Name: _____

Magnetic Earth

The Earth acts as if there's a bar magnet running though it from pole to pole. The Earth's core is made of iron and nickel. This magnetic force affects all magnetic material that come within its reach. A freely floating magnet will always land with one end pointing to the Earth's North Pole and the other end pointing to the South Pole. This is how a compass works. The needle will always point to the North Pole...Magnetic North.

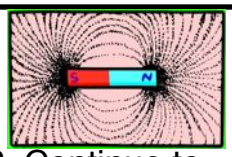
Directions: Make your own compass.

Materials: steel needle or paper clip, cork, pan of water, bar magnet, tape

Magnetize the needle by rubbing the needle with the magnet for about 45 seconds, or 30 times.
Lay the newly magnetized needle onto the cork, tape it into place. Place the cork into the pan of water. The cork should spin freely in the pan without hitting the sides. Observe where the needle lands. This is the Earth's Magnetic North.

Write what you observed about your compass:

Experiment: Magnetic Field



Lay a bar magnet on the table. Place your compass at the South Pole end of the bar magnet. In what direction is the compass needle pointing? Continue to move the compass around the bar magnet observing where the needle is pointing while in each position. Record the direction of the needle in each position as you move the compass around the bar magnet. Add more position farther away and see what happens.