earth for millions of years.

**paleontologists** — Scientists who study fossils.

**amber** — A yellowish-brown fossil made from tree sap that has hardened over millions of years. Amber often contains small insect fossils that were trapped when the tree sap was soft and sticky.

**imprints** — Fossils, like footprints, that were filled in by mud that hardened over time.

**molds** — Fossils formed when an organism decays, leaving an empty space in their exact shape.

**meteorite** — A small piece of rock or metal that speeds through space and crashes into the Earth’s surface.

**extinction** — When a whole group of animals dies out completely because it cannot adapt to changes in the environment.

**evolution** — The natural process by which animals change over time.

## Pre-viewing Discussion

Before students generate their list of “Everything We Know About...” this topic, stimulate and focus their thinking by raising these questions so that their list will better reflect the key ideas in this show:

1. What is a dinosaur?
2. How long ago did dinosaurs live on Earth?
3. How do we know about dinosaurs?

After the class has completed their “Everything We Know About...” list, and before watching the show, ask them what other questions they have that they hope will be answered during this program. Have students listen closely to learn if everything on their class list is accurate and to hear if any of their own questions are answered.

## Focus Questions

You may wish to ask your class the following questions to assess their comprehension of key points presented in the program:

1. Were humans and dinosaurs on Earth at the same time?
2. When did dinosaurs disappear from the Earth?
3. What does the word “dinosaur” mean?
4. What color were the dinosaurs?
5. Can you describe several ways in which dinosaurs were different from one another?
6. What is an herbivore?
7. What is an example of a plant-eating dinosaur?
8. What is a carnivore?
9. What is an example of a meat-eating dinosaur?
10. How do we know so much about dinosaurs?
11. What is a fossil?
12. How are fossils formed?
13. What is a paleontologist?
14. What is amber? What types of fossils are found in amber?
15. Why are the La Brea tar pits in California so helpful to paleontologists?
16. What is an imprint fossil?
17. What things can be learned about dinosaurs by examining the location where a fossil is discovered?
18. Why do scientists think the dinosaurs became extinct?
19. What are some animals alive today that are related to dinosaurs?