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# Anchor Charts for

# EARTH SYSTEMS

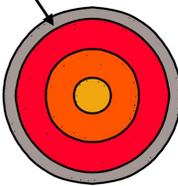
# Anchor Charts Cover:

- Earth's layers
- compositional layers: crust, mantle, core
- types of crust
- mechanical layers: lithosphere, asthenosphere, mesosphere, inner and outer core
- continental drift theory
- plate tectonics
- how plates move
- continental and oceanic plates
- convergent, transform, and divergent plates
- types of convergent and divergent boundaries
- seismic waves
- primary, secondary, and surface waves
- Ring of Fire
- seismograph
- volcano
- lava and magma

- active, dormant, and extinct volcanoes
- Volcanic Explosivity Index
- characteristics of minerals
- properties of minerals: color, streak, luster, cleavage and fracture, hardness, specific gravity
- Mohs Hardness Scale
- Uses of Minerals
- ores, gemstones, and silicates
- rocks: igneous, metamorphic, and sedimentary (includes types)
- The rock cycle
- crystallization, weathering, deposition, sedimentation, deformation, melting
- soil and components of soil
- factors that impact what type of soil forms
- soil horizons: A horizon, B horizon, C horizon, O horizon, and R horizon
- physical properties of soil: color, texture, water holding capability, structure
- sand, silt, clay
- human activities that can damage pedosphere
- vegetative cover, contour plowing, conservation tillage, nutrient balance, composting, agroforestry, stewardship

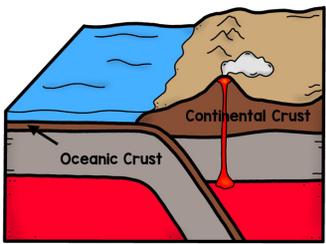
## Crust

made of:  
rocks and  
minerals



- **outermost**
- **thinnest**
- **solid**
- **least dense**

## Types of Crust



- **continental crust:**
  - found under land
  - made up **granite** rocks
  - **thicker**, less dense than oceanic
- **oceanic crust**
  - found under oceans
  - **not as thick** as continental crust
  - made of igneous (**basalt**) rocks

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# Frame Size

# Streak

(Mineral Property)

color mineral appears  
in powdered form



Hematite  
creates a  
reddish-  
brown  
streak.

- found by running a mineral on a streak plate
- are on white and black plates

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# Luster

(Mineral Property)

the way mineral reflects light

- can be described in many ways
- They are first divided into these categories:

- metallic:  
looks like  
metals



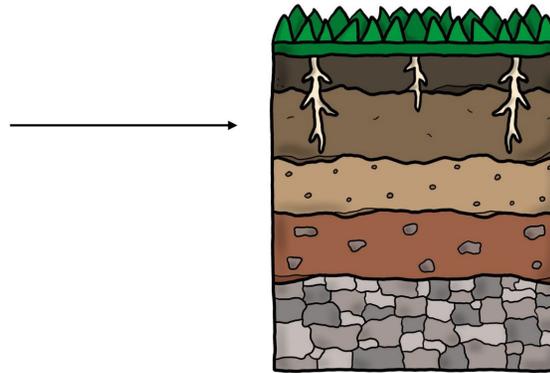
- nonmetallic:  
doesn't  
look like  
metals



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# Half-Sheet Size

# A Horizon: Topsoil



- large amount of **organic matter**
- **many organisms** live in this layer (decomposers)
- usually **dark** in color and rich in nutrients
- **most fertile** layer - needed to grow most crops
- where most **plant roots** grow

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# Full-Sheet Size