

Literacy & Social Studies Activity

ACTIVITY OVERVIEW

This activity, which is aligned to the Common Core State Standards (CCSS) for English Language Arts and the New York State Social Studies Elementary Standards, introduces students to the process of mummification in ancient Egyptian and Peruvian societies.

This activity has two components:

- 1. AT THE MUSEUM**, students will read and engage with exhibition texts (including printed text, digital and physical/hands-on interactives, videos, and models). This information will help them complete the post-visit writing task.
- 2. BACK IN THE CLASSROOM**, students will complete a CCSS-aligned explanatory writing task about mummies of Egypt and Peru.

Materials in this packet include:

For Teachers

- Activity Overview (p. 1-2)
- Answers to the student worksheets (p. 3-5)
- Essay scoring rubric (p. 6-7)

For Students

- Student worksheets (p. 8-10)

1. DURING YOUR VISIT

At the Museum, students will observe specimens and engage with texts (including printed text, digital interactives, videos, and models). The information they'll gather from these sources will help them complete the post-visit writing task.

Preparation for Museum Visit

- Review the educator's guide to see how themes in the exhibition connect to your curriculum and to get an advance look at what your students will encounter. (Guide is downloadable at amnh.org/mummies-for-educators)
- Familiarize yourself with the student worksheets (p. 13-14) and the map of the exhibition.

Important Information about the *Mummies* Exhibition

- In keeping with the sensitive nature of displaying human remains, the exhibition's atmosphere is somber and the lighting is dim.
- Photography is prohibited.
- Accompanying labels are often positioned above the display cases.
- Titles of the scans and their corresponding mummies do not always match, but the scans go with the mummies they are closest to.

Suggestions for Facilitating the Museum Visit

- Explain the goal of the Museum visit: to observe specimens and engage with texts (including printed text, digital interactives, videos, and models), and to gather information to help them complete the post-visit writing task.
- Review the worksheet. Clarify what information students should collect.
- Have students explore the exhibition in pairs, with each student completing his or her own student worksheet.
- Encourage student pairs to ask you or their peers for help locating information. Tell students they may not share information with other pairs, but may point each other to places where information needed to complete the worksheet can be found.

Common Core State Standards

W.12.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

New York State Social Studies High School Standards

Standard 2: World History

- **Key Idea 2.1:** The study of world history requires an understanding of world cultures and civilizations, including an analysis of important ideas, social and cultural values, beliefs, and traditions.

2. BACK IN THE CLASSROOM

Students will use what they have learned from the visit to the Museum to complete a CCSS-aligned explanatory writing task about mummies.

Preparation

- Plan how you will explain the student writing task, on the first page of the student entry sheet (p. 15), to students.

Instructions

- Review the writing task and rubric with students. Explain that they will use it while composing, and also to evaluate and revise what they have written.

Suggestions for Facilitating Writing Task

- Before they begin to write, have students use the writing task to frame a discussion around the information that they gathered at the Museum. They can work in pairs, small groups, or as a class, and can compare their findings.
- Referring to the writing prompt, have students underline or highlight all relevant passages and information from the notes taken at the Museum. Instruct each student to write down any useful information gathered by their peers.
- Students should write their essays individually.
- Have students self-assess and revise their work using the essay scoring rubric. You may choose to create a student friendly self-assessment checklist based on column four of the essay scoring rubric.

Supports for Diverse Learners

This resource has been designed to engage all learners with the principles of Universal Design for Learning in mind. It represents information in multiple ways and offers multiple ways for your students to engage with content as they read about, discuss, view, and write about scientific concepts. Different parts of the experience (e.g. reading texts, or locating information in the Museum) may challenge individual students. However, the arc of learning is designed to offer varied opportunities to learn. We suggest that all learners experience each activity, even if challenging. If any students have an Individualized Education Program (IEP), consult it for additional accommodations or modifications.

Student Worksheet: Page 1

Name: _____

ANSWER KEY

Welcome to the *Mummies* exhibition! Today, you will come face-to-face with real mummies. Mummies are remains of humans and other animals that have been preserved for thousands of years. You'll encounter mummies from the ancient cultures of Peru and Egypt. You'll observe and study what the mummies look like on the outside. You'll also discover what scientific imaging, like CT scans and X-rays, reveal about what mummies look like on the inside.

