

The Bone Hunter

The story of the 12-year-old girl who helped discover the world of dinosaurs

About the Story

Lexile: 940L

For qualitative complexity factors, go to Scope Online.

Learning Objective: to explore key ideas and details in a narrative nonfiction article and incorporate them into an in-role writing task

Key Skills: Greek and Latin roots, author's craft, text structure, key ideas and details, author's purpose, cause and effect

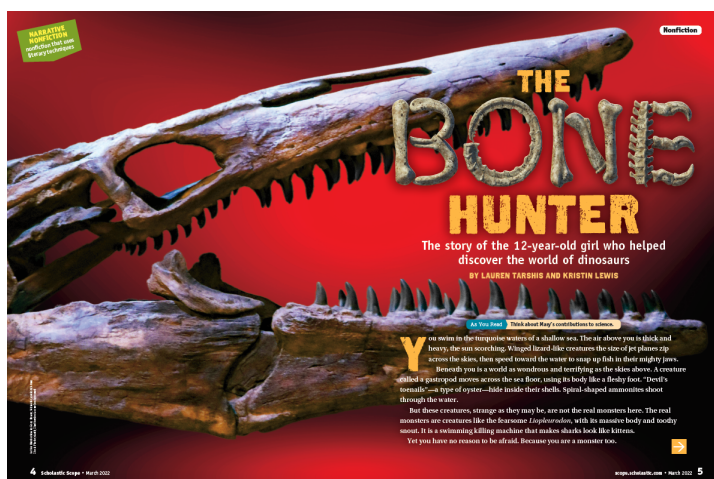
Essential Questions:

- Why do we study Earth's history?
- What is a trailblazer?
- How does scientific understanding change over time?

Standards:

The article and lesson support these Common Core anchor standards: R.1, R.2, R.3, R.4, R.5, R.7, W.3, W.9, SL.1, L.4, L.5, L.6

For more standards information—including TEKS—go to Scope Online.



Your Teaching Support Package

Find your full suite of support materials at scope.scholastic.com.

Audio:

- Author read-aloud
- Text-to-speech
- Vocabulary

Video: Time Machine: The Mesozoic Era

Differentiated Articles:

- Lower-Lexile version
- Spanish language version

Connected readings from the Scope archives:

- Special Collection: Women's History: Stories of Trailblazers

Skill Building Activities to print, project, or share digitally:

- Play With Greek and Latin Roots: Dinosaur Names
- Preparing to Write: Mary Anning's Journal
- Close Reading and Critical Thinking
- Choice Board
- Vocabulary: Definitions and Practice
- Video Discussion Questions
- Nonfiction Elements
- **Core Skills Workout:** Summarizing,* Text Features, Text Structure*
- Quiz*
- Contest Entry Form

*Available on two levels

Step-by-Step Lesson

Close Reading, Critical Thinking, Skill Building

1. Preparing to Read

25 minutes

Do Now: Play with Greek and Latin Roots. (10 minutes)

- Project the task below for students to complete in their journals or on a piece of paper. (A projectable format is available in your Resources tab.)

The word dinosaur is from the Greek deinós (terrible) and saurus (lizard). The names of dinosaurs and other reptiles that lived during their time are often made up of combinations of Greek and Latin roots that describe the animals' characteristics. Use the roots in the box to figure out the meanings of the names listed below. Next to each name, write its meaning. Then pick your favorite animal to draw, or combine some roots to create an imaginary animal to draw!

allo	strange	loph	crest	proto	first
brachio	arm	morph	form	raptor	robber
bronto	thunder	nano	dwarf	rex	king
cerat, ceros	horned	odon	tooth	saur, saurus	lizard
di	two	ops	face	tri	three
ichthys	fish	plesio	near	tyranno	tyrant
lio	smooth	pleuro	side	veloci	speedy

1. *Allosaurus*
2. *Protoceratops*
3. *Tyrannosaurus rex*
4. *Ichthyosaurus*
5. *Liopleurodon*
6. *Plesiosaurus*
7. *Dimorphodon*
8. *Dilophosaurus*
9. *Velociraptor*
10. *Triceratops*

- Allow students to share their names and drawings, discussing how the names fit. Then tell them they will encounter many of these creatures in the article they're about to read.

Watch the Video (10 minutes)

- Watch the **Time Machine** video to take your students on a journey to the Mesozoic era. Have students respond to the **Video Discussion Questions** (available in your Resources tab) in small groups or pairs.

