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## Focus Words

diversity | enhance | migration | presume | reveal

## Weekly Passage

Mummies are very old dead human bodies that still have flesh on their bones. Some cultures have a tradition of making mummies when people die. For example, ancient Egyptians preserved the bodies of dead kings and queens because they thought this would ensure a good afterlife.

In recent years, mummies that were created naturally have been discovered all over the world. One found in the Alps appears to have been accidentally frozen in a glacier. He is known as the Iceman and is presumed by scientists to be over 5000 years old!

We can learn a lot about human history from studying mummies. They can reveal clues about what people ate, the tools they made, what they wore, and how they lived and died. They can also help to enhance archaeologists' understanding of human migration patterns. Scientific tests have provided information about where the Iceman might have traveled in his lifetime.

There is a diversity of perspectives about what to do with mummies when they are encountered. Should they be removed and examined, or should they be left where they are? Some think a mummy should stay in the country where it was first identified. Others believe it should go to the museum or university best equipped to study and protect it. Still others believe that removing a mummy from its burial place dishonors the dead.

What do you think?

### TEACHER

#### Reading Comprehension/Discussion Questions:

- ▶ What is a mummy?
- ▶ Why did the ancient Egyptians make mummies when people died?
- ▶ What can we learn from studying mummies?
- ▶ Who is the Iceman?
- ▶ What should be done with mummies when they are found?

## Unit 1.1.1

# Mummies: Who owns the dead?

## Focus Word Chart

Word	Meaning	Forms			Related Words
		Inflectional	Basic Word Classes	Prefixes/ Suffixes	
diversity	(n.) - variety; range	diversities	diverse	diversify	diverge divergent
enhance	(v.) - to improve	enhances enhancing enhanced		enhancement	
migration	(n.) – movement	migrations migrate (v.) migrates migrating migrated		migrant migratory immigrate emigrate	
presume	(v.) - to suppose; to guess	presumes presuming presumed		presumption presumably presumptuous presumptive	resume consume assume
reveal	(v.) - to uncover; to show	reveals revealing revealed		revealer revelatory revelation	veil

## Unit 1.11

# Mummies: Who owns the dead?

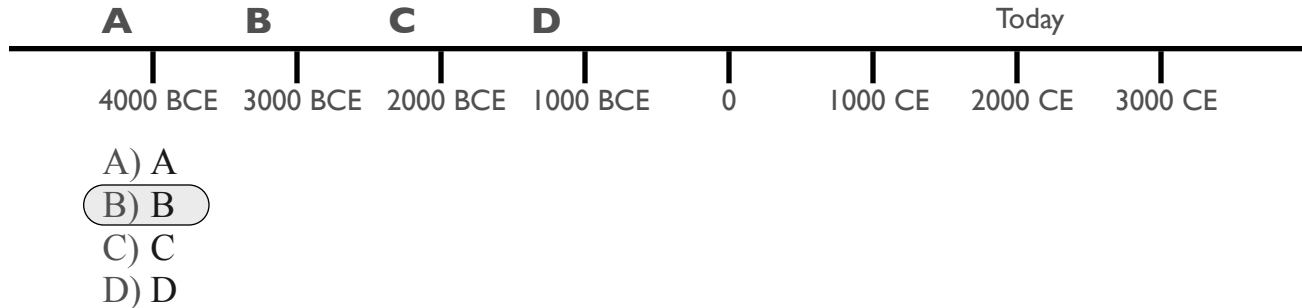
### Problem of the Week



When hikers first found the Iceman, they **presumed** that the body was fresh. Subsequent scientific study **revealed** that he had died over 5,000 years earlier.

Studies of the Iceman's body and clothing have **enhanced** our idea of what life was like long ago. Researchers learned about the **diversity** of his diet. Inside his stomach they found meat, grain, roots, and fruit. Researchers who study human **migration** were particularly interested in the Iceman's shoes. His shoes were sturdy and good for walking.

**Option 1:** The Iceman died about 5,300 years ago. Which letter represents the time frame of his death?



**Option 2:** Evidence from the Iceman's teeth and bones suggest that he spent his life in a region that measures 37 miles across. An average person can walk at a rate of 3.5 miles per hour. How long would it take to walk from one end of the Iceman's domain to the other?

**Answer:** about 10.57 hours, or about 10 hours 34 minutes

**Math Discussion Question:** When a modern person dies, we **presume** that the family has rights to the body. Many families want bodies disposed of quickly and respectfully. Although some people offer their bodies for scientific study, it is illegal to use a person's body in this way without their consent. When an ancient mummy is discovered, we think about the body very differently. We know that studying ancient remains may **reveal** new information that will **enhance** scientific knowledge. Ancient mummies may tell us new things about the **diversity** of human experience: where and how people **migrated**, what they ate, and how they lived. Is treating ancient mummies as scientific objects a form of disrespect? Or is the value to science more important? Or, could we say that scientific study itself is a way of respecting our ancient ancestors?

# Mummies: Who owns the dead?

## Debating the Issue



### 1. Get ready...

Pick one of these positions (or create your own).