*NOTE: Location numbers refer to those on the map in the *Mummies Educator's Guide* (amnh.org/mummies-for-educators)*

1. CT Scanner *(Answers to these questions can be found in sections 1a-1d)*

Look at the CT scanner and read the text panels to the left and right of the scanner. Then, look at the case with the unwrapped mummy and read related text.

What does a CT scanner do?

Computerized Tomography (CT) allows doctors to see inside a patient's body without performing surgery. A spinning ring inside the scanner takes hundreds of X ray images with each rotation. Scientists use CT scanners to study mummies without unwrapping them.

Before scanning technologies, how did scientists study mummies?

In the late-18th and early-19th century, researchers relied on illustrations, sketches, and lithographs. Starting in the mid-1840s, photography was used to document mummies.

How has scanning technology changed the way scientists study mummies?

Scientists no longer need to unwrap mummies to study them.

2. Peru

ANSWER KEY

In the Peru section, pick two mummies to observe. Be sure to pick mummies with accompanying scans that reveal what these mummies look like on the inside.

Peruvian Mummy #1

Name: *For this question and the two following questions, see the top of the glass cases.*

Where was it found?

When was it made?

Observe and describe the mummy as seen with the naked eye. What does it look like? What materials is it made from?

NOTE: All Peruvian mummies are found in sections 2a-2f.

Observe and describe the scan. What does it enable scientists to see and infer about the mummy?

Many mummies have images of scans next to their cases. See section 2b for a touch-screen interactive with more information about many of the mummies.

Peruvian Mummy #2

Name: *For this question and the two following questions, see the top of the glass cases.*

Where was it found?

When was it made?

Observe and describe the mummy as seen with the naked eye. What does it look like? What materials is it made from?

NOTE: All Peruvian mummies are found in sections 2a-2f.

Observe and describe the scan. What does it enable scientists to see and infer about the mummy?

Many mummies have images of scans next to their cases. See section 2b for a touch-screen interactive with more information about many of the mummies.

3. Egypt

ANSWER KEY

In the Egypt section, pick two mummies to observe. Be sure to pick mummies with scans that reveal what these mummies look like on the inside.

Egyptian Mummy #1

Name: *For this question and the two following questions, see the top of the glass cases.*
Where was it found?

When was it made?

Observe and describe the mummy as seen with the naked eye. What does it look like? What materials is it made from?

NOTE: All Egyptian mummies are found in sections 4a-4g.

Observe and describe the scan. What does it enable the scientists to see and infer about the mummy?

Many mummies have images of scans next to their cases. See section 4b for a touch-screen interactive with more information about many of the mummies.

Egyptian Mummy #2

Name: *For this question and the two following questions, see the top of the glass cases.*
Where was it found?

When was it made?

Observe and describe the mummy as seen with the naked eye. What does it look like? What materials is it made from?

NOTE: All Egyptian mummies are found in sections 4a-4g.

Observe and describe the scan. What does it enable the scientists to see and infer about the mummy?

Many mummies have images of scans next to their cases. See section 4b for a touch-screen interactive with more information about many of the mummies.

4. Facial Reconstruction

Observe and describe the facial reconstruction of Mindris, and the the facial reconstruction of the Gilded Lady. How were these reconstructions created?

CT scans allow for a virtual reconstruction and making of 3D print of the individual's skull. Detailed measurements of the skull allow forensic scientists to estimate the placement of the muscles, thickness of the skin, shape of eyes, nose, and mouth. Finally a skin tone based of forensic research is added.

