

# Click®

## Fantastic Fossils

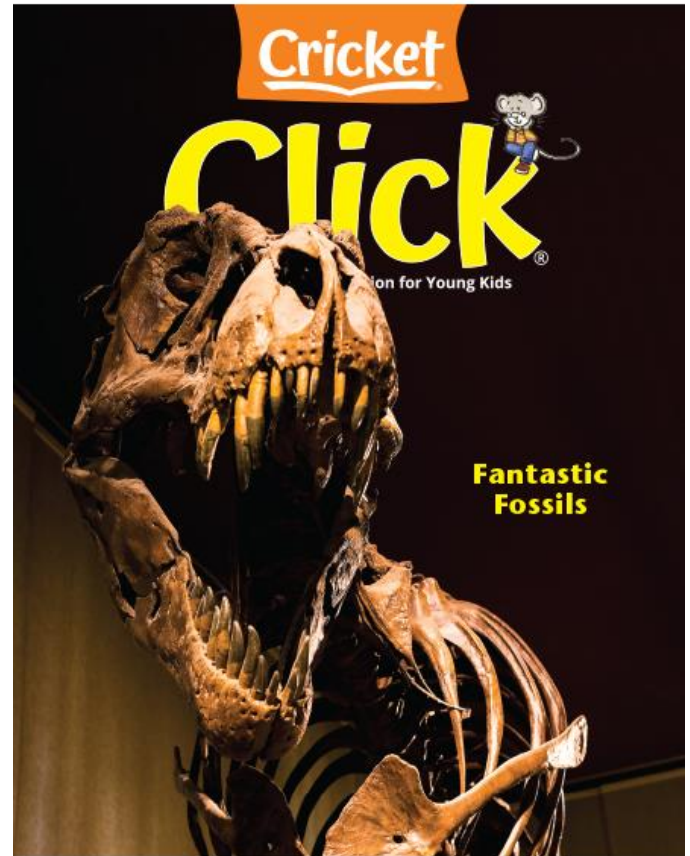
Dinosaurs are an extinct group of reptiles that were the dominant terrestrial life form on Earth more than 245 million years ago. Take a bite into this month's issue of CLICK magazine to learn about the characteristics of these "terrible lizards" and how humans are preserving dinosaur remains.

## CONVERSATION QUESTION

What do we know about dinosaurs?

## TEACHING OBJECTIVES

- Students will learn facts about a variety of dinosaur species.
- Students will learn how fossils are prepared and studied.
- Students will learn how dinosaurs protected themselves from threats.
- Students will classify information.
- Students will obtain information from a nonfiction text.
- Students will examine the structure and function of a dinosaur's defensive features.
- Students will complete sentence frames using second-person perspective.
- Students will participate in a chocolate chip cookie excavation activity.
- Students will research and share how animals protect themselves in the natural world.



In addition to supplemental materials focused on core STEM skills, this flexible teaching tool offers vocabulary-building activities, questions for discussion, and cross-curricular activities.

## SELECTIONS

- **Can You Do Dino?**  
Creative Nonfiction, ~570L
- **Meet a Fossil Expert**  
Informational Interview, ~680L
- **Dino Defenses**  
Expository Nonfiction, ~570L

## Can You Do Dino?

pp. 7–10, Creative Nonfiction

Dinosaurs of all shapes and sizes walked the Earth millions of years ago. Young readers will learn about the special characteristics that set some species apart. Colorful drawings enhance this high-interest article.



## RESOURCES

- Classifying Information: Dino Details

## OBJECTIVES

- Students will learn facts about a variety of dinosaur species.
- Students will classify information.
- Students will complete sentence frames using the second-person point of view.

## KEY VOCABULARY

- balance** (p. 7) to make something steady by keeping weight equal on both sides
- plod** (p. 9) walk slowly and heavily

## ENGAGE

**Conversation Question:** What do we know about dinosaurs?

Present the title of the article and get students motivated to learn with a simple kinesthetic activity. First, have all students stand up and ROAR! Then ask them to walk like a T-rex and then like a stegosaurus. How might an Apatosaurus (long-neck) walk? Put on some music and allow a few minutes for “Dino Dancing.”

## INTRODUCE VOCABULARY

Post and discuss the two vocabulary words and definitions. Have students Think-Pair-Share with a partner. Give them the following directives, one at a time:

- Stand up and **balance** on your right foot. Next, balance on your left foot. What did you have to do to keep yourself balanced? Try balancing a pencil across your index finger.
- Would you be more likely to **plod** up a hill or down it? Why?

