Ultimate Guide: Mummies: Teacher’s Guide

Grade Level: 6-8 | Curriculum Focus: World History | Lesson Duration: Two class periods

Program Description
They’ve been discovered all over the world, from South America to Antarctica, offering a glimpse of what life was like in ancient civilizations. Learn how scientists examine mummies to learn the secrets they can teach us about both the preservation techniques and belief systems of their makers.

Onscreen Questions
Part I—Before watching the video

- People in some cultures first preserved the bodies of their dead thousands of years ago. As you watch the program, think about why they did this. What are the challenges involved in preserving a human body?
- What methods were developed to overcome those challenges?

Part I—After watching the video

- The biggest challenge to mummification is decomposition. How does the process of mummification slow or even halt decomposition?
- Describe the different climatic conditions that make preservation more likely in some geographic locations.

Part II—Before watching the video

- Mummification is one way in which civilizations have sought to honor their dead. As you watch the program, note the methods that different cultures have used to preserve their dead.
- Consider what technologies might be available in the future to preserve the human body.

Part II—After watching the video

- Describe the mummification process of the Chicama mummies of Peru. Discuss the scientific methods scientists used to study these mummies.
- What did scientists learn about the diet of the Chicama people?
Lesson Plan

Student Objectives

- Learn about different kinds of mummies around the world.
- Examine a mummy or mummy group and present images and facts to the class.

Materials

- Newsprint and markers
- Internet access (Web sites suggested below)
- World map

Procedures

1. On a piece of newsprint, write the word “mummy,” and ask students to brainstorm what they know about mummies. Write students’ responses on the newsprint.

2. Explain that a mummy is a preserved body that still has soft tissue, such as organs or muscles. Such tissue usually decays as bacteria and fungi grow. When a body is mumified, it is preserved so that the bacteria and fungi cannot grow. Explain that some mummies are intentionally preserved, and others are accidentally preserved by natural qualities in the environment.
   - Embalming, or deliberate preservation, involves drying a body with sunlight, fire, smoke, or chemicals to remove the moisture that bacteria and fungi need to grow.
   - Ice preserves a body because bacteria and fungi cannot live in freezing temperatures.
   - Peat bogs, or stagnant bodies of water with high acid levels, preserve bodies because bacteria and fungi cannot live in an oxygen-free environment.
   - Some soil and mud environments preserve bodies because they contain chemicals that kill bacteria.
   - Desert environments may preserve bodies because there is very little moisture in the air.

3. Tell students that mummies have been found on every continent. Explain that students will study mummies and make a presentation to the class. Divide the class into small groups to conduct research using the Web sites suggested below.

4. Have students use the Web sites on the next two pages to answer the following questions:
   - What is this mummy or mummy group called?
   - Where was it found?
   - Describe what scientists found.
   - Draw a picture or print out an image.
   - How was it preserved?
• How well preserved was it?
• Was the mummy preserved intentionally or accidentally?
• Explain any information known about this person or group, including name, position or title, and cause of death. How do scientists know this information?
• Were other objects found? If so, what do they reveal about the mummy or mummies?
• What have scientists and historians learned about the society of the mummy or mummies?

Web Sites for Students

BOG MUMMIES

• Tollund Man: This 2,100-year-old mummy was found in a peat bog in Denmark. A rope around his neck indicates he was probably sacrificed.
  
  http://dsc.discovery.com/stories/history/desertmummies/tollundman.html
  http://library.thinkquest.org/J003409/bog.htm

• Lindow Man: This mummy of a murdered man was found in an English peat bog.
  
  http://www.mummytombs.com/mummylocator/featured/lindowman.htm
  http://www.archaeology.org/cgi-bin/site.pl?page=online/features/bog/reconstructions

ICE MUMMIES

• Ötzi the Iceman: Found frozen in the Alps, this man died about 5,200 years ago.
  
  http://www.mummytombs.com/mummylocator/featured/otzi.htm
  http://www.pbs.org/wgbh/nova/icemummies/iceman.html
  http://dig.archaeology.org/drddig/mummy/22.html

• Juanita (the “Ice Maiden”): Discovered in the Peruvian Andes, the young Inca girl had been sacrificed and preserved by the ice.
  
  http://www.pbs.org/wgbh/nova/peru/mummies/high1.html
  http://dsc.discovery.com/stories/history/desertmummies/juanita.html

