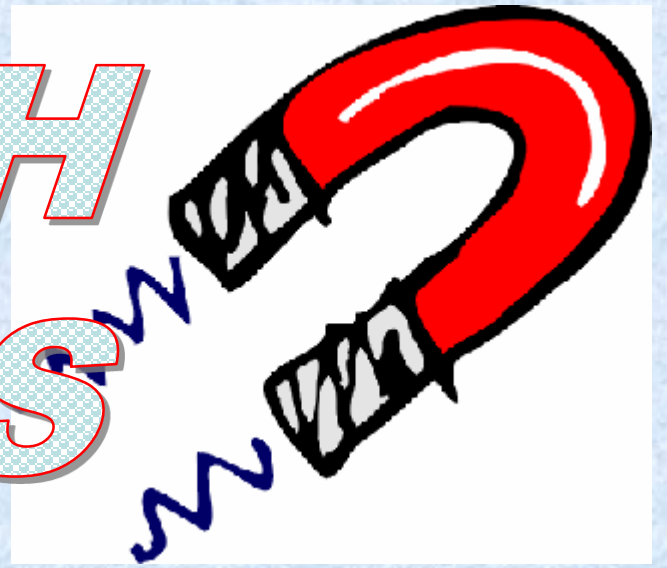
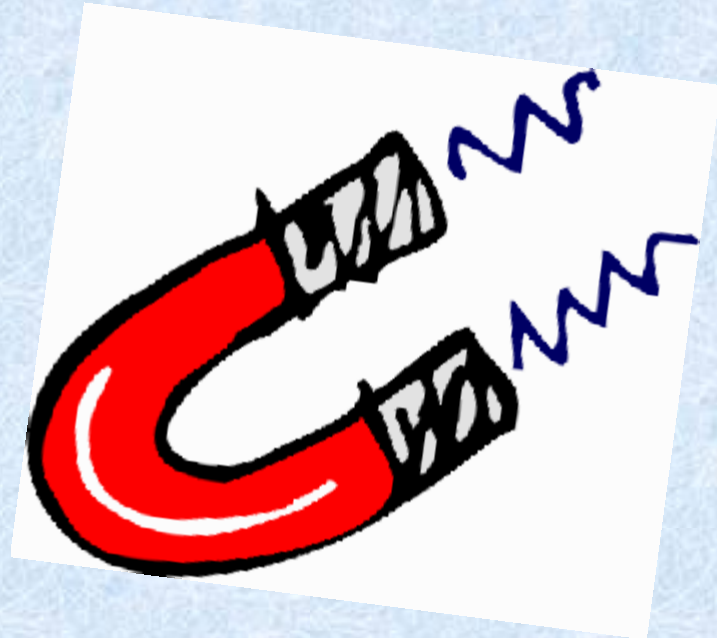


FUN WITH MAGNETS



Magnets

The substance having the property of attracting iron is known as Magnet



HOW MAGNETS WERE DISCOVERED

There are many legends that tell us about the discovery of magnets.

One of the most common, is that of an elderly shepherd named Magnes, who was herding his sheep in an area of Northern Greece called Magnesia, about 4,000 years ago.

It is said that both the nails in his shoes and the metal tip of his staff became firmly stuck to the large, black rock on which he was standing.

This type of rock was later named magnetite, after either Magnesia or Magnets himself.



TYPES OF MAGNETS

Natural Magnet – This magnet is got from rocks. E.g. magnetite

Artificial magnet – This magnet is made from iron, cobalt and nickel.



DIFFERENT SHAPES OF MAGNETS

Bar magnet



Circular magnet



Horseshoe magnet



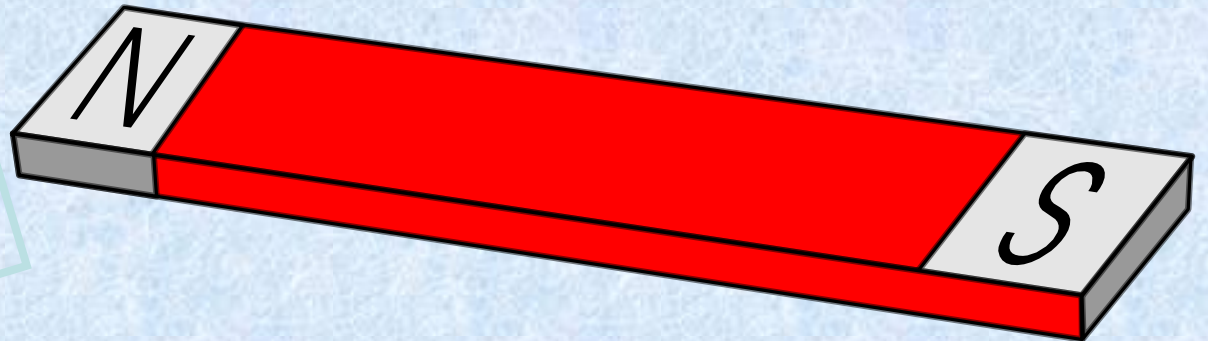
PROPERTIES OF MAGNETS

They are usually made of iron.

