



UNIT 7

Dinosaurs Come Alive

WARM UP

Discuss these questions with a partner.

1. What do you know about dinosaurs?
2. Have you ever seen a movie about dinosaurs? Describe it.
3. Why do you think people are interested in dinosaurs?

▲ A model of a *Tyrannosaurus rex* shows how it ate its prey.



Masiakasaurus

When:
65–70 million
years ago

Where:
Madagascar,
Africa

With its long,
sharp teeth,
Masiakasaurus
was a powerful
predator.

Before You Read

A. Discussion. Read the timeline, paying attention to the words in blue. Then answer the questions below.

The Triassic Period

248 million years ago

The Jurassic Period

206 million years ago

The Cretaceous Period

144 million years ago

65 million years ago

248 million years ago: Earth's warm and dry temperatures are perfect for reptiles. These animals become common on Earth, and some grow to huge sizes.

240 million years ago:
The oldest-known dinosaur,
discovered by paleontologists
in Madagascar, dates back to
this time.

65 million years
ago: Dinosaurs
become extinct.

1. What kind of animals were dinosaurs?
2. When did dinosaurs die out completely?
3. What is a *paleontologist*?
4. What does a *predator* eat?

B. Predict. Read the four questions in the paragraph headings on the next page and answer **Yes** or **No**. Then read the passage to check your answers.

DINOSAURS: FACT & FICTION

1 You learned about dinosaurs in school. Maybe you have seen them in a **museum**. But how much do you really know about these animals?

Were dinosaurs just big reptiles?

5 For years, scientists thought dinosaurs were big, dumb,¹ and cold-blooded—in other words, just **giant** reptiles. Some dinosaurs *were* huge. But many were about the size of modern-day birds or dogs. Were dinosaurs warm- or cold-blooded? Paleontologists are not sure. But they believe
10 some were intelligent. Of course, no dinosaur was as smart as a human or even a monkey. However, some smaller dinosaurs—like the two-meter (six-foot) *Troodon*—had fairly large brains.



▲ A scientist with a mechanical *Troodon*

Was *Tyrannosaurus rex* a powerful predator?

15 Some scientists think the **opposite** is true. In the movies, *T. rex* is often a **speedy** giant, but in fact, this dinosaur could not run very fast. **Physically**, it was too large. **In reality**, *T. rex* probably moved as fast as an elephant. Also, *T. rex* had very small arms. Without strong legs
20 or arms, this dinosaur probably wasn't a powerful **hunter**. It may have been a scavenger instead, only eating animals that were already dead.



▼ *Tyrannosaurus rex*

Did an asteroid kill the dinosaurs?

An asteroid hit Mexico's Yucatán Peninsula about 65 million years ago. It created a 180-kilometer (110-mile) wide crater called *Chicxulub*. Many believe this asteroid caused the extinction of the dinosaurs. But even before this, dinosaurs were already dying out² around the world, for many reasons. At the end of the Cretaceous period, for example, the global **climate**
30 was changing: the Earth's temperature was getting colder.



▲ A crater caused by an asteroid hitting the Earth in Australia

Are all dinosaurs now extinct?²

Dinosaurs **completely** disappeared about 65 million years ago. However, scientists believe modern-day birds are descendants³ of certain dinosaurs. If this is true, then dinosaurs' **relatives** are still walking—and flying—among us!

¹ If something is **dumb**, it is not smart.

² If something **dies out** or becomes **extinct**, it becomes less common and finally disappears.

³ Your **descendants** are people in later generations who are related to you.

□ Reading Comprehension

A. Multiple Choice. Choose the best answer for each question.

Gist

1. Another title for this reading could be _____.
a. What Really Killed the Dinosaurs?
b. The Truth about Dinosaurs
c. Dinosaurs Discovered in Mexico
d. Our Favorite Dinosaurs

Inference

2. Which statement about the *Troodon* is probably true?
a. It was smarter than a monkey.
b. It was warm-blooded.
c. It was a huge animal.
d. It was quite intelligent.

Vocabulary

3. Some paleontologists think *T. rex* was a scavenger (line 21).
What does this mean?
a. It had small arms.
b. It was a powerful killer.
c. It was similar to an elephant.
d. It ate animals that were already dead.

Detail

4. What is *Chicxulub*?
a. a huge hole caused by an asteroid
b. a type of dinosaur found in Mexico
c. a time in dinosaur history
d. an animal *T. rex* ate

Detail

5. At the end of the Cretaceous period _____.
a. some dinosaurs started to fly
b. humans appeared on Earth
c. the Earth's temperature was changing
d. dinosaur numbers were increasing in Mexico

B. True or False. Read the sentences below and circle **T** (true), **F** (false), or **NG** (not given in the passage).

1. Some dinosaurs were small.	T	F	NG
2. All dinosaurs had small brains.	T	F	NG
3. Paleontologists agree that dinosaurs were cold-blooded.	T	F	NG
4. <i>T. rex</i> was a fast runner.	T	F	NG
5. A young <i>T. rex</i> probably had feathers like a bird.	T	F	NG
6. Some scientists believe that modern-day birds are related to dinosaurs.	T	F	NG

Vocabulary Practice

A. Matching. Read the information and match each word in red with its definition.

T. rex and other giant land dinosaurs went extinct about 65 million years ago. Today, you only see these animals in a museum. But what about the huge animals that lived in the seas millions of years ago? Are they still alive—living in the world's lakes and oceans?



