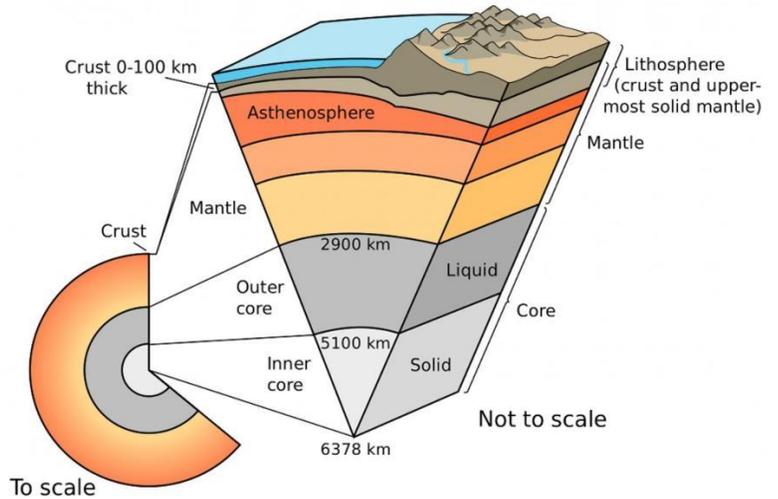


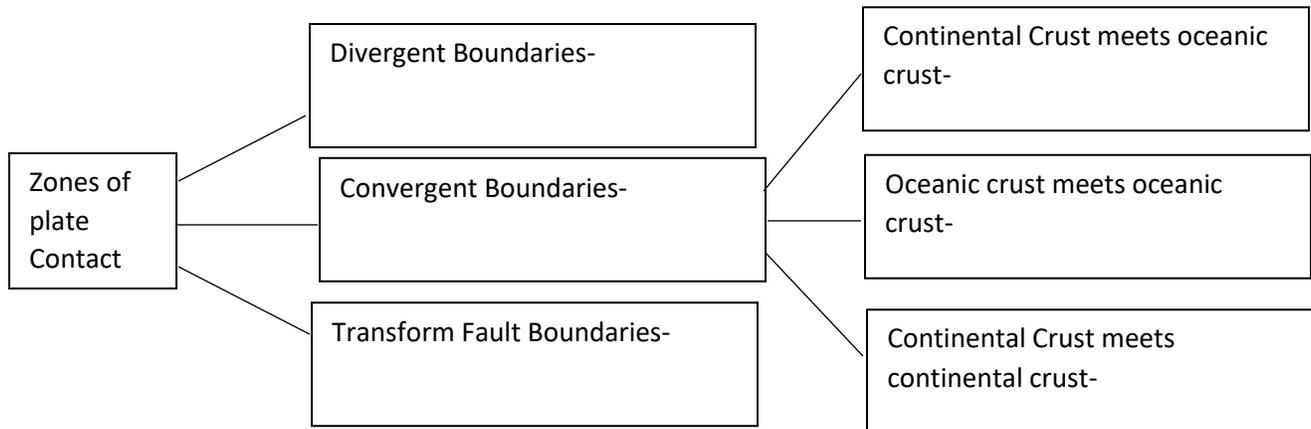
**Module 24 – Mineral Resources and Geology**

1. Vocabulary:
2. Read the Case Study: Are Hybrid Electric Vehicles as Environmentally Friendly as We Think?
  - a. What are the environmental issues associated with HEV's?
  - b. Conclusion – traditional cars or HEV...which is better and why?

3. Earths Layers and their composition
  - a. Core-
  - b. Mantle-
  - c. Asthenosphere-
  - d. Lithosphere-



4. What is the theory of plate tectonics?
5. What evidence is there to support the theory?
6. Using figure 24.5 to determine where the formation of the following occur:
  - a. Formation of oceanic crust-
  - b. Volcanic activity-
  - c. Formation of mountain ranges-
  - d. Increased seismic activity-
7. Describe each type of boundary and give a likely outcome result from the type if plate contact.



