# Exam 1 Vocabulary

- Hypothesis- an educated guess, usually stated in "if-then" format
- Theory- idea that has a lot of data supporting it
- Law- so much data backing it up that it's almost irrefutable
- Catastrophism- early belief that everything on earth was formed from 6 giant catastrophes
- Principle of Uniformitarianism- present processes are the same as past processes
- Actualism- uniformitarianism revised to include catastrophes
- Nebula- large cloud of gas in space
- Nebular hypothesis- belief that the solar system formed from a nebula of H atoms
- Solar Disk Model- nebula flattens and rotates over time
- Protostar- not quite a star but trying to get there
- Fusion- combining separate atoms to make different (bigger) ones
- Planetary accretion- tiny particles move really fast so when they collide they combine
- Theia Impact- planet that collided with Earth after it formed; remnants of the impact formed the moon
- Chemistry- elements and the like
- Composition- what something is made up of
- Crust- 1st compositional layer of Earth
- Continental crust- low density crust; can pile up above water
- Oceanic crust- high density crust
- Mantle- 2nd compositional layer of Earth
- Outer Core- 3rd compositional layer of Earth; 4th physical layer of Earth; ductile
- Inner Core- 4th compositional layer of Earth; 5th physical layer of Earth; brittle; completely solid
- Physical- characteristics
- Mechanical- the way something works
- Lithosphere- 1st physical layer of Earth; brittle
- Asthenosphere- 2nd physical layer of Earth; ductile
- Lower Mantle/Mesosphere- 3rd physical layer of Earth; brittle

- Plates- pieces of lithosphere that move around Earth's surface
- Cartographers- mapmakers
- Continental Drift Hypothesis- Alfred Wegener's idea that the continents moved over time
- Mesosaur- extinct animal whose fossils provided evidence for continental drift
- Mid-Ocean Ridge- long mountain chain running through the oceans
- Seafloor spreading hypothesis- idea that lava rises to the surface at the MOR, cools to form new rocks, then those rocks get pushed aside as more lava comes to the surface
- Convection- one reason plates move; hot, low-density material moves upward displacing cooler, high-density material
- Ridge Push Model- buoyant material near the MOR pushes the plates apart & they slide downhill away from the MOR
- Slab Pull Model- as one end of the plate sinks, it pulls the rest of the plate down behind it
- Slab Suction Model- the descending plate sucks down some asthenosphere, helping stir the convection cell
- Divergent Margins- 2 plates moving away from each other
- Seafloor spreading- occurs when a divergent boundary exists between 2 plates with oceanic crust
- Rift valleys- form when a divergent boundary starts forming in continental crust
- Triple junction- Y-shaped split in continental crust
- Convergent Margins- 2 plated collide head-on
- Subduction zone- place where plate with oceanic crust is pushed under plate with continental crust
- Subducted- forced downward
- Collision zone- place where plates with continental crust converge and push up, forming mountain belts
- Transform Margins- 2 plates slide past each other
- San Andreas Fault- transform boundary between North American Plate & Pacific Plate

- Atoms- building blocks of matter
- Atomic number- number of protons; assigns the atom to a specific element
- Element- substances that cannot be broken down chemically
- Color- first mineral property you notice
- Streak- color of mineral when ground into a powder
- Moh's scale- used to determine hardness of a mineral
- Luster- reflectivity of a mineral
- Effervescence- reacts when exposed to weak acids
- Crystal form- what shape the mineral has
- Fracture- no pattern to the break of the mineral
- Cleavage- mineral breaks on flat planes
- Striations- straight lines on cleavage planes that can only be seen in the light
- Sulfides- S ion; simple chemical formula; metallic & usually rare
- Oxides- O ion; simple chemical formula; metallic & usually rare
- Sulfates- $SO_4$ ion; commonly used for construction & plaster
- Phosphates- $PO_4$ ion; important in fertilizers and in bones/teeth
- Carbonates- $CO_3$ ion; effervescent; pretty common
- Silicates- $SiO_4$ ion; most common
- Tetrahedron- Si in middle, O in 4 corners
- Island silicates- tetrahedron is alone
- Chain silicates- adding at both ends
- Sheet silicates- flat, 2-D sheet of rings
- Framework silicates- 3-D, very common
- Rocks- substance made up of 1 or more minerals & maybe a little more other stuff
- Rock Cycle- transitions to and from different types of rocks
- Magma- molten rock below ground
- Igneous rocks- rocks produced from cooled magma
- Weathering- breaking down the rock
- Erosion- movement of rock particles
- Deposition- where erosion stops