OVERVIEW
In this lesson students will research and discuss this form of technology, its origin, and its advantages and disadvantages. They will investigate the innovation of telegraph communication and how it was used during the Civil War to report the progress of the war from the battlefield to the president. Students will understand how a telegraph works and will translate a message using Morse code.

GOAL
Students will understand the principles of telegraph communication, their impact on the battlefield, and how that form of communication compares with different communication technologies of today.

OBJECTIVES
After completion of this lesson, the student will know the origins and uses of the telegraph during the Civil War, be able to analyze primary source images of the telegraph, be able to translate and produce a message using Morse code, and understand how this innovation relates to future innovations in communications.

INVESTIGATIVE QUESTION
How did telegraph communications impact the Civil War, both on the battlefield and in the White House?
**TN CURRICULUM STANDARDS**

**6th grade: Exploring Technology**

**STANDARD 3.0:** Understand and describe how technology in motion has impacted society, individuals, and the environment.

**LEARNING EXPECTATIONS:**

3.1 Understand technology in general and that humans make decisions to use technology in positive and negative ways.

3.3 Recognize the differences between desirable and undesirable outcomes of technology.

**PERFORMANCE INDICATORS:**

3.1.1 Define and explain technology.

3.1.2 List examples of how technology has impacted society, individuals, and the environment.

3.2.1 List the impacts of technology.

3.2.3 Create working drawings.

**7th Grade: Inventions and Innovations**

**STANDARD 6.0:** Develop an understanding of the impacts of invention and innovation.

**LEARNING EXPECTATIONS:**

6.1 Select an invention and innovation and discuss how it has impacted society.

**PERFORMANCE STANDARDS:**

6.1.1 Describe, analyze and evaluate the impacts that inventions and innovations have had on humans.

**8th Grade: Technological Systems**

**STANDARD 5.0:** Analyze how technological systems evolve.

**LEARNING EXPECTATIONS:**

5.2 Understand how a telegraph works.

**PERFORMANCE STANDARDS:**

5.2.1 Research the invention of the telegraph.

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**MATERIALS**

- Computers with access to the internet
- Optional hard copies of LOC images and Morse code
- Handouts (included with lesson plan)
  - Picture Analysis Worksheet
  - Telegraph Research Worksheet
  - Telegram Message Worksheet

**LIBRARY OF CONGRESS PRIMARY SOURCES**

- [Sherman's march to the sea] / F.O.C. Darley fecit, [c. 1868]
- Morse apparatus and alphabet [1877]
- The signal telegraph train as used at the battle of Fredericksburg [1862]
- Signal Telegraph Machine and operator - Fredericksburg [1862]
- [Worker repairing telegraph line?] [1862 or 1863]
- Grant telegraphing the news of the crossing of the river Rapidan--May 1864 [1864]
- [Note: this image will not expand into a larger jpeg] President Lincoln in the War Department Telegraph Office writing the first draft of the Emancipation Proclamation [1907]
- William T. Sherman to Abraham Lincoln, Thursday, December 22, 1864 (Telegram offering Savannah, Georgia as a Christmas present) [1864]
- Abraham Lincoln to William T. Sherman, Monday, December 26, 1864 (Acknowledges Sherman's Christmas gift--the capture of Savannah) [1864]
- Morse Timeline (secondary source)
**ADDITIONAL RESOURCES**

- The US Civil War, the First Modern War: Telegraph (Aeragon) [http://www.aeragon.com/03/#telegraph](http://www.aeragon.com/03/#telegraph)
- Learn How a Telegraph Machine Works (5min Life Videopedia) [http://www.5min.com/Video/Learn-how-a-Telegram-Machine-Works-117541596](http://www.5min.com/Video/Learn-how-a-Telegram-Machine-Works-117541596)

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**Day 1**

**PROCEDURE**

**Step 1  Connect & Wonder**

Ask students the following questions: How do they communicate with their friends? With their families? With their teachers? What kinds of technology do they use when communicating?

Once students have had a chance to discuss their answers aloud, ask them this question: How do they think people communicated 150 years ago?

Tell students that in this lesson, they will explore communication during the Civil War. Open the discussion of students’ prior knowledge about the Civil War, including battles, generals, presidents, causes, and other issues.

**Step 2  Connect**

Students should use this prior knowledge, as well as their powers of observation and curiosity, to complete the Picture Analysis Worksheet, “Sherman’s March to the Sea.” This could be done as a whole class, using the overhead projector to project the image, or in pairs at individual computer stations.

**Step 3  Express**

Have students discuss what they recorded on their Picture Analysis Worksheets with the whole class. Start with the first column, then move onto the second column (which ties into the discussion in Step 1). Spend extra time and attention on the third column before moving to the final question at bottom.
**Step 4  Investigate**  Have students read this short articles (link on p. 3) about telegraphs in the Civil War:
- The US Civil War, the First Modern War: Telegraph, from Aeragon (stop at the Aerial Warfare section)

Students should work individually or in pairs at computer stations, or read from print-outs that the instructor prepares beforehand.

**Step 5  Construct**  With this new historical background information, have students reassess what they wrote in the middle column of the Picture Analysis Handout. Does their new knowledge change the questions they want to ask? How does it change their perceptions of “Sherman’s March to the Sea”?

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**Day 2**

**PROCEDURE**

**Step 1  Investigate**  Watch these two videos (links on p. 3) to start learning about the telegraph as an innovative technology:
- Modern Marvels: The Telegraph and the Telephone (3min 39sec), from the History Channel Web site
- Learn How a Telegraph Machine Works (40 sec), from 5min Life Video-pedia

Discuss the contents of each video.

**Step 2  Investigate & Express**  Pass out the Telegraph Research Worksheet and allow students to complete in class. Worksheets can be distributed either electronically or in hard copy, but students will still need access to computers in order to look at specific Web site images and features. Students may work in pairs.

**Step 3  Construct**  When most or all of the class is finished with the worksheet, discuss some of their answers. Then discuss how the development of the telegraph coincided with Civil War events.
- What would armies need in order to properly use this technology?
- What pieces of equipment from the videos do you see reflected in the primary sources?
- What were the advantages of using the telegraph?
- What were the disadvantages?
Step 4  Connect
(Step 9) Now students will increase their practical knowledge of Morse code. Pass out copies (hard or digital copies) of the third handout, the Telephone Message Worksheet. This can either be completed in class or as homework. Invite students to write their names or even to write notes to each other in Morse code.

Step 5  Reflect
(Step 10) Ask students to reflect on the difficulties of writing in Morse code. What was challenging about it? What was easy about it? How fast do you think a practiced telegraph operator could tap out a message?

Step 6  Reflect
(Step 11) Revisit the introductory questions about how students communicate with their friends today. How is sending a telegram similar to sending a text message on their cell phones? What forms of communication replaced the telegraph? How do telegrams and letters from the 19th century compare with email, text messaging, twittering, and other forms of modern communication?

Discuss aloud their new insights about how people communicated 150 years ago. How did telegraph communications impact the Civil War? How did it impact communications between the battlefield and the White House?

Grant telegraphing the news of the crossing of the river Rapidan--May 1864 [1864]

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Evaluation
This lesson will be evaluated based on
- Class participation (25pts)
- Completion of the Picture Analysis Handout (25pts)
- Correct completion of the Telegraph Research Worksheet (25pts)
- Correct completion of the Telegram Message Handout (25pts)

Extension
Students can build a telegraph system and send messages regarding the outcome of Civil War battles from different commanders to President Lincoln. Use the following videos as reference: