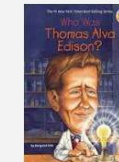




Incredible Inventions

Why are inventions important?

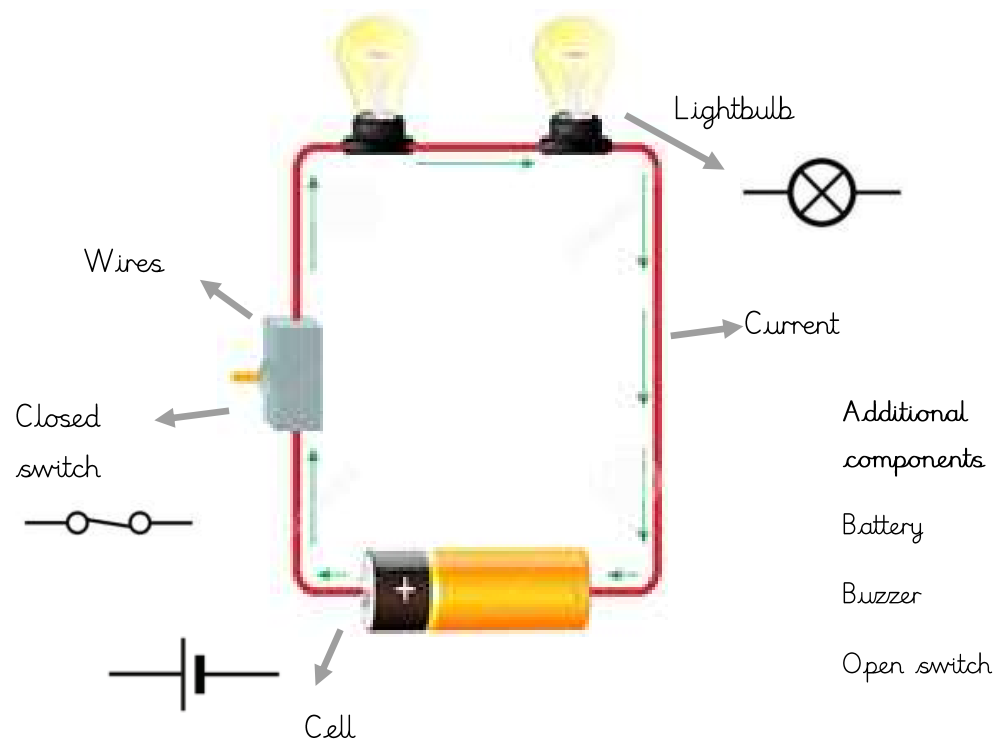


Electricity

Mains electricity



Battery powered



Historical enquiry

Who really deserves the credit for the invention of the lightbulb?

Joseph Swan

1878 Swan took the oxygen out of the bulb to prevent the filament from burning out. This is called a vacuum. His filament did not glow for long.



Thomas Edison

1882 Edison patented an improved filament that glowed for longer using less electricity.

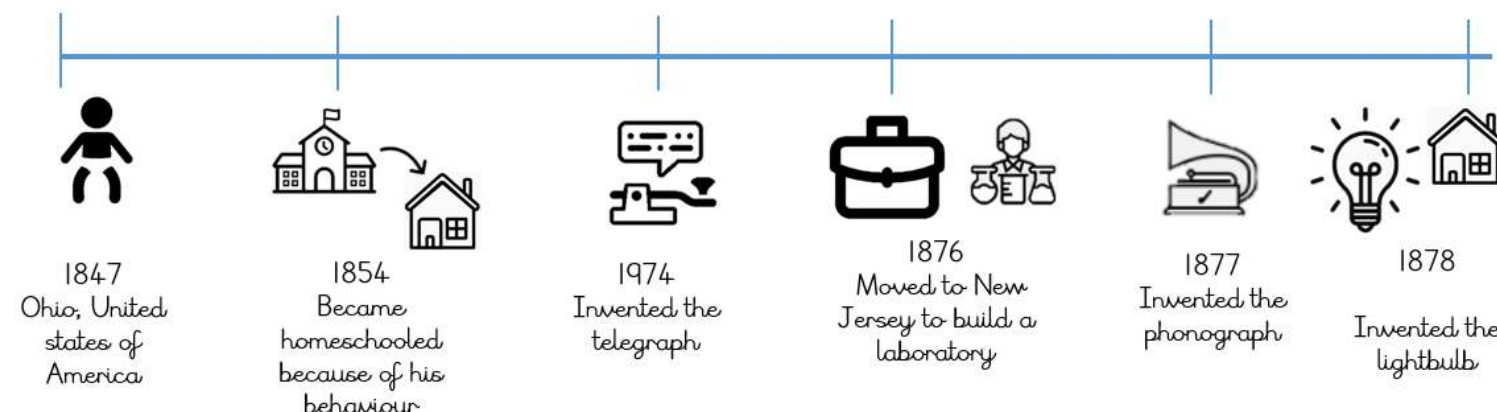


Lewis Latimer

1881 Latimer patented an improved carbon filament that lasted longer

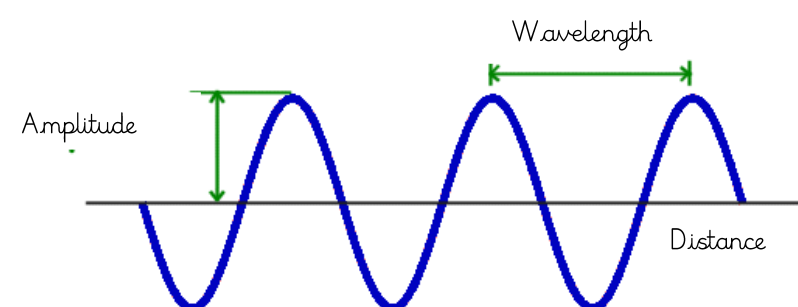
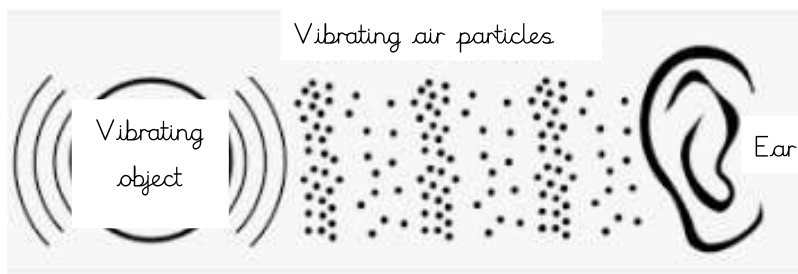


