Review Key for the End of Year test.

Matching:

1. __f__Place where plates move apart
2. __j___Layer of rock that forms Earth's outer surface.
3. __r___Place where two plates slide past each other moving in opposite directions. Earthquakes occur frequently along these boundaries.
4. _l or e_Is a dense ball of solid metal that is deep within the Earth.
5. __m___Pure substance that cannot be separated into a simpler substance.
6. __h___Substance formed of 2 or more different elements
7. __n___The smallest unit of an element
8. __k___Anything that can be observed or measured
9. __o___Examples of these are when a substance freezes, gets cut in half or melts.
10. __a___Push or pull
11. __v___distance divided by time
12. __p___Unit of force
13. __b___transfer of heat through empty space
14. __c___type of energy in an electric current
15. __i___force that governs the motion of our solar system
16. __q___The liquid layer of Earth's core
17. _l or e The solid layer of Earth's core
18. __g___The semi-solid layer of Earth where convection takes place
19. __s___Elements that are semiconductors
20. __d___2 Tectonic plates moving towards one another
21. __t___2 Tectonic plates moving away from one another
22. __u___The ability of an organism to make its own food

a. Force
b. Radiation
c. Electric
d. Convergent boundary
e. Inner core
f. Plate boundary
g. Mantle
h. Compound
i. Gravity
j. crust/lithosphere
k. Physical property
l. Inner core
m. element
n. atom
o. Physical change
p. newton
q. Outer core
r. Transform boundary
s. metalloids
t. Divergent boundary
u. autotrophy
v. speed

True or False:

1. _F__Producers eat plants.
2. _T___Animals are heterotrophic.
3. _T___A meteorite is also known as a shooting star and is in the atmosphere.
4. _F___A comet is a meteor with a tail.
5. _T___A telescope makes objects look bigger.
6. _F___Metamorphic rock is made by sediment compacted or cemented together
7. _T___Igneous rock is made from hardened lava or magma
8. _T___Sedimentary rock is made by sediment compacted or cemented together
9. _F___A prokaryotic cell has a nucleus.
10. _T___A eukaryotic cell has a nucleus.
11. _T___Abiotic means not living

Multiple Choice:

1. What do convergent boundaries create?

a. Prairies
b. Mountains
c. Oceans
d. Canyons

2. What is **not** a way to test for the identification of a mineral?

a. Hardness using the Moh's scale of hardness
b. Streak on a streak plate
c. Smell, when it's wet
d. Luster, how shiny it is

3. The 3 domains of life are:

a. Protist, Eukaryotic, Heterotroph
b. Archaebacteria, Fungi, Eubacteria
c. Archea, Bacteria, Eukarya
d. Fungi, Plant and Animal

4. Bacteria that can withstand extreme conditions are:

a. Eubacteria
b. Archaebacteria
c. All bacteria

5. What is Newton's Universal Law of Gravitation?
   a. The greater the object's mass, the greater the pull of gravity it has
   b. Speed divided by time
   c. Velocity

6. A compound has _____ element(s).
   a. One
   b. Two or more
   c. Three or more

7. In the chemical equation below, which substance represented is classified as an element?
$Cl_2 + H_2O \rightarrow HCl + HClO$
   a. Cl_2
   b. H_2O
   c. HCl
   d. HClO

8. How is the chemical symbol for Cobalt written?
   a. C
   b. CO
   c. Co
   d. cO

9. When a plant photosynthesizes, it takes Carbon Dioxide and turns it into glucose. What happens to the Carbon Dioxide during the chemical reaction?
   a. The Carbon Dioxide just changes shape.
   b. The Carbon Dioxide remains the same.
   c. No chemical bonds in the carbon dioxide are broken
   d. A new substance forms which has different properties from Carbon Dioxide.

