Lesson Plan 8

Day: 8 Grade: 4

**Lesson Outcomes:**

* Students will be able to identify important inventions in communication, technology and transportation that began in Ohio.
* Students will be able to explain how technological innovations that originated in Ohio benefitted the United States.
* Students will be able to answer how Ohio influenced the growth of the United States.

**Materials:**

Half sheet of paper with 10 inventions (5 inventions from Ohio and 5 not)

Smart board

List of Ohio Inventors/Inventions

Computer

Crayons

Markers

Pencils

Scissors

Glue

Construction paper

**Procedures:** (2- 1 hour sessions)

* “Today we are going to learn about inventions and inventors from Ohio.”
* Hand out a half sheet of paper with ten pictures on it of inventions. (5 from Ohio and 5 not)
* “I want you to circle five inventions that you think is from Ohio.”
* “Then I want you to write down three ways you can gather information about Ohio inventors.”
* Give about two minutes to complete.
* After time is up go over the five Ohio inventions students circled.
* Then post up more pictures of inventors and inventions from Ohio.
* Go over the pictures.
* Then post up a list of Ohio inventors and inventions.
* Place the list on the smart board for students to reference.(List attached at the end of lesson.)
* After going over the inventions, students will pick an Ohio inventor/invention to research.
* Talk about how to get information for the project.
* “I want you to conduct a research about an Ohio inventor, one of his/her inventions, and how the invention changed people’s lives and contributed the U.S. I want you to have 1 page paper answering those questions. Then I want you to have a visual aid.”
* “The visual aid can be a poster, book, etc.”
* “I will give you an hour to do these and I will give you more time tomorrow.”
* “I also have all of the supplies on the table for you to use.” (Such as crayons, markers, paper, scissors, glue, etc.)
* “Tomorrow we are going to present our information.”
* “Any questions?” (Answer any questions students may have)

**Day 2**

* Continue finishing project.
* Give about 20 to 30 minutes to finish.
* After 30 minutes have students present their information.

**Closure:**

* Go around the room and have every student tell one thing they learned today.
* Students will tell one thing.
* Ask if there are any questions.

**Assessment:**

* Students will be assessed by using a rubric to grade the presentation and materials made.

**Grading Rubric:**

**Research Product Rubric**

You are to produce your final research product in a written form with an accompanying

visual aid. Your research product will be scored according to the following rubric:

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2 | 1 | 0 |
| **Inventor**  **Information** | Accurate and  complete  information  regarding the  inventor is included. | Some information  regarding the  inventor is included. | Incomplete or  missing information  regarding the  inventor. |
| **Invention**  **Information** | Accurate and  complete  information  regarding an  invention is  included. | Some information  regarding an  invention is  included. | Incomplete or  missing information  regarding an  invention. |
| **Importance**  (How the invention  changed lives and  contributed to the  growth of the U.S.) | The importance of  the inventor/  invention is clearly  identified,  explaining how it  changed lives and  contributed to the  growth of the U.S. | The importance of  the inventor/  invention is  somewhat identified,  vaguely explaining  how it changed lives  and contributed to  the growth of the  U.S. | The importance of  the inventor/  invention are not  identified. |
| **Writing**  **Conventions** | Good sentence  structure, spelling,  grammar and  punctuation. | Fair sentence  structure, spelling,  grammar and  punctuation. | Poor sentence  structure, spelling,  grammar and  punctuation. |
| **Visual Aid** | Good visual aid  provided, neat,  appealing and  relevant to the topic. | Fair visual aid  provided, fairly neat  and appealing and  close to the topic. | Poor visual aid  provided, lacking in  neatness and appeal,  vaguely on topic or  off topic. |

**Total:\_\_\_\_\_\_\_x5**

**\_\_\_\_\_\_/50**

**Key Questions;**

* What are the important inventions in communication, technology, and transportation that began in Ohio?

The invention of the light bulb made it so people could still do things at night when it was dark outside. Businesses could stay open longer. This spread all over the world because it was such an amazing invention that everyone wanted to have in their homes or businesses.

When the gas mask was invented it saved lives. Many people wanted this all over the country. It became especially popular for the firefighters.

The telephone created communication over distances very quickly and whenever you want. This became popular all over the country and less people wrote letters.

Transportation was improved by people being able to self-start their cars. Safety for drivers was provided from the traffic signal. Now this invention is used all around the world, daily. Transportation was also impacted by the inventions made for the railroad. For example the air brake and steam boiler which made it easier to travel goods across the country.

* How did the technological innovations that originated in Ohio did benefitted the United States? Many inventions changed America. For example, communication was changed by the invention of the telephone. Technology was improved when Thomas Edison invented the phonograph and light bulb. The invention of the gas mask was an impact on technology too. Transportation was better when the airplane, automobile self-starter, traffic signal, air brake, and steam boiler were invented. These all were invented by people who originated in Ohio.
* How has Ohio influenced the growth of the United States? Ohio has influenced the growth of America in so many different ways. Ohio has so many important people who have impacted many things. Many people changed the views of slavery by creating the Ohio Anti-Slavery Society. They freed over 40,000 slaves in the Underground Railroad. Also, Ohio has products that they provide and supply for other parts of the country. Ohio has many inventors who have invented many things we use today. Edison’s light bulb invention is used all over the United States. The gas mask was invented to save lives and firefighters use it as a part of their uniform. The telephone was invented by Alexander Graham Bell and it changed communication forever. Everyone I know at least has one telephone in their house. The railroad industry and transportation improved because of the inventions that were created, such as the automobile self-starter, traffic signal, air brake, and steam boiler. Ohio is a small state, but we have impacted everyone’s lives in so many ways.

FAMOUS OHIO INVENTOR LIST:

Charles Brush (electric arc light) Arthur Compton (sodium vapor lamp)

Charles Hall (inexpensive aluminum) Charles Kettering (car starter)

Granville Woods (train telegraph) Garrett Morgan (traffic signal)

Charles Richter (earthquake scale) James Spangler (portable vacuum)

Harvey Firestone (rubber tires) Josephine Cochran (dishwasher)

Elisha Gray (telegraphic instruments) Frank Seiberling (work safety)

Ernest Volwiler (anesthetic) W.F. Semple (chewing gum)

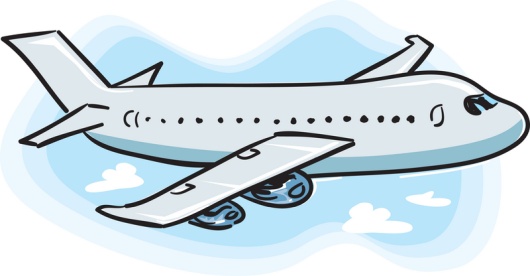
James Ritty (cash register) Thomas Edison (light bulb)

Orville and Wilbur Wright (airplane)

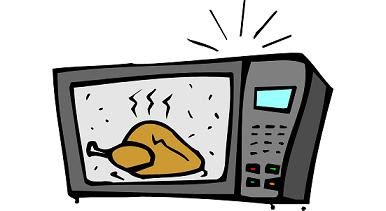
Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Pre-Activity**

**Directions:** Circle 5 inventions that you think were invented in Ohio. Then write three ways that you can find information on your invention.

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