

# Muse®

## Under the Surface

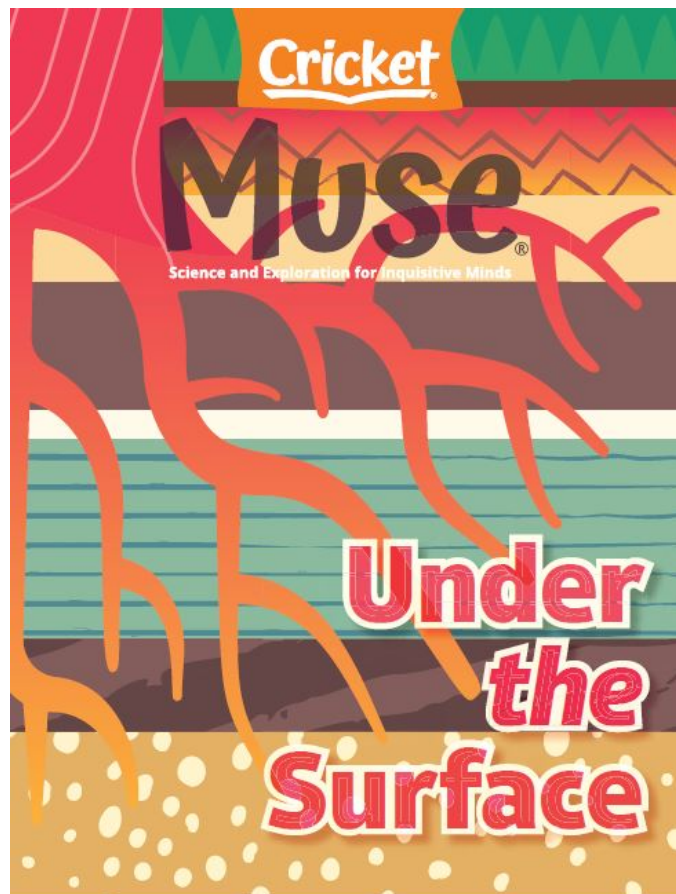
Buried in layers of earth are clues that unlock the mysteries of our ancestors' existence. This issue of MUSE magazine encourages students to “dig in” to the past and discover how archaeology can provide valuable information about people and places.

### CONVERSATION QUESTION

How is history buried beneath our feet?

### TEACHING OBJECTIVES

- Students will learn about the history that is hidden underground.
- Students will learn how an archaeological field school is helping researchers to uncover the buried past of St. Croix.
- Students will learn how early rock drawings in Australia provide anthropologists with clues to the past.
- Students will classify artifacts from prior time periods.
- Students will examine specific procedures in the archaeological process.
- Students will use information from the article to construct explanations.
- Students will write a newspaper article that relates information about the Civil War.
- Students will solve a theme-based mathematical word problem.
- Students will construct drawings of megafauna according to details presented in the article.



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

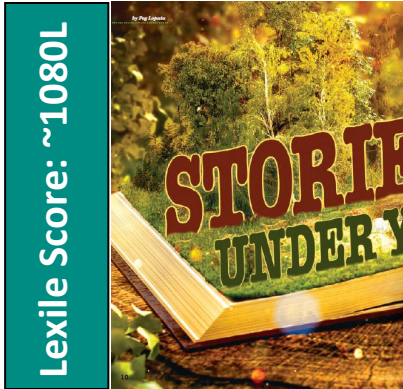
- **Stories Under Your Feet**  
Expository Nonfiction, ~1080L
- **Uncovering the Past**  
Expository Nonfiction, ~1000L
- **Australia's Mega Animals**  
Expository Nonfiction, ~970L

# Muse® Teacher Guide: September 2021

## Stories Under Your Feet

pp. 10–13, Expository Nonfiction

Readers will discover that stories aren't only told through writing and speaking. This article shares how the layers of the earth can reveal narratives of past societies.



## RESOURCES

Buried Treasure: Obtain and Classify

## OBJECTIVES

- Students will learn about the history that is hidden underground.
- Students will classify artifacts from prior time periods.
- Students will write a newspaper article that relates information about the Civil War.

## KEY VOCABULARY

- **archaeology** (p. 12) the science that deals with past human life and activities by studying artifacts such as bones, tools, and pottery
- **provenance** (p. 13) the origin or source of something
- **rebellious** (p. 13) refusing to obey rules or authority

## ENGAGE

**Conversation Question:** How is history buried beneath our feet?

Present the class with drawings and photos that depict a past era. Ask students what clues they can use to determine the time period. Encourage students to consider such things as fashion, occupational evidence, and transportation. Then ask students to consider how objects can provide information about a specific time period (design, materials, markings). Introduce the article, “Stories Under Your Feet.”

## INTRODUCE VOCABULARY

Review the key terms and definitions with the class. Guide students to notice that each word belongs in a different part of the alphabet—beginning: A–I, middle: J–Q, end: R–Z. Have students write these headings at the top of their paper and list each word in the correct category. As a post-reading activity, have students add other theme-related words from the article to the columns in their chart.

## READ & DISCUSS

Read the article aloud with the class. Then have students reread the article in small groups to answer the questions below.

1. What is the task of the student employees with the Urban Archaeology Corps?
2. How can uncovering layers of earth help us to learn stories about the people who came before?
3. How did the UAC workers learn to organize the Gravel Hill site for digging?
4. What pieces of African American history did the UAC students recover?

## SKILL FOCUS: Classifying Objects

**INSTRUCT:** Guide students to obtain information from the text, captions, and photos in the article. Remind students that the article was written to teach readers how artifacts found buried in the earth can provide important clues to past eras. Introduce the *Buried Treasure: Obtain and Classify* graphic organizer and instruct students to write the listed artifacts in the most likely layer of the earth. Students will use critical thinking skills to add other objects to the diagram.

**ASSESS:** Have students discuss their work with a partner. If there are discrepancies, have them work together to reclassify the object correctly.

## EXTEND

**Language Arts** Students will assume the role of a newspaper reporter covering events of the Civil War. Page 13 provides some background, but students will need to do some research. They will need to structure the article to include the following: *what* (specific event), *who* (the people involved), *where* (place), *when* (date and time), *why* (reasons for events taking place), and *how* (connecting the facts). Emphasize that providing details is particularly important in this genre of writing.

## Buried Treasure

**Obtain and Classify** Place the listed objects in the layer of earth (time period) that it would most likely be found. Next, think of at least two artifacts from each era that you can add to the diagram. Draw and label the artifacts.

**Objects:** wagon wheel, plastic doll, glass bottle, rubber tire, video game, civil war bullet, T-rex bone, pig tusks, wooden toothbrush

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### SURFACE

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1900–present

1700s–1800s

1700s & earlier

# Muse® Teacher Guide: September 2021

## Uncovering the Past

pp. 14–17, Expository Nonfiction

Get your hands dirty as you join the students at the Estate Little Princess Field Archaeological School. Students will learn how archaeologists are helping to uncover stories of the enslaved Africans who inhabited St. Croix.



## RESOURCES

Dig In! Studying Process

## OBJECTIVES

- Students will learn how an archaeology field school is helping researchers to uncover St. Croix's buried past.
- Students will examine specific procedures in the archaeological process.
- Students will solve a theme-based mathematical word problem.

## KEY VOCABULARY

- **artifacts** (p. 15) simple objects such as tools or weapons that were made by people in the past
- **sifter** (p. 15) a tool for separating small objects from loose soil
- **abolished** (p. 15) officially ended or stopped something

## ENGAGE

**Conversation Question:** How is history buried beneath our feet?

Inform students that the article "Uncovering the Past" tells the story of the Estate Little Princess Field Archaeological School in St. Croix. Display a map of the world and give students the following clues, one at a time, so they can locate St. Croix.

- It is located in the Western Hemisphere.
- It is located in the eastern Caribbean Sea.
- It is southeast of Puerto Rico.
- It is south of St. Thomas.
- It is the largest of the U.S. Virgin Islands.

## INTRODUCE VOCABULARY

Display the following statements and underline the key vocabulary terms. Review making inferences. Then have partners work together to infer the meaning of each word. Then reveal definitions.

1. The archaeologists dug up clay pots, wooden tools, and other artifacts.
2. I used a sifter to separate stones from the soil in my garden.
3. I believe school uniforms should be abolished because most kids don't like them.

## READ & DISCUSS

Read the article aloud, pausing when answers to the questions are revealed. Encourage students to elaborate.

1. Explain the history of the Estate Little Princess.
2. How can artifacts help researchers learn more about the everyday lives of past inhabitants?
3. What are the benefits of getting the local community involved in excavations?
4. How is the youth program helping archaeologists build a picture of the enslaved Africans who lived at the Estate Little Princess?

