

Dr. Apgar: Helping Babies

Fill in the circle by the correct answer. Then write the answers to numbers 3, 4, and 5.

1. In the context of this text, the word *pioneer* means _____.

- (A) someone who goes west in a covered wagon
- (B) someone who researches a new area of knowledge
- (C) an American space rocket
- (D) a person who settles a new country

2. An Apgar Score _____.

- (A) tells how old the baby is
- (B) tells how many inches long a baby is
- (C) rates the health of a newborn
- (D) measures the weight of a newborn

3. Explain how Dr. Virginia Apgar's research and writing affected newborn babies.
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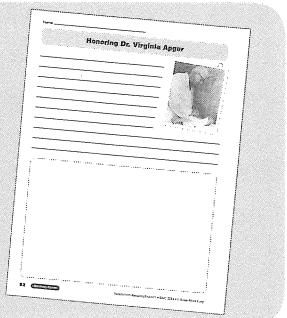
4. How would you justify the statement that Dr. Apgar was a medical pioneer?
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-

5. What is the purpose of paragraph 1?
-
-

Write About the Topic

Use the Writing Form to write about what you read.

Dr. Virginia Apgar received many awards. Design an award you would give her. Then write a speech to go with it.



Hunting for Fossils

Level 1 ■

Words to Know list, Reading Selection, and Reading Comprehension questions

Level 2 ■ ■

Words to Know list, Reading Selection, and Reading Comprehension questions

Level 3 ■ ■ ■

Words to Know list, Reading Selection, and Reading Comprehension questions

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Assemble the Unit

Reproduce and distribute one copy for each student:

- Visual Literacy page: Mary Anning Timeline, page 101
 - Level 1, 2, or 3 Reading Selection and Reading Comprehension page and the corresponding Words to Know list
 - Graphic Organizer of your choosing, provided on pages 180–186
 - Writing Form: A Letter About Mary Anning, page 102

Introduce the Topic

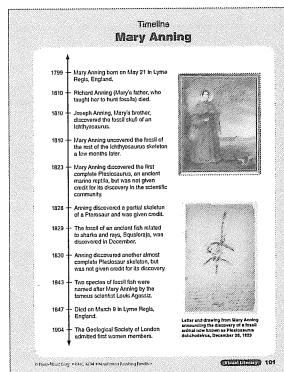
Read aloud and discuss the timeline of Mary Anning's life. Explain that paleontology (the study of fossils) was a new science then. Tell students that Anning is famous today for her fossil discoveries, but that others took credit for them during her lifetime.

Read and Respond

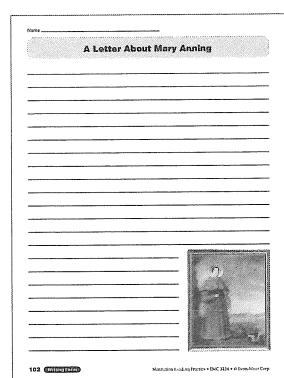
Form leveled groups and review the Words to Know lists with each group of students. Instruct each group to read their selection individually, in pairs, or as a group. Have students complete the Reading Comprehension page for their selection.

Write About the Topic

Read aloud the leveled writing prompt for each group. Tell students to use the Graphic Organizer to plan their writing. Direct students to use their Writing Form to respond to their prompt.



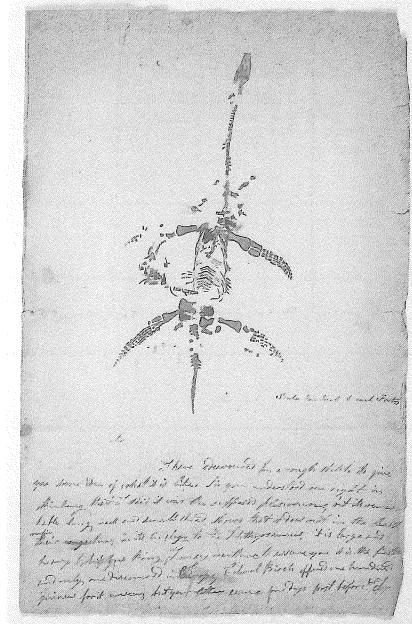
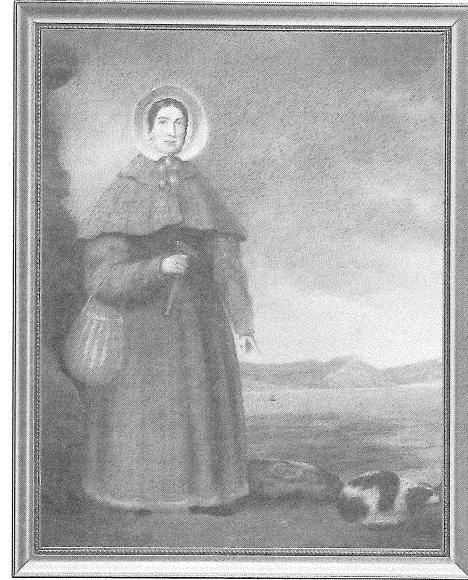
Visual Literacy



Writing Form

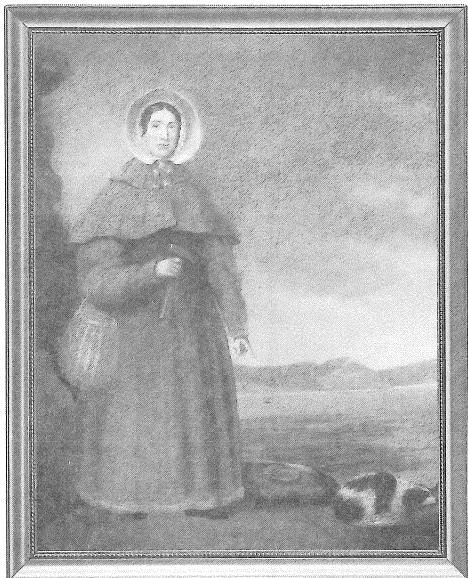
Timeline Mary Anning

- 1799 Mary Anning born on May 21 in Lyme Regis, England.
- 1810 Richard Anning (Mary's father, who taught her to hunt fossils) died.
- 1810 Joseph Anning, Mary's brother, discovered the fossil skull of an Ichthyosaurus.
- 1810 Mary Anning uncovered the fossil of the rest of the Ichthyosaurus skeleton a few months later.
- 1823 Mary Anning discovered the first complete Plesiosaurus, an ancient marine reptile, but was not given credit for its discovery in the scientific community.
- 1828 Anning discovered a partial skeleton of a Pterosaur and was given credit.
- 1829 The fossil of an ancient fish related to sharks and rays, Squaloraja, was discovered in December.
- 1830 Anning discovered another almost complete Plesiosaur skeleton, but was not given credit for its discovery.
- 1843 Two species of fossil fish were named after Mary Anning by the famous scientist Louis Agassiz.
- 1847 Died on March 9 in Lyme Regis, England.
- 1904 The Geological Society of London admitted first women members.



Letter and drawing from Mary Anning announcing the discovery of a fossil animal now known as *Plesiosaurus dolichodeirus*, December 26, 1823

A Letter About Mary Anning



Words to Know

Finding Fossils

fossils
Jurassic
contributed
curiosities
marine
reptile
skeleton
explore
museums
geology
anatomy
credit
mentioned
deserved
regarded

Hunting for Fossils ■■

Words to Know

Fossil Hunter

fossils
Jurassic
contributed
paleontology
curiosities
museums
credit
marine
reptile
skeleton
geology
anatomy
anatomy
classified
sketches
contributions

Hunting for Fossils ■■■

Words to Know

Fossil Discoveries

paleontology
fossils
contributed
Jurassic
revealing
curiosities
tourists
geology
anatomy
explored
unstable
dangerous
credit
marine
reptile
skeleton
reputation

Hunting for Fossils ■■■■



Finding Fossils

Mary Anning was born in 1799 in Lyme Regis on the southern coast of England. At the edge of that town are cliffs that contain fossils. There are so many fossils that today it is called the Jurassic Coast. In the early 19th century, scientists were just beginning to understand the history of life on Earth. They realized that fossils were the remains of ancient living creatures. Mary Anning's fossil discoveries contributed to that understanding.

Fossil Hunters

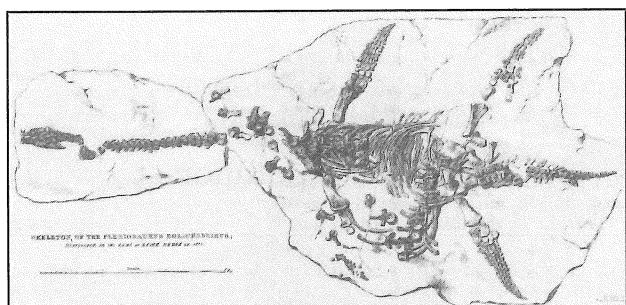
When Mary Anning was a girl, her father taught her how to collect fossils. The fossils were mostly sold as curiosities to visitors who came to the seaside.

