**Assignment:\_1\_\_\_**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour:\_\_\_\_**

**Intro To Radioactivity**

**Radiation –**

**Types of Radioactive Decay**

* Radioactive decay – Particles or energy leaving an \_\_\_\_\_\_\_\_\_\_\_\_ atom (goal is to become \_\_\_\_\_\_\_\_\_ over \_\_\_\_\_\_\_\_\_\_\_\_)
* Alpha Decay - is a \_\_\_\_\_\_, very \_\_\_\_\_\_\_\_ range particle and is actually an ejected \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_ an \_\_\_\_\_\_\_\_\_\_\_\_ hazard to humans but can be harmful if inhaled, swallowed or absorbed through open wounds
  + Radioactivity that can be blocked by \_\_\_\_\_\_\_\_\_\_, but still is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Beta decay – is a \_\_\_\_\_\_\_, \_\_\_\_\_\_\_-range particle and is actually an ejected \_\_\_\_\_\_\_\_\_, can penetrate human \_\_\_\_\_\_\_, clothing can provide \_\_\_\_\_\_\_\_ protection against it
  + Radiation that can be blocked by \_\_\_\_\_\_\_\_\_, but not \_\_\_\_\_\_\_\_\_
* Gamma decay – \_\_\_\_\_\_\_\_\_\_\_\_\_\_ penetrating electromagnetic radiation, can travel longer \_\_\_\_\_\_\_\_\_\_\_ and many \_\_\_\_\_\_\_\_\_ into human tissue
  + Emission of high energy radiation, goes through all but thick \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_
* Background Radiation – Radiation that comes from the \_\_\_\_\_\_\_, stars, soil and building materials

**Uses for Radiation**

* Can \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ (damages our DNA -> creates rouge cells with “broken directions” that can misbehave, UV rays etc.)
* Can be used to \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (more powerful exposure can totally damage the DNA -> cells die)
* \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ was one of the first scientist to discover radiation
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** – radiation used to make \_\_\_\_\_\_\_ safe to eat
  + Kills \_\_\_\_\_\_\_\_\_\_\_\_\_ (salmonella, E. coli)
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of food (again kills microorganisms)
  + Controls \_\_\_\_\_\_\_\_\_\_/kills larva
  + Delays sprouting/ripening (think \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_)
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of food (esp. helpful in hospitals with AIDS and cancer patients with weak immune systems)
* Radioactive Tracers – a radioactive \_\_\_\_\_\_\_\_\_\_\_\_\_ that \_\_\_\_\_\_\_\_\_ certain \_\_\_\_\_\_\_\_\_\_ inside living organisms (used to discover a lot of things about DNA, think glow genes)
* \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – a device used to measure radiation
  + Measured in \_\_\_\_\_\_, \_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_