

# Magnetism

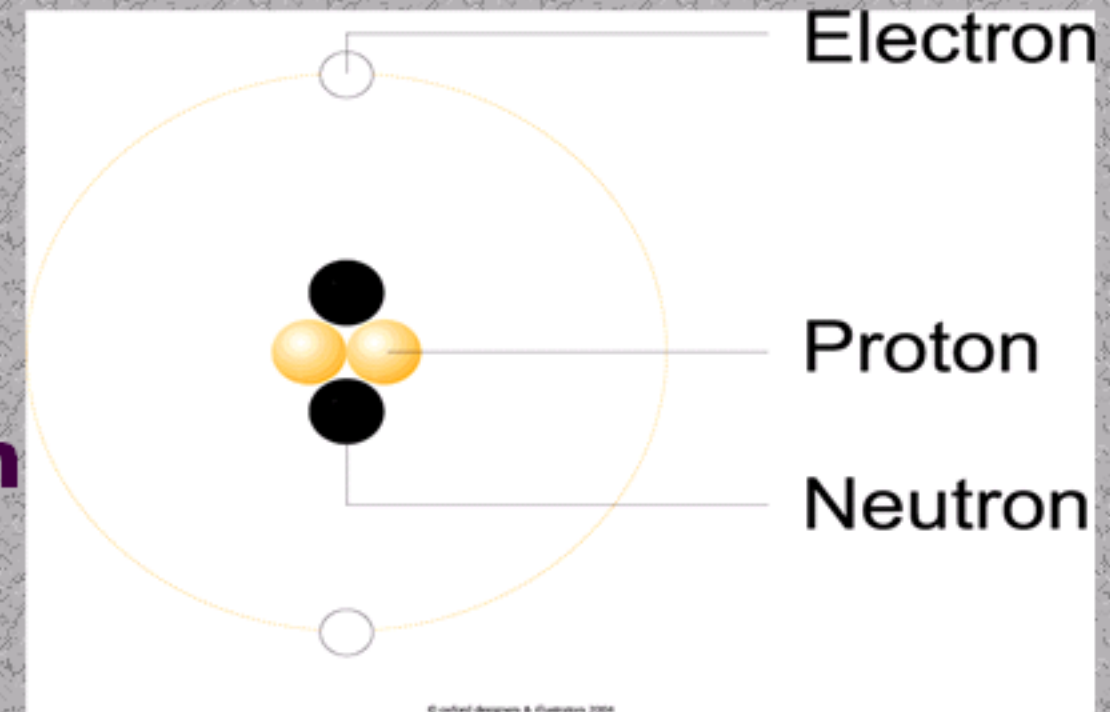
0507.12.3 Design and explain an investigation exploring the earth's pull on objects

# What is magnetism?



**Magnetism is a force created by the motion of electrons in atoms.**

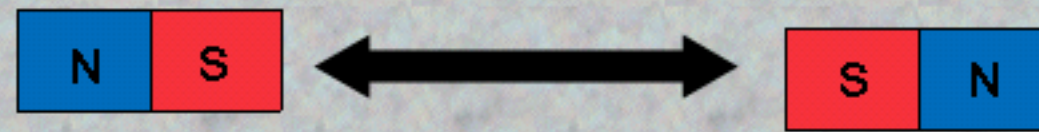
**When the electrons in an atom line up in the same direction, they create a magnetic field.**



**When the atoms in a magnet align, they create two regions called the north pole and the south pole.**



**Like poles repel - opposites attract!**

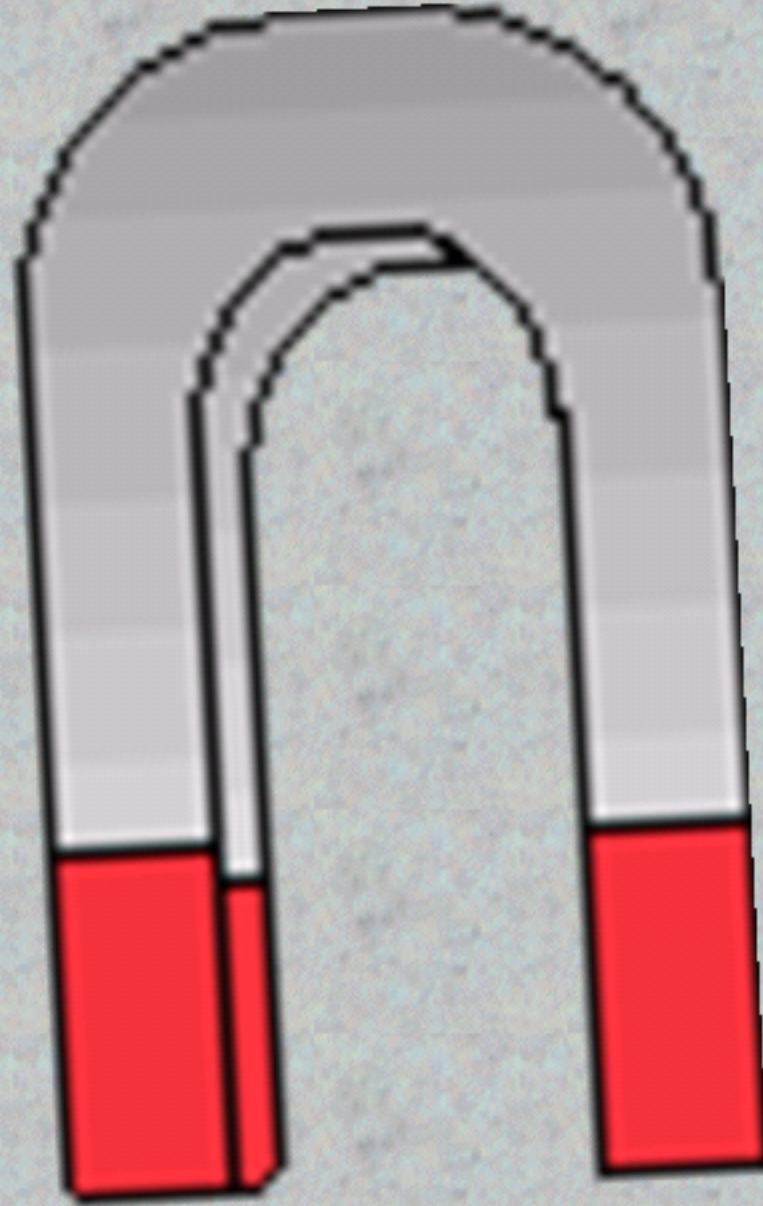


# ***Which poles repel and attract?***



***repel***  
***repel***  
***attract***  
***attract***

## ***Create an electromagnet***



***An electromagnet is a magnet created by using an electric current.***

***Materials: flashlight battery, coil of insulated wire, paper clips, and a nail.***

***In your Science journal, write down your observations and steps. Also answer these questions:***

- 1. Is the nail magnetic before you begin?***
- 2. Is the nail magnetic after you finish?***

***Steps:***

- 1. Coil the wire around the nail in the same direction.***
- 2. Tape one bare end of the wire to the positive terminal on the battery and the other bare end to the negative terminal.***
- 3. The nail will now act as a magnet because the electric current passes through the coils. Now try to pick up the paper clips.***

