EGYPTOMANIA: Hieroglyphs

Program Two

Grades 2-6

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Objects:

Papyrus, (2) 3” x 3” squares to be sent by mail.
How to Prepare Your Class for the Distance Learning Presentation

Teacher Information will be sent or made available to you prior to the program.

Please familiarize yourself with the materials and discuss them with your class.

Have the Teacher Information Packet (T.I.P.) materials on hand in the classroom, ready for the program. These materials may be used during the videoconference.

Be prepared to facilitate by calling on students yourself during the lesson. Students are sometimes initially shy about responding to questions during a distance learning lesson.

Explain to students that this is an interactive medium and encourage them to ask questions.

Reinforce topics discussed in the program by asking students to complete some of the suggested pre- and post-conference activities in the Teacher Information Packet.

We ask teachers, after the program, to please fill out the Evaluation Form and return it to:

    Dale Hilton/Distance Learning
    The Cleveland Museum of Art
    11150 East Boulevard
    Cleveland, OH 44106

Thank You!
After the pyramids, hieroglyphs are probably the most familiar feature of ancient Egyptian civilization. For thousands of years these exotic images have both charmed and puzzled the human race. The Egyptians believed hieroglyphic inscriptions were the words of the gods and that words in all forms were sacred. In fact, the term “hieroglyph” means “sacred carving.” For thousands of years, the meaning of hieroglyphic writing remained a mystery. The breakthrough to understanding only came in 1822 after Jean Francois Champollion realized that hieroglyphic symbols could stand for objects, ideas or sounds.

**Program Objectives:**

1. To introduce students to the symbolic nature of written languages.
2. To compare similarities and differences between hieroglyphs and the English alphabet.
3. To acquaint students with the role of the scribe and his importance in ancient Egypt.
4. To investigate the materials, techniques and equipment used to produce hieroglyphic inscriptions.

**Common Core Standards:**

*English Language Art & Literacy in History/Social Studies, Science, and Technical Subjects*

**2nd Grade:**

**CCSS.ELA-Literacy.W.2.3**

Write narratives in which they recount a well elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.

**CCSS.ELA-Literacy.SL.2.1**

Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.

**3rd Grade:**

**CCSS.ELA-Literacy.W.3.3**

Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

**CCSS.ELA-Literacy.SL.3.1**
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others’ ideas and expressing their own clearly.

4th Grade:
CCSS.ELA-Literacy.W.4.3
Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
CCSS.ELA-Literacy.SL.4.1
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 4 topics and texts, building on others’ ideas and expressing their own clearly.

5th Grade:
CCSS.ELA-Literacy.W.5.3
Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
CCSS.ELA-Literacy.SL.5.1
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topics and texts, building on others’ ideas and expressing their own clearly.

6th Grade:
CCSS.ELA-Literacy.W.6.3
Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
CCSS.ELA-Literacy.SL.6.1
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 6 topics, texts, and issues, building on others’ ideas and expressing their own clearly.

National Education Standards:
For Fine Arts - Visual Arts (grades K-4, 5-8):
- Understanding and Applying Media, Techniques, and Processes
- Understanding the Visual Arts in Relation to History and Cultures
- Making Connections Between Visual Arts and Other Disciplines

For Language Arts - English (grades K-12):
- Reading for Perspective
- Reading for Understanding
- Evaluation Strategies
- Communication Skills
- Communication Strategies
Applying Knowledge
Developing Research Skills
Multicultural Understanding

For Social Sciences – U.S. History (grades K-4):
- The History of Peoples of Many Cultures Around the World

For Social Sciences – World History (grades 5-12):
- Era 2: Early Civilizations and the Emergence of Pastoral Peoples, 4000-1000 BCE

For Mathematics – Number and Operations (grades Pre-K – 2, 3-5):
- Understand numbers, ways of representing numbers, relationships among numbers, and number systems
- Understand meanings of operations and how they relate to one another
- Compute fluently and make reasonable estimates

For Mathematics – Connections (grades Pre-K - 12):
- Recognize and apply mathematics in contexts outside of mathematics.

