**Mining Notes**

1. Open Pit Mining (surface)
   1. Removal of minerals from an open pit or borrow
   2. Could come from tunneling, like long wall mining
   3. Usually used when minerals are close to the surface
   4. Could be referred to as quarries
   5. Water usually builds up to and has to be removed
   6. Much of the waste that comes from this is piled in a waste dump pile that builds up to large heights in this tailings pile
   7. Toxic waters from the runoff of the tailing pile can add harmful metals into the surrounding environment
2. Dredging (surface)
   1. Partially carried out underwater with bottom sediments being gathered up and disposed of or mined
   2. Sometimes used to replenish beaches or fishing for edible materials
   3. This process uses water to clear out much of the materials that are not used or wanted
   4. This type of mining creates spoils (excess materials) that can destroy the aquatic systems that they are working in
3. Strip Mining (surface)
   1. A process that strips the surface of a minerals in long lines
   2. Commonly used to mine coal
   3. It will strip the minerals with the contours of the land, stripping the land in line after line from hillsides and destroys the surrounding mountainsides and hills
4. Mountain Top Removal (surface)
   1. Replacing the nearby mountains and valleys with a flatter terrain that slowly digs out the tops of the area
   2. Minerals and ores are removed by stripping benches of land and removing to other areas not needed in the mining process
   3. Once an area is claimed by mining, the environment left behind is supposed to be planted with regrowth and maintained by government law
   4. Blasting can throw dust into the atmosphere and contain sulfur compounds
5. Room and Pillar (subsurface)
   1. This form of underground mining is a two-step process, where pillars of untouched materials are left to support the mine while open areas are mined around the pillars
   2. Used in the mining of coal, iron, and other stones and aggregates
   3. Collapses and crushed rooms are a large concern in this type of mining. Once this collapse starts, it is hard to stop the chain reaction of pillar failures
   4. There is not much pollution that comes from this type of mining, except for minor environmental changes at the surface
6. Longwall Mining (subsurface)
   1. Coal mining where large sections are taken from the underground, taking only the materials that are wanted, and then allowing the mine to collapse once the desired material is taken
   2. This can lead to sinkholes and much damage to the surface, even though the mining itself takes place underground
   3. Because of possible sinkholes, this can have devastating effects on the underground water systems and surrounding land areas