10. How many elements are in Glucose, $C_6H_{12}O_6$?
   a. 1
   b. 2
   c. 3
   d. 4

11. Hydrogen (H), Oxygen (O), and Neon (Ne) all share similar physical properties. Which element listed below would best complete this group?
   a. Iron (Fe)
   b. Germanium (Ge)
   c. Nitrogen (N)
   d. Gold (Au)

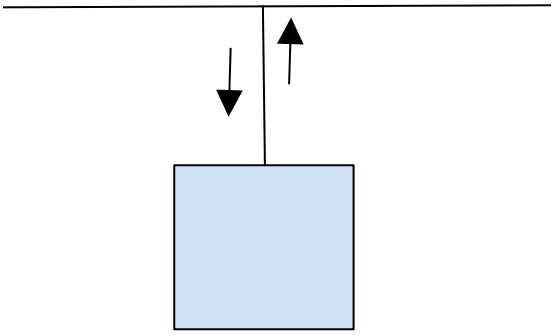
12. A rock was thrown into a pond and sank to the bottom. Which statement is true?
    a. The rock is less dense than the pond water.
    b. The rock is more dense than the pond water.
    c. The rock and pond water are equally dense.

13. Which example does not have **only** potential energy?
    a. A rock sitting at the top of a cliff
    b. A good battery not in use
    c. Manu Ginobili (Spurs player) going for the basket
    d. An arrow in a stretched bow

14. On a rollercoaster, the car has the most kinetic energy when:
    a. It's at the very top of a curve
    b. It's at the very bottom of a curve
    c. It's between the top and the bottom
    d. When it stops at the end of the ride

15. An good example of an insulator is:
    a. A t-shirt because it keeps us warm
    b. A Whataburger soda cup because it keeps the my soda cold
    c. My backpack because it keeps my popcicle from melting
    d. My tupperware container because my soup cools off in it

16. The block below **is still** and is hanging by a wire. Which of the following statements is true?



    a. The downward force of gravity is greater than the tension force pulling up on the block.
    b. The downward force of gravity is less than the tension force pulling up on the block.
    c. The downward force of gravity is equal to the tension force pulling up on the block.

17. The Law of Conservation of Energy states that:
    a. Energy cannot be created
    b. Energy cannot be destroyed
    c. Energy cannot be created or destroyed
    d. None of the above

18. The organization of an ecosystem starting with the fewest members is:
    a. Population, organism, community, ecosystem
    b. Ecosystem, community, population, organism
    c. Organism, population, community, ecosystem
    d. Ecosystem, community, organism, population

Fill in the blank:

1. __mechanical_____ energy: the sum of an object's potential and kinetic energy due to gravity or elastic deformation.
2. ___energy____ is the ability to cause change.
3. ___geothermal_____ energy is produced from within the Earth.
4. ___radiant_____energy is energy produced by the sun.
5. ___nuclear_____is energy released by a fission or fusion reaction
6. ____hydroelectrical_____ energy is electric energy produced by the flow of water.
7. _bubbling/fizzing__, _smoke__, _temperature change__, or _formation of a precipitate_ could possibly indicate a chemical change.
8. __conductivity_____ is the ability of matter to transfer heat and electricity.
9. __ductility_____ is the ability for metals to be stretched into thin wires.
10. __malleability_____ is the ability of metals to be hammered into shapes.
11. __luster_____ is the shininess of metals.
12. The greater the mass a celestial body has, the greater its _gravitational___force is on other bodies.
13. The major difference between a space probe and the space shuttle, is that a probe doesn't carry _people___.

Short Answer:

Select either metal, nonmetal or metalloid:

1. Shiny_metal__
2. Semi-conductor_metalloid__
3. Brittle_nonmetal__
4. Not a good conductor__nonmetal__
5. Found along stair step line of periodic table __metalloid___
6. Malleable __metal___
7. Good conductor__metal____

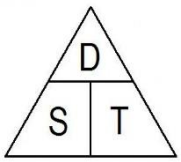
8. Calculate the density of an object that has a mass of 12g and a volume of 6 cm^3.
Density=mass ÷ volume 12 g ÷ 6 cm^3 Answer is 2 g/cm^3

9. In Moh's scale of hardness (1-10), what number means the softest? __1___
What number means the hardest?_10___

10. Why is the streak taken of a mineral when you can see what the mineral's color is just by looking at it?
Streak is the "true" color of the mineral.