ESSAY SCORING RUBRIC

	Exceeds	Meets	Approaches	Needs Additional Support
	4	3	2	1
Research: Mummies Exhibition	Accurately presents information relevant to all parts of the prompt with effective paraphrased details from the exhibition	Presents paraphrased information from the exhibition relevant to the prompt with sufficient accuracy and detail	Presents information from the exhibition mostly relevant to the purpose of the prompt with some lapses in accuracy or completeness AND/OR information is copied from the exhibition text	Attempts to present information in response to the prompt, but lacks connections to the exhibition content or relevance to the purpose of the prompt
Explanations	Develops the topic thoroughly by selecting the most significant examples and details to describe how CT and X-ray imaging technology help scientists learn about the lives and cultures of the people of ancient Egypt and ancient Peru	Develops the topic with relevant examples and details to describe how CT and X-ray imaging technology help scientists learn about the lives and cultures of the people of ancient Egypt and ancient Peru	Choice of examples and details is ineffective or lacking descriptions of how CT and X-ray imaging technology help scientists learn about the lives and cultures of the people of ancient Egypt and ancient Peru	Does not describe how CT and X-ray imaging technology help scientists learn about the lives and cultures of the people of ancient Egypt and ancient Peru
	Provides thorough explanations that demonstrate in-depth understanding of how CT and X-ray imaging technology help scientists learn about the lives and cultures of the people of ancient Egypt and ancient Peru	Provides sufficient explanations that demonstrate understanding of how CT and X-ray imaging technology help scientists learn about the lives and cultures of the people of ancient Egypt and ancient Peru	Provides some explanations of how CT and X-ray imaging technology help scientists learn about the lives and cultures of the people of ancient Egypt and ancient Peru OR explanations are incomplete or contain minor errors	Does not provide any explanations of how CT and X-ray imaging technology help scientists learn about the lives and cultures of the people of ancient Egypt and ancient Peru OR explanations are mostly inaccurate
	Consistent and effective use of precise and domain-specific language	Some or ineffective use of precise and domain-specific language	Little use of precise and domain-specific language	No use of precise and domain-specific language

ESSAY SCORING RUBRIC

	Exceeds	Meets	Approaches	Needs Additional Support
	4	3	2	1
Development	Includes an opening paragraph that clearly introduces the topic and previews what is to follow	Introduces an opening paragraph that clearly introduces the topic	Includes an opening section that insufficiently introduces the topic	Includes an opening section that is irrelevant OR does not include an introduction
	Ideas in the essay are organized so that each new element builds on that which precedes it to create a unified whole	Ideas in the essay are sufficiently well organized	Uneven organization of ideas in the essay	No organization of ideas.
	Provides a concluding section that follows from and effectively supports the information or explanation presented	Provides a concluding section that follows from and sufficiently supports the information or explanation presented	Provides a concluding section that mostly supports the information or explanation presented	Provides a concluding section that does not support the information or explanation presented OR provides no concluding section
Conventions	Demonstrates and maintains a well-developed command of standard English conventions with few errors; response includes language and tone consistently appropriate to the purpose and specific requirements of the prompt	Demonstrates a command of standard English conventions with few errors; response includes language and tone appropriate to the purpose and specific requirements of the prompt	Demonstrates an uneven command of standard English conventions; uses language and tone with some inaccurate, inappropriate, or uneven features	Attempts to demonstrate standard English conventions, but lacks control of grammar, usage, and mechanics
	Uses appropriate and varied transitions to create cohesion and clarify the relationships among complex ideas and concepts	Uses some transitions to create cohesion and clarify relationships among different parts of the essay	Uses transitions that don't create cohesion or clarify relationships among different parts of the essay	Sections of the essay are not linked by transitions; essay lacks cohesion

Student Worksheet: Page 1

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Peruvian Mummy #1

Name:

Where was it found?

When was it made?

Observe and describe the mummy as seen with the naked eye. What does it look like? What materials is it made from?

Observe and describe the scan. What does it enable scientists to see and infer about the mummy?

Peruvian Mummy #2

Name:

Where was it found?

When was it made?

Observe and describe the mummy as seen with the naked eye. What does it look like? What materials is it made from?

Observe and describe the scan. What does it enable scientists to see and infer about the mummy?

3. Egypt

In the Egypt section, pick two mummies to observe. Be sure to pick mummies with scans that reveal what these mummies look like on the inside.

Egyptian Mummy #1

Name:

Where was it found?

When was it made?

Observe and describe the mummy as seen with the naked eye. What does it look like? What materials is it made from?

Observe and describe the scan. What does it enable the scientists to see and infer about the mummy?

Egyptian Mummy #2

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Observe and describe the mummy as seen with the naked eye. What does it look like? What materials is it made from?

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