

Resources Review notes

Test: Multiple Choice /30 + Written /10 = Total /40

- Environmental Problems (4 of them, here are a couple examples)
 - Acid Rock Drainage – when waste rock is in contact with air and water, water that flows through becomes acidic and can harm the environment
 - Solution: cover rock in clay or put under water
 - Water Quality – chemicals used in the milling process are stored in tailings ponds which may leak into environment
 - Solution: line pond with concrete, treat water, reuse water so not making more and more contaminated
- Mining benefits our lives in many ways: jobs, better economy, energy, products (scooters, sewing machines, jewelry, zinc ointment, etc)
- Geology of BC:
 - BC has metals near volcanoes (Cascade subduction zone volcanoes, roots of ancient volcanic islands that collided pushing up the Rockies)
 - Rockies have coal because it formed by vegetation falling into swamps in the flat lying layers before the Rockies were pushed up
 - Alberta and NE BC have oil because there was an inland sea there for a while where marine organisms died, were buried and became oil
- Coal: been in Canada for 300 years; is mined mostly in surface mines; twisted seams are mined in open pit mines; it is used for making electricity, steel, and power; Japan buys most of our coal; coal releases sulfur when it is burned creating acid rain; coke is coal baked in an oven
- Renewable: formed in nature as fast as it is used by us
- Ore minerals and their metallic element:
 - Chalcopryite – copper
 - Magnetite – iron
 - Sphalerite – zinc
 - Bauxite – aluminum (from South America, processed here)
- Uses
 - Gypsum – wallboard (non-metal)
 - Zinc – corrosion resistance, zinc plus copper = brass, etc (metal)
 - Sulfur – fertilizer, sulfuric acid (non-metal)
- Fossil fuel – made from ancient plant or animal life i.e. coal, natural gas, oil, petroleum
- Ore rock is composed of ore mineral (what we want) and gangue (the rest of the rock)
- Resource – an estimate of the total amount of a mineral in Earth's rocks
- Reserve – the amount of known deposit that can be mined profitably
- Permeable – water can flow through, on top of an oil trap, i.e. shale
- BC is a major producer of copper and coal concentrate
- Placer mining best on the inside of a river's curve