



Mummies Made in Egypt

(GPN #54/PBS #509)

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Program Description: LeVar visits the Museum of Fine Arts in Boston where the art of conserving Egyptian artifacts is explored. Through the use of CAT scan technology, viewers also see what a mummy looks like after thousands of years.

Math Concepts:

- patterns
- geometric shapes
- metric system
- measurement
- problem solving (coded messages)

• **Finding patterns.** Using the book and the story segment of the video, have students examine the illustrations for patterns. For example, there are patterns on the jewelry, the portrait masks, the coffins, the sled used for transporting the body, and many other artifacts of the burial. Have students describe the patterns. Some include geometric shapes; others are pictorial.

• **Geometric shapes.** Allow students to examine pyramid blocks so that they can describe the shapes that make up a pyramid. (Pyramids can be built on any polygon as a base, but the sides are always triangular.) The pyramids in Egypt were actually made with rectangular stones. Have students use rectangular building blocks (any size) and problem solve the building of a pyramid. Consult the video segment showing the pyramids, Aliko's book, and other sources, such as Pyramid by David Macaulay, as references. Students might also experiment with different pyramid forms using toothpicks and miniature marshmallows.

• **Metric system.** The forensic artist who created the model of the mummy's face on the video used numbers to mark the thickness of the facial tissue. His measurements were in metric units. Have students work with centimeter rods and blocks to measure classroom objects in metric units.

Do-At-Home Activity

• **Creating and decoding hieroglyphic messages.** Copy the hieroglyphic number system shown on the next page for students to take home. Have families represent familiar numbers such as ages of family members, the year they were born, their addresses, birth dates, etc., in hieroglyphic form. As a more sophisticated activity, they may create a short coded message in hieroglyphics using the following system: A=1, B=2, C=3, D=4, etc., for the alphabet. (This alphabet system is included on the next page, as well.) Invite them to create a "signature" for their family using hieroglyphic symbols. Have students bring their messages to school for classmates to decode.

Ancient Egyptian system of writing numbers.

Use the Egyptian number system to write familiar numbers, such as your address, ages and birthdates of family members, the year that everyone was born, and the like. Write a message in code using the alphabet code and the Egyptian number system. Have fun with these codes.

- | is one | All numbers are written by using combinations of these figures.
- ∩ is ten | The higher number is always written in front of the lower number.
- ☉ is 100 | When there is more than one row of numbers, start at the top and read down.
- ☿ is 1,000 | Sample numbers:

☿ is 10,000

☉ ∩ III	is 126	∩∩ II	is 42
☿ ☉ ∩ III	is 1,215	∩∩∩∩ II	is 74

Alphabet Code

A=1	G=7	M=13	T=20
B=2	H=8	N=14	U=21
C=3	I=9	O=15	V=22
D=4	J=10	P=16	W=23
E=5	K=11	Q=17	X=24
F=6	L=12	R=18	Y=25
		S=19	Z=26