
The Mummy Who Would Be King

PROGRAM OVERVIEW

NOVA investigates whether an Egyptian mummy that wound up on display at a curiosity museum in Canada may be the remains of Rameses I, the founder of one of Egypt's greatest dynasties.



The program:

- reviews how the mummy appears to have been purchased around 1860 and shipped to the Niagara Falls Museum and Daredevil Hall of Fame in Ontario, Canada.
- describes how an amateur German Egyptologist became intrigued with the mummy in 1979 and prompted a subsequent inquiry that led investigators to conclude in 1985 that the remains did not belong to a royal mummy from the New Kingdom.
- reviews some of the pharaohs who ruled during the New Kingdom era, which began about 3,500 years ago and lasted five centuries.
- relates that while the tombs of nearly all the pharaohs buried in the Valley of the Kings were looted in antiquity, their mummies were safeguarded and eventually moved to the Egyptian Museum in Cairo.
- reports which of the mummies of New Kingdom pharaohs have already been identified and where many of them were discovered.
- notes how the mummy captured the attention of an archeology student who invited a visiting British Egyptologist to come see it at the Niagara Falls Museum.
- relates how the mummy came to be carbon-14 dated in 1994, which indicated the remains were about 2,700 years old, too old to be part of the later Roman era.
- explains how the Michael C. Carlos Museum in Atlanta acquired the mummy in 1999.
- follows the investigation launched by the Carlos Museum to determine the mummy's identification, which included visual observation, X-ray and cross-matching of the skull to an existing database of pharaoh skull shapes, CT scans, and archival evidence.
- concludes with the confirmation that the unknown mummy is almost certainly a pharaoh and possibly Rameses I.
- follows the October 2003 return of the mummy to Egypt.

Taping Rights: Can be used up to one year after the program is taped off the air.

BEFORE WATCHING

- 1 Rameses I ruled during the New Kingdom period (1550-1070 b.c.), a time of tremendous growth for the Egyptian empire. Have students research some of the advances made during this time period and create a newspaper with articles highlighting the developments that occurred. To put the developments into perspective, have students research advances being made by other cultures worldwide during the same period.
- 2 Organize the class into five groups. Have each group take notes on what each of the following techniques revealed about the age of the mummy—visual examination, X-rays, carbon dating, CT scanning, and historical records.

AFTER WATCHING

- 1 Discuss with students the techniques that were used to determine the age of the mummy. Have each group share its notes and discuss what each technique revealed. Ask about the evidence that supports the idea that the mummy is Rameses I. Which evidence seemed strongest? Which seemed weakest? What conclusions, if any, can students make? How confident are students in their conclusions? Have students explain the reasoning behind their confidence levels.
- 2 Have students consider the reliability of the different dating methods they took notes on, and then discuss with students why it is useful to rely on more than a single piece of evidence to determine the age of a mummy. (*Confidence in a conclusion becomes strengthened as it is verified by several pieces of evidence or it is independently confirmed by additional scientific teams.*)

CLASSROOM ACTIVITY

Activity Summary

To determine the culture and method of mummification of various mummies by using descriptive clues.

Materials for Each Team

- copy of the “Matters of Mummification” student handout
- copy of the “Mummies of the World” student handout
- copy of the “Mummies 101” article found at www.pbs.org/wgbh/nova/chinamum/mummies101.html
- access to world atlas
- access to print and Internet resources

Background

Mummies are bodies of people or animals preserved after death. The process of mummification used by ancient cultures that preserved their dead for hundreds, even thousands, of years differs from more modern methods of embalming that are sometimes used to temporarily preserve human remains after death. Mummification often included the use of resin or chemicals to preserve the dead; contemporary embalming involves treating a corpse with preservatives in order to temporarily prevent decay.

Mummies have been found in many places around the world, including Egypt, Greenland, South America, the Austrian-Italian Alps, New Guinea, Northwest Europe, the Aleutian Islands off the coast of Alaska, and the U.S. Southwest.

Mummification methods varied, and they were often dependent upon the tools and materials available to a particular culture. Each method prevented bacteria and fungi from multiplying and breaking down the body. Some mummification methods were anthropogenic—created intentionally by people—while others were spontaneous—created by natural conditions such as subzero temperatures or burial in bogs.