8. The Ring of Fire --- Not just a Johnny Cash Song
  - a. Describe a subduction zone and how this leads to volcanic activity
  - b. Describe primary succession and soil formation from volcanic rock
  - c. Explain how tsunamis form as a result of plate movement
  - d. Describe transform boundaries as an earthquake occurs and after the earthquake has occurred
9. Describe an ecological, an environmental, as social, and an economic impact associated with plate movement.
10. Answer the module 24 review questions:

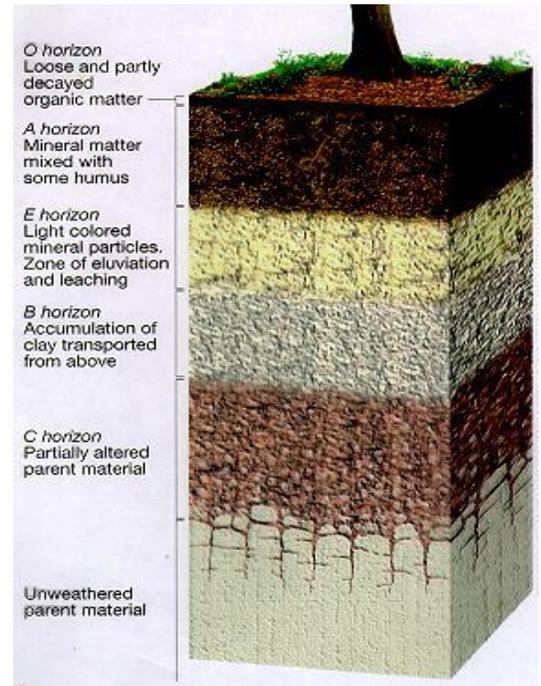
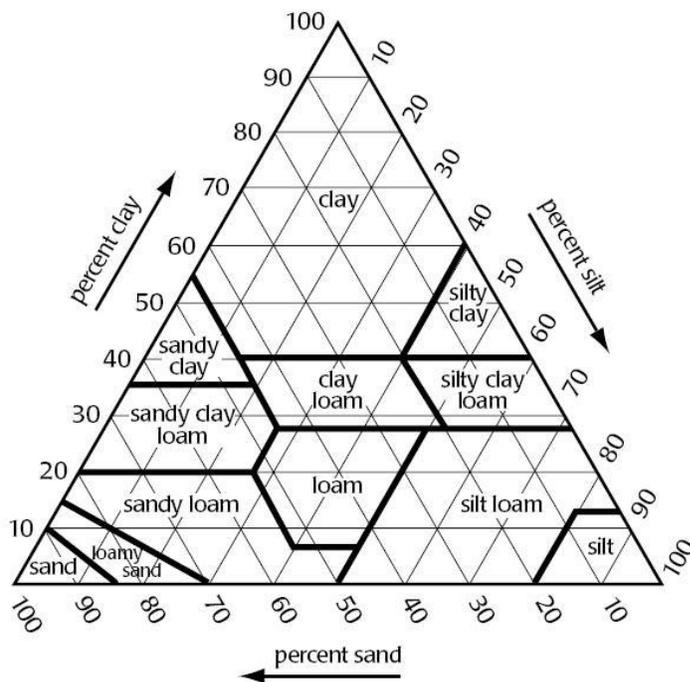
1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_

5. \_\_\_\_\_  
 6. \_\_\_\_\_

## Module 25 – Weathering and Soil Science

- Distinguish between chemical and physical weathering. Give examples of each type of weathering.
  - Physical –
  - Chemical-
- What are environmental benefits of weathering?
- Describe each factor and how it contributes to soil properties:

Parent Material	
Climate	
Topography	
Organisms	
Time	



- How do nutrient values change with time (refer to figure 25.5)?
- How have humans contributed to soil degradation?
- What is humus and where is it found in the soil profile?
- Describe the properties of soil below.
  - Physical Properties
    - Texture
    - Permeability
  - Chemical Properties
    - Cation exchange
    - Base saturation
  - Biological Properties
    - microorganisms
    - detritivores
- Which type of soil is best for
  - Agriculture
  - Contaminant of pollution
  - Supporting high productivity in a soil

9. Using table 25.1 on page 283 predict some potential economic consequences the USA might face because of unequal distribution of metal reserves?

10. Complete the mining table below.

Type of mining operations	Description	Effects on air, water, soil, biodiversity and humans
Strip Mining		
Open-pit Mining		
Mountaintop Removal		
Placer Mining		
Subsurface Mining		

11. Answer the Module 25 review questions:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_