Part C: Lesson 1.4 - Read pages 20-29 to answer these questions.

1. A physical change alters the form or appearance a change in __FORM__ or __APPEARANCE__.

Add to notes - Change in size, shape, or state

2. A change in matter that produces one or more new substances is a __CHEMICAL__ change.

3. The law of conservation of mass states that matter is not created or destroyed during a chemical reaction. The atoms involved in the reaction are not __LOST__ or __GAINED__, only __REARRANGED__.

4. Every __CHANGE__ in matter includes a change in __ENERGY__, which is conserved in a chemical reaction and __TRANSFORMED__ from one form to another.

5. **TEMPERATURE** is a measure of how hot or cold something is, while **THERMAL** energy is the total energy of the motion of the particles in an object.

6. What is the difference between endothermic and exothermic reactions? Give examples for each.

Energy is absorbed during endothermic, such as when ice melts.
Energy is released during exothermic, such as when wood burns.

7. What is chemical energy?

It is the energy stored in chemical bonds.

Add to notes -
Eating food – Food → Chemical energy
Burning fuels – Chemical energy → Thermal energy

Physical/Chemical Changes

Part A: Watch the Study Jams: Changes in Matter to answer these questions.

1. A physical change is a change when the ___SIZE___, ___SHAPE___, or ___STATE___ of matter changes.

2. Physical changes can be caused by ___MOTION___, pressure, and ___TEMPERATURE___, but it doesn't change the molecules that make up the substance.

3. In a ___CHEMICAL___ change, the molecules of matter are changed and usually cannot be reversed. Clues that a it has occurred are a ___GAS___ forms, light or ___HEAT___ appears, or the ___COLOR___ changes.

Part B: Click "Test Yourself" to take the quiz and answer these questions.

Part D: Lesson 2.1 - Read pages 40-55 to answer these questions.

1. A ___SOLID___ has a definite shape and volume. They can be classified as __CRYSTALLINE__ (made up of crystals) or ___AMORPHOUS___ (particles are not in a regular pattern.)

2. A ___LIQUID___ has a definite volume, but not a definite shape. Liquids with ___HIGH___ viscosity flow slowly, while those with ___LOW___ flow quickly.

3. A gas has neither definite ___SHAPE___ nor definite ___VOLUME___ as its particles fill all the ___SPACE___ available.

4. Write a description of each type of phase change and include specific examples.

Melting - **Solid (ice) → Liquid (water)** ↑ or ↓

Freezing - **Liquid (water) → Solid (ice)** ↑ or ↓

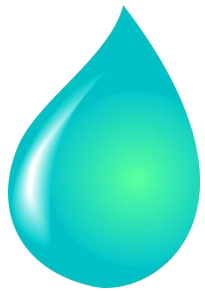
Vaporization - **Liquid (water) → Gas (steam or water vapor)** ↑ or ↓

Sublimation - **Solid (ice) ←→ Gas (steam or water vapor)** ↑ or ↓

Condensation - **Gas (steam or water vapor) → Liquid (water)** ↑ or ↓

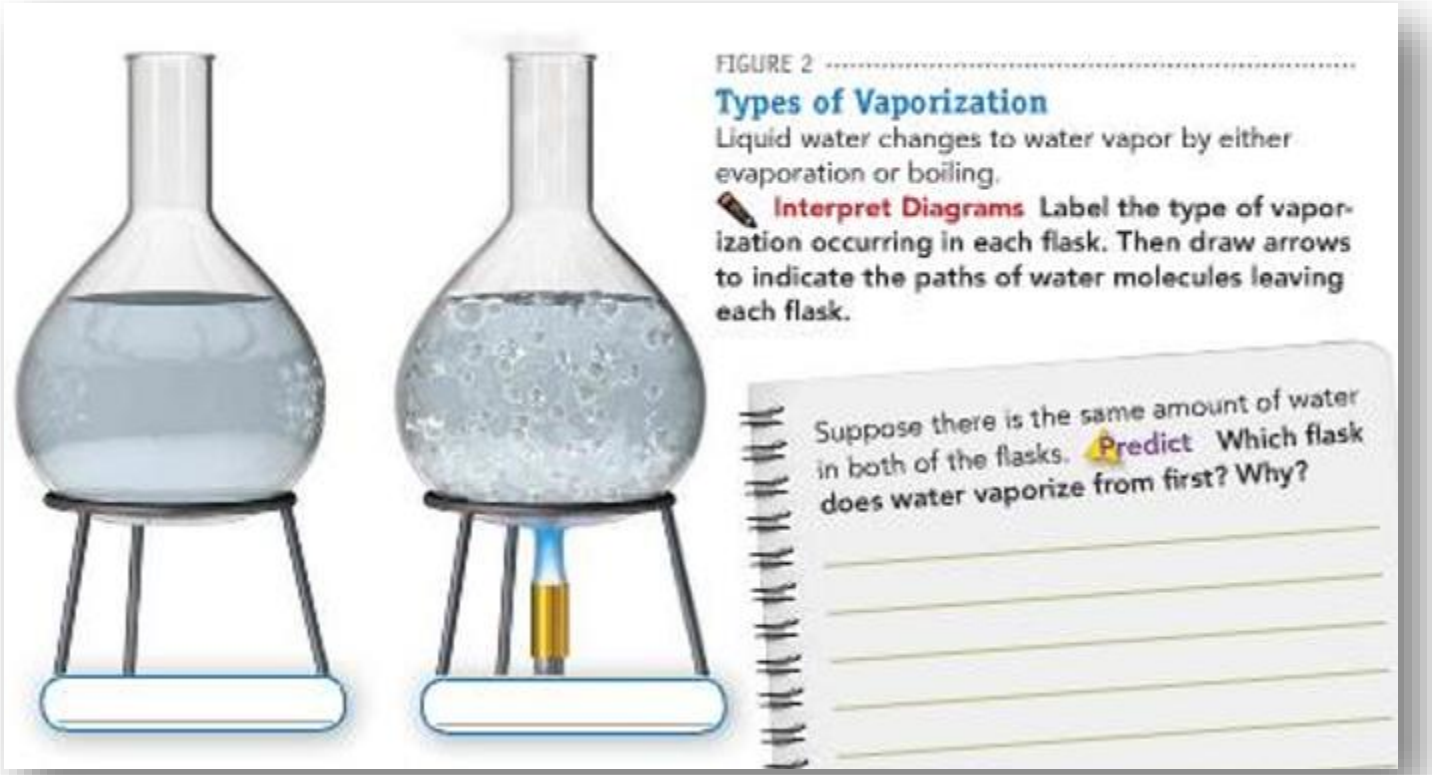
ADD TO NOTES → Identify using ↑ or ↓ to show if the phase changes involves a gain or loss of thermal energy.

Write down three things you learned about water as you watch the video on the page under your notes →



5. What is the difference between evaporation and boiling?

Vaporization at the surface of a liquid is evaporation, while boiling is when it occurs at all levels in a liquid.



Glue the Part E note worksheet on page ____ and complete for class tomorrow.