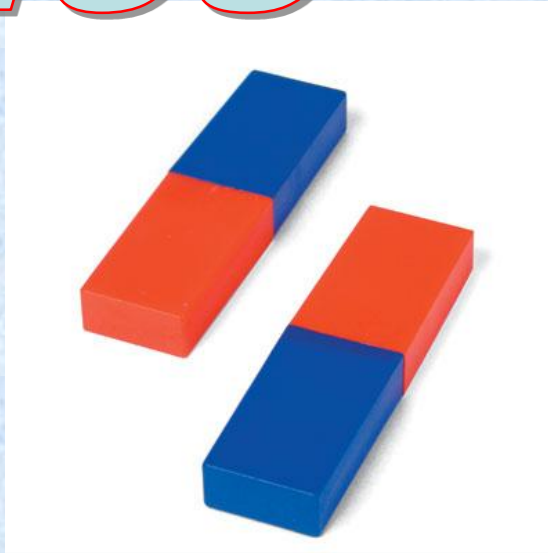
They can also repel other magnets.

They have two ends called magnetic poles.

They can attract some materials.



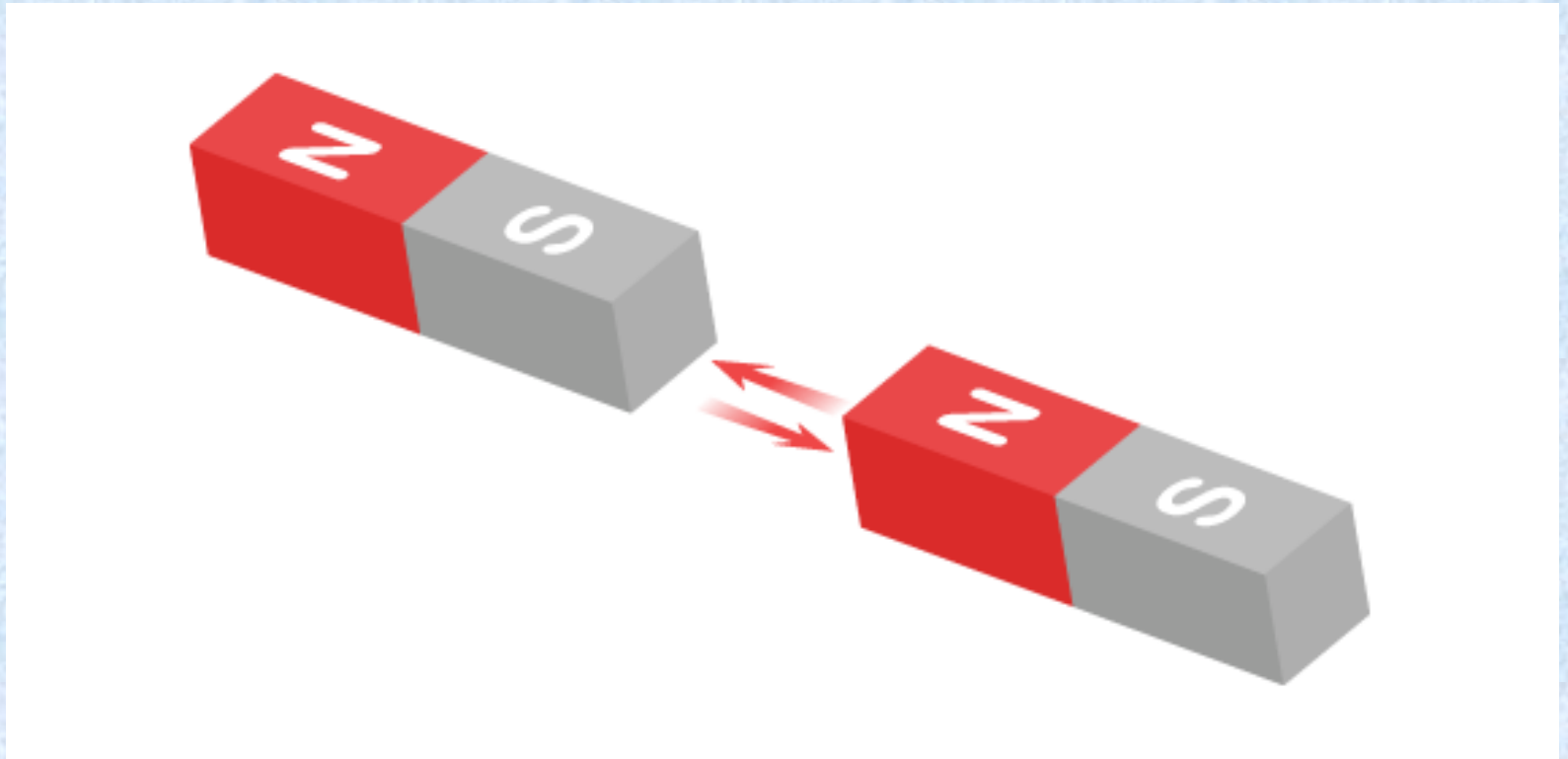
poles



Every magnet have two poles - North pole and South pole.

Attraction is maximum at the poles.