For Science (grades K-4, 5-8):
- Science as Inquiry
- Science in Personal and Social Perspectives

Partial list of objects included from the CMA collection:

Nome Gods Bearing Offerings, detail of wall relief, 1961.205
Coffin of Senbi, 1914.716
Scribe Statue of Medthu, 1920.2004
Scribe’s Palette, 1914.727
Wild Bull Hunt Scarab of Amenhotep III, 1984.36

Prior to the Lesson:
Make photocopies of the hieroglyphic alphabet and cartouche worksheet for each student. Bring to the distance learning lesson. Students may be asked to write their name in hieroglyphs during the program. Also bring the four hieroglyphic flashcards that spell the name Senbi, included with this packet, to the lesson.
Selected Vocabulary:

**Book of the Dead** – a book of spells and incantations that was buried with the mummy to help safely guide it to the afterlife.

**Cartouche** – a bullet shaped oval drawn around the name of a king to indicate his power.

**Demotic** – Demotic evolved from an even more cursive form of hieratic and became the standard for the administration from the 25th or 26th Dynasty on, starting around 600 BC. The demotic became the everyday script, used for accounting, writing down literature, etc. It bears no resemblance whatsoever to the hieroglyphic script. In fact, it is so cursive that it resembles the Aramaic scripts used around the Fertile Crescent at this time.

**Faience** - Egyptian faience is not clay but a ceramic consisting almost entirely of quartz, the silica (sand) material of which glass is made. Faience was thought to glisten with a light symbolic of life, rebirth and immortality. Faience was first developed around 3,500 B.C. The recipe is fairly simple. Mix sand, soda from burned plants, ground seashells or limestone until the ingredients form a paste. This paste would then be pressed into molds and then coated with metallic oxides that would create various colors (ground copper creates the blue-green color). As the molded figures dry, the soda evaporates and combines with the sand to create a glaze. The figures are then heated to harden and melt the glaze.

**Hieratic** – simplified form of hieroglyphic writing, always read from right to left. By 600 BCE, hieratic, which was used to write documents on papyri, was retained only for religious writing. Eventually the most cursive form of hieratic became the demotic which gives no hint of its hieroglyphic origin. The demotic became the everyday script.

**Hieroglyph** – a form of writing that uses pictures to represent sounds, objects, or ideas. (hiero=sacred, glyph=writing)

**House of Life** – a place of learning in which manuscripts were stored and where scribes were trained.

**Ostraca** – small pieces of pottery or stone which were used as slates for sketching or writing.

**Palette** – the surface upon which artists mix their colors, or the range of colors present in a painted work.

**Papyrus** – a paper-like material made from the stems of the papyrus plant from which we get the modern word “paper.”

**Pharaoh** – the name used for an Egyptian king, which comes from the Egyptian *per-aa* or “great house.”

**Reed** – hollow stem of a plant used for writing.
Rosetta Stone – a large, granite slab with the same inscription written in three different scripts: hieroglyphic, demotic, and Greek. Its discovery in 1799 aided in translating Egyptian hieroglyphs.

Raised relief – a type of two-dimensional sculpture in which the figures stand out from the background.

Scarab – beetle, also known as a dung beetle. It is known for rolling dung into balls and pushing it, as well as laying its eggs in animal dung. The Egyptians believed the rolling of the dung symbolized the way the god Khepri (or sometimes Ra) rolled the sun across the sky. The scarab was seen as a symbol of life and rebirth, which is also associated with the god Khepri.

Scribe – a term for one who writes, from the Latin word “scribere” which means “to write.”

Scroll – long roll of paper used for writing and drawing.

Shen sign – a symbol of eternity (as well as a divine symbol) which looks like an O resting on a line.

Thoth – Egyptian god of writing and knowledge; also the patron of scribes.

