**ELECTROMAGNETISM STATIONS ACTIVITY**

**Station # 1 – Cathode Ray Tube**

* Watch the video at: [http://highered.mcgraw-hill.com/olcweb/cgi/pluginpop.cgi?it=swf::100%::100%::/sites/dl/free/0072512644/117354/01\_Cathode\_Ray\_Tube.swf::Cathode%20Ray%20Tube](http://highered.mcgraw-hill.com/olcweb/cgi/pluginpop.cgi?it=swf::100%25::100%25::/sites/dl/free/0072512644/117354/01_Cathode_Ray_Tube.swf::Cathode%20Ray%20Tube)
* Look at the enclosed cathode ray tube and identify the parts

**Station # 2 – Cloud / Bubble Chamber**

* Look at the strip of tracks from a cloud / bubble chamber; you might want to use the overhead

**Station # 3 – Magnetic or Not?**

* Look at the samples of metals, determine whether or not they are magnetic.
* Research to determine why some things are magnetic and some are not

**Station # 4 – Generator**

* Use the generator
* Consider how it works? How is this technology used?

**Station # 5 – Beakman Motor and Homopolar Motor**

* Use the picture to assemble the Beakman motor
* Build your own homopolar motor
* Consider – why do these work?

**Station # 6 – Brain Busters: Magnetics**

* Go to: <http://courses.science.fau.edu/~jordanrg/busters_29/push-ups_5.htm>

**Station # 7 – Electromagnetism Simulations**

* Go to: <http://phet.colorado.edu/en/simulations/category/physics/electricity-magnets-and-circuits>
* Work through any of the simulations that interest you

**Station # 8 – Induction / Faraday’s Law**

* Drop two cow magnets at the same time – one on its’ own and one down the copper pipe; observe what happens
* Research why this happens

**Station # 9 – Magnetic Fields**

* Place on acetate sheet over a bar magnet and shake some iron filings onto it; jiggle the sheet slightly and observe the shape formed
* Repeat for a horseshoe magnet
* Observe what happens when Ms. Carew does the same thing with the coiled wire in a circuit

**Station # 10 – Explore**

* Use the random magnetic objects from the prep room to explore magnetism