

Electricity Events and Inventions Timeline

Fifth Grade

Activity: 4

Time: 1-2 Class Periods

General Description

Students will construct a historical timeline of events and inventions associated with electricity. Each student will illustrate an event or invention and these drawings will be placed on a piece of butcher paper to be displayed in the class or hallway.

Objectives

Students will identify major events and inventions associated with the history of electricity and the resulting technologies.

Arizona State Standards

SC05 S1C1 PO3 Locate information (e.g., book, article, website) related to an investigation

SC05 S1C4 PO1 Communicate verbally or in writing the results of an inquiry

SC05 S1C4 PO3 Communicate with other groups or individuals to compare the results of a common investigation

SC05 S2C1 PO1 Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Percy Lavon Julian [scientist], supports Strand 4; Niels Bohr [scientist], supports Strand 5; Edwin Hubble [scientist], supports Strand 6

SS05 S1C1 PO2 Construct timelines of the historical era being studied (e.g., presidents/ world leaders, key events, people)

R05 S3C1 PO5 Locate appropriate print and electronic reference sources (e.g., encyclopedia, atlas, almanac, dictionary, thesaurus, periodical, textbooks, CD-ROM, website) for a specific purpose

W05 S3C6 PO1 Paraphrase information from a variety of sources (e.g., Internet, reference materials)

Teacher Information

Electricity and the resulting technologies associated with electricity have changed the daily lives of people drastically in the past 250 years. Scientific discoveries about the nature of electricity paved the way for an explosion of inventions. Information about these inventions can be derived in a variety of resources including almanacs, encyclopedias, and library books about inventions.

Materials

Butcher paper at least 20 feet long (to calculate number of feet needed exactly: 8.5 inches multiplied by the number of students in your class divided by 12)

Library books

Encyclopedias

Almanacs

Colored pencils and markers

Glue

Scissors

Activity Cards 5-4a and 5-4b

Procedures/Exploration

1. Ask students to imagine what life would be like without electricity. Have them suggest ways their lives would be different from what it is today. Point out that the history of electricity is relatively short (from early 1700s to today). Tell students that as a class they will construct a timeline that will identify the major events and inventions in the history of electricity.
2. Tell students that each of them will be responsible for illustrating a particular event or invention in the history of electricity. Their illustrations will be put together in chronological order on a piece of butcher paper to create a timeline. Hand out an Invention/Event page to each student (Activity Card 5-4a). Tell them they will fill in the date, event or invention, inventor/scientist, and draw a picture that illustrates their assigned event or invention.
3. Assign each student a number. Hand out the Electricity Events and Inventions information sheet (Activity Card 5-4b). Explain to students that the event or invention they are responsible for corresponds with the number the teacher assigned to them. (Modify the events and invention numbers according to interest and number of students in the class.)
4. Allow students time to draw and color their event or invention. Let them use the encyclopedias, invention books, almanacs, etc. for information on how to draw their illustration. Encourage creativity with the drawings. For example, show people using the invention, the scientist discovering the electrical principle, etc.
5. Have students come up one by one to tape or glue their illustrations in place on the butcher paper. Have a student use a marker to write the dates: 1700, 1750, 1800, 1850, 1900, and 1950 in the appropriate places on the butcher paper. Add a title to the timeline.
6. Discuss the usefulness of timelines. Ask students to identify the time period when there were most electrical inventions. Ask them why they thought that happened when it did. Have them discuss which they think are the most important events.

Invention/Event

Fifth Grade

Activity: 4

Activity Card: 5-4a

Student's Name:

Date:

Invention/Event:

Date of Invention/Event:

Inventor/Scientist:

Electricity Events and Inventions

Fifth Grade
Activity: 4
Activity Card: 5-4b

Student's Name:

Date:

1. Event - People in Ancient Greece first discovered that amber would attract light objects after being rubbed with fur. The term “electricity” comes from the Greek word for amber.
2. Event - 1600 - William Gilbert - Did experiments with static electricity. First person to coin the word “electric”.
3. Event - 1729 - Stephen Grey - Transported static electricity hundreds of feet.
4. Event - 1746 - Pieter von Musschenbroek - Stored a small charge of electricity in a Leyden jar.
5. Event - 1752 - Benjamin Franklin - Performed his famous kite experiment that proved lightning was electricity.
6. Invention - 1800 - Alessandro Volta - Invented a simple "wet" electric cell or battery. From his name, "volt" is the unit used to measure electrical force.
7. Event - 1820 - Hans Christian Oersted - Discovered that an electric field surrounds a conductor. Began the study of electricity and magnetism.
8. Event - 1820 - A.M. Ampere - Described more fully the connection between electricity and magnetism by providing a theoretical and mathematical explanation. From his name, “ampere” or “amps” is the unit of current.
9. Invention - 1831 - Michael Faraday - Investigated the effects of electromagnetic induction with his induction ring. He also helped to popularize science.
10. Invention - 1832 - Hippolyte Pixii - Invented the first practical electrical generator.
11. Invention - 1837 - Samuel Morse - Patented the telegraph. He sent a message from Baltimore to Washington in 1844 which said “What hath God wrought..”
12. Invention - 1859 - George B. Simpson - First electric hot plate.
13. Invention - 1866 - Georges LeClanche - First dry cell battery.
14. Invention - 1876 - Alexander Graham Bell - First telephone.
15. Invention - 1877 - Thomas Edison - Phonograph.
16. Invention - 1878 - David Edward Hughes - Microphone.
17. Invention - 1879 - Thomas Edison - Light bulb.
18. Event - 1880s - Heinrich Hertz - Demonstrated the existence of radio waves. From his name “hertz” is the unit of frequency.
19. Invention - 1882 - Henry W. Seely - Iron.
20. Invention - 1884 - Charles Parsons - Steam turbine generators.
21. Event - 1888 - Fred Kimball - Demonstrates an electric car.
22. Event - 1889 - Otis Brothers and Company - Electric elevator is installed in New York City.
23. Event - 1895 - First large-scale hydroelectric generator.
24. Invention - 1906 - General Electric - Kitchen range.
24. Invention - 1911 - George Claude - Neon light.
25. Invention - 1926 - Charles Strite - Toaster.

26. Invention - 1929 - Vladimir K. Zworykin - Television.
27. Invention - 1935 - International Business Machines
28. Corporation - Typewriter.
29. Invention - 1935 - Edwin H. Armstrong - FM radio.
30. Invention - 1945 - J.G. Brainerd, J.P. Eckert, H.H. Goldstine, John
31. Mauchly, and Sperry Corporation - Computer.
32. Invention - 1947 - Percy Spencer - Microwave oven.
33. Invention - 1956 - Ampex Corporation - Videotape recorder.
34. Invention - 1959 - Chester Carlson and Xerox Corp. - Photocopier.