Poles are located at the two ends of magnet.



LIKE POLES REPEL EACH OTHER

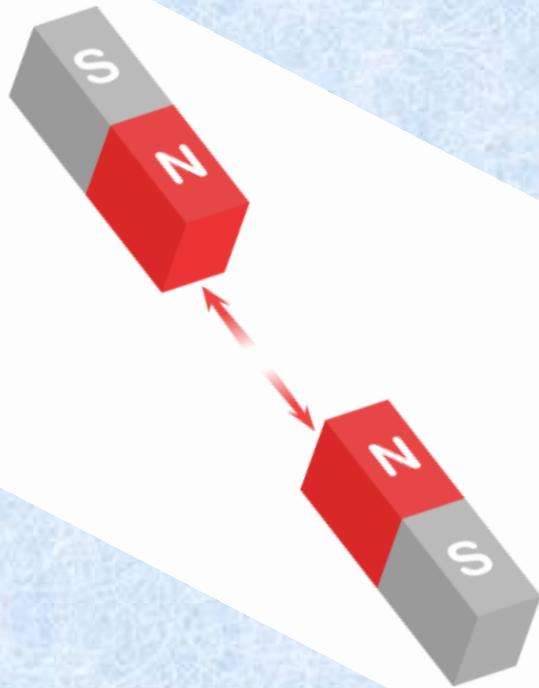
UNLIKE POLES ATTRACT EACH OTHER



Same poles repel

N – N REPULSION

S - S REPULSION

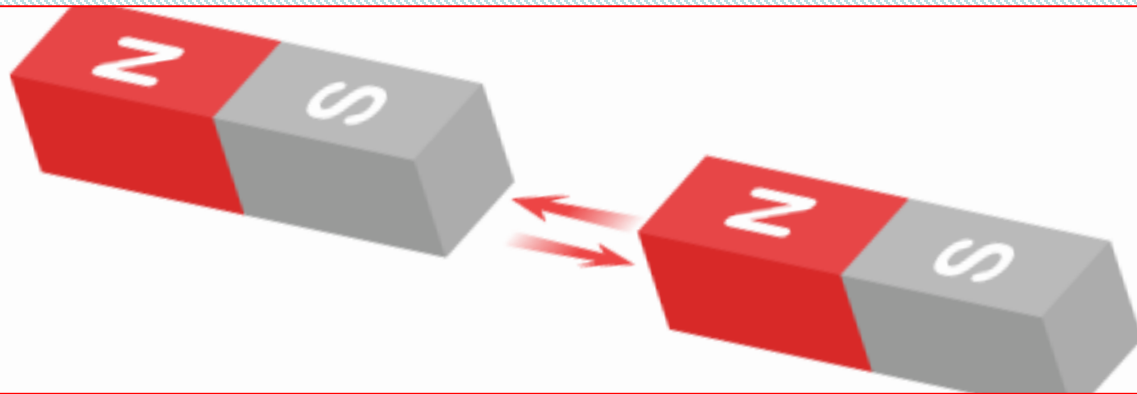


In this picture two north poles are pushing away from each other (repelling each other).

