

A. Phases or States of Matter: Solid-Liquid-Gas and Plasma

Crystal ↓(Solid)

Solid ↓

Liquid ↓

Gas ↓

Plasma ↓

1. Draw a picture model.

Extra..

2. Describe the shape of each.

3. Compare the amount of energy.

4. Compare the temperature, compared to others of the same substance.

5. The processes to change from one to the next:

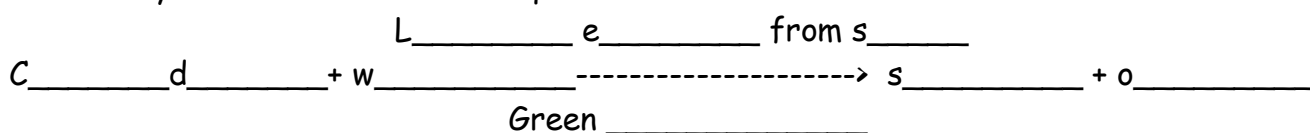
A solid _____ to form a liquid, which may _____ slowly or _____ quickly to change to a gas, which _____ to form a liquid, which _____ to form a solid.

B. Oxygen-Carbon Dioxide Cycle

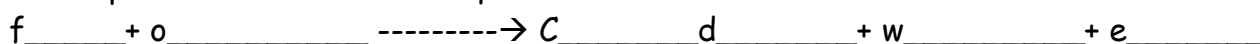
6. Photosynthesis, the storing of l_____ e_____ in the form of f_____ or s_____ is done ONLY by g_____ p_____.

7. Respiration, the using of f_____ and o_____ to release energy for living & growth is done by almost all living cells , including p_____ and a_____.

8. Photosynthesis: the chemical equation



9. Respiration: the chemical equation:



C. Physical Change↓ and Chemical Change↓

Characteristics:

- | | |
|-----------------------------|-------------------------------------|
| 10. _____ substance | _____ substance |
| 11. Usually _____ color | Often _____ color |
| 12. _____ reversed | _____ reversed |
| 13. _____ chemical equation | _____ chemical equation |
| 14. May be different _____ | May give off light and/or e_____ |
| 15. _____ | Energy/heat absorbed or given _____ |

Examples:

- | | |
|---|---------------------------------------|
| 16. Change from liquid to s_____ | Burning wood to a_____ and gases. |
| 17. Breaking up into smaller p_____ | Iodine& starch color change to b_____ |
| 18. CO ₂ released from _____ | CO ₂ released from _____ |
| 19. Dissolving _____ in _____ | Iron + oxygen changes to _____ |
| 20. _____ | _____ |

D. Density

- Density is the mass per v_____ of a substance.
- The formula for finding density is written $D = \frac{\text{mass}}{\text{volume}}$, which means:
Density = _____ (in grams) DIVIDED by _____ (in milliliters or cm³)
- The density of water is used to compare and is _____.
- Anything with a density of more than one will _____ in water.
- Anything with a density of less than one will _____ if put in water.
- Write the best estimate for the following, using these values:
0.7, 1.3, 3.0 1.0 0.1 7.0

Wood	_____
Aluminum	_____
Styrofoam	_____
Iron	_____
Water	_____
Salt Water	_____

E. CHARGES

- Substances get a n_____ charge when they have extra e_____ and a positive charge when they have more p_____ than e_____.
- Like charges _____ and unlike charges _____.
- The e_____, not the p_____ or n_____ move around and are also the basis for the energy of batteries and el_____.