Richard Anning was a cabinetmaker, and the family was poor. When he died in 1810, the family became even poorer. Mary and her family continued to sell fossils. Mary Anning and her brother discovered a complete Ichthyosaurus in 1810. Joseph found the skull of the ancient marine reptile, and Mary uncovered the rest of its 17-foot (5-meter) skeleton. In 1823, people took notice when Mary Anning discovered the first Plesiosaurus. It was a complete skeleton of the long-necked marine reptile.



Fossil Scientist

Anning would explore the shore beneath the cliffs with her dog, Tray. There was danger from rockslides, especially after storms. One day, she lost her trusty pet in a rockslide. When her brother found another line of work, Mary Anning continued her work, mostly alone. Museums, scientists, and collectors bought from her. She learned geology and anatomy on her own. She made drawings of the fossils she found. Other scientists bought her fossils and often took credit for them. Her name was not mentioned in their scientific papers. The Geological Society of London did not allow women to be members. Besides being a woman, Mary Anning was poor and lower class.



Mary Anning was not always given the credit she deserved during her lifetime. But by the time of her death in 1847, she had earned the respect of other scientists. Today she is regarded as one of the most important women scientists in British history.

This drawing of Plesiosaurus discovered by Mary Anning was published by the Geological Society in 1824.

Finding Fossils

Fill in the circle by the correct answer. Then write the answers to numbers 3, 4, and 5.

1. In the context of this text, “to give credit” means _____.

- (A) to add money to an account
- (B) to recognize and praise someone’s work
- (C) to believe something
- (D) to lend money

2. A marine animal _____.

- (A) lives on a cliff
- (B) has a short neck
- (C) lives in the sea
- (D) is ancient

3. What traits do you think Mary Anning possessed that earned her a place in scientific history?

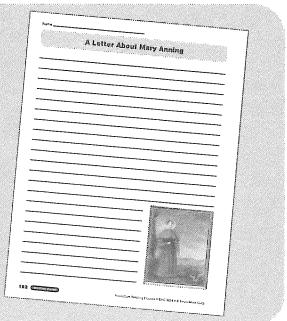
4. From what you have read, can you name a plus and a minus about hunting for fossils at Lyme Regis?

5. How do you feel about the conclusion of Mary Anning’s story?

Write About the Topic

Use the Writing Form to write about what you read.

Imagine yourself back in time. Write a letter to a newspaper to inform the public about Mary Anning’s work.



Fossil Hunter

Lyme Regis is a small town on the coast of southern England. Its rocky cliffs hold so many fossils of ancient life that it is known today as the Jurassic Coast. During the first half of the 19th century, a new branch of science was growing. Scientists were studying the history of life on Earth by studying fossils. Mary Anning's discoveries contributed to the new science of paleontology.

Her Story

Mary Anning was born in 1799 in Lyme Regis. When she was a girl, her father taught her how to collect fossils. The fossils were curiosities the Anning family sold to visitors who came to the seaside town. Richard Anning was a cabinetmaker, and the family was poor. When he died in 1810, the family became even poorer. Mary and her family continued selling fossils. Later, Mary Anning took over the fossil business.

Fossils Found

We don't know about all of Mary Anning's fossil discoveries. She sold them to museums, well-to-do collectors, and scientists who did not always give her credit. But we do know that she and her brother discovered an Ichthyosaurus in 1810. Joseph Anning spied the skull of the ancient marine reptile. Mary Anning uncovered the rest of the giant skeleton. It was 17 feet (5 meters) long and had huge jaws.

In Anning's time, the Geological Society of London did not allow women to be members. Besides being a woman, Anning was poor, from the lower class. Some people didn't think a young woman like Anning could know much about science, but she kept on working. Anning taught herself geology and anatomy. She classified her discoveries and drew scientific sketches of them. Anning's fame as a fossil hunter grew when she discovered another marine reptile in 1823. It was the first Plesiosaurus. Unfortunately, the scientific community did not give her credit.

For much of her life, Anning's contributions to the new science of paleontology went unrecognized. However, when she died in 1847, she had gained the respect of other scientists. Today Mary Anning is known as one of the most important women scientists in British history.