Different poles attract

S – N ATTRACTION

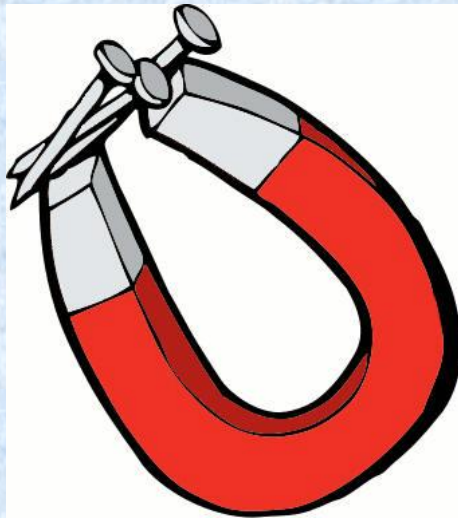
N – S ATTRACTION



In this picture a north and a south pole are pulling towards each other (attracting each other).

Magnetic materials

Materials that are attracted towards a magnet.

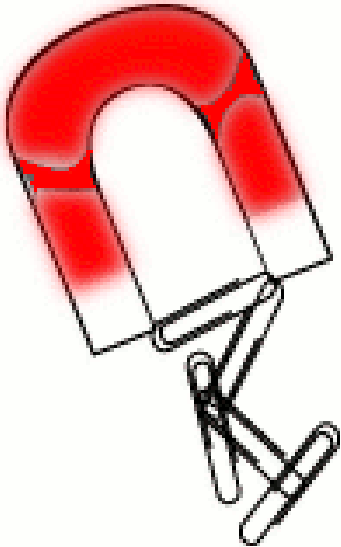


e.g. iron , nickel
cobalt.

Non - Magnetic materials

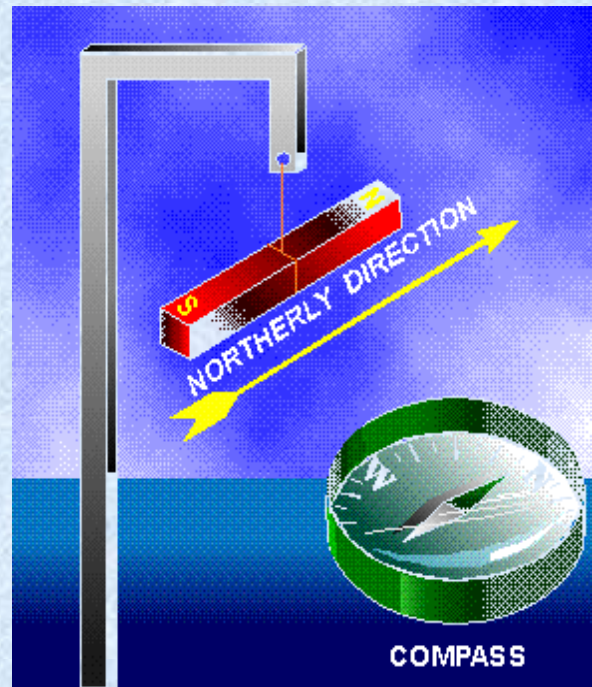
Materials that are not attracted towards magnet.

e.g. Gold, copper ,
aluminium , paper ,
rubber etc.



