




Honors Chemistry

Tuesday August 18th 2015

Agenda

- * Warm Up: 3 States of Matter
- * Continue Topic 1.1: Introduction to the Particulate Nature of Matter & Chemical Change
- * Exit Ticket: 3-2-1

Warm Up



You have
5 minutes
ONLY!
GO!

- * On the half sheet of paper, list **three (3) characteristics** for each state of matter.
- * You may **not** to use your notes or work with a partner!!!!!!

HOMEWORK

- * Topic 1.1 Introduction to Particulate Nature of Matter & Chemical Change vocabulary
- * DUE September 4th 2015
- * **No Exceptions!**

Introduction to the Particulate Nature of Matter and Chemical Change

Temperature

- **SI (Système International) unit for temperature is kelvin (K).**
- **Absolute zero is zero on the Kelvin scale, 0K (which is -273°C)**
- **All movement of particles in matter stop moving at 0K**

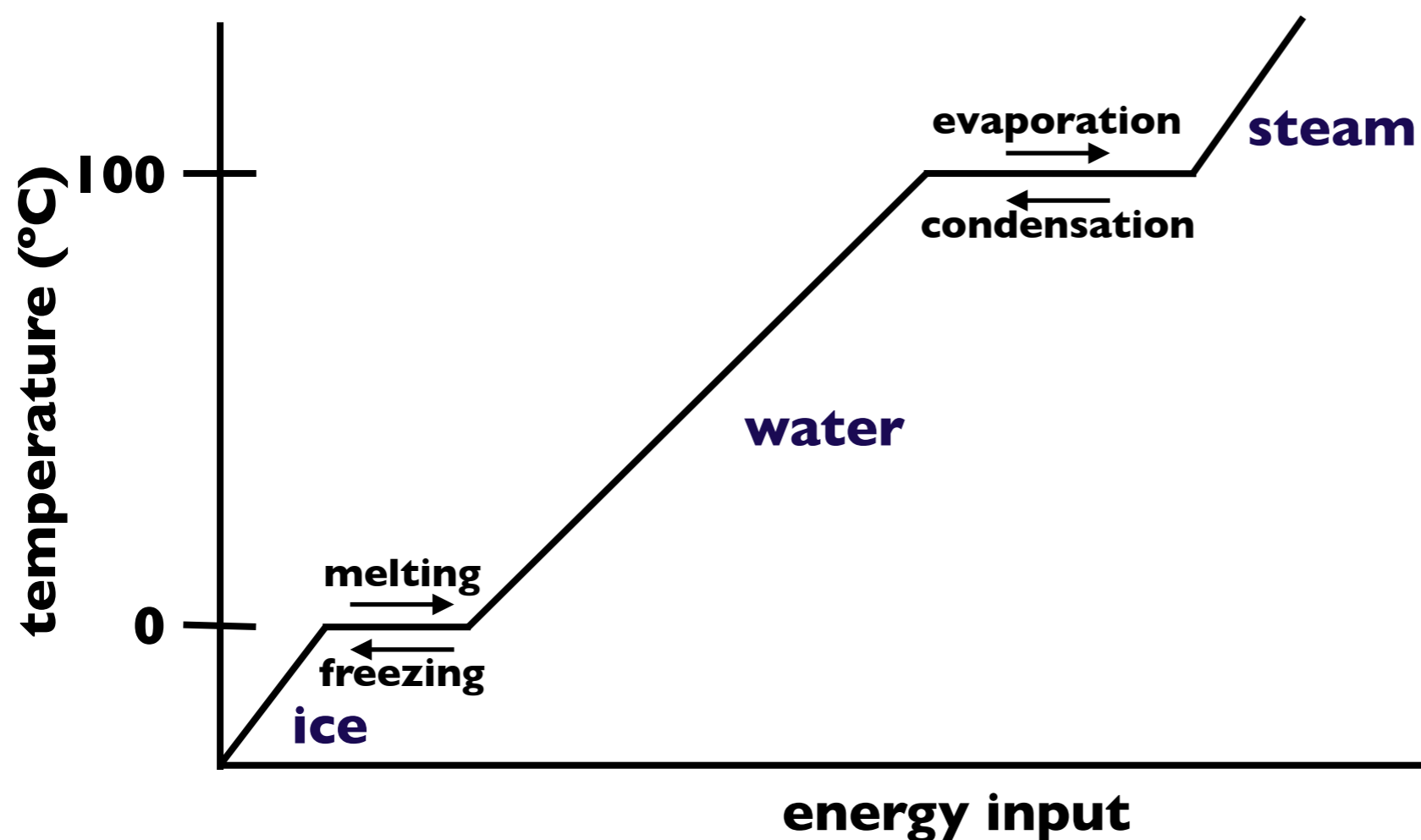


$$**Temperature (K) = Temperature (C) + 273.15**$$

Introduction to the Particulate Nature of Matter and Chemical Change

Changes of State

- Increase in kinetic energy leads to a change of state in matter (solid - liquid - gas)



The heating curve for water

Introduction to the Particulate Nature of Matter and Chemical Change

Changes of State Key Terms

- **Melt:** solid - liquid equilibrium is set up
- **Boil:** liquid - gas equilibrium is set up
- **Endothermic:** Energy is transferred from the surroundings to the system
- **Condensation:** gas to liquid
- **Freezing:** liquid to solid
- **Exothermic:** Energy is transferred from the system to the surroundings
- **Vaporization:** liquid to gas (boiling)
- **Evaporation:** liquid to gas (below boiling point)
- **Sublimation:** solid to gas (skips liquid phase)
- **Deposition:** gas to solid (skips liquid phase)

Introduction to the Particulate Nature of Matter and Chemical Change

	Solids	Liquids	Gases
Distance between particles	close together	close but further apart than solids	particles far apart
Arrangement	regular	random	random
Shape	fixed shape	no fixed shape – take up the shape of the container	no fixed shape – fill the container
Volume	fixed	fixed	not fixed
Movement	vibrate	move around each other	move around in all directions
Speed of Movement	slowest	faster	fastest
Energy	lowest	higher	highest
Forces of attraction	strongest	weaker	weakest

Topic 1.1.2

Chemical Change

- Understand that compounds have different properties to the elements they are made from
- Understand how to balance chemical equations
- Understand how to use state symbols and chemical equations
- Describe the differences between elements, compounds and mixtures
- Understand the differences between homogenous and heterogenous mixtures

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