

Lady X Mummy Identification Project

Laura Krenicki, William J. Johnston Middle School, History/Social Studies, Grades 6-8, Allow 5-7 days to run this project

Introduction: This lesson demonstrates the difficult task of archaeologists and forensic scientists in identifying Egyptian mummies. This lesson aligns with Common Core standards and provides multiple source materials for students to examine evidence and draw conclusions. In this lesson, students will take on the role of a forensic archaeologist – examining multiple sources of information regarding one mystery Egyptian mummy. This lesson is ideal for a Flipped Classroom – now all of the video clips are online and can be viewed from outside of the classroom.

Geographic Connections: Human Movement due to environmental, geographic, political, and social factors

Vocabulary:

Locations: *Valley of the Kings, Nile, Karnak, Amarna*

Terms: *Nefertiti, pharaoh, sarcophagus, mummy (See also – [History Alive! Ancient World chapter 8](#) for background information)*

Stage 1 – Desired Results

Common Core Social Studies Standards: *Specific to Grades 6-8*

- **CCSS.ELA-Literacy.RH.6-8.1** Cite specific textual evidence to support analysis of primary and secondary sources.
- **CCSS.ELA-Literacy.RH.6-8.2** Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.
- **CCSS.ELA-Literacy.RH.6-8.4** Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
- **CCSS.ELA-Literacy.RH.6-8.5** Describe how a text presents information (e.g., sequentially, comparatively, causally).
- **CCSS.ELA-Literacy.RH.6-8.6** Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).
- **CCSS.ELA-Literacy.RH.6-8.7** Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
- **CCSS.ELA-Literacy.RH.6-8.8** Distinguish among fact, opinion, and reasoned judgment in a text.

<p>Understandings/Goals: Students will understand that:</p> <ul style="list-style-type: none"> • there are multiple perspectives by experts on forensic and historical data • data may be developed over time due to changing technology and resources 	<p>Essential Question Related to Theme:</p> <ul style="list-style-type: none"> • How can information change over time? • Based on the evidence, what is your hypothesis?
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<p>Student Objectives (Outcomes): Students will be able to:</p> <ul style="list-style-type: none"> • Discuss the essential questions using supporting evidence and details. • Work cooperatively and present their ideas in a logical and reasonable manner.

Stage 2 – Assessment Evidence

<p>Performance Task(s):</p> <ul style="list-style-type: none"> • Students take the role of “forensic archaeologists” in the Lady X Mummy investigation. These groups may be self-divided, or may be differentiated according to teacher placement. 	<p>Other Evidence:</p> <ul style="list-style-type: none"> • Pre-/post-assessment exit slips (“What new information did we learn today?”) – <i>formative assessment</i> • Data collection foldable – <i>formative assessment and graphic organizer</i> • Letter to Dr. Hawass (see attachment below) – <i>summative assessment</i>
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Stage 3 – Learning Plan

<p>Learning Activities:</p> <p>1. The main source material for this lesson is the viewing of <i>Nefertiti Resurrected</i> (90 minutes, Discovery Channel, now available on Netflix and Amazon), a five-minute portion of <i>Digging the Truth</i> (Season 1, Episode 2, History Channel, available on DVD or Amazon Video On Demand, and on YouTube), and portions of <i>Nefertiti and the Lost Dynasty</i> (total of 60 minutes, but only portions are needed episode in this National Geographic DVD). You may find links to all of these through this site: http://www.livebinders.com/play/play?id=829127 under VIDEO RESOURCES.</p> <p><i>TEACHER’S NOTE: Although there are three resources listed here, the lesson is primarily based on the Nefertiti Resurrected documentary by Discovery Channel. It provides most of the “back story” for Nefertiti and shows the excavation in “real time.” Many of the clues and conclusions may be drawn from this film, though additional facts can be found in the other two film clips. It is important to show the clips in the ORDER they are listed above, as the films were released in that order.</i></p> <p>2. Set the stage for this lesson by introducing the vocabulary and geography of the 18th-Dynasty of Egypt (for the vocabulary, you may choose to copy the list above and project it on the screen for students to copy, or give the words and have the students research the definitions themselves). In <u>History Alive! The Ancient World</u>, there is an excellent chapter on Egypt’s dynasties (chapter 8).</p>
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3. Show the entire *Nefertiti Resurrected* film, stopping to discuss key revelations and information. For example, discuss the following sequences during the viewing:

- Discuss the differences between film-maker liberties and facts. The film starts with a reenactment of the pillaging of a tomb. It also reenacts Nefertiti's life, and it is important to distinguish the story-telling with the scientific excavation.
- Key information about the Amarna period. When appropriate, stop to complete the "family tree" of Akenaten. The "Aye" character is not introduced in these films, so it may be up to you to include his information.
- Stop to discuss the excavations of the mummies. The room in the Valley of the Kings is opened twice, and it is important that students see the scene and make observations. Ask what they see in specific detail. In the first excavation, note the number and locations of the mummies. Note physical details. On second excavation, pause the video in these locations and discuss how these were found (1) finding of the missing arm in the wrappings, (2) the size and location of the cut under the left arm, and (3) the evidence of injury to the face.
- Stop to discuss (1) what Dr. Fletcher actually says who she thinks the mummy is and (2) what Dr. Hawass says about the mummy and the need for further tests (IMPORTANT DETAIL).

4. Show the clip from *Digging for the Truth* (<http://www.youtube.com/watch?v=XU-duEmuM9Q>) starting at 26.22. Note the way the room has changed from the previous clip. Note the students' observations. Ask: How does this change the information? Make the comparison to a cleaned-up crime scene – what information is lost? Note the differences in the comments from Dr. Hawass and the tone taken by both characters in the scene. How does tone influence what you think you know?

5. Show the *Nefertiti and the Lost Dynasty* film. You may wish to pass through the back story as it is a repeat of the first film but with different actors. This is often a distraction to students. Be sure to show all of the scenes that include Dr. Hawass – this includes parts that don't just discuss Nefertiti. It is important to see the clips about King Tut as the genetic clues should tie back to the family tree.

6. Share the excerpt of the press release (see below) which summarizes the findings of the last film and was written by Dr. Hawass. This may serve as a quotable source for students.

7. In differentiated groups, allow students to discuss the findings and make claims based on evidence. What themes and trends surface? Be sure to intervene if students make the argument personal – either toward each other or toward Dr. Hawass. Ask: *how does new information/new technology change what we know? How reliable is that information? What/whom should we believe?*

Extension/Modification

- **Modifications** – if you have a highly-inclusive classroom, you may wish to eliminate some of the length of the videos or even include a transcript for a visual reference (<http://encyclopediaegypt.com/NefResNum.htm>). The text may be modified according to student needs. *Note about modifications* – I’ve had some very low students do extremely well in this unit. The writing component may be a challenge, but they have definite opinions about the topic and can back them up with examples and details from the films. The mode of this lesson may actually benefit many students with special needs as it is engaging and informative. Just be sure to stop the film during points to allow for clarification, processing and discussion.
- **Extension** – there is a short Discovery Kids episode about King Tut called Mystery Hunters. In it, kids find out about King Tut and the possibility of Marfan Syndrome in the royal line. If your students know about this in advance, this will play into their understanding of the hip shape of the mummies. If you decide not to show another clip, this article gives some information: http://inventorspot.com/articles/tutankhamuns_dna_reveals_why_he_died_boy_king_37952 . Marfan Syndrome affects the shape of the hips, which makes gender difficult to determine in some mummies.

Assessment

1. Daily exit slips or Flipped Classroom discussion questions are formative assessments.
2. Nefertiti Foldable – this may be modified for your use. I have many versions of this as over the years I have found that some information was more relevant and other things less so. However, having the “family tree/circle” is helpful in keeping track of names and relationships.
3. Letter to Dr. Hawass – this is the key summative assessment piece. The letter provides the guidelines for the students and should serve as the rubric for assessment.

Resource List/Bibliography:

- Excerpt of February 9, 2010 Press Release regarding the Younger Lady (below)
- *Nefertiti Resurrected* (90 minutes, Discovery Channel, now available on Netflix and Amazon)
- *Digging for the Truth* (Season 1, Episode 2, History Channel, available on DVD or Amazon Video On Demand, and on YouTube)
- *Nefertiti and the Lost Dynasty* (total of 60 minutes, but only portions are needed in this National Geographic DVD)
- History Alive! The Ancient World, textbook published by TCI

How Are You Going to Use This Unit?