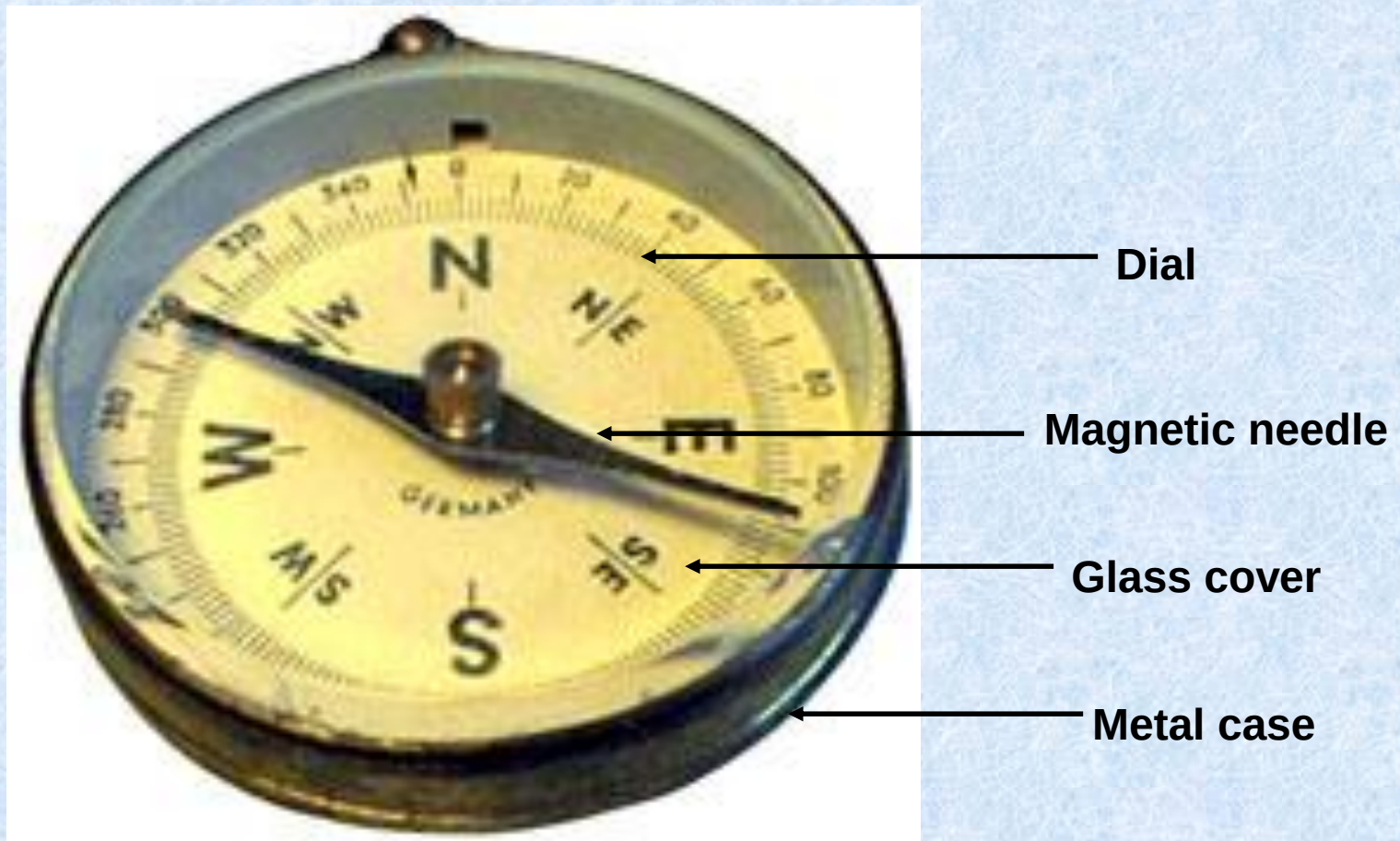
FIND OUT DIRECTION – USING MAGNET

A freely suspended magnet always points in the north-south direction. We can find out a direction using magnet in a device called compass.