This portrait by Henry de la Beche shows Mary Anning working at Lyme Regis.

Fossil Hunter

Fill in the circle by the correct answer. Then write the answers to numbers 3, 4, and 5.

1. Paleontology is _____.
 (A) a marine fossil
 (B) the study of British history
 (C) a branch of science
 (D) an ancient marine reptile
2. In studying anatomy, you would learn _____.
 (A) about rocks and cliffs
 (B) about skeletons
 (C) all about the sea
 (D) how to find fossils
3. What talents do you think Mary Anning possessed that helped her in her work?

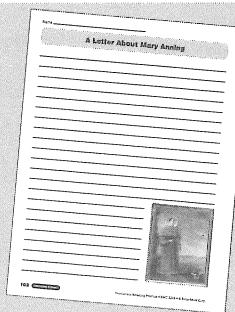
4. Would you say that Mary Anning was a pioneer of science? Support your answer with facts from the text.

5. Why do you suppose Mary Anning continued fossil hunting even when people didn't recognize her work?

Write About the Topic

Use the Writing Form to write about what you read.

Imagine yourself back in time. Write a letter to a museum that displays fossils. Recommend Mary Anning's work to them.



Fossil Discoveries

In the early 19th century, the science of paleontology was very young. Scientists were just beginning to understand the history of life on Earth through the study of fossils. Mary Anning's fossil discoveries contributed to the new science.

Born into a Poor Family

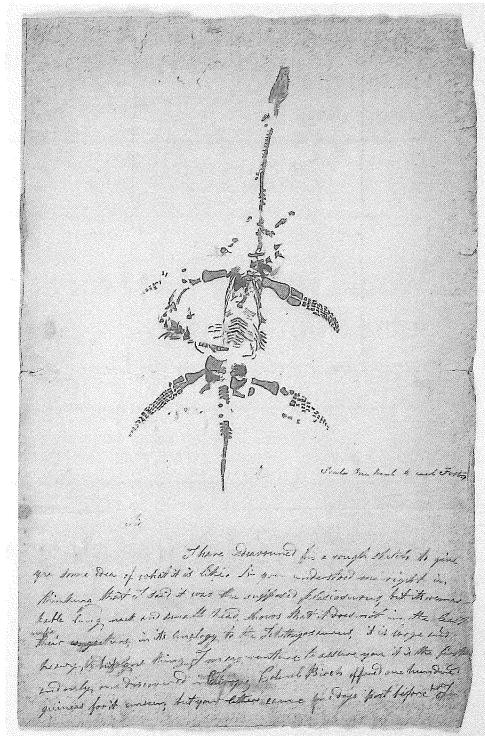
Mary Anning was born in 1799 in a small town, Lyme Regis, on the southern coast of England. The cliffs along the edge of town contain so many fossils that it is known today as the Jurassic Coast. The rocky cliffs break away and tumble into the sea, revealing new fossils. When Mary Anning was a girl, her father taught her how to collect fossils. Richard Anning worked as a cabinetmaker, and the family was poor. They sold fossils as curiosities to the tourists who came to the seaside. When Mary's father died in 1810, the family became even poorer. Mary Anning, her mother, and her older brother, Joseph, continued selling fossils. When her brother went into another line of work, Mary Anning took over the fossil business.

Rock Hounds

Mary Anning worked alone, except for the times she guided scientists who came to see her. She taught herself geology and anatomy. She made scientific drawings of her finds. Anning would take her dog, Tray, down to the shore while she explored the unstable rocks that had slid from the cliffs. It was dangerous work, especially after storms. One day, she lost her trusty friend when he was caught by a rockslide.

Many of Mary Anning's discoveries were not recognized. Other scientists and collectors took credit for them. In Anning's time, the Geological Society of London did not allow women to be members. Besides being a woman, Anning was of the lower class. Some people didn't think a young woman like Anning could know much about science, but that did not stop her from working.

Mary Anning and her brother discovered a complete Ichthyosaurus in 1810. Joseph found the skull of the ancient marine reptile, and Mary uncovered the rest of its 17-foot (5-meter) skeleton. In 1823, people took notice when Mary Anning discovered the first Plesiosaurus. It was a complete skeleton of the long-necked marine reptile. Anning's reputation as a fossil hunter grew until she died in 1847. Today she is known as one of the most important women scientists in British history.



Mary Anning wrote this letter about her discovery of Plesiosaurus and included her sketch.