Thomas Edison



Sound

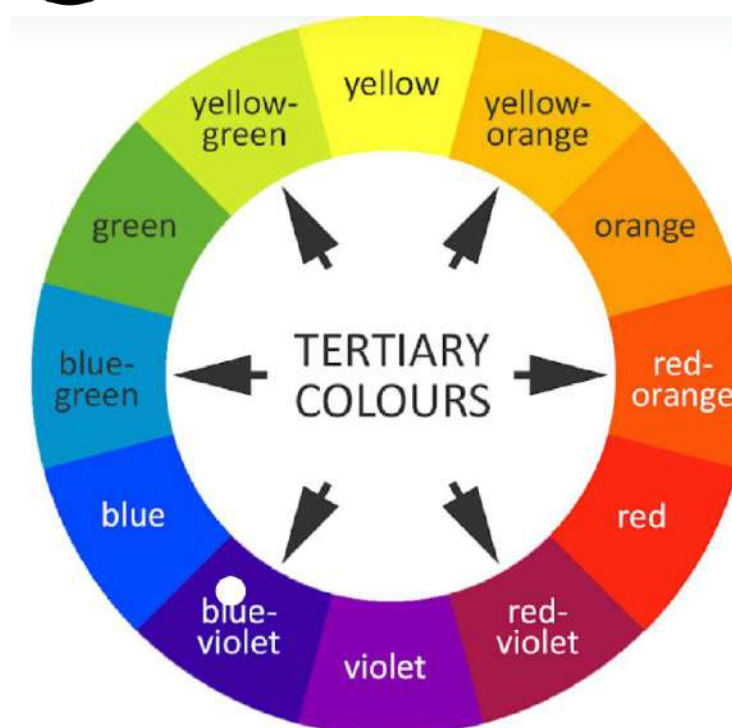
Vibrating air particles



Sound vocabulary	Definition
vibration	A quick movement back and forth.
particles	Small parts of a solid, liquid or gas.
wavelength	The length of the smallest unit of sound.
sound wave	The total length of the whole unit of sound.
absorb sound	To take in sound energy.



Tertiary Colours



Spanish Food



The books we'll use to support our inventions topic:

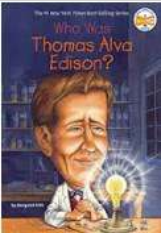
Electrigril by Jo Cotterill

Holly Sparkes is just your average 12-year-old, that is, until she's hit by a bolt of lightning. Now Holly is EXTRAordinary. Like a human battery Holly can generate a massive amount of electricity in seconds, which could come in handy if she's ever going to solve the mystery of her best friend's disappearance. Because when you're dealing with the likes of Professor Macavity and her mysterious CyberSky corporation, you need all the help you can get!



Who was Thomas Ava Edison? By Margaret Frith

One day in 1882, Thomas Edison flipped a switch that lit up lower Manhattan with incandescent light and changed the way people live ever after. The electric light bulb was only one of thousands of Edison's inventions, which include the phonograph and the kinetoscope, an early precursor to the movie camera. As a boy, observing a robin catch a worm and then take flight, he fed a playmate a mixture of worms and water to see if she could fly!



See inside Inventions by Alex Firth

This title tells the wonderful, mysterious and often funny stories behind famous inventions. Flaps reveal lovingly detailed artwork to show the hidden workings inside inventions. Carefully researched text explains the differences between discovery, invention and innovation, and how these three aspects unite.



Key vocabulary

energy 	This is power and the ability to do work. It is never lost but converted into something else.	insulator 	A material which cannot easily allow electricity, sound, light or heat through.
current 	The flow of an electrical charge.	amplitude 	The <i>size</i> of the vibration, louder noises have a larger amplitude.
conductor 	A material which can carry electric sound, light or heat through it.	pitch 	The measure of how high or low a sound is. Higher pitch noises vibrate quicker.

Key skills we'll be building on...



In DT, we will be combining our design and technology and music skills to create a circuit as part of an invention.



In computing, we will be looking at the creation of the internet and analysing the impact of it on our lives today.



In Science, we will be investigating how electricity impacts on our daily lives and how sound travels around us. We will be investigating how best to protect our ears from sound.



In P.E lessons we will be mastering our movement and strategy skills to compete in games of rounders and basketball.



In Art, we will be mixing paint to include tertiary colours in our paintings of heroes.



In History, we will decide who deserves the credit regarding the invention of the lightbulb. We will validate our ideas using reliable sources.

The questions and outcomes we'll cover are:

Week 1

Who was Thomas Edison?

To crease a timetable of an inspiration person.



Week 2

Who really invented the lightbulb?

To present findings of a historical enquiry.



Week 3

How can we light up the world?

To construct a series of circuits.



Week 4

How many colours can we make?

To produce a painting of a character using watercolour paints.



Week 5

What did you say?

To draw a labelled diagram to explain how sound travels to our ears.



Week 6

Who had the power?

To write a narrative based on ElectraGirl.



Week 7

Can you be inventive?

To complete a DT project using wired framework.



Week 8

How can we showcase our learning from the year?

To reflect on our Year 4 journey.



Why not try this at home?



Create your own invention which uses the lightbulb. Maybe you could make your own shadow puppet?



Find out all about some of the most amazing inventions that have changed our world, take the quiz and see if you can make your own inventions.



Use your art skills to produce a sketch or painting of the inside of a lightbulb.