## SKILL FOCUS: Studying Process

**INSTRUCT:** Present the *Dig In! Studying Process* graphic organizer. Tell students they will be recording details about specific procedures that are essential to the process of archaeological excavation.

**ASSESS:** Have students share what they learned and ask them to state which part of the process they would be most interested in being part of and why.

## EXTEND

**Mathematics** Page 15 states that Denmark ruled St. Croix from 1672 to 1917. Use the RDW process (Read-Draw-Write) to calculate how many years Denmark ruled there. Students should express their answer in written form and expanded form, as well as in standard form.

## Dig In!

**Studying Process** There are many components to consider when organizing an archaeological dig. Use information from the article to explain how each element plays an important role in the success of the excavation process.

<b>Component</b>	<b>Description of Procedures</b>
classroom work	
site/field work	
laboratory work	

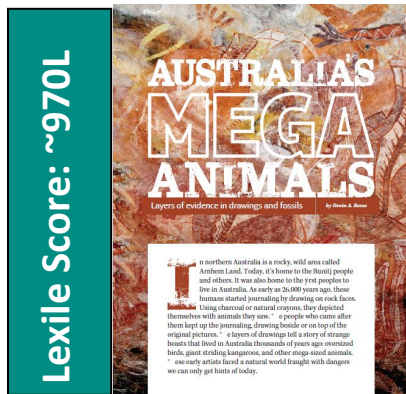


# Muse® Teacher Guide: September 2021

## Australia's Mega Animals

pp. 26–29, Expository Nonfiction

Readers will learn how prehistoric drawings reveal that strange beasts once roamed the earth along with humans.



## RESOURCES

Where the Wild Things Were:  
Constructing Explanations

## OBJECTIVES

- Students will learn how early rock drawings in Australia provide anthropologists with clues to the past.
- Students will use information from the article to construct explanations.
- Students will construct drawings of megafauna according to details presented in the article.

## KEY VOCABULARY

- **megafauna (p. 28)** the large or giant animals of a particular region, habitat, or geological period
- **marsupial (p. 28)** a type of animal, such as a kangaroo or an opossum, that carries its babies in a pocket of skin on the mother's stomach
- **herbivore (p. 29)** an animal that only eats plants
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## ENGAGE

**Conversation Question:** How is history buried beneath our feet?

Ask students to take out something to write with, but do not specify. (The intent is to have students unwittingly use a variety of mediums.) Begin the activity by writing “Clues to Our Classroom” horizontally on a piece of paper. Inform students that as the paper is passed around, they are to add a sentence, word, or drawing about the classroom. Encourage them to write in all sizes and to overlap. At the end of the activity, display the paper and discuss the results. What information can be interpreted? Which markings are most noticeable? Did the medium or order of the markings matter?

## INTRODUCE VOCABULARY

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

- How would the world be different if **megafauna** still walked the earth today?
- List three **marsupials**.
- If it was your job to feed all the **herbivores** at the zoo, what would you feed them?

## READ & DISCUSS

Read the article aloud, pausing when answers to the questions are revealed. Encourage students to elaborate.

1. What can be learned by studying the layers of journaling on Australia's rock faces?
2. How do anthropologists believe the first humans reached Australia more than 65,000 years ago?
3. Why do some rock drawings endure while others fade away?
4. What helps scientists to confirm that the animal drawings do not simply represent imaginary creatures?
5. Explain how the older rock drawings differ from the more recent.

## SKILL FOCUS: Constructing Explanations

**INSTRUCT:** Advise students to review the article and to study the theories surrounding the extinction of the megafauna. Distribute the *Where the Wild Things Were: Constructing Explanations* graphic organizer and tell the class they will use information directly from the text to complete the first three sections of the chart. In the last section, they must use details and logical reasoning to state their own theory.

**ASSESS:** Collect and review the worksheets to check skills.

## EXTEND

**Art** Pages 28–29 describe some of the megafauna that existed in Australia thousands of years ago. Have students choose one animal and use the details provided to create a simple sketch. Instruct them to tag their drawing with a caption.

## Where the Wild Things Were

**Constructing Explanations** Refer to the article to record explanations that support the theories surrounding the extinction of the megafauna in Australia. State your own theory in the last box.

Theory	Explanation
climate change	
food shortages	
human activity	
combination	
MY THEORY	