

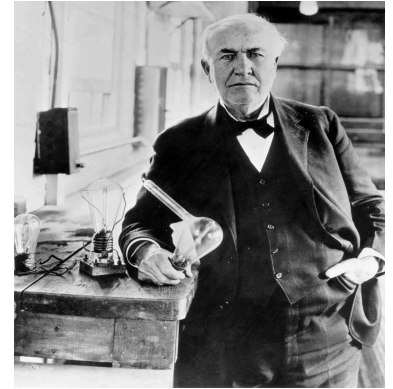


Fifth Grade Independent Learning Project Winter 2024

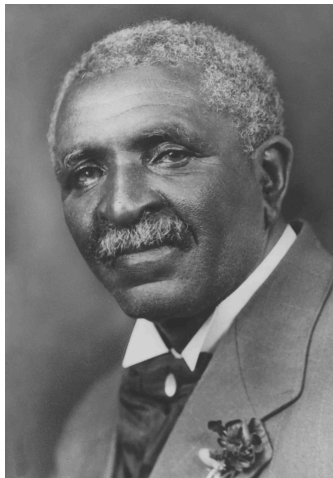
Student Name _____

A Day in the Life of...

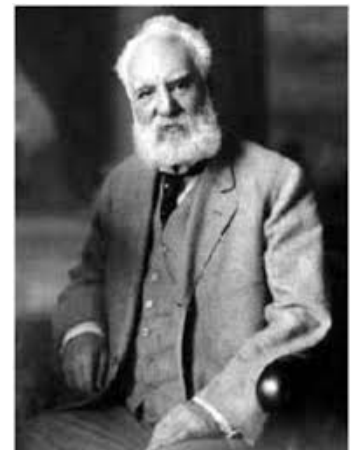
Thomas Edison, the wizard of Menlo Park, was an inventor credited with creating over 1,000 inventions. One invention he is credited with is a long-lasting filament for the electric light bulb. He is also known for developing the phonograph or record player as well as developing motion pictures. His inventions very much relied on electricity. He created machines that used electricity to solve problems for enhancing everyday life. He was not only an inventor but also a successful businessman, marketer, and manufacturer.



George Washington Carver became one of our nation's most famous agricultural scientists. In 1896, he began teaching at the Tuskegee Institute. It was there that he researched methods to improve agricultural production. Carver is most known for his research on peanuts and his commitment to helping struggling southern African American farmers. He is most known for teaching southern farmers to rotate crops to replenish nutrients back to the soil by rotating cotton crops with peanut crops. Because of his work, peanuts became an important agricultural crop in Georgia. A common misconception is that he created peanut butter. He did not. However, he developed more than 300 uses for peanuts including peanut milk, Worcestershire sauce, peanut paper, and peanut soap. Dr. George Washington Carver also discovered more than 100 uses for the sweet potato and a variety of southern plants.



Alexander Graham Bell was a scientist, inventor, and engineer. He is famous for his patented invention of the telephone in 1876. He made the first phone call on March 10, 1876, to his assistant, Thomas Watson. The telephone was a device that was almost immediately popular and became so affordable that over time nearly every American household contained at least one telephone. The telephone dramatically changed communication throughout the country. Bell launched the Bell Telephone Company in 1877. He was also an audiologist, speech therapist, and teacher of the deaf.



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Your Task: Imagine spending the day with one of the scientists/inventors you just read about. Write a diary entry describing a day that you spent with one of the scientists/inventors (Thomas Edison, George Washington Carver, or Alexander Graham Bell) on the “My Diary” sheet. Include information about at least two important events or times in the inventor’s life.

Use this checklist to help you:

- First-person (I, me, we, us)
- Past tense
- Feelings
- Events in chronological order (time order)
- Time order words (in the morning, after that, at 2 o'clock)


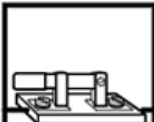

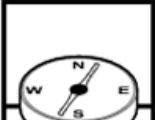




We use electricity every day, but the electronics around us largely operate without us being aware of how they do so. The "how" of electronics working is answered by electrical circuits. Electrical circuits allow currents to flow through our electronic devices to produce light, sound, and a variety of other effects.

In order for electricity to flow and power a device, there must be an unbroken or closed pathway. Think about a light switch; when the circuit is open, the light is off. When the circuit is closed, energy is able to flow and the light is on. Simple electrical circuits you have studied in school have 3 main parts: the power source, path, and light source. Look at the image on page 5. Cut out the “Components and Function” cards (on the right). Glue or tape the cards on the left to design a simple electric circuit. If scissors and glue aren’t available, draw a quick sketch of the components. Write the function of each component in the spaces provided.

