

## Unit 3 –Energy & States of Matter - Part 2 Objectives

1. Relate observations regarding the addition of energy by warming to increased particle motion	BW Thursday, Oct 31, 2013 Notes, Oct 21 - 24, 2013: p2 & p 4
2. Describe the characteristics of solids, liquids and gases in terms of particles and their: <ul style="list-style-type: none"><li>• Arrangement: use particle diagrams to account for motion and density differences; describe the process of how the arrangement of matter particles changes during phase changes.</li><li>• Attractions: infer the necessity of an attractive force between particles at close range from observations of differences in cohesiveness of the three phases;</li></ul>	Bell Work, Oct 21 - 24, Monday- Tuesday  Oct 14 -17 Bell Work  Notes Oct 21 – 24: p3, p12 – 15  Unit 3 Work Sheet page 2
3. Define energy; describe the ways in which it is stored in a system.	Bell Work and Notes, Nov 24 - Nov 25, p6, p11-15  Notes Oct 21 – Oct 24, p.11
4. Describe three ways in which energy is transferred between system and surroundings	Notes, Week of October 28, 2013, p 3

<p>6. Given a heating/cooling curve for a substance, identify what phase(s) is/are present in the various portions of the curve, and what the melting and freezing temperatures for the substance are.</p>	<p>Bell Work and Notes, Nov 4-5 Worksheet, Unit 3</p>
<p>7. Given a heating/cooling curve for a substance, identify which energy storage mode is changing for the various portions of the curve.</p>	<p>Bell Work and Notes, Nov 4-5 Worksheet, Unit 3</p>
<p>8. Given a situation in which a substance at a given temperature undergoes a change (in temperature, phase or both), sketch a heating/cooling curve that represents the situation.</p>	<p>Bell Work and Notes, Nov 4-5 Worksheet, Unit 3</p