Teaching with Primary Sources—MTSU

LESSON ACTIVITY: TECHNOLOGY IMAGE ANALYSIS

Grades: Middle School, grade 8
Subjects: Computer Technology
Time Required: 15-20 minutes
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OVERVIEW
The student will explore a technology image from the Library of Congress Web site related to the subject matter that they are studying and complete a picture analysis worksheet and bibliography page worksheet.

The Teacher can use the overhead projector, make copies of the image for individual or pairs of students, or allow students to work at computers. Teachers may choose to give Picture Bibliography Page Worksheet to students to work independently, or go over the page during class discussion.

UNDERSTANDING GOAL
Various technologies have been developed over time to improve our lives. The learner will explore a technological device from the past, discuss its benefits and unintended consequences, materials, what innovations have resulted from the technological device and what may be future developments related to this device.

OBJECTIVES
After completion of this lesson, the student will be able to identify various technological devices; be able to recognize materials they are made from; and be able to problem solve ways to protect them from enemy destruction.

Investigative question
How has human made technologies changed our lives for the better?

6. DETAIL VIEW LOOKING NORTH, SHOWING SUSPENSION CABLES - Cincinnati Suspension Bridge, Spanning Ohio River, Cincinnati, Hamilton County, OH

CURRICULUM STANDARDS
8th Grade: Computer Technology
8.6.2. Students will employ technology in the development of strategies for solving problems in the real world.

MATERIALS
- Picture Inquiry Worksheet
- Picture Bibliography Page Worksheet
Library of Congress Resources

- Science, Technology, & Business http://www.loc.gov/topics/science.php
- Alexander Bell Family Collection https://www.loc.gov/collections/alexander-graham-bell-papers/
- Wilbur and Orville Wright Papers https://www.loc.gov/collections/wilbur-and-orville-wright-papers/
- Samuel F. B. Morse Papers https://www.loc.gov/collections/samuel-morse-papers/
- The World’s Transportation Commission Photograph Collection https://www.loc.gov/collections/worlds-transportation-commission/
- Bell’s First Telephone https://www.loc.gov/item/2016817024/
- Model of Bell’s Telephone https://www.loc.gov/item/2016816952/
- Cincinnati Suspension Bridge https://www.loc.gov/resource/hhh.oh0104.photos/?sp=8
- West Main Street Bridge (Beam Bridge) https://www.loc.gov/resource/hhh.nj0144.photos/?sp=10
- Saline River Bridge (Arch Bridge) https://www.loc.gov/resource/hhh.ar0065.photos/?sp=2
- Assembly Line https://www.loc.gov/item/2016797152/
- Horseless Carriage https://www.loc.gov/item/20176216219/
- Cotton Gin https://www.loc.gov/resource/hhh.sc0739.photos/?sp=14
- Wright’s 1902 Glider http://www.loc.gov/item/00652084
- Wright 1903 Airplane http://www.loc.gov/item/2001696254/
- Reconstructed Wright 1903 Motor http://www.loc.gov/item/2001696579/
- Fire Engine http://www.loc.gov/item/2002695415/
- Tractor https://www.loc.gov/item/2017740805/
- Eli Whitney’s Cotton Gin http://www.loc.gov/item/2005683642/
- Plow https://www.loc.gov/item/2016873799/

Educators not in the Technology Engineering field can find other images relevant to their curriculum that they teach by searching the Library of Congress Web site.
**PROCEDURE**

1. **Introduction:** Using overhead projector, select a primary source image display it to the class.
   a. Ask, “What do you observe in this picture?”
   b. Ask, “What do you know about
   c. Ask “What questions do you have about this picture?”

2. **Guided Practice:** Students work independently or with partners and complete the Picture Analysis Worksheet and Bibliography Page Worksheet.

3. **Conclusion:** Students share picture analysis with classmates.
   a. If possible, display each image on the overhead.
   b. Have each student/pair of students discuss their image.
   c. After the students’ presentation, ask the class, “How has this human technology changed our lives today?”

**EVALUATION**

This lesson will be evaluated based on
- Class participation (50pts)
- Completing the Image Worksheet (50pts)

**Extensions**

Investigate Library of Congress for more images related to the current image
Make PowerPoint presentations over information learned
Picture Analysis Worksheet #1

Name ________________________  Period ________  Grade _________

Complete the chart below:

<table>
<thead>
<tr>
<th>What do you observe?</th>
<th>What prior knowledge helps you understand what you see?</th>
<th>What questions does the picture raise?</th>
</tr>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>
Picture Bibliography Page Worksheet #2

Name ___________________    Period    ________  Grade ________

Name of Picture _______________________________________________________

Creator _______________________________________________________

Date ____________

Is there additional information relevant to what we have been studying?  Yes  No

If so, what? _______________________________________________________

______________________________________________________________

______________________________________________________________

Did the bibliography page answer any of your questions? Yes  No

If so, what? _______________________________________________________

______________________________________________________________

______________________________________________________________