**Observation Versus Inference**

**Timeline**

45-90 minutes (Applying the skill of observation and inference to primary source documents can be handled on day 2)

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| **Content Standards** | **CCSS Addressed** |
| none | R1: Read closely to determine what the text says explicitly and to make logical inferences from it; citing specific textual evidence when writing or speaking to support conclusions drawn from the tex. |

**Objectives**

* Make careful observations of sources of historical information (artifacts, pictures, etc.)
* Make inferences based on their observations
* Differentiate between observations and inferences and make applications to the work historians do

**Essential Question**

 What is the difference between an observation and inference and how do historians

use them to construct a narrative about the past?

**WICOR Strategies**

Writing .Cornell Notes, Compare and Contrast Organizer

Inquiry .Make observations and inferences

Collaboration .Collaborative inquiry, pair share

Organization .Interactive Notebook, T-Chart, Venn Diagram

Reading .History Textbook, Primary Source Documents

**Materials**

Photos, artifacts, maps, and short documents (primary sources) for students to observe

Word list to project

Artifact Hunters Handout (alternative LP assignment to Compare Contrast Organizer

**Handouts**

Word Sort Cards (Cut out and place in envelope for table)

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**Teacher Directions**

Have students set up Cornell Notes in a right page in their INBs with the title and essential question.

**Part 1: Defining the Terms**

* Have students conduct a word sort using the words (conclusion, opinion, explains, fact, hear, see, interpretation, smell, measured, statement, judgement, taste. …..and any other level one and level three words from Costa’s level of thinking – you will make a connection between data/fact words from level one with higher level thinking of level three and how level three is essential for historians to construct a narrative of the past. You must have level one “stuff” to construct the narrative, however.
* Students read and sort the words into separate columns based on which are associated with **observation** and which are associated with **inference**.
	+ ***Q: Which words did you sort in each column?***
* Students conduct a think-pair-share on the key concepts of observation and inference based on their word sort results.
	+ ***Q: What do observation and inference mean?***
* “Popcorn” around the room to solicit main ideas to be used in developing a definition for each word and guide them towards the correct definitions of observation and inference.
* Write the class definitions in their notes.
	+ *An observation is a factual statement based on information garnered from the senses, while an inference is the act of drawing conclusions based on facts or observations.*

**Part 2: Making Observations of Artifacts**

* Have students look at teacher and ask them to make several observations about them. *“Make some observations about me. What do you see?”* Elicit responses. Then have them make several inferences about the teacher. *“Based on what you can see or what you know to be factually true, what inferences can you make…..in other words, based on the given facts, what else might also be true?”*
* **Race to 10:** Project a historical image (child factory workers, etc.) and have the groups identify and write down on scratch paper 10 things they see in the picture. The first group to get 10 should stand up and read their list. After each, have class vote on whether it is a legitimate observation, rather than an inference by voting thumbs-up or thumbs-down. Then ask, *“What inferences can we make about the people in the picture or the time period it was created in?”* Elicit responses.
* Students should make a T-chart in their notes with “Observation” on one side and “Inferences” on the other.
* Set out several **artifacts**, maps, pictures at the table groups or around the periphery of the classroom (if this is the case, assign a set # of students to each station). Maybe pass out 2 artifacts per table group so they can work in pairs to look at one each.
* Ask students to record as many observations with as much detail as they can on the left side of the T-chart. Rotate artifacts or stations after about 2-3 minutes.

**Part 3: Evaluating Observations**

* Have individual students meet with someone who didn’t observe the same artifacts as them to share the observations. Cross out items written down that aren’t actually observations.

**Part 4: Making Inferences**

* Instruct students to work together with their original partner to develop four inferences about their observations and record the inferences on the right side of their T-chart.
* Have students volunteer to hold up and briefly describe their artifact, then share out some of the inferences they made about it. Elicit elaboration from classmates about other possible inferences.
	+ *“Let’s construct a quick narrative about the life of the person who would have lived when this was created and may have used it.”*

**Part 5: Applying the Skill to Print Sources**

* Set out several **primary source print documents** and have student pairs read them and make observations together. Record observations on left side of T-chart. (Consider having all students examine the same print documents, as this is a more challenging skill.)
* Students will develop 4 inferences about their observations and write them on the right-hand side of their T-chart.
* Have students volunteer to briefly describe their source, then share out some of the inferences they made about it. Elicit elaboration from classmates about other possible inferences.
	+ *“Let’s construct a quick narrative about the life of the person who would have lived when this was created and may have experienced it.”*

**Part 6: What Does the Textbook Say About All This?**

* Have students open their textbooks and read pg. \_\_\_\_\_\_\_\_\_\_\_\_. What does the text say about the way historians use their observation of sources to make inferences and construct a narrative about the past?
* Read pg. \_\_\_\_\_\_\_\_\_\_\_\_ where it talks about how sometimes (lots of times) historians get their inferences wrong and what we know or believe about the past is continually refined by new archaeological discoveries.
* Write something to that effect in your notes.

**Part 7: Processing the Lesson**

* **Debrief:** Tell students that historians use observations and inferences to piece together a narrative about the past; about what it would have been like to live in and through different historical time periods. The artifacts and documents are used like bricks to construct an argument. They are like puzzle pieces or like pieces of evidence a police investigator might use to figure out a crime scene.
* **Questions:** Have students write one Level 1 question, one Level 2 question, and one Level 3 question in their Cornell Notes.
* **LP Activity:** Have students use the Compast and Contrast (Venn Diagram) Organizer on their left page to compare and contrast historical observations and inferences.
* **Alternate LP Activity:** Have students complete Artifact Hunters Activity on their LP for HW.
* **Summary:** Have students write a 3-5 sentence summary of what they learned in this lesson.