Mummification often involves one of the following techniques: drying the body with salts, smoke, or chemicals; drying the body in the sun and wind or in the cold and wind; placing the body in an oxygen-free environment such as a peat bog; or burying the body in soil that has bacteria-killing chemicals.

This activity will introduce students to some of the different kinds of mummification techniques that have been discovered worldwide.

LEARNING OBJECTIVES

Students will be able to:

- explain what mummification is.
- understand that different societies practiced different methods of mummification.

STANDARDS CONNECTION

The “Matters of Mummification” activity aligns with the following National Science Education Standards (see books.nap.edu/html/nses).

GRADES 5–8

Science Standard G

History and Nature of Science
History of science

*Video is not required
for this activity.*

Classroom Activity Author

Developed by WGBH Educational
Outreach staff.

CLASSROOM ACTIVITY (CONT.)

Procedure

- 1 Organize students into teams and provide each team with copies of the student handouts and access to or copies of the “Mummies 101” article found on the NOVA Web site.
- 2 Ask students to read the article and then work together to identify each mummy by using the descriptive clues.
- 3 When teams are finished, divide the mummy descriptions evenly amongst teams. Have each team conduct additional research on its types of mummification. After learning more, each team should plot the geographic location where its mummies were found, and the date the bodies were mummified, on the map and time line provided in the “Mummies of the World” student handout.
- 4 After all teams have completed their handouts, have each team report on its assigned mummies, providing the locations and mummification time frames for a class map and time line. Once all teams have reported, ask students to identify any patterns they see about where, how, why, or when the mummies were created. What, if any, general conclusions can be drawn about the mummies studied? What surprised students the most about the mummies they researched?
- 5 Ask students about the types of items that are often preserved today and the preservation techniques that are used. *(An example might include food by refrigeration, salting, and pickling.)*
- 6 As an extension, have students choose a mummification technique for further study. Ask students to prepare a one-page summary that includes the related science of their chosen techniques.

ACTIVITY ANSWER

	Aleut	Anasazi	Austrian-Italian Alps	Chinchorros	Egyptian	Greenland	Inca	New Guinean	NW European Bogs	Paloman
Mummy Description										
flat, brown, and leathery; lifelike appearance								•		
young with wood supports along the spine				•						
found under ceramic jar						•				
wrapped in leather; lots of grass inside	•									
buried under house floor; wrapped in reeds									•	
3,000 years old; found wrapped well in linen strips				•						
wrapped in fur, wore new sandals		•								
wore shoes stuffed with grass			•							
found hanging from cave ceiling	•									
feathers inside				•						
broken skull; thin bones								•		
found beside clothing made of seal skin						•				
mummy bundled with false head decorated with piercing eyes							•			
heart left inside				•						
found high on a mountain surrounded by gold and silver							•			
smoke-cured before covered in clay								•		

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LINKS AND BOOKS

Links

NOVA—The Mummy Who Would Be King

www.pbs.org/nova/mummy

Find out whether any undiscovered tombs still exist, discover who Rameses I was, see how a mummy is made, and learn more about the history of mummification in Egypt.

Mummies of Ancient Egypt

www.si.umich.edu/chico/mummy/demo.html

Explores the process of and reasons for mummification.

Mummies Unmasked

www.nationalgeographic.com/ngkids/9906/mummies/mummy_making.html

Provides more information about mummy making.

Mystery Mummy

www.egyptianmuseum.com/article17_archmagApril2003.htm

Contains an article that explains why the mystery mummy found in a Niagara Falls museum may be Rameses I.

Summum Mummification

summum.kids.us/mummification/world/
Contains a globe interactive that allows users to see where mummies have been found around the world.

Books

Egyptian Mummies: People from the Past

by Delia Pemberton.

Harcourt Brace & Co., 2001.

Shows how forensic science can shed light on the ancient Egyptians.

Mummies, Bones, and Body Parts

by Charlotte Wilcox.

Carolrhoda Books, 2000.

Contains graphic photos of ancient mummies and descriptions of different preservation methods.