DESERT AND CAVE MUMMIES

• Cherchen, Tarim Basin, or Takla Makan mummies: Found in the barren Taklamakan Desert of northwestern China, the bodies had been naturally dehydrated and almost perfectly preserved for 3,000 years. They had distinctly European features.
  
  http://www.mummytombs.com/mummylocator/group/urumchi.htm
  http://dsc.discovery.com/stories/history/desertmummies/cherchen.html
  http://library.thinkquest.org/J003409/china.htm
  http://www.pbs.org/wgbh/nova/chinamum/taklamakan.html
• **Chiribaya mummies:** Many mummies preserved for more than a thousand years have been found in the cold desert of southern Peru.
  
  http://dsc.discovery.com/stories/history/desertmummies/desertmummies.html

**EMBALMED MUMMIES**

• **Chinchorro mummies:** The Chinchorro in Peru and Chile may have been the first people in the world to practice mummification.

  http://www.mummytombs.com/mummylocator/group/chinchorro.htm

  http://www.archaeology.org/online/features/chinchorro/index.html

• **Guanche mummies:** These mummies were found in caves on the Canary Islands.

  http://www.mummytombs.com/mummylocator/group/guanche.htm

• **Tutankhamen (King Tut):** Buried in a tomb filled with treasures, the Egyptian pharaoh had been embalmed and wrapped in hundreds of yards of linen.

  http://www.si.umich.edu/CHICO/mummy

  http://www.civilization.ca/civil/egypt/egtut01e.html

  http://www.pbs.org/wnet/pharaohs/digging.html

• **Rameses II (Rameses the Great):** This Egyptian pharaoh was about 90 years old when he died and was mummmified.

  http://www.secker.fsbusiness.co.uk/rameses2.htm

  http://www.si.umich.edu/CHICO/mummy/who.html

  http://www.mummytombs.com/egypt/pharaohmummies.htm

**EGYPTIAN MUMMIFICATION**


• [http://www.pbs.org/wgbh/nova/peru/mummies](http://www.pbs.org/wgbh/nova/peru/mummies)


5. Have students present their findings to the class. Place a marker on a map showing where each mummy or group was found.

**Assessment**

Use the following three-point rubric to evaluate students’ work during this lesson.

• **3 points:** Students participated actively in class discussion; demonstrated strong research and writing skills; thoroughly answered all the questions in their presentation.

• **2 points:** Students participated to an average degree in class discussion; demonstrated on-grade research and writing skills; answered some of the questions in their presentation.

• **1 point:** Students participated little in class discussion; demonstrated weak research and writing skills; answered only one or two of the questions in their presentation.
**Vocabulary**

**bog**
*Definition*: A marsh of acidic stagnant water covered with a wet, spongy layer of vegetation that keeps out oxygen
*Context*: Tollund Man is a 2,100-year-old mummy found in a bog in Denmark.

**embalm**
*Definition*: To treat a dead body with preservatives in order to prevent decay
*Context*: The ancient Egyptian pharaoh Tutankhamen was embalmed to prepare his body for the afterlife.

**mummy**
*Definition*: A body that has been preserved by natural or artificial means
*Context*: Unlike a fossil or skeleton, a mummy has some of its soft tissue, such as organs or muscles.

**Academic Standards**

**National Academy of Sciences**

This lesson plan addresses the following science standards:

- Science as Inquiry: Understandings about scientific inquiry

**Mid-continent Research for Education and Learning (McREL)**
McREL's Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education addresses 14 content areas. To view the standards and benchmarks, visit link: [http://www.mcrel.org/compendium/browse.asp](http://www.mcrel.org/compendium/browse.asp)

This lesson plan addresses the following national standards:

- Science—Nature of Science: Understands the nature of scientific inquiry, Understands the scientific enterprise
- Language Arts—Writing: Uses the general skills and strategies of the writing process, Gathers and uses information for research purposes
Support Materials

Develop custom worksheets, educational puzzles, online quizzes, and more with the free teaching tools offered on the Discoveryschool.com Web site. Create and print support materials, or save them to a Custom Classroom account for future use. To learn more, visit

- [http://school.discovery.com/teachingtools/teachingtools.html](http://school.discovery.com/teachingtools/teachingtools.html)