

Unscramble the names of these famous scientists and match the scientists to their discoveries:



s e o r t e d



e p a r m e



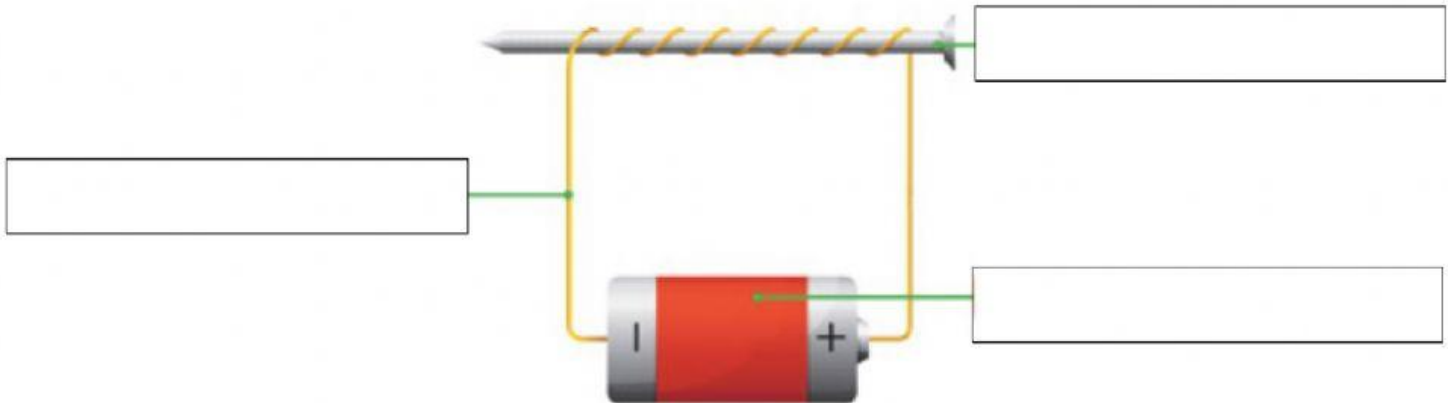
a r a d f a y

- _____ discovered that a moving magnet produces an electric field.
- _____ discovered the electron, although he called it a different name.
- _____ invented the first electric motor.
- _____ discovered that an electric current produces a magnetic field.
- _____ couldn't explain his discovery.

Label the parts of the electromagnet:



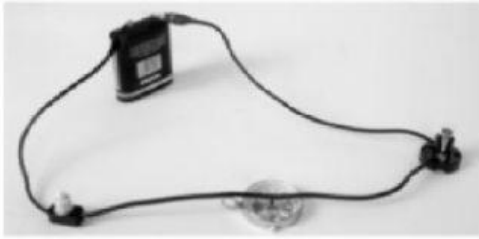
wire iron nail battery



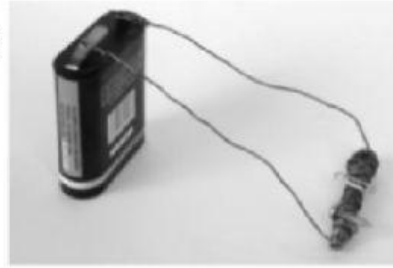
What happens when these electric circuits are switched on? Write sentences:



a



b



a) When we switch on the circuit, the _____ will
_____.

b) When we switch on the circuit, the _____ will
_____.

TRUE or FALSE? Correct the false sentences.



- Bar magnets can be switched on and off.

- Bar magnets have one pole: north.

- The north pole of a bar magnet has a positive magnetic charge.

- Bar magnets repel metals such as iron, steel and nickel.

What do bar magnets attract? Classify these objects in the table. Then, test your ideas.



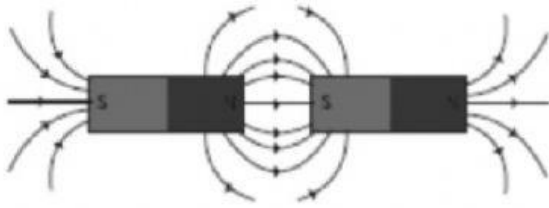
scissors pencil a fridge magnet a plastic bag a key a coin plasticine
an electrical wire a needle cotton thread a ruler a bar magnet

**Objects that are
attracted to a bar
magnet**

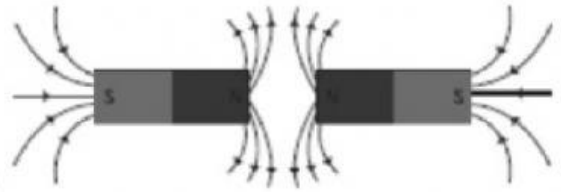
**Objects that are
repelled by a bar
magnet**

**Objects that are not
attracted or repelled
by a magnet bar**

Look at the pictures and complete the descriptions:



These two bar magnets are _____ each other. The magnetic field lines go from the _____ pole of the first magnet to the _____ pole of the other.



These two bar magnets are _____ each other. The magnetic field lines don't go from one magnet to _____.

Complete the text about the magnetosphere using the words in the box:



north compass bar magnet Sun magnetic atmosphere

Our planet, the Earth, has a _____ field that can be detected by a _____. It's called the magnetosphere and it extends below the surface of the planet and out into the _____. The magnetosphere resembles the magnetic field of a _____, with the magnetic south close to our geographical _____ pole. The magnetosphere deflects harmful radiation from the _____. As a result, it's extremely important for life on Earth. Without its protection, many species would become extinct.

Match the words to the definitions:



1. The magnetosphere
2. The geographical north pole
3. Solar radiation
4. A compass

- a) A magnetised needle that helps us navigate.
- b) The Earth's magnetic field.
- c) Harmful energy produced by the Sun.
- d) The south pole of the magnetosphere.

Name the odd one out and explain why:



- compass needle north atmosphere
-

- iron Sun radiation harmful
-

- magnetosphere north pole atmosphere compass
-

- south pole magnetic field Sun north pole
-