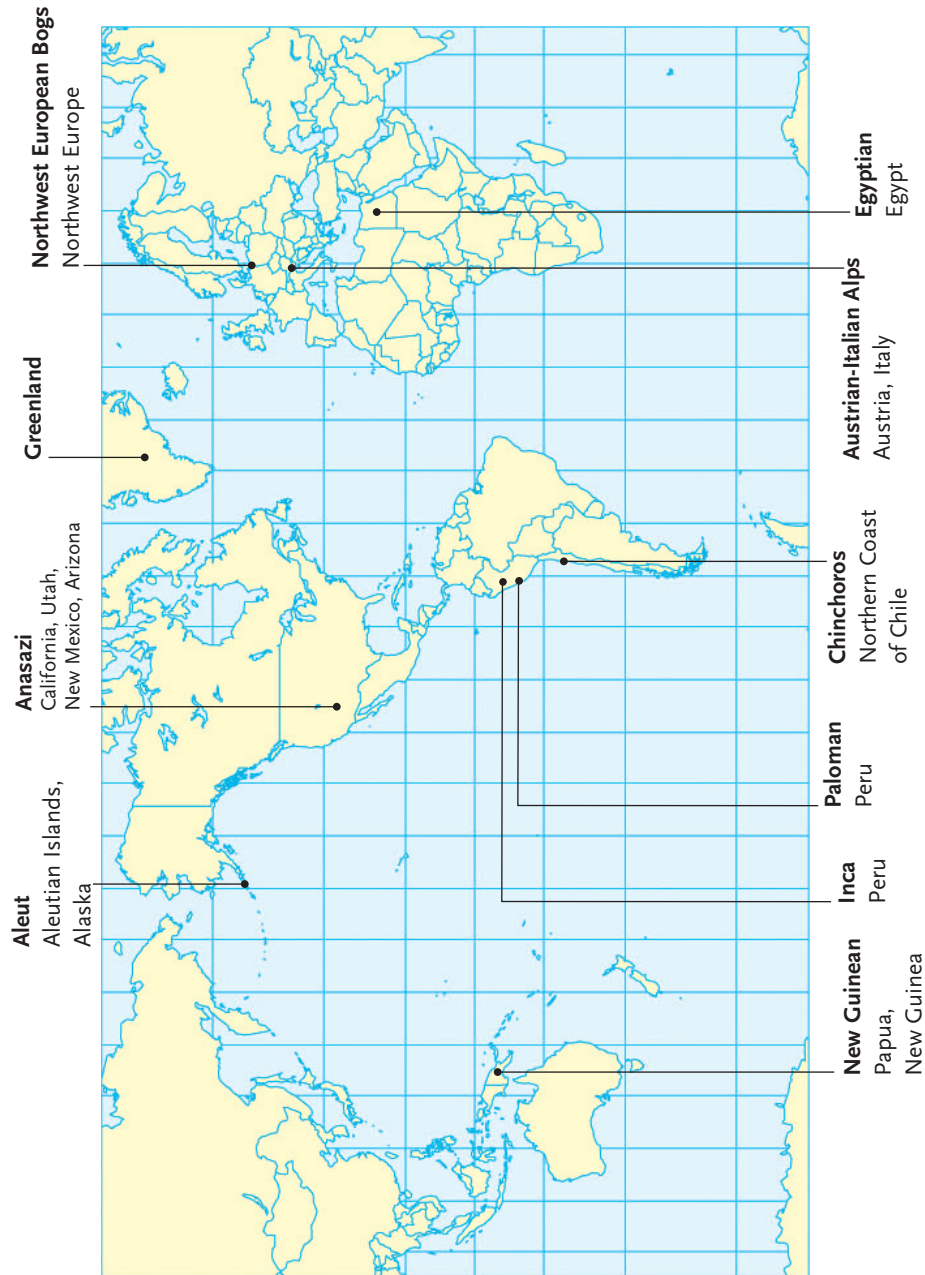
Mummy

by James Putnam.

Dorling Kindersley, 2000.