▲ An ancient sea reptile fossil in Beijing, China

For centuries, stories about sea monsters have existed in many countries. One of the most famous is Scotland's Loch Ness Monster (often called "Nessie"). In reality, these legendary animals are similar to actual reptiles that lived in the world's seas 65–250 million years ago. For example, Nessie is physically similar to a type of plesiosaur—a sea reptile with a very long neck. But is Nessie really an ancient sea monster, still alive in a lake in Scotland? Probably not. Plesiosaurs (like the dinosaurs) died out completely about 65 million years ago.

1. actually, in fact _____
2. huge, very large _____
3. totally _____
4. related to the body _____
5. a building where historical items are kept for people to see _____

B. Completion. Complete the information using words from the box. One word is extra.

climate hunter opposite relative speedy

The ancient sea monster *Dakosaurus* (nicknamed "Godzilla") is a(n)

1. _____ of modern-day crocodiles. This South American sea reptile was a(n) 2. _____ swimmer and a powerful 3. _____.

Sea reptiles like *Dakosaurus* were top predators. And some, like *Tylosaurus*, even attacked sharks. But in the end, sharks were the real survivors. Today, they are still alive, but changes in the Earth's 4. _____ caused the larger sea reptiles to become extinct.

Word Link

We can add **-er** or **-or** to words to form nouns. These nouns often describe a person who does a certain action or job, for example, *hunter* or *inventor*.



▲ *Carnotaurus*
(67–82 million years ago).
Discovered in Argentina.

▲ *Epidendrosaurus*
(160 million years ago).
Discovered in China.

7B

Strange Dinosaurs

Before You Read

A. Completion. Read the definitions. Then complete the paragraph below with the correct form of the words in blue. What is unusual about the dinosaurs pictured above?

claws: the long, sharp nails on the toes of some animals
fossils: the bones or remains of an animal or plant
horns: the hard things on top of an animal's head
unearth: to take something out of the ground; to discover something

Dinosaurs looked strange. Some had 1. _____ on their heads. Others had 2. _____ like giant knives. Several (like the *Carnotaurus*) had huge bodies but very small arms. Paleontologists continue to 3. _____ different dinosaurs all over the world. Each time, these dinosaur 4. _____ are stranger than before. Today, scientists are asking: what was the purpose of these unusual features—the horns, the strange claws, the small arms? And what can they tell us about dinosaurs?

B. Predict. Look at the pictures on the next page. What do you think is unusual about this dinosaur? Read the passage to check your ideas.

MYSTERY OF THE TERRIBLE HAND

1 Name: **Deinocheirus**

Lived when: 70 million years ago

Discovered where: Mongolia

Whose arms are these? Paleontologists have **sought**

5 an answer to this question for almost forty years.

In the 1960s, paleontologists unearthed a pair of giant arms in Mongolia. The **length** of each, when fully **extended**, was 2.4 meters (eight feet). The claws were 26 centimeters (ten inches) long. Paleontologists called the animal *Deinocheirus* (meaning “**terrible hand**”).

So what did this animal look like? Paleontologists aren’t sure. Many times, scientists have **examined** the area where they found the arms. But since the original discovery, 15 they have unearthed only a few other bones of this dinosaur.

Despite this, scientists have some ideas about *Deinocheirus’s* **appearance**. Physically, this animal’s arms and hands are similar to *ornithomimids*—a type of dinosaur that looked like a modern-day ostrich¹ and used its arms for catching food. But 20 when paleontologists use the size of *Deinocheirus’s* arms to try to **estimate** the size of its body, it seems to have been a huge animal—almost 12 meters (40 feet) long. This is almost as big as a *T. rex*!

Other scientists have a different **opinion**. They think 25 *Deinocheirus* was a smaller dinosaur with extremely long arms. But why would a little animal need **limbs**² so long? To climb trees or to hunt for food, perhaps? “The body is a **mystery**,” says Thomas Holtz, a paleontologist at the University of Maryland in the U.S. “It might not be an ornithomimid at all. 30 But then what is it?” Until paleontologists find new fossil evidence, this question remains **unanswered**.

Did You Know?

Today, China and Argentina are “hot spots” for important dinosaur discoveries.



▲ *Deinocheirus*: the body is a mystery.



▲ Was *Deinocheirus* a huge animal?

¹ An **ostrich** is a very large bird that cannot fly.

² Your **limbs** are your arms and legs.

