

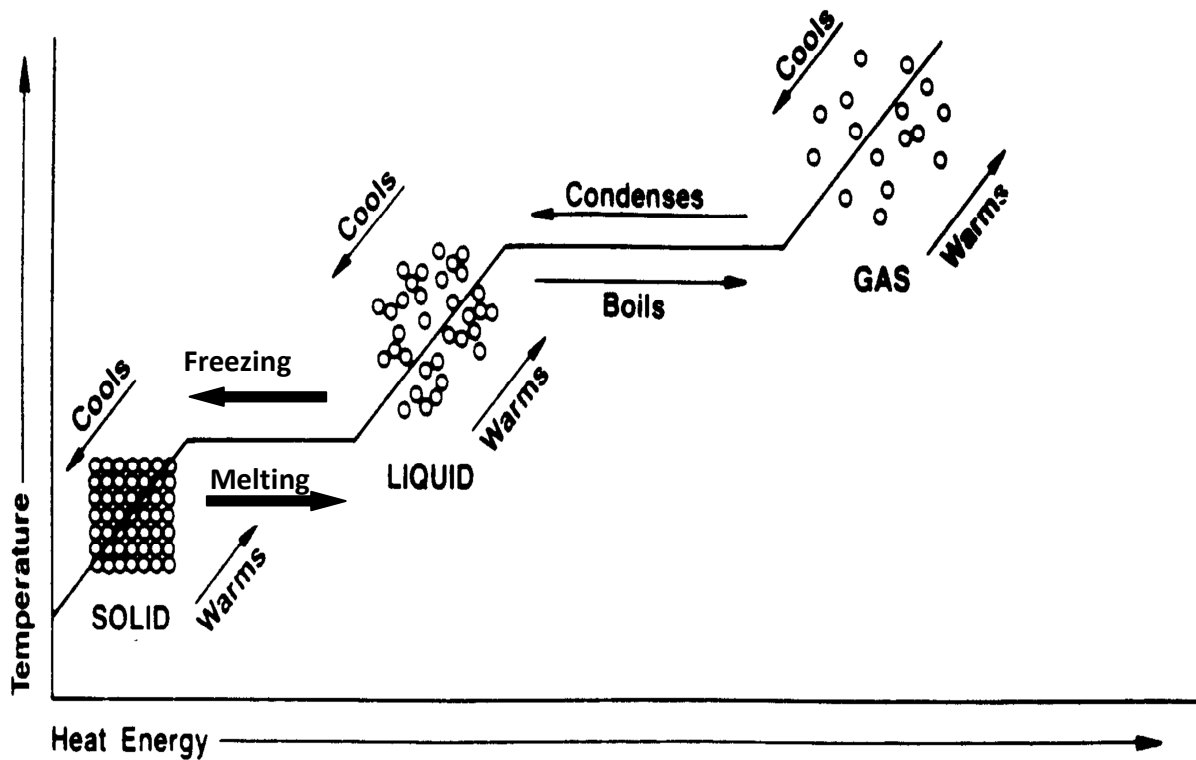
Phases of Matter

What is a Physical Property? _____

List 5 Physical Properties. _____

Phase	Arrangement of Particles	Movement of Particles	Definite Shape?	Definite Volume?	Compressible?

Phase Changes



- Does temperature increase during melting? _____
- Is energy required for each phase change? _____
- Can both liquid water and water vapor/steam exist? _____
- What must be changed, temperature or thermal/heat energy? _____
- How do you describe the change in the arrangement of particles as thermal energy and temperature increase? _____
- What rule could you say about the relationship between phase changes and temperature? between phase changes and thermal/heat energy? _____

Key Concept: Energy is responsible for the different phases of matter. To change the phase of a substance energy can be added or transferred away.

***Compare & Contrast the terms in each pair. One similarity for both and 1 difference for each term**

1. Melting Point vs. Freezing Point

2. Evaporation vs. Vaporization

3. Evaporation vs. Boiling

4. Vaporization vs. Sublimation

5. Melting Point vs. Boiling Point

6. Freezing vs. Condensation

Review Questions: (Classify #13-#18 as a Physical or Chemical Change)

7. Do molecules move fastest in a solid, liquid, gas? _____
8. Do molecules move slowest in a solid, liquid, gas? _____
9. In which phase do molecules have the most energy? _____
10. In which phase do molecules have the least energy? _____
11. What phase is produced if energy is added to a liquid? _____
12. What phase is produced if energy is added to a solid? _____
13. A match burns _____
14. An ice cube melts _____
15. Food coloring is added to a cake to make it red _____
16. A silver fork tarnishes when exposed to air for several weeks _____
17. Leaves of trees turn bright red in Fall _____
18. Copper wire is cut into 5 pieces _____

Example	Physical Change that could happen	Chemical Change that could happen
Raw egg		
Pencil		
Green Plant		
Bicycle Frame		