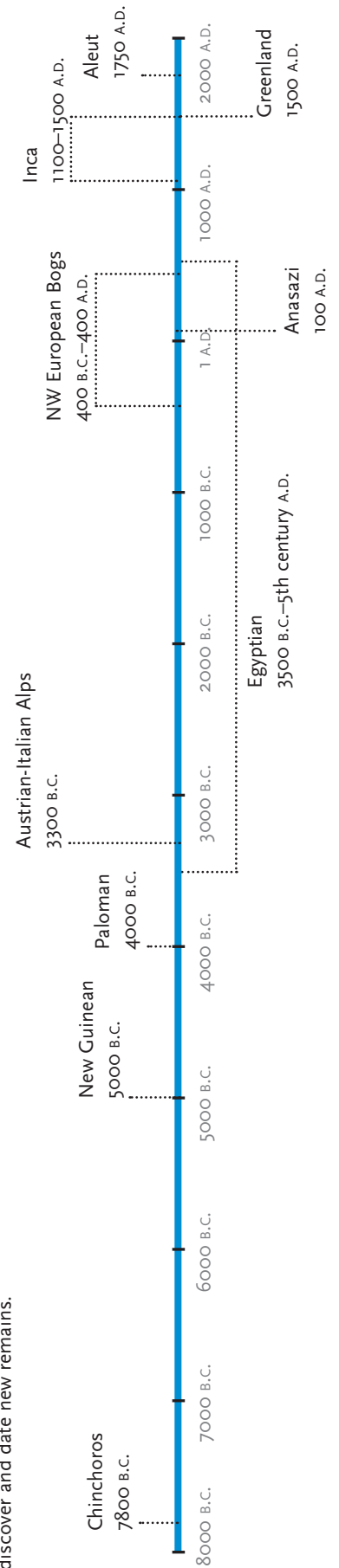
Provides an overview of mummies from around the world.

ACTIVITY ANSWER



Time Line

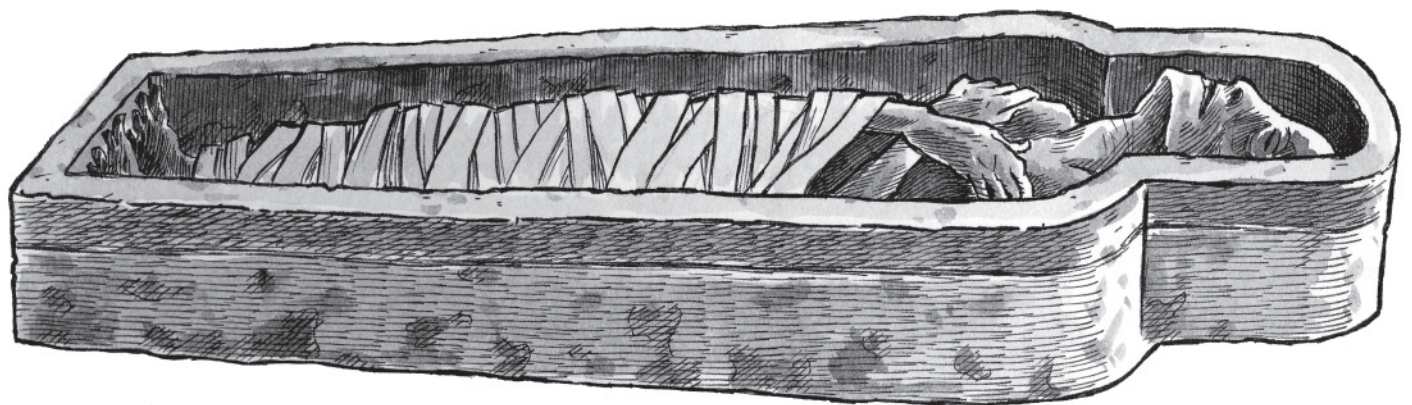
The time line shows mummy findings worldwide and the approximate times scientists believe the mummies were preserved (some mummy ages are more speculative than others depending on how accurately the mummy remains could be dated). These approximate ages change as scientists more accurately determine the age of existing mummy remains and discover and date new remains.



Matters of Mummification

Mummies are preserved bodies from long ago. While many cultures preserved their dead, mummies were also created by accident during subzero temperatures or after burial in bogs. There were a number of different methods of mummification; all of them prevented bacteria and fungi from multiplying and decomposing soft tissue. In this activity, read an article about mummies to find clues about different ways in which they were mummified. Place a mark in the correct column to match the appropriate culture or location with which the mummy was associated.