## READ & DISCUSS

As a post-reading activity, lead a discussion based on these questions:

- Why did the Tyrannosaurus rex have big teeth and strong jaws?
- How did dinosaurs use their tails?
- Why did the stegosaurus have to walk slowly?
- Which dinosaur is one of the largest animals that ever lived?
- How did the Argentinosaurus’s long neck help it to get food?

## SKILL FOCUS: Classify Information

**INSTRUCT:** Elicit from students that the main idea of the article is to provide readers with information regarding various dinosaurs. Review the article with the students. Point out the subheading on the top of each page and explain that these subheadings are written as sentence starters. Present the *Classifying Information: Dino Details* graphic organizer. Tell students they will be using information from the article to place each dinosaur characteristic in the correct column of the chart.

**ASSESS:** Circulate as students are working. Have students place the facts in the correct columns and then glue the facts down after you have given a thumbs-up. Challenge students to add an additional fact.

## EXTEND

**Language Arts:** This article’s second-person point of view helps readers feel like they are part of the action. Review the article with students, noting how each page begins with the sentence starter “If you were a (dinosaur name)” and then goes on to describe features. Give students practice using second-person point of view by having them complete the sentence frames below with details about an animal of their choice.

If you were a/an (animal name), you’d eat \_\_\_\_\_.

Your arms would \_\_\_\_\_. Your legs would \_\_\_\_\_.

Your tail would \_\_\_\_\_.

## Dino Details

**Classifying Information** Look at the pictures and read the words in the article. Cut out the descriptors at the bottom of this page. Then place them correctly on the sorting mat below.

Tyrannosaurus Rex	Stegosaurus	Oviraptor

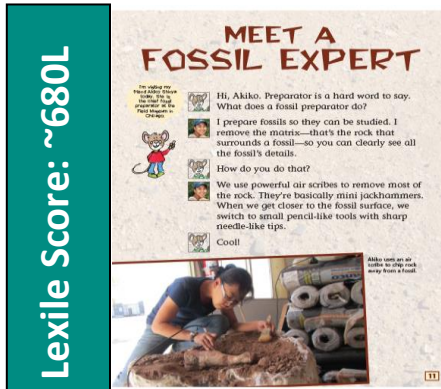
Cut and place in the correct column.

feathered body but cannot fly	giant, pointy plates on the back	can crush bones in one bite
has cheeks to hold food	short arms with two fingers	lays eggs in a nest

## Meet a Fossil Expert

pp. 11–15, Informational Interview

This article takes students on a journey to explore the work of a fossil preparator. Click's interview with Akiko Shinya teaches readers about the methods and tools that are used in this specific field of study.



## RESOURCES

- Obtain Information: Fossilized Fun

## OBJECTIVES

- Students will learn how fossils are prepared and studied.
- Students will obtain information from a nonfiction text.
- Students will participate in a chocolate chip cookie excavation activity.

## KEY VOCABULARY

- expose** (p. 12) to uncover something hidden
- fieldwork** (p. 12) the work of gathering information by going outside

## ENGAGE

**Conversation Question:** What do we know about dinosaurs?

Introduce the article and have students share what they know about fossils. Tell students that one type of fossil evidence that scientists often find is imprints. This can include bones, footprints, or leaf patterns preserved in mud that later turned to stone. Get students excited to learn by having them create clay prints. Give each student a small lump of clay and instruct them to flatten it out. Give groups a tray of small objects that they can press into the clay to create impressions. Have students switch tables and identify the prints.

## INTRODUCE VOCABULARY

Display the following statements and underline the key vocabulary terms. Demonstrate how to infer the meanings of new words by using context clues and background knowledge. Then have partners work together to determine the meaning of each word. Reveal definitions.

- She bit into the cupcake to expose the cream filling.
- The scientist did fieldwork by studying the fish in a pond.

## READ & DISCUSS

Post and discuss questions prior to reading the article aloud. Then reread the article, pausing when answers to the questions are revealed.

- What tools are used to prepare fossils to be studied?
- Why must fossil preparators be patient? When do YOU need to be patient?
- Why does the team use grid paper once they have exposed part of a fossil skeleton?
- How do bones look on the inside?
- What is Akiko's very favorite dinosaur? Why?

## SKILL FOCUS: Obtaining Information

**INSTRUCT:** This article presents the reader with detailed information about how fossils are discovered, excavated, and prepared. Present the *Obtain Information: Fossilized Fun* graphic organizer. Tell students they will be reviewing the article and highlighting sentences that answer the *what, why, how, and where* questions presented. Answers will be recorded on the worksheet.