**A** Mummies should be left where they are.  
Moving them dishonors the dead.

**B** Mummies should be moved to a  
university where scientists can study  
what they reveal about the past.

**C** Mummies should be moved to a museum  
where people can come to see them and  
enhance their knowledge about the past.

**D** Mummies can be moved as long as they do  
not leave the country in which they are  
found.

**E** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# GO!

Be a strong participant by using phrases like these.

*In my experience . . .*

*that's similar to what I think too...*

*What makes you think that?*

*When I re-read the  
text, it reminded me...*

### 2. Get set...

Be ready to provide evidence to back up your position  
during your class discussion or debate. Jot down a few  
quick notes:

\_\_\_\_\_  
\_\_\_\_\_

#### TEACHER

Whatever the debate format, ask students to use academically productive talk when arguing their positions. In particular, students should provide reasons and evidence to back up their assertions. It may be helpful to read these sample positions to illustrate some possibilities, but students should be encouraged to take their own positions about the issue at hand.

## Unit 1.11

# Mummies: Who owns the dead?

## Science Activity

Professor Kahn is spending her summer in Germany studying ancient Egyptian mummies. Her research team hopes to **enhance** what we know about a deadly disease: leishmaniasis (pronounced leash-man-eye-a-sis).

Scientists think leishmaniasis first appeared in ancient Nubia. In history, **migration** and trade have helped spread disease. When people moved, their diseases came with them. When people met to trade, they shared parasites and germs. Where there was **diversity** in terms of people, there was also **diversity** in terms of disease.

Egypt often traded with Nubia during the Middle Kingdom period (2050 – 1650 BC). Four of the Egyptian mummies Professor Kahn is studying are from this period. If the Nubians had leishmaniasis, then they could have given the disease to the Egyptians. The scientists **presume** these mummies will **reveal** evidence of leishmaniasis. Are they right?



This activity is designed to help you practice thinking like a scientist and to use this week's focus words. Sometimes the data are based on real research, but they should never be considered true or factual.

### Question:

Did the Middle Kingdom mummies have leishmaniasis?

### Hypothesis:

Tests will **reveal** that all four Middle Kingdom mummies had leishmaniasis.

### Materials:

- ▶ Bone samples from the Middle Kingdom mummies
- ▶ DNA testing equipment

### TEACHER

-Nubia was located in modern-day Sudan and southern Egypt.

-Leishmaniasis is caused by protozoan parasites and spread by the bite of sand flies. It causes painful skin sores and kills half a million people each year. It is found in tropical and sub-tropical climates, both in the Americas and across Africa and Asia. Some U.S. troops stationed in the Middle East have contracted leishmaniasis.

### Real Research

-The real research on which this experiment was based was done by a team led by Albert Zink of Ludwig-Maximilians University in Munich. They tested 91 mummies from ancient Egypt and 70 from ancient Nubia by testing bone samples for mitochondrial DNA of the parasite that carries leishmaniasis. They found this DNA in nine of the Nubian mummies and four of the Egyptian mummies. All four of the Egyptian mummies were from the Middle Kingdom period, when trade ties between Nubia and Egypt were strong.

-Biello, D. (2006, October 6). Mummy DNA reveals birth of ancient scourge. Scientific American. Retrieved on November 17, 2009 from <http://www.scientificamerican.com/article.cfm?id=mummy-dna-reveals-birth-o>

**Procedure:**

1. Remove samples from the bones of the 4 mummies.
2. Test the samples for leishmaniasis.

**Data:**

Four Mummies from the Middle Kingdom period (2050 – 1650 BC)	Does the Mummy have Leishmaniasis?
Mummy 1	yes
Mummy 2	yes
Mummy 3	yes
Mummy 4	yes

**Conclusion:**

Is the hypothesis supported or not by the data?

Supported

What evidence supports your conclusion?

All four mummies from the Middle Kingdom period showed evidence of leishmaniasis.

How would you make this a better experiment?

Encourage students to consider sample size, number of trials, control of variables, whether the procedure is a true measure of the question, whether the experiment can be repeated by other scientists, data collection and recording systems, and other potential explanations for the outcome. Students should understand that these simple experiments represent the beginning of an exploration, not the end. If time permits, have students suggest how the experiment could be strengthened, emphasizing the use of the target words in the discussion.



## Writing Prompt:

What should be done with  
mummies when they are found?  
Why?

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

### Focus Words

diversity | enhance | migration | presume | reveal

#### A tool to help you think about your own writing!

Remember you can use focus words from any of the WG Units.

Check off what you accomplished:

##### Good Start

- ☐ Stated my own position
- ☐ Included 1 focus word

##### Pretty Good

- ☐ Stated my own position clearly
- ☐ Included 1-2 arguments
- ☐ Included 1-2 focus words

##### Exemplary

- ☐ Stated my own position clearly
- ☐ Included 1-2 arguments
- ☐ Included 1 counterargument
- ☐ Used 2-5 focus words

#### TEACHER

Ask students to write a response in which they argue a position on the weekly topic.

Put the writing prompt on the overhead projector (or the board) so that everyone can see it. Remind students to refer to the word lists in their Word Generation notebooks as needed.

[illegible]