

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Science Final Review

1. Understand what the Scientific Method is about and how to use it to understand different scientific questions. **DON'T FORGET!!!**
2. List 3 conditions when you would be required to wear safety goggles during an 8th Grade Science experiment (we do not dissect in 8th Grade).
  - a. **Glass**
  - b. **Chemicals**
  - c. **Fire/Heat**
3. List the purpose of each type of equipment and what it measures.
  - a. **Graduated Cylinder: measure the volume of a liquid**
  - b. **Celsius Thermometer: measure the temperature**
  - c. **Meter Stick: measure the distance/length**
  - d. **Triple Beam Balance: measure the mass**
4. Write the definition and the metric unit for each of the following:
  - a. Volume: **the amount of space something takes up- mL, cm<sup>3</sup>**
  - b. Mass: **the amount of matter in an object-grams**
  - c. Temperature: **the presence or absence of heat-Degrees Celsius**
  - d. Density: **the ratio of mass to volume-g/mL or g/cm<sup>3</sup>**
  - e. Force: **the push or pull on an object-Newtons**
  - f. Work: **the ability to move an object using force-Joules**
5. What is the difference between potential and kinetic energy?  
**Potential Energy: energy that is stored**  
  
**Kinetic Energy: energy that is in motion**
6. What is the difference between a balanced force and an unbalanced force?  
**Balanced Force: when all forces acting on an object are equal in size.**  
  
**Unbalanced Force: when all forces acting on an object are unequal in size.**
7. Balanced forces cause objects to...
  - a. **stay at rest**
  - b. **stay at rest, but change shape**
  - c. **constant speed (in same direction)**
8. Unbalanced forces cause objects to...
  - a. **start**
  - b. **stop**
  - c. **slow down**
  - d. **speed up**
  - e. **change direction**
  - f. **change shape**

9. What is the formula for work? **Work = Force x Distance**

10. Define speed, velocity, and acceleration then write an example for each.

a. **Speed: how fast an object is moving (distance and time)**

b. **Velocity: how fast an object is moving in a specific direction (speed and direction)**

c. **Acceleration: when the speed or direction of an object changes**

11. What is the formula for speed? **Speed = Distance / Time**

12. KNOW HOW TO READ A DISTANCE-TIME GRAPH AND A SPEED-TIME GRAPH **Practice!!!**

13. What is Newton's 1<sup>st</sup> Law?

**An object at rest stays at rest, an object in motion stays in motion, unless acted upon by an unbalanced force.**

14. What is Newton's 2<sup>nd</sup> Law?

**Force = mass x acceleration**

15. What is Newton's 3<sup>rd</sup> Law?

**For every action, there is an equal and opposite reaction.**

16. Define density and write the formula for density.

**Density is the measure of space of a particular mass of a substance  $D=m/v$**

17. Define weathering, erosion, and deposition.

a. Weathering: **breaking down of rocks**

b. Erosion: **moving of rocks**

c. Deposition: **settling/build up of rocks**

18. What is the continental drift theory and who proposed this theory?

**The theory that states that parts of the Earth's crust drift atop a liquid core-Alfred Wegener**

19. List 3 types of evidence to help support the continental drift theory?

**1) continents fit like puzzle pieces**

**2) same fossils were found where pieces fit together**

**3) similar landforms found on each continent**

20. What do the following stand for?

a.  $A=P=E$  **Atomic Mass =Protons =Electrons**

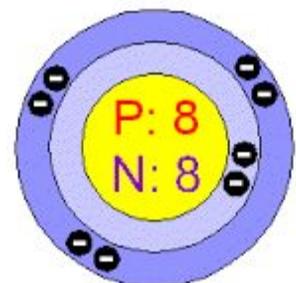
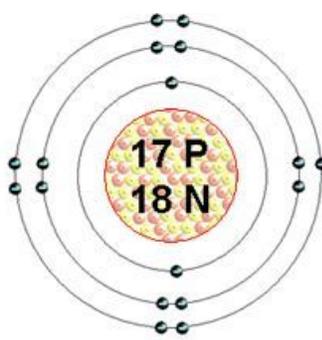
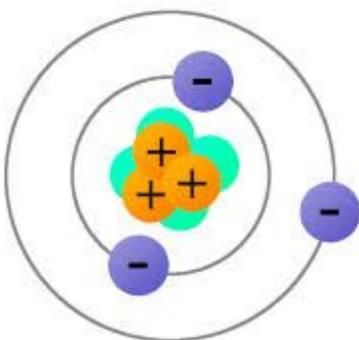
b.  $M-A=N$  **Mass # - Atomic # = Neutrons**

21. Identify the following elements:

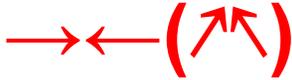
    Lithium    

    Chlorine    

    Oxygen    



22. Fill in the table about the types of plate boundaries.

| Type of Boundary                       | Sketch of Boundary  | Direction of Movement                   | Types of Features  |
|--|---|---|--|
| Divergent Plate Boundary               |  | Away from each other                    | -sea floor spreading<br>-rift valleys<br>-mid ocean ridges<br>-volcanoes |
| Transform Plate Boundary               |  | Slides past each other                  | -earthquakes<br>-fault lines   |
| Convergent Plate Boundary (Collision)  |  | Comes together and rises up             | -mountains<br>-volcanoes   |
| Convergent Plate Boundary (Subduction) |  | Comes together and one plate goes under | -subduction<br>-trenches   |

23. A topographical map shows-

- Earth's layers
- the mineral content of the rocks
- the shape of the Earth's surface**
- Earth's climate

24. Fill in the following chart:

|           | Charge                  | Location       | AMU             | Function/Role                 |
|-----------|-------------------------|----------------|-----------------|-------------------------------|
| Protons   | Positive +              | nucleus        | 1 AMU           | Identify element              |
| Electrons | Negative -              | Electron cloud | Less than 1 AMU | Determine chemical properties |
| Neutrons  | Neutral (no charge) +/- | nucleus        | 1 AMU           | Give atom mass                |