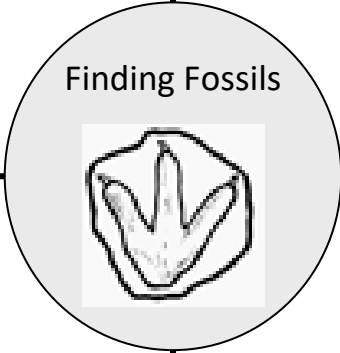
**ASSESS:** Reconvene and discuss answers. Ask: *What do you think is the best part of Akiko's job? Why?*

## EXTEND

**STEM:** Provide each student with a chocolate chip cookie, a toothpick, and a paper plate. Have students "excavate" the chocolate chips by using the toothpick to pick away at the cookies without breaking the chips. Remind students that this can be slow, delicate work and that it is important to be patient. How many chips did students successfully excavate? Have students discuss the process and the results.

## Fossilized Fun

**Obtain Information** Gather information from the text that answers the **what**, **where**, **why**, and **how** questions below. (The **who** is Akiko Shinya, fossil preparator.)

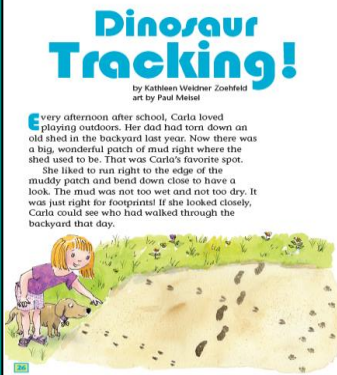
<b>What</b> work does Akiko do?	
<b>Where</b> has she done fieldwork?	<b>Why</b> is Akiko's work important?
<div style="text-align: center;"><p>Finding Fossils</p></div>	
<b>How</b> does Akiko prepare fossils?	

## Dino Defenses

pp. 22–25, Expository Nonfiction

Although some dinosaurs were big, scary hunters, others were gentle giants. This article examines the different types of natural body armor sported by these magnificent creatures.

Lexile Score: ~570L



## RESOURCES

- Structure and Function: Safe-a-saurus

## OBJECTIVES

- Students will learn how dinosaurs protected themselves from threats.
- Students will examine the structure and function of a dinosaur's defensive features.
- Students will research and share how animals protect themselves in the natural world.

## KEY VOCABULARY

- **armor (p. 23)** special clothing that people wear to protect their bodies from injuries

## ENGAGE

**Conversation Question:** What do we know about dinosaurs?

Tell students that dinosaurs that were meat eaters are called “carnivores” and they were fierce hunters. Dinosaurs that ate plants are called “herbivores.” Make a T-chart on the board with headings “carnivore” and “herbivore.” Activate prior knowledge by asking students to contribute characteristics to each column. Remind them to consider the teeth, the bodies, the diets, and the temperaments, etc. Review the chart after reading the article and add new information.

## INTRODUCE VOCABULARY

Post and discuss the key vocabulary word and definition. Ask students what armor they use to keep safe (Example: bike helmet, elbow and knee pads, gloves, goggles, etc.). Next, ask students to consider the built-in body armor of animals (Ex: quills, horns, scales, etc.).

## READ & DISCUSS

Reinforce comprehension of the details in the article by using the following prompts to direct discussion:

1. What dangers did dinosaurs need to protect themselves from?
2. How did dinosaurs protect themselves?
3. Scientists don't know for sure what some dinosaur body parts were for. Why don't they know?
4. Why were slower dinosaurs more likely to have built-in body armor?
5. How could traveling in a big herd keep an animal safer?

## SKILL FOCUS: Structure and Function

**INSTRUCT:** Elicit from students that the main idea of the article is to provide a detailed description of the defenses that dinosaurs used to keep safe. Present the *Structure and Function: Safe-a-saurus* graphic organizer. Tell students they will use information from the article to show-and-tell how each part of the dinosaur's body was used for defense. Have students work in small groups. Discuss what they learn.

**ASSESS:** Review answers. Have students take the worksheet home and instruct them to teach someone at home about the defensive features of dinosaurs.

## EXTEND

**Biology:** Acknowledge that dinosaurs had some very strong and powerful physical features that helped to protect them from threats. Other animals in the natural world also have defense mechanisms that keep them safe. For example, skunks spray a nasty odor, opossums play dead, and some animals have camouflaged bodies that blend in with their surroundings. Divide the class into three groups and assign each group one of these animal types: Land Animals, Air Animals, Sea Animals. Have each group investigate the methods their assigned animals use to stay safe. Tell students to think about these questions: *How do the animals hide? What tricks do they use? What defenses do they have?* Regroup and discuss.

## Safe-a-saurus

**Structure and Function** Gather information from the photographs and words in the article to explain how each feature helped to keep a dinosaur safe. You may use pictures and words.

Feature	What does it look like? Draw pictures.	How does it protect a dinosaur? Use words.
horns		
bony plates		
spikes		
tail club		