**Magnets and Magnetic field notes**

<https://www.youtube.com/watch?v=s94suB5uLWw>

Magnets have a \_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_ pole – two of the same poles will \_\_\_\_\_\_\_\_\_\_\_each other, while opposite poles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Only certain materials can be magnets, like \_\_\_\_\_\_\_\_\_\_. And other materials can be attracted to magnets like cobalt, nickel, and iron.

There is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ around Earth and a compass will align itself with Earth’s magnetic field.

If you chop a bar magnet in half, you don’t end up with one north magnet and one south magnet—you end up with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, each with its own north pole and south pole. This means that the magnetic field lines surrounding a magnet always form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

We measure magnetic fields using a unit called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_, which is one Newton/Amere-meter.

An electric current produces a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

When current runs through a wire, the magnetic field that it produces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the wire. The field lines are running \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1st right hand rule- take right hand and point your thumb in the direction of the electric current. Now curl your fingers. The direction your fingers are curing is the way the magnetic field lines are pointing. You can use this rule to find the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the current in the wire.

A magnet exerts a \_\_\_\_\_\_\_\_\_\_\_\_\_ on a current running through a wire. – This is what is protecting us from harmful radiation from the sun.

\*\* You do not need to know any of these formulas from this video, we will not be doing much math in this portion of the unit\*\*