Reading Comprehension

A. Multiple Choice. Choose the best answer for each question.

Purpose

1. What is the main purpose of the reading?
 - to explain how paleontologists find dinosaur fossils
 - to compare *T. rex* and *Deinocheirus*
 - to talk about different dinosaur discoveries in Mongolia
 - to describe an unusual type of dinosaur

Detail

2. *Deinocheirus* _____.
 - had very short fingers on its hand
 - had very long arms
 - had very few bones in its body
 - could fly like a bird
3. Which modern-day animal is *Deinocheirus* most similar to?
 - a monkey
 - a horse
 - an ostrich
 - a lizard

Vocabulary

4. What does the word *evidence* mean in line 31?
 - information
 - questions
 - mysteries
 - beliefs

Inference

5. Which statement would Thomas Holtz probably agree with?
 - Deinocheirus* was a huge and dangerous predator.
 - T. rex* was a relative of *Deinocheirus*.
 - Deinocheirus* was a small dinosaur with very long arms.
 - We don't know for sure what *Deinocheirus* looked like.

B. Completion. Complete the paleontologist's notes with information from the reading.

Name: *Deinocheirus* (meaning: 1. _____)

Discovered when: 2. _____ Discovered where: 3. _____

Today, paleontologists have only the dinosaur's 4. _____.

Each was about 5. _____ long.

Two ideas about what this dinosaur looked like:

Maybe it was a 6. _____ animal

(about the same size as 7. _____)

Maybe it was a 8. _____ animal with really

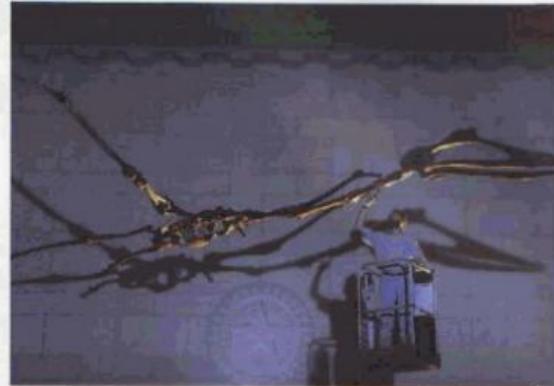
9. _____. The dinosaur probably used these to
10. _____ or _____.

□ Vocabulary Practice

A. Completion. Complete the information using the correct form of words from the box. One word is extra.

appearance estimate examine extend length seek

The largest ever flying animal lived 85 million years ago. It was a type of pterosaur (or “flying reptile”) called *Quetzalcoatlus*. When this animal’s wings were 1. _____, each was about 12 meters (40 feet) in 2. _____ —the size of some airplanes! But did pterosaurs come from a smaller animal? And how did pterosaurs learn to fly? For years, paleontologists have 3. _____ answers to these questions and others.



- ▲ A paleontologist with the bones of *Quetzalcoatlus* in Texas Memorial Museum, U.S.A.

Recently, one of the smallest pterosaurs was discovered in China by a team of Chinese and Brazilian paleontologists. In 4. _____, the tiny pterosaur (called *N. crypticus*) was a small, toothless reptile with feet similar to a bird's. Scientists 5. _____ that about 120 million years ago, this animal lived in trees in China. The world's huge pterosaurs, they believe, were descendants of *N. crypticus*.

B. Words in Context. Complete each sentence with the best answer.

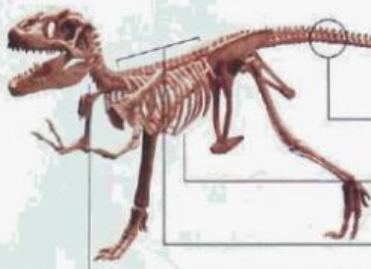
Word Partnership

Use *opinion* with:
different opinion, **expert** opinion,
honest opinion, **popular** opinion,
ask an opinion, **give** an opinion,
share an opinion.

Dinosaur Discovery

A. Preview. Label the picture using the words in the box. Use a dictionary to help you.

neck tail rib back bone vertebra



1. _____
2. _____
3. _____
4. _____
5. _____



B. Summarize. Watch the video, *Dinosaur Discovery*.

Then complete the summary below using the correct form of words from the box. Three words are extra.

climate	completely	examine	extend
giant	hunt	length	museum
opinion	opposite	relative	seek

Near the town of Sabinas in Mexico, scientists have discovered a(n) 1. _____ dinosaur. The animal is about 15 meters (50 feet) in 2. _____ and 4.5 meters (15 feet) tall. Why is this discovery important? It shows that Sabinas was once a jungle. Sabinas is now a desert. The 3. _____ in this area has changed 4. _____. Why? Scientists are 5. _____ an answer to this question.

An engineer first discovered some of the dinosaur's bones. He was 6. _____ the land for a construction project. Later, children found more bones. Now paleontologists are 7. _____ for the rest of the fossils. In their 8. _____, this might be the most complete dinosaur skeleton in Latin America. The mayor of Sabinas wants to keep the dinosaur's fossils in a(n) 9. _____ for people to see. He also wants paleontologists around the world to know about "Sabinasaurio" and other dinosaur discoveries in the area.

C. Think About It.

1. How do you think the mayor of Sabinas feels about the discovery?
2. Which of the dinosaur discoveries in this unit do you think is most interesting? Why?

 To learn more about dinosaur discoveries, visit elt.heinle.com/explorer