11. What is needed, besides water, to have a functioning hydropower plant?
High potential energy of the water (example-the water is running down a mountain). You also must have a turbine that spins.

12. Draw the speed triangle that shows the formula for speed with distance and time.



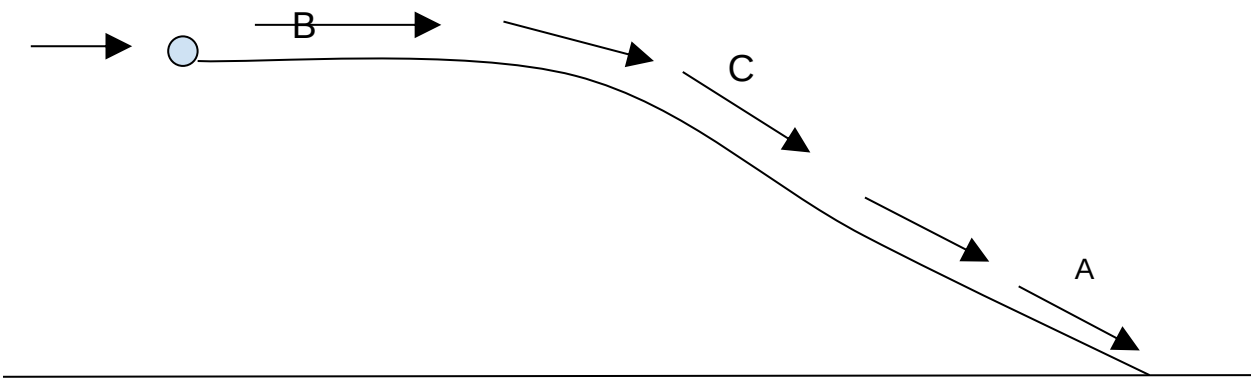
13. Calculate the speed of a car that went 1000 meters in 60 seconds.
Speed = Distance ÷ Time 1000 meters ÷ 60 s = 16.6 m/s

14. What are the common advantages of wind, hydropower, geothermal, and solar energy?
All of these energy resources are renewable and do not pollute our atmosphere.

15. What are the common disadvantages of coal and oil?

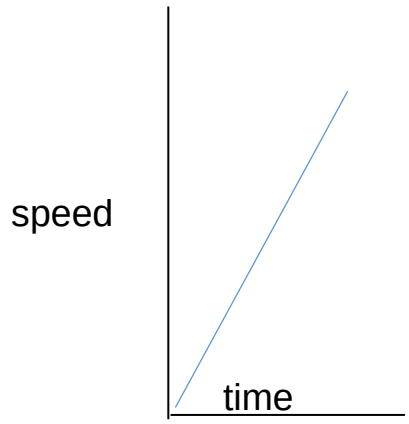
Coal and oil are nonrenewable and they pollute our atmosphere.

16. Make a sketch of the picture below **on your paper**. Then label the path of the ball with:
    a. Most kinetic energy
    b. Most potential energy
    c. Equal kinetic and potential energy

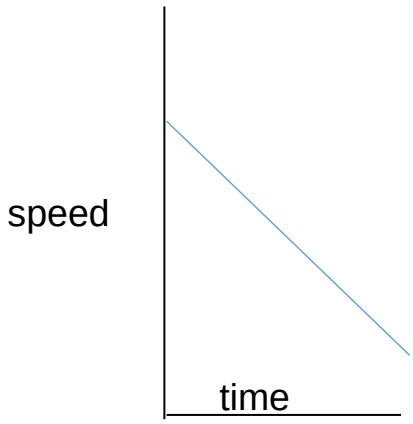


17. Make a sketch of the graphs below on your **<u>own paper</u>**, then draw a line on the acceleration graphs that shows that an object is:

Increasing in speed:



Decreasing in speed:



18. Draw an illustration showing convection in a pot of boiling water on a fire on your **own paper**.