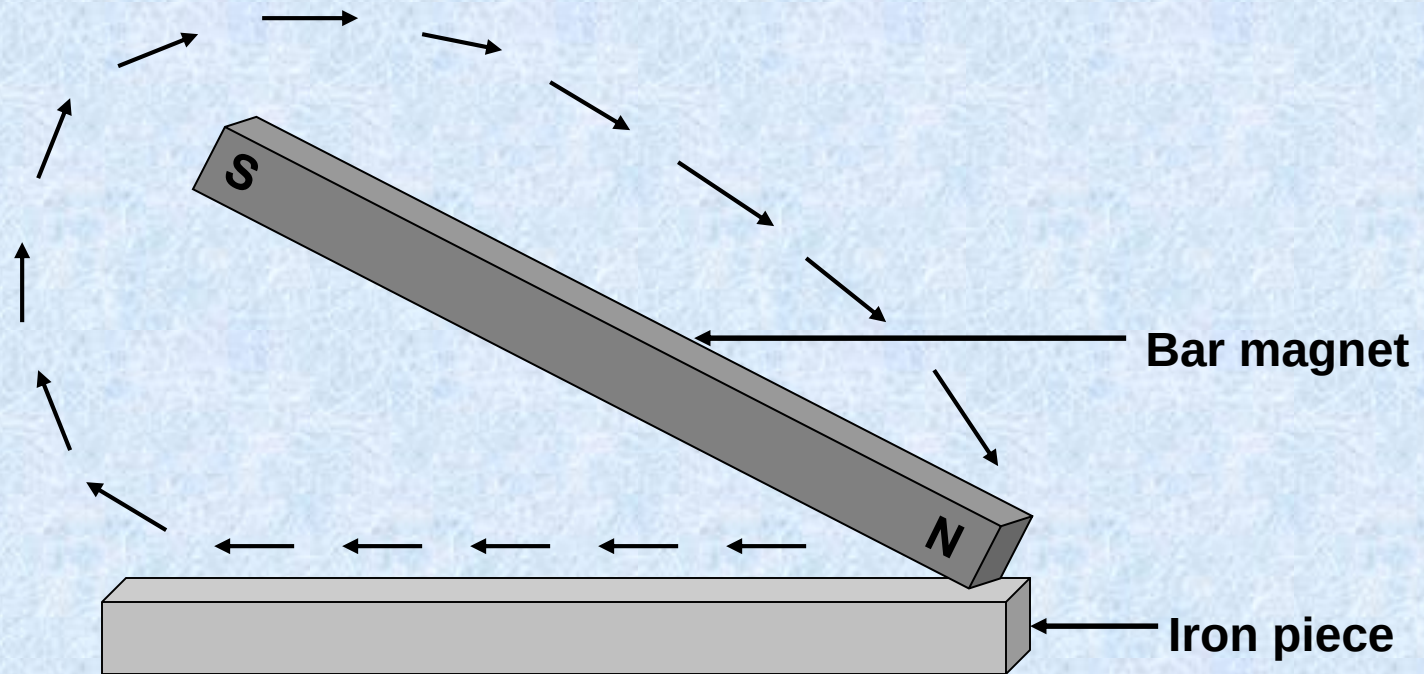
Magnetic compass

A magnetic compass is a device used to find directions. It has a metal case with a glass cover. A magnetic needle which can rotate freely is pivoted inside the case. It also has a dial marked with directions inside it.



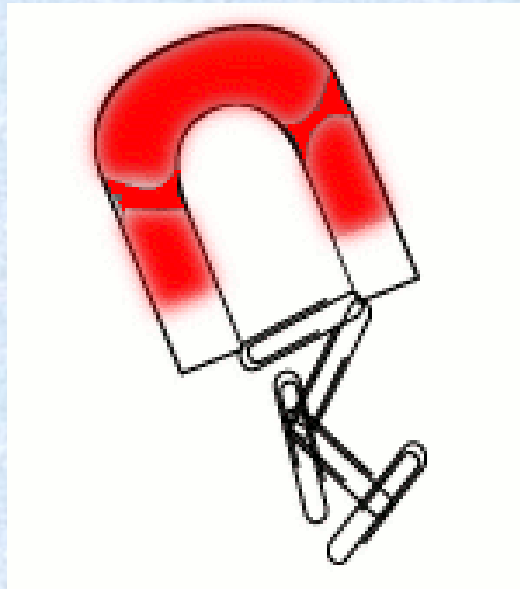
MAKE YOUR OWN MAGNET

Take a rectangular piece of iron. Keep it on a table. Take a bar magnet and keep one of its pole on one end of the piece of iron. Move it along the piece of iron till the other end. Then lift the magnet and repeat this process 30 to 40 times. Then the piece of iron becomes a magnet.



A FEW CAUTIONS FOR MAGNET

- Magnets lose their properties if they are heated, hammered or dropped from a height.
- Magnets should be stored properly.
- Bar magnets should be kept in pairs with their opposite poles on the same side. They should be separated by a piece of wood and two pieces of soft iron should be placed at the two ends. For a horse shoe magnet a piece of soft iron should be kept across the poles.
- Magnets should be kept away from radio, television, music systems, computers, mobile phones, cassettes, compact discs etc.



Some uses for magnets

Magnets are in most electronic devices, in fact, anything that has a motor uses a magnet.



They are used to slow down roller coasters and subways.

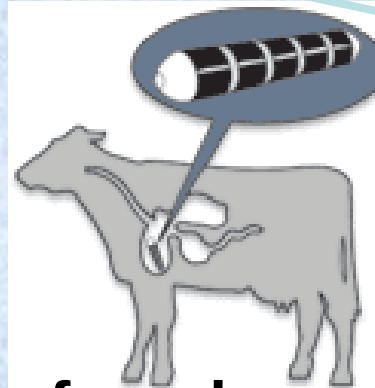


Televisions, computers, and microwave ovens all operate with magnets.



Magnets are used to keep refrigerator doors closed.

Magnets are even placed in the stomachs of cows to catch metals!



More uses of magnets are found every day!