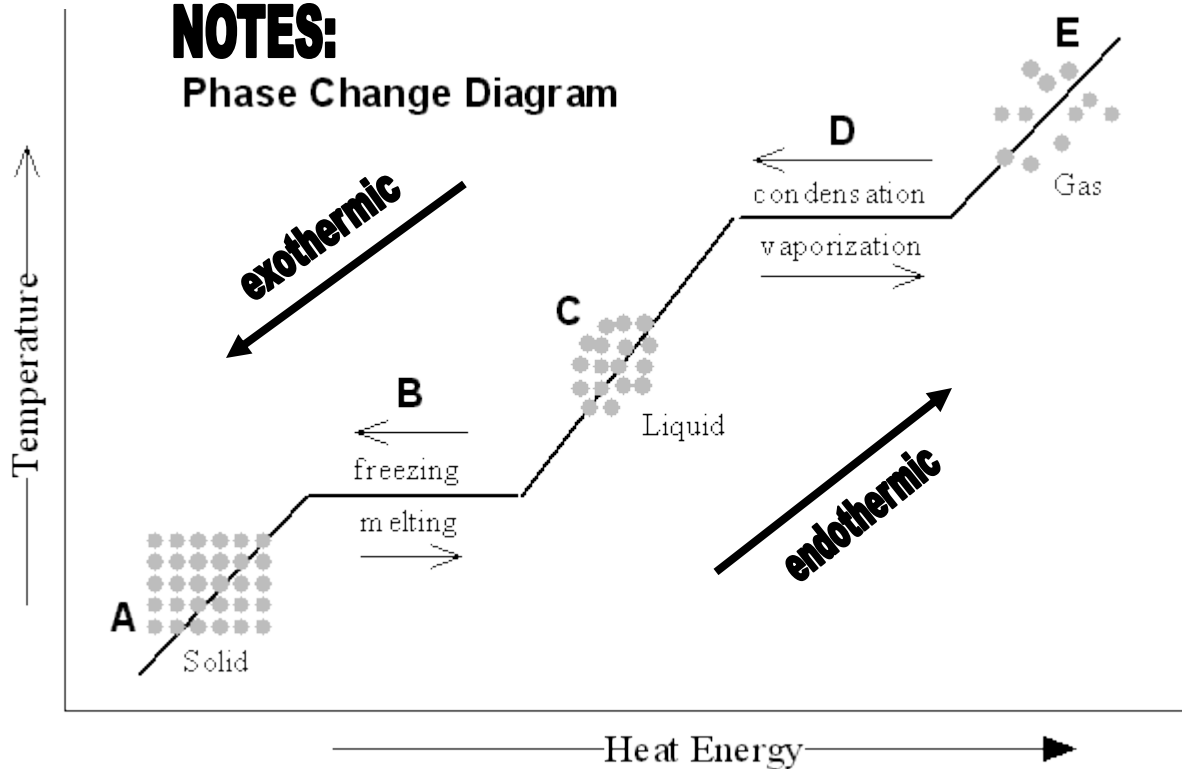


NOTES: Phase Change Diagram



Heat plays an important role in phase changes. Heat is energy that causes particles of matter to move faster and farther apart. As particles move faster, they leave one phase and enter another. Phase changes produce changes in only the physical properties of matter. They do not produce changes in the chemical properties. A substance is still the same kind of matter regardless of its phase.

The accompany diagram is called a phase-change diagram. It shows the heat energy-temperature relationship as an ice cube becomes steam. Study the diagram and then answer the following questions.

1. At which points (A, B . .) does the addition of heat energy cause an increase in temperature? **A, C, E**
2. At which points is there no temperature change despite the addition of heat energy?
B, D

What is happening at these points? **PHASE CHANGES**

3. Does the temperature increase during melting? **NO**
4. Is energy required for each phase change? **YES**
5. Can both water and steam exist at 100` C? **YES; a phase change is occurring there**
6. What must be changed, temperature or heat energy, during condensation?
HEAT ENERGY; temperature remains the same