Post-lesson Teaching Extensions:

1. Ancient Number Systems: Math, Social Studies

The whole idea of writing may have begun with the recording of numbers. Ancient people always need to know “How many?” whether they were talking about animals, crops, or the days in a year. Make photocopies of the enclosed worksheet for students to complete. The answer key can be used to check for accuracy.

Materials needed: photocopies of Ancient Number Systems (p. 21), Answers to Ancient Number Systems sheet (p. 22), pencils.

2. Hieroglyph Translations: Reading

Make photocopies of the two enclosed hieroglyph worksheets for students to complete. The answer key can be used to check for accuracy.

Materials needed: photocopies of the following- Hieroglyph to English Alphabet instructions (p. 16), Hieroglyph to English Alphabet (p. 17), two worksheets (p. 18-19); answer key, pencils.

3. Create a Personal Language: Writing

Hieroglyphic symbols were created by assigning meaning to objects from the physical world. Have students create their own symbolic language by assigning meanings to objects found in the classroom and use the new language to write a short sentence describing a simple everyday activity.

Materials needed: blank paper, colored and lead pencils.
4. A Day in the Life of a Scribe-in-training: Writing

It was a great honor to be a scribe in ancient Egypt, but it wasn’t easy to become one. Scribal training required a lot of hard work and eligibility for training was usually reserved for the sons of scribes. The training began at an early age and required from 12-14 years of study at a place called the House of Life. There the aspiring scribe would be told the meanings of the sacred symbols while he learned to draw the individual hieroglyphs. The ancient Egyptian word for teaching was the same as the word for punishment, and the hieroglyph for both words was the image of a man holding a stick, perhaps suggesting the fate of those who didn’t practice their lesson.

Have students write a journal entry or letter home to family members from the viewpoint of a scribe-in-training at the House of Life. Their fictional story should include at least five of the vocabulary words, and indicate an understanding of the words’ meanings. Students can decorate the margins of their paper with hieroglyphs they have drawn.

Materials needed: paper, pencils, vocabulary list.


In this group activity the teacher plans a one-clue treasure hunt for small groups of students. For example, a class of 25 might be divided into five groups of five. Each group conducts its own hunt based on a clue written in hieroglyphs that they must decipher. The teacher selects five separate treasure locations in which something will be hidden for each member of the group. Some suggested “treasures” might be: miniature candy bars, pencils, pens, or trading cards. Using the Hieroglyph to English alphabet, the teacher can write the clues, hide the treasures, give a clue to each group and let the games begin!

Materials needed: 5 index cards with treasure clues written in hieroglyphs, “treasure,” or items to be found.

6. Write Like a Scribe on Homemade Papyrus: Visual Art

For upper elementary classes, follow the directions listed on the enclosed sheet (p. 23) in this packet. For lower elementary classes, students may write with reeds, brushes or plastic stirring sticks dipped in watercolors to simulate the experience of a scribe.

Upper elementary materials needed: ground coffee, coffee filters, rubber bands, container of hot water, 2 sheets of 8 ½” x 11” manila construction paper per student, paper towels, glue, wood cooking skewers, colored chalk, sandpaper, and small cups for water

Lower elementary materials needed: plastic stirring sticks, reeds or paint brushes, watercolor paints, paper, small cups for clean water.

Suggested Reading:


Buchanan, Penelope D. In the Spell of an Ibis. The Cleveland Museum of Art. 2004.

**Websites of Interest:**

- The British Museum website includes information and interactive games on Egyptian life, gods and goddesses, mummification and writing. Play senet, an Egyptian board game. [http://www.ancientegypt.co.uk](http://www.ancientegypt.co.uk)
- Guardians Ancient Egypt Kid Connection includes links to fun, interactive websites. [www.guardians.net/egypt](http://www.guardians.net/egypt)
- Color Tour of Egypt from the Institute of Egyptian Art and Archaeology, The University of Memphis. [http://www.memphis.edu/egypt/resources/egypt.php](http://www.memphis.edu/egypt/resources/egypt.php)
- Odyssey Online: Egypt [http://carlos.emory.edu/ODYSSEY/EGYPT/homepg.html](http://carlos.emory.edu/ODYSSEY/EGYPT/homepg.html)
- NOVA Online Adventure – Mysteries of the Nile. Includes an illustrated timeline that traces Egyptian history: [http://www.pbs.org/wgbh/nova/egypt/](http://www.pbs.org/wgbh/nova/egypt/)
- Overview of the Hieroglyphic Alphabet from National Geographic Kids: [http://www.ngkids.co.uk/history/Hieroglyphics-uncovered](http://www.ngkids.co.uk/history/Hieroglyphics-uncovered)
Selected Images:

Nome Gods Bearing Offerings,  
c. 1391 – 1353 BC  
Egypt, New Kingdom, Dynasty 18 (1540-1296 BC), reign of Amenhotep III  
Painted limestone  
1961.205

Coffin of Senbi,  
c. 1918 – 1859 BC  
Egypt, Meir, Middle Kingdom, mid-Dynasty 12, reign of Amenemhat II to Sesostris II  
Gessoed and painted cedar  
1914.716
Seated Scribe of Medthu,
c.1479 – 1425 BC
Egypt, New Kingdom, Dynasty 18 (1540 – 1296 BC), reign of Tutmosis III
Limestone, originally painted
1920.2004

Wild Bull Hunt Scarab of Amenhotep III,
c.1391 – 1353 BC
Egypt, New Kingdom, Dynasty 18
Steatite
1984.36
The Cleveland Museum of Art Distance Learning Evaluation Form

Your Name______________________________________________________________
Your School________________________________________________________________
School Address (with zip code) ______________________________________________
E-mail Address ___________________________________________________________
Grade/Class of students (e.g. 10\textsuperscript{th} grade French) _______________________________
Program Title _____________________________________________________________
Program Date _____________________________________________________________

Thank you so much for your participation in our distance learning program. We would appreciate your response to these questions by circling the appropriate answer and returning the survey. Please Mail or Fax to Dale Hilton at 216-707-6679

<table>
<thead>
<tr>
<th>5 = Strongly Agree</th>
<th>4 = Agree</th>
<th>3 = Neither Agree nor Disagree</th>
<th>2 = Disagree</th>
<th>1 = Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The teacher information packet was helpful for preparing my class and me for the distance learning lesson.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2. The teaching style of the on-camera instructor was interesting, engaging and fostered interaction.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>3. The Teacher Information Packet was helpful in providing interdisciplinary extension activities that I did use or plan to use.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4. The distance learning lesson successfully taught its objectives.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>5. The distance learning lesson was not interrupted by technical difficulties.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>6. The pre-requisites in the distance learning lesson and extensions are aligned with The National Education standards.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>7. I plan to register for another distance learning lesson.</td>
<td>(circle one)</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
If no, why? ____________________________________________________________

8. I would like more information about The Cleveland Museum of Art’s Teacher Resource Center.
   
   (circle one)  
   Yes                  No

9. Why did you choose The Cleveland Museum of Art Distance Learning?
   
   (circle one)
   
   a.) Price Point
   b.) Quality of lessons
   c.) Selection of lessons
   d.) Ease of working with CMA
   e.) Other

10. How did you hear about The Cleveland Museum of Art Distance Learning program?
    
    (circle all that apply)
    
    a.) CMA in service
    b.) CILC
    c.) TWICE
    d.) Conference
    e.) Brochure
    f.) The Cleveland Museum of Art website
    g.) The Teacher Resource Center
    h.) Other

11. Do you have any additional comments about the distance learning lesson?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

Please return the completed teacher evaluation form to:

Dale Hilton/Distance Learning
The Cleveland Museum of Art
11150 East Boulevard
Cleveland, OH 44106

Or fax to Dale Hilton at 216-707-6679
Read About It! Catalogue Entry for Scribe’s Palette:

The Cleveland Museum of Art

Catalogue of Egyptian Art

LAWRENCE M. BERNAN
with Kenneth J. Bohné

Conservation sections by Patricia S. Griffin
with D. Bruce Christman
Introduction by Arielle P. Kozloff

Distributed by Hudson Hills Press, New York
Similar drawings of tunics and bolts of cloth together with other commodities, such as jars of beer and loaves of bread, are known on ostraca from Deir el-Medina. Rather than idle doodling, they appear to be the records of ad hoc economic transactions or impromptu inventory lists. The same is probably true of images scratched on the Cleveland palette. The significance of these hieroglyphic groups, however, remains unknown. One possibility is that they may be units of measure giving the dimensions of the textiles inscribed on the palette. In this case, on the palette might represent the length of one cubit, or indicating a šep, a unit of one palm’s width.  

**Materials and Construction**

The palette was carved from two pieces of an unidentified dark dense wood comprising the palette and the sliding lid which covers the storage for the stick brushes, a number of which are extant. The surface of the wood was finely smoothed with abrasives. Two rounded depressions were carved into the top surface; they functioned as paint wells. Traces of black (carbon black) and red (red ochre) pigments remain in the wells. Finely incised decoration was carved around each well. Coarser incised details were carved on the underside. All incised decoration appears to have been inlaid with a black material (probably carbon black).

**Condition**

The palette is in good condition. It is intact and exhibits slight wear, scratches, and chipping. Dirt is adhered to recessed areas or in places roughened by wear.

**Provenance**

Purchased from P. Kytiak, Cairo, through Henry W. Kent.

**Exhibitions**

CMA 1916, no. 9, p. 205

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250 Scribe’s Palette

Wood
L. 35-9, W. 5-9, D. 1
Dynasties 18-19
Gift of the John Huntington Art and Polytechnic Trust, 1914.727

Long and rectangular, this scribe’s palette has two small, circular wells at the top. Each well is encircled by a finely incised šen-sign 𓊾, and each still retains traces of its original pigment: black in the top well, red in the bottom. In the center of the palette is a rectangular slot for holding reed pens. A long, sliding lid covers the lower part, where many fragments of the original reed pens still remain.

This is a typical scribe’s palette of Dynasties 18 and 19. A similar palette, inscribed with Nebkheperura, the throne name of Tutankhamen, provides a close parallel. The incised šen-signs around each inkwell of the Cleveland palette are usually motifs. As Patch observes, the šen, as a symbol of eternity (and by connection, a divine symbol), reinforces the idea that in Egypt the written word was a gift from the gods and therefore was eternal.

Not as typical, however, are a number of incised bag tunics, or galabias, with fringed edges that occur on the palette: two on the front (on the lid of the pen case), and six on the back (on the lower two-thirds of the palette). In each case, these garments are presented in alternating front and back views. Also on the back, located on the top one-third of the palette and separated from the bag tunics by a horizontal line, is a group of fringed cloths in hieroglyphic form. Most curious is a group of hieroglyphs that appears about one-third of the way down the back. It consists of two feet over an open hand that face in the same direction.

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**Notes**

5 Gardiner 1957, p. 507, sign-list S 32.
6 See Broué 1937, pp. 61–63. I am indebted to Lawrence M. Berman for pointing out this reference to me.
7 See ibid., p. 61.
8 Gardiner 1957, p. 199, § 266 n. 204.
Hieroglyph to English Alphabet Instructions:

The ancient Egyptians used over 700 different hieroglyphs to express thoughts, words, and sounds, but if we limit ourselves to only the hieroglyphs that represent sounds we can have some fun creating and deciphering hieroglyphic inscriptions based on English words and phrases.

On the next page you’ll find a realistic representation of a hieroglyph to English alphabet based on sound signs that you can use to decipher a variety of hieroglyphic inscriptions and to create hieroglyphic messages of your own.