Preview Vocabulary (5 minutes)

- Project **Vocabulary: Definitions and Practice**. Review the definitions as a class. Highlighted words: *carnivorous, embedded, excavate, fossil, prestigious, prominent, remnants, specimen, trove*. (Optionally, share the interactive link directly to your LMS and have students preview the words and complete the activity independently beforehand. Audio pronunciations of the words and a read-aloud of the definitions are embedded on the slides.)

2. Reading and Discussing

45 minutes

- Have a volunteer read the As You Read box on page 5 of the magazine or at the top of the digital story page.
- Read the article once as a class. (*Differentiation: Share the **lower-Lexile version** or the **Spanish version** of the article.*) Optionally, have students listen to one of the authors, Kristin Lewis, read the article aloud while they follow along. The **audio read-aloud** is located in the Resources tab in Teacher View and at the top of the story page in Student View.
- Divide students into groups to read the article again and respond to the following close-reading questions.

Close-Reading Questions (15 minutes)

The following questions can be shared in printable or interactive form.

1. **In the introduction, what does the authors' use of imagery help readers understand about the Mesozoic era?** (author's craft) *The authors' use of imagery helps readers understand that during the Mesozoic era, Earth was a drastically different place. Descriptive details such as "winged lizard-like creatures the size of jet planes zip across the skies" and "a swimming killing machine that makes sharks look like kittens" allow readers to visualize the strange and extraordinary beasts that once ruled the planet. Details about the steamy weather and changing sea levels help readers understand how different the planet itself was as well.*
2. **How does the section "Monsters and Giants" contribute to the article?** (text structure) *The section "Monsters and Giants" establishes the scientific context in which Mary's discovery was made. The authors explain that in 1811, the word dinosaur didn't even exist, Earth was thought to be 6,000 years old, and the idea of extinction was accepted by few—a level of understanding far from the "dazzling picture" scientists can give us today of what Earth was like*

200 million years ago. By comparing and contrasting humans' understanding of Earth's history in Mary's time versus today, the authors help readers understand why Mary's discovery and other contributions were so important.

3. **The authors write, "Soon Mary would find the skeleton that would alter the course of her life." How did the skeleton alter the course of Mary's life? What else did her discovery alter?** (key ideas and details) *Finding the ichthyosaur saved Mary and her family after her father's tragic death left them penniless; selling the skeleton enabled Mary to feed the family for months. Her discovery also provided proof for new ideas about extinction and ignited an entirely new field of science that completely changed our understanding of Earth's history: paleontology. Perhaps this first find is what led Mary to passionately hunt fossils and make incredible discoveries for the rest of her life.*
4. **Why might the authors have wanted to quote Dr. Anjana Khatwa? What do her words add to the article?** (author's purpose, cause and effect) *Dr. Khatwa is an earth scientist, an expert in a field shaped by Mary's pioneering work. Her words outline Mary's contributions to science—not only her incredible discoveries but also the skills, processes, and methods she laid out for future scientists to use. Dr. Khatwa also emphasizes how extraordinary Mary's achievements were in light of the discrimination she faced because she was a woman. Because Dr. Khatwa is a woman who studies the region where Mary lived, quoting her adds not just a voice of authority from the field but also a special connection to Mary's legacy.*

Critical-Thinking Questions

(5 minutes)

The following questions can be shared in printable or interactive form.

1. **Reflect on the timeline "Earth: A Brief History." In what ways, if any, does this timeline cause you to think differently about humans' place in Earth's history?** *Answers will vary. Students may offer that seeing humans' appearance on a timeline relative to the Mesozoic era gives them a new understanding of how recently humans appeared on Earth and for just how long creatures drastically different from us ruled the planet.*
2. **How does scientific understanding of the natural world change over time?** *Answers will vary. Students may offer that scientific understanding of the natural world can change over time through study and discovery. Scientific knowledge can be dynamic and changing, as seen when Mary uncovered evidence that supported the idea that animals can, in fact, become extinct.*

3. Skill Building and Writing

30 minutes

- Have students complete **Preparing to Write: Mary Anning’s Journal**. This activity will help them organize their ideas in preparation for the writing prompt on page 9 in the printed magazine and at the bottom of the digital story page.
- Alternatively, have students choose a culminating task from the **Choice Board**, a menu of differentiated activities.

Connected readings from the *Scope* archives:

- [Paired Texts: “Did You Use the GPS on Your Phone Today?” and “5 Ways GPS Is Changing the World” \(March 2021\)](#)
- [Drama: *The Poison Sky* \(April 2017\)](#)
- [Narrative Nonfiction: “Malala the Powerful” \(October 2020\)](#)

View the rest of the Special Collection: [Women’s History: Stories of Trailblazers](#)