This lesson will be used in a 6th-8th grade level social studies classroom at William J. Johnston Middle School, Colchester, CT as part of the winter unit on Egypt.



Press Release - CT-scans of Egyptian Mummies from the Valley of the Kings

(Excerpt) 02/13/2009

The “Younger Lady” from KV 35

One of the most intriguing mummies from the Valley of Kings is the “Younger Lady” from KV35. She has recently, and unconvincingly, been identified as Akhenaten’s chief queen Nefertiti, renowned as one of the great beauties of the ancient world. Traditional scholarship has already successfully debunked this speculative assumption; the latest CT-scan confirms that this identification is indeed highly unlikely.

The mummy, found lying on the floor in a side chamber, had been badly damaged, and its right arm had been ripped off. The scholar who has most recently proposed the “Nefertiti” identification concluded that a bent right arm, found nearby, belongs with the body, rather than a straight arm also discovered close to the mummy. This might, according to this scholar’s theory, argue that she is royal, as queens often have one arm (although usually the left) bent and the other straight. In fact, this arm position is also seen for non-royal women, and the recent CT-scan performed by the EMP indicates, based on the density of the bones and the relative lengths of the arms, that it is the straight arm that goes with the mummy, not the bent one. Another point raised by the Nefertiti enthusiasts is that the lower portion of the Younger Lady’s face is badly damaged, taken as evidence of an extreme form of *damnatio memoriae* appropriate for someone as controversial as Akhenaten’s great wife. However, the team’s radiologist, Dr. Ashraf Selim, argues that if the mummy’s face had indeed been smashed after embalming, one would expect to see bits of dried bone and flesh within the wound; the CT-scan performed by the EMP revealed very few pieces of the relevant broken bones within the sinus cavity, suggesting that the damage to the mummy’s face occurred before embalming, most likely even before death.

Dr. Hawass reiterates that other points made in support of the identification of the Younger Lady as Nefertiti can be refuted without referring to the CT-scans. These include a wig of a type worn by Nefertiti found in the tomb and the fact that the mummy has a double-pierced ear; both of these attributes are seen in non-royal women of the New Kingdom, so do not at all prove that this is Nefertiti. The age range suggested by the CT-scan is between 25 and 35; again, this would fit any number of important New Kingdom Dynasty females. In summary, Dr. Hawass concludes that there is no convincing reason to identify the Younger Lady as Nefertiti.

NAME _____ Class _____

Write a formal letter to Dr. Hawass telling him who you think the “Younger Lady/Lady X” mummy is, making sure to include details from the three film clips. The material for your letter is in your foldable and in your graphic organizer. Then, *respectfully* tell him what your opinion is of the mummy using supporting details. Your letter should include the following:

✚ First paragraph:

- Introduction of yourself
- Statement of purpose – the letter is in response to the three film clips
- The names of the three film clips you watched (check your foldable)
- Your belief about the mystery mummy.

✚ Body paragraph(s) – these should include all of the evidence to support YOUR case. It should not be fewer than THREE pieces of evidence.

✚ Concluding paragraph:

- Restate your belief.
- Ask questions
- End with a kind and respectful statement

✚ Sign your letter – use SINCERELY, before you sign it (check spelling)