Electrical Circuit

Components

 light bulb	 switch	 bar magnet
 compass	 pencil	 battery

Functions

conducts electricity	powers the circuit
turns circuit on and off	powered by the circuit

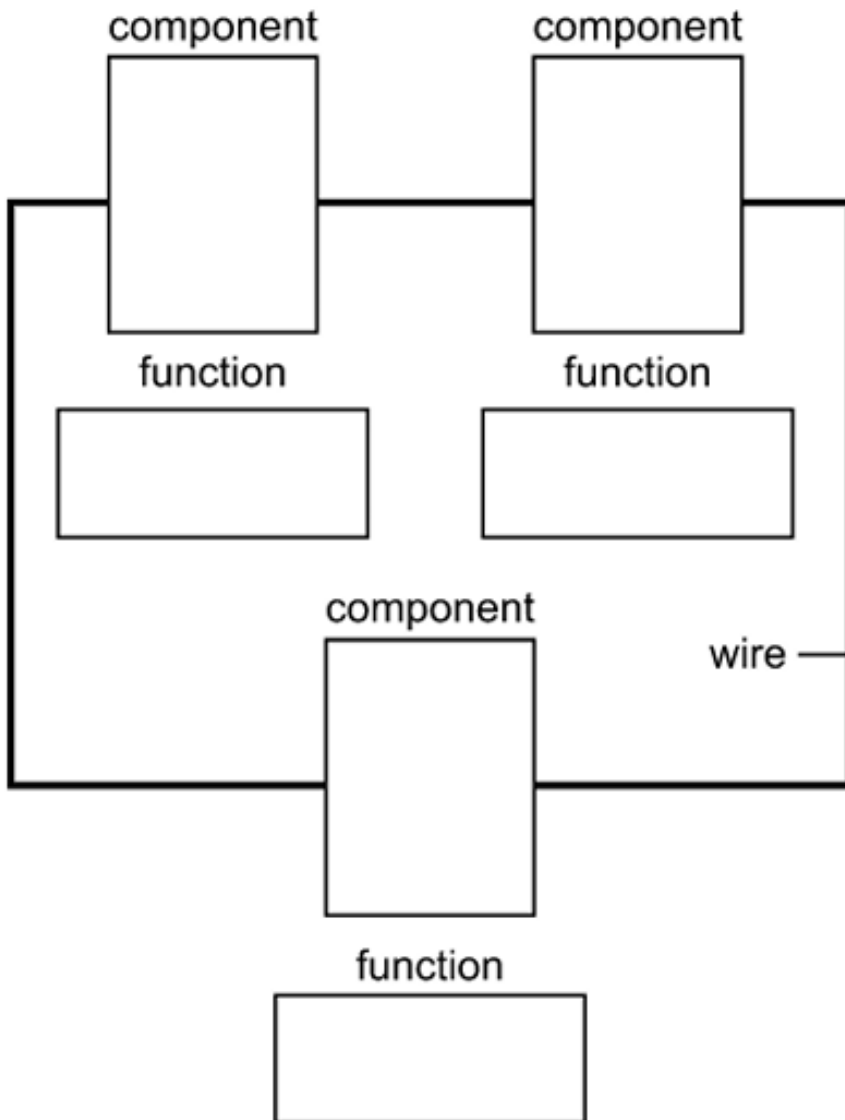
Become an Inventor- Think about a problem that using a simple circuit would solve. Using a simple circuit, what can you invent to help solve the problem?

Questions to think about:

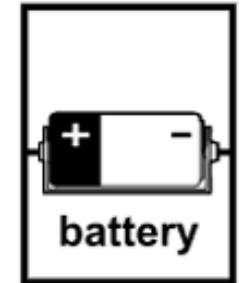
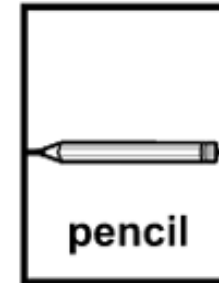
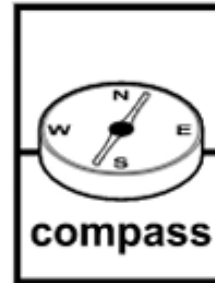
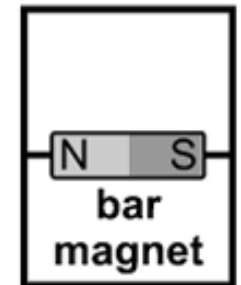
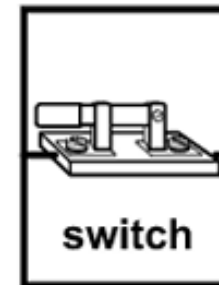
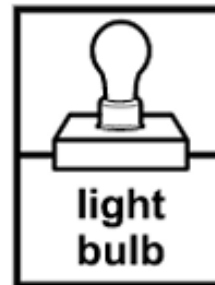
- | |
|---|
| <ul style="list-style-type: none"> • What is your problem? |
| <ul style="list-style-type: none"> • How can a simple electric circuit be used to solve your problem? |
| <ul style="list-style-type: none"> • What materials will you need to design your invention? What is the function of each material? |
| <ul style="list-style-type: none"> • How will your invention work? |

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Electrical Circuit



Components



Functions

conducts electricity

powers the circuit


turns circuit on and off

powered by the circuit

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Your Task: Write a paragraph about your invention using notebook paper. Use the questions above to help you write about your invention. Sketch your invention in the box below. Label as many components as possible.

A large, empty rectangular box with a dashed black border, intended for a student to draw and label their invention.

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Your Math Task

Alexander Graham Bell is credited for inventing the telephone. If 8 individuals were able to complete calls during the first month of using telephones for $\frac{2}{3}$ of a minute. Draw a visual representation of how long the calls were all together.

George Washington Carver is famous for crop rotation and peanut cultivation. If 6 people harvested $\frac{3}{4}$ pounds of peanuts each day. How many pounds of peanuts were harvested in one day? _____

How many pounds of peanuts were harvested if everyone collected the same amount for 3 days? _____

Thomas Edison's most famous invention is the electric light bulb. If 5 light bulbs were created each $\frac{1}{4}$ of an hour. Draw a visual representation of how many light bulbs were created in an hour.