**Science Mid-term Study Guide**

1. Which of the following is a **renewable** natural resource? Why?
   1. Coal
   2. Apples
   3. Nuclear energy (from uranium)
   4. Quartz
2. (true/false) Minerals are natural resources.
3. What is a nonrenewable natural resource?
4. What is one way we can conserve nonrenewable natural resources?
5. What is one way that will *not* conserve natural resources?
6. (True or False) Fossil Fuels are nonrenewable.
7. What is a fossil fuel?
   1. Resource that forms at a rate that is much faster than the rate at which it is used up
   2. Resource formed from the remains of plants and animals that lived long ago
   3. Resource that is just used to power cars
   4. Mixture of one or more minerals
8. What are the three main fossil fuels?
9. What is a disadvantage (negative) of burning fossil fuels?
   1. Cars don’t run as well on gasoline.
   2. Food isn’t cooked as well with natural gas.
   3. They pollute the air.
   4. There are no disadvantages, fossil fuels are wonderful and renewable.
10. You are trying to determine whether a sample is a mineral. Which of these characteristics might mean the sample **is** a mineral?
    1. It is a living thing.
    2. It exists in a liquid state.
    3. It is a natural substance.
    4. It has a changing chemical makeup.
11. Which of the following is **not** a characteristic of a mineral?
    1. Organic
    2. Solid
    3. Natural
    4. Has a crystalline structure/shape
12. Why is plastic NOT a mineral?
    1. It is made of an inorganic compound.
    2. It is not natural.
    3. It is made of silicon.
    4. It doesn’t have cleavage.
13. Which question is **least useful** to ask if you want to identify a mineral?
    1. What color is the mineral?
    2. What color is the mineral’s streak?
    3. How hard is the mineral?
    4. What are the mineral’s special properties?
14. The way a mineral **reflects light** is called its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
15. Which of the following properties does **Mohs scale** measure?
    1. Luster
    2. Hardness
    3. Density
    4. Streak
16. Cleavage is when
    1. A mineral breaks irregularly (jagged).
    2. A mineral breaks in smooth, flat planes.
    3. A mineral is shiny.
    4. A mineral cracks easily.
17. The streak of a mineral shows
    1. the color of a mineral.
    2. hardness.
    3. the color of the mineral in powder form.
    4. the density.
18. If you say a mineral is at 5 on the Mohs scale and is glassy (vitreous), you are describing the mineral’s
    1. cleavage and color
    2. hardness and luster
    3. crystal shape and streak
19. How do you determine the hardness of a mineral?
20. Use the streak test, the color of the streak can match the hardness scale
21. Determine where the rock was formed in the rock cycle
22. Scratch it with known minerals from the Mohs hardness scale
23. Crush it and see if it will dissolve in acid
24. A mixture of minerals is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
25. What are the 2 main things that are used to identify a rock (not a mineral)?
26. Color and hardness
27. Texture and composition
28. Cleavage and fracture
29. Texture and streak color
30. A rock, like granite, is **coarse** grained. What does this mean?
31. What has to happen to a rock BEFORE it can become an **igneous** rock?
    1. Lots of pressure
    2. Erosion and weathering
    3. Sediment “glued” together
    4. Melting and cooling
32. Molten (melted) rock inside the earth (underground) is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
33. Fill in the tree map below:

**Igneous Rock**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Extrusive**

magma \_\_\_\_\_\_\_\_\_\_\_\_\_

1. What has to happen to a rock BEFORE it can become a **sedimentary** rock?
   1. Weathering
   2. Melting
   3. Cooling
   4. Subtraction
2. Weathered (broken down) rocks are called
   1. magma
   2. lava
   3. coal
   4. sediments
3. Sedimentary rocks are known for having (hint: think of sandstone)
   1. layers
   2. lots of color
   3. bubbles
   4. fun
4. What are the main categories of **sedimentary** rock?
   1. Extrusive, Intrusive,
   2. Clastic, chemical, organic
   3. Foliated and Non-foliated
   4. fine-grained and coarse-grained
5. How could you tell if a rock is organic?
   1. It contains pebbles
   2. It can dissolve
   3. It has layers
   4. It contains once living things
6. Under what conditions can a metamorphic rock form?
   1. When magma and lava cools
   2. Sediments collecting at the bottom of a lake or ocean
   3. Extreme Heat and/or pressure deep beneath the earth
   4. Compaction and cementation over time
7. What kind of metamorphic rock has its mineral grains arranged in planes or bands?