Draft letter is due _____

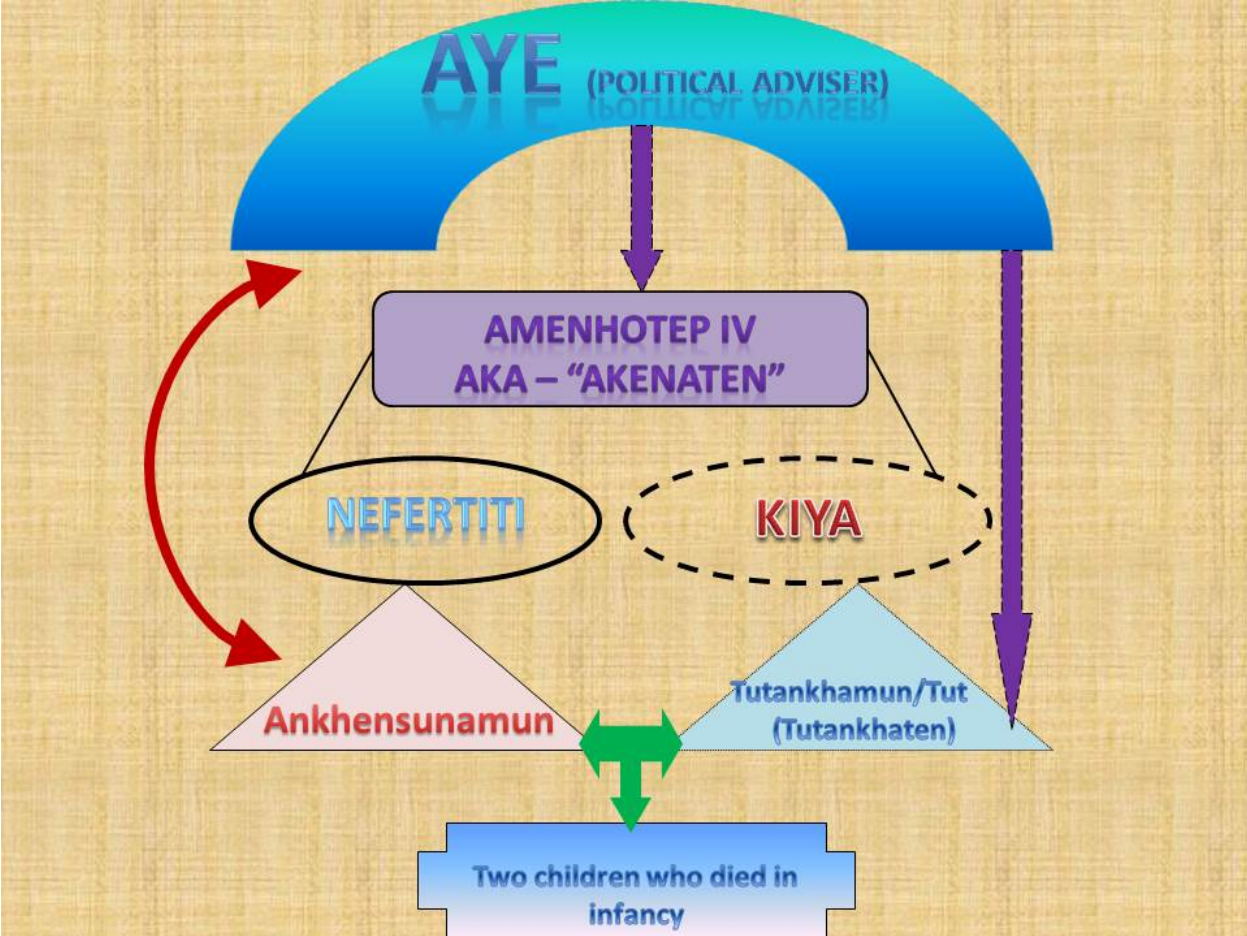
Before final draft, be sure to check the following:

✚ Did I peer review the letter? Did I peer review someone else’s letter?

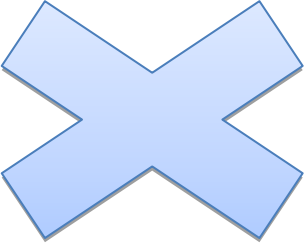
✚ Did I edit the letter and make appropriate revisions? Did you capitalize and spell all words correctly?

✚ Print a clean copy and then hand-sign the letter, neatly, at the bottom of the letter.

Final letter is due _____



Lady X / Nefertiti Mummy Investigation

Film	Evidence	What does Dr. Hawass say?
<p style="text-align: center;"><i>Discovery Kids</i> (TV) – King Tut Mystery Episode</p>	<p><i>Marfan Syndrome</i> – causes weak muscle tone and wide hips (like those of a woman)</p>	
<p style="text-align: center;"><i>Discovery Channel</i> – “Nefertiti Resurrected” Dr. Joann Fletcher Filmed & shown: 2004 DVD Release: 2006</p>		
<p style="text-align: center;"><i>History Channel</i> - “Digging for the Truth” Nefertiti Episode January 24, 2005</p>		
<p style="text-align: center;"><i>National Geographic</i> – “Nefertiti & the Lost Dynasty” Dr. Zahi Hawass November 6, 2007</p>		