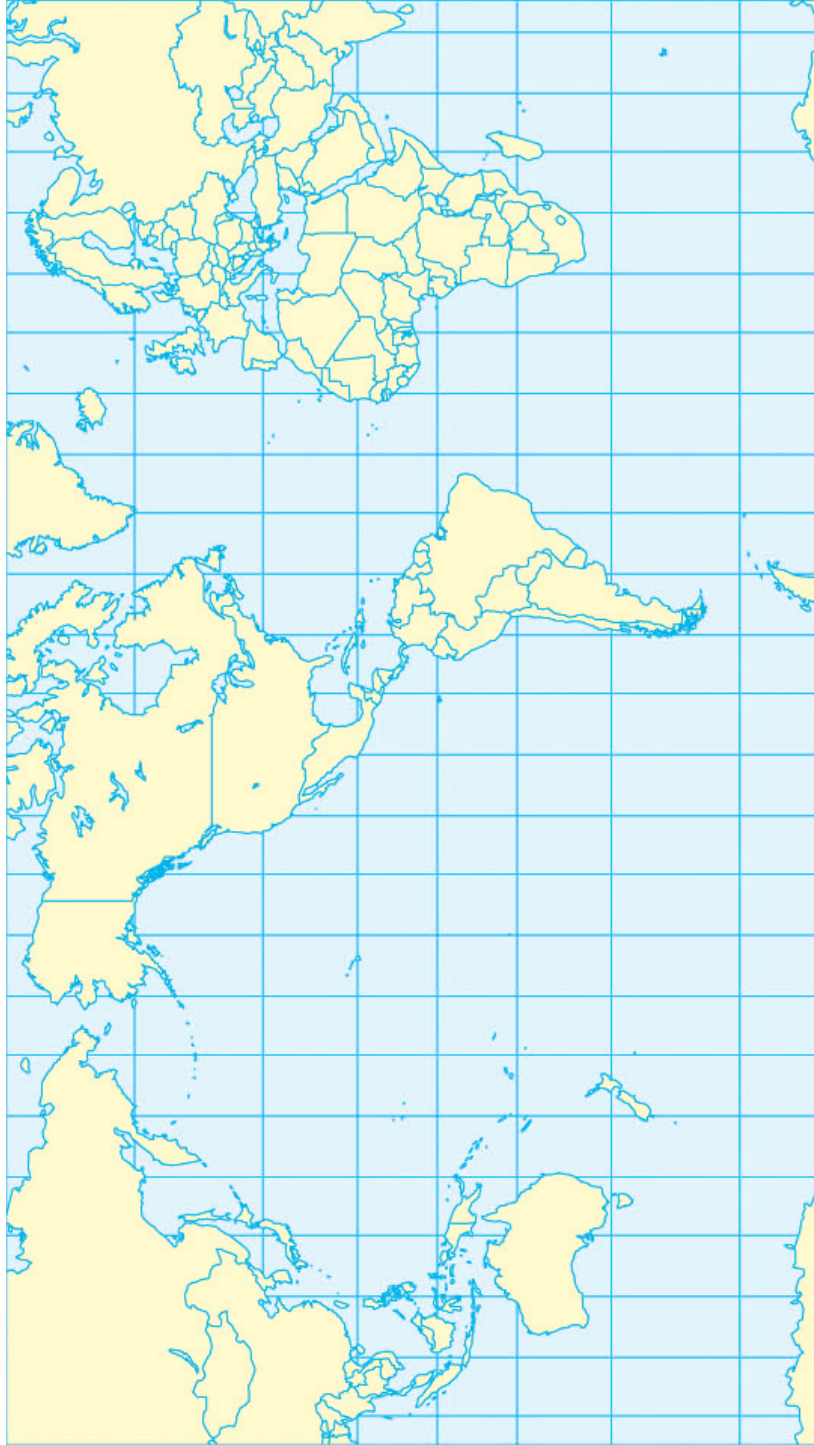
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Mummies of the World

Locate and plot the site of each of the cultures or locations of mummy finds that you have been assigned to research. Then use the time line to mark the approximate date(s) when the bodies were mummified.

World Map



Time Line