                      a. Fine-grained

                      b. Foliated

                      c. Non-foliated

* 1. Coarse-grained

1. Sandstone has layers so James said it was foliated. Is he correct? Why or why not?
2. What are the two types of metamorphic rocks?
   1. Fine- grained and Coarse-grained
   2. Clastic and Chemical
   3. Organic and Inorganic
   4. Foliated and Non-foliated
3. What rock are fossils mostly found in what type of rock?
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a process where water, wind, ice, and/or heat break down rock.
   1. Weathering
   2. Erosion
   3. Deposition
   4. Melting
5. What type of rock goes through the process of deposition?
   1. Igneous
   2. Magma
   3. Sedimentary
   4. Metamorphic

**Part 10**: Processes of Sedimentary Rocks

1. What is the force that uses pressure to make sediments into rock?
   1. Compaction
   2. Cementation
   3. Melting
   4. Weathering
2. Cementation is more common in which type of rock?
   1. Clastic, example is conglomerate
   2. Chemical, example is limestone
   3. Chemical, example is rock salt
   4. Clastic, example is granite
3. What is the difference between compaction and cementation?
   1. Compaction uses natural glue, cementation uses pressure
   2. Compaction uses heat, cementation uses pressure
   3. Compaction uses pressure, cementation uses natural glue
   4. Compaction uses pressure, cementation uses heat

**Part 11:** Processes

1. As layer upon layer of sediments are deposited, the process of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **presses** them together.
   1. erosion c. compaction
   2. melting d. solidification
2. The process that changes igneous rocks to sedimentary where sediments move is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   1. Deposition
   2. Erosion
   3. Cementation
   4. Weathering
3. The process where sediments are dropped and collect (builds up the land) is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   1. Melting
   2. Compaction
   3. Deposition
   4. Erosion

**Part 12:** Composition of Rocks

1. Sedimentary rock is made of sediments such as
   1. sand
   2. clay
   3. shells
   4. all of the above
2. What kind of sediments would only organic sedimentary rocks contain?
   1. Fossils
   2. Pebbles
   3. Lava
   4. Sand

46. Sediment is formed when rock gets \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. younger  
 b. weathered  
 c. deposited  
 d. compacted

47. Which of the following is an example of sediment?  
 a. clay   
 b. gravel  
 c. sand  
 d. pieces of shells  
 e. all of the above are examples of sediment

48. If sediments are compacted and cemented, they will eventually form \_\_\_\_\_\_\_\_\_\_\_\_ rocks.  
 a. igneous   
 b. sedimentary   
c. metamorphic

49. What are the two types of weathering?

50. Planting different crops each year is what?

51. Making steps on the side of the mountain to slow down water erosion is what?

52. Planting trees/bushesto slow down wind erosion is what?

53. What are the layers of soil?

54. (true or false) The sediments in topsoil is MORE weathered than the sediments in subsoil.

55. Why is topsoil so important to farming and gardening?

56. Put the layers of the earth in order from outside to inside

57. What makes the tectonic plates move?  
a. pressure from above  
 b. a layer of gas under the lithosphere  
 c. convection currents in the asthenosphere  
 d. gravity

58. When a continental plate hits an oceanic plate, which plate is subducted down (because it’s denser)?

59. What was the name of the supercontinent that broke apart about 65 million years ago?

60. What happens at mid-ocean ridges?  
a. Sea-floor spreading  
 b. tsunamis  
 c. mountains  
 d. trenches

61. Explain why California has so many earthquakes?

62. What happens at convergent boundaries? What forms?

63. What happens at divergent boundaries? What forms?

64. What happens at transform boundaries? What forms?

65. What is the relationship between the lithosphere and the asthenosphere?

66. What is the property of a mineral that you can observe just by looking at it?  
Luster, streak, fracture or cleavage?

67. What is the name of the layer of soil just under the grass? (Hint: The A-horizon)

68. How are sand dunes formed?

69. A \_\_\_\_\_\_\_\_\_\_\_\_ is a pile of sediment left at the mouth of a river  
a. sandbar  
b. terrace  
c. delta

70. After digging deeper and deeper, you would eventually hit solid rock called what?

71. What is the process called that moves sediments?

72. Acid rain is a type of what kind of weathering?

73. What is soil made of? (Hint: 4 things)