Magnets and Magnetic Fields

Activity I: *What are some of the properties of magnets?*

Procedure:

1. Obtain a strong magnet, a paper clip, and a small compass.
2. Place one end of the magnet near the compass and move it around.

Describe what you observe? _____

_____

3. Place the other end of the magnet near the compass and move it around.

What happens now? _____

_____

4. Place one end the paper clip near the compass and move it around.

What happens to the compass needle? _____

5. Rub the paper clip on the magnet several times then place one end the paper clip near the magnet.

What happens to the compass needle? _____

_____

6. Rub the paper clip on the magnet several times then place the other end the paper clip near the magnet.

What happens to the compass needle time? _____

_____

Which end of the paper clip is "North"? Which end is "South"? _____

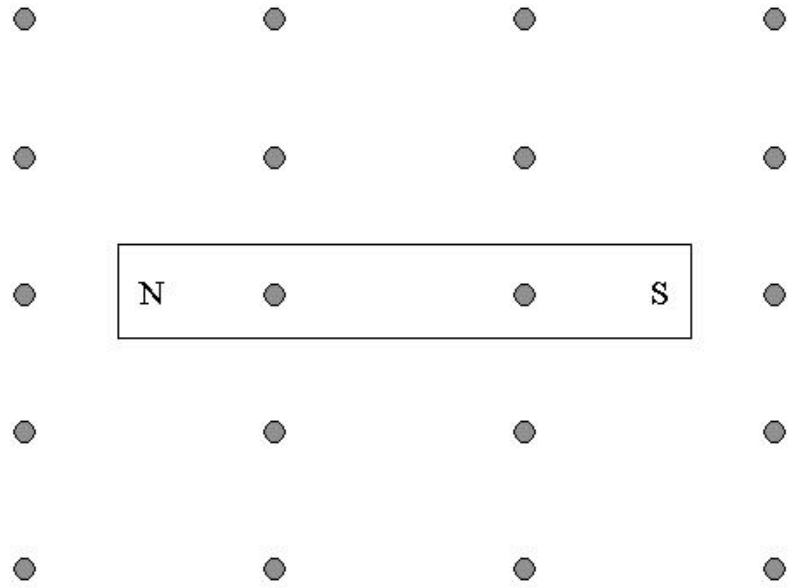
_____

Activity II: *What is a magnetic field?*

Procedure:

1. Tape the magnet to a piece of paper.
2. Place the compass on the paper, at the locations shown.

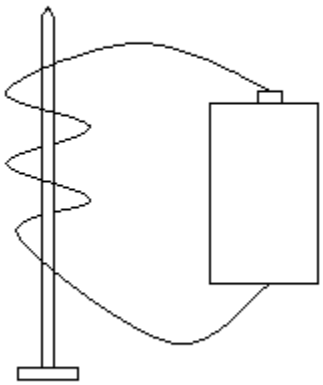
In which directions does the compass point?



Activity II: *How do we make a magnet?*

Procedure:

1. Obtain an iron rod (such as a nail), a battery and some wire.
2. Wrap the wire around the iron rod and connect to the battery as shown.
3. Place the compass next to the iron rod.



What do you observe? _____

_____

Which end of the iron rod is "North"? _____

4. Switch how the wire is connected to the battery.

Which end of the iron rod is now "North"? _____