Remember that you are working with SOUND signs only, so don’t worry too much about proper English spelling. Just sound out the word and choose the appropriate symbols to create the sound you want. Also keep in mind that we are working with two very different languages. Some hieroglyphs have more than one sound and some sounds can be represented by more than one hieroglyph. And there are a few English sounds that aren’t easily reproduced, even with a customized hieroglyphic alphabet like this one.

Hieroglyphs were usually written from right to left but their direction and arrangement was often determined by what looked the best. The orientation of the animals and people indicated where to start—you always read into the faces of the animals. Here’s a sample inscription to get you started:
Hieroglyph to English Alphabet:

<table>
<thead>
<tr>
<th>Hieroglyph</th>
<th>English Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>As in cake (vulture)</td>
</tr>
<tr>
<td>B</td>
<td>As in bat (arm and hand)</td>
</tr>
<tr>
<td>C</td>
<td>As in boat (foot)</td>
</tr>
<tr>
<td>CH</td>
<td>As in church (tethered rope)</td>
</tr>
<tr>
<td>D</td>
<td>As in dog (hand)</td>
</tr>
<tr>
<td>E</td>
<td>As in money (double leaf)</td>
</tr>
<tr>
<td>F</td>
<td>As in foot (horned viper)</td>
</tr>
<tr>
<td>G</td>
<td>As in girl (pot stand)</td>
</tr>
<tr>
<td>H</td>
<td>As in hat (wick)</td>
</tr>
<tr>
<td>I</td>
<td>As in pin (leaf)</td>
</tr>
<tr>
<td>J</td>
<td>As in jump (cobra)</td>
</tr>
<tr>
<td>K</td>
<td>As in basket (basket w/ handle)</td>
</tr>
<tr>
<td>L</td>
<td>As in lion (lion)</td>
</tr>
<tr>
<td>M</td>
<td>As in man (owl)</td>
</tr>
<tr>
<td>N</td>
<td>As in Nile (water)</td>
</tr>
<tr>
<td>O</td>
<td>As in rope (knotted rope)</td>
</tr>
<tr>
<td>P</td>
<td>As in pet (reed mat)</td>
</tr>
<tr>
<td>R</td>
<td>As in right (mouth)</td>
</tr>
<tr>
<td>S</td>
<td>As in sun (folded cloth)</td>
</tr>
<tr>
<td>SH</td>
<td>As in show (pool)</td>
</tr>
<tr>
<td>T</td>
<td>As in top (bread)</td>
</tr>
<tr>
<td>TH</td>
<td>As in Thebes (tethered rope)</td>
</tr>
<tr>
<td>U</td>
<td>As in duck (quail chick)</td>
</tr>
<tr>
<td>V</td>
<td>As in vice (quail chick)</td>
</tr>
<tr>
<td>W</td>
<td>As in win (quail chick)</td>
</tr>
<tr>
<td>Y</td>
<td>As in yellow (two slashes)</td>
</tr>
<tr>
<td>Z</td>
<td>As in zebra (door lock)</td>
</tr>
</tbody>
</table>
Hieroglyph inscription translation worksheets:

EGYPTOMANIA

See if you can use this special Egyptomania hieroglyph to English alphabet based on sound signs to decipher the following inscriptions:
EGYPTOMANIA

See if you can write the hieroglyphs for the sounds in
Cleveland Museum of Art

Your name
Hieroglyph inscription answer sheet:

**EGYPTOMANIA**

Answers to special Egyptomania hieroglyph to English alphabet based on sound signs inscriptions:

*May you go forth to see the sun*

*There is sand in this pita and onion sandwich.*

Hieroglyphs for the sounds in Cleveland Museum of Art
Ancient Number Systems worksheet plus answer sheet:

Ancient Number Systems

<table>
<thead>
<tr>
<th>Egyptian numerals</th>
<th>Japanese numerals</th>
<th>Roman numerals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>一 = 1</td>
<td>I = 1</td>
</tr>
<tr>
<td></td>
<td>二 = 2</td>
<td>Ⅱ = 2</td>
</tr>
<tr>
<td></td>
<td>三 = 3</td>
<td>Ⅲ = 3</td>
</tr>
<tr>
<td></td>
<td>四 = 4</td>
<td>Ⅳ = 4</td>
</tr>
<tr>
<td></td>
<td>五 = 5</td>
<td>V = 5</td>
</tr>
<tr>
<td></td>
<td>六 = 6</td>
<td>Ⅵ = 6</td>
</tr>
<tr>
<td></td>
<td>七 = 7</td>
<td>Ⅶ = 7</td>
</tr>
<tr>
<td></td>
<td>八 = 8</td>
<td>Ⅷ = 8</td>
</tr>
<tr>
<td></td>
<td>九 = 9</td>
<td>IX = 9</td>
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<tr>
<td></td>
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<td>X = 10</td>
</tr>
<tr>
<td></td>
<td>万 = 10,000</td>
<td>L = 50</td>
</tr>
<tr>
<td></td>
<td>亿 = 10,000,000</td>
<td>C = 100</td>
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<tr>
<td></td>
<td></td>
<td>D = 500</td>
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<tr>
<td></td>
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<td>M = 1000</td>
</tr>
</tbody>
</table>

The ancient Egyptians used a decimal number system but they did not have a symbol for zero. They wrote their numbers in order, from highest to lowest, although they could begin on the left or the right, and would often stack similar symbols. Here is the number 2,436 written in Egyptian numerals: 

Write the number 3,563 using Egyptian numerals:

Now write the number 4,981 using Egyptian numerals:

The number 49 is written in Japanese numerals as 四十九. Why?
Try writing an equation in Japanese for the number 49 using the numbers 4, 9, and 10.

The Cleveland Museum of Art opened in 1916. Write the year 1916 using Roman numerals:

Your name
# Answers to Ancient Number Systems

<table>
<thead>
<tr>
<th>Egyptian numerals</th>
<th>Japanese numerals</th>
<th>Roman numerals</th>
</tr>
</thead>
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<td>𓊀</td>
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<td>I = 1</td>
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<tr>
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<tr>
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<td>III = 3</td>
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<td>𓊃</td>
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<td>𓊄</td>
<td>五 = 5</td>
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<td>𓊆</td>
<td>七 = 7</td>
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<td>𓊇</td>
<td>八 = 8</td>
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<td>十 = 10</td>
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MCMXVI
Write Like a Scribe on Homemade Papyrus:

Try your hand at writing like a scribe. First make paper that looks like papyrus.

1. Put two tablespoons of ground coffee into a coffee filter. Bind the top together with a rubber band and place the filter into hot water and let cool.

2. Put two sheets of 8 ½ x 11 in. white or manila construction paper on heavy paper towels.

3. When the water is cool, grasp the coffee filter by the rubber band and drag it sideways across the one of the sheets of paper, making streaks as you go.

4. Cut the stained paper into seven equal strips and then glue the strips to the other clean sheet of paper with the streaked side up. Let dry.

5. Make writing tools from thin wooden cooking skewers by cutting the tips at an angle.

6. Make the colored inks by rubbing colored chalk against sandpaper, letting the ground chalk fall onto a piece of folded paper. Using the fold in the paper as a funnel, pour the chalk into a small cup. Do this for each color.

7. Fill one small cup with water. Dip the writing tool into the water and drip a few drops from the tip into the cup of chalk to turn it into a thick liquid. Mix with the tool, using a separate writing tool for each color.

8. You are now ready to write.

Use hieroglyphs to write Egyptomania or a message of your choice.
Cartouche Outline:

Write your royal name in hieroglyphs inside the cartouche
Hieroglyph flash cards of Senbi’s name:
WATER

AS IN NILE

-\(S\) -

AS IN SUN

FOLDED CLOTH

\(-I-\)

AS IN PIN

LEAF

\(-B-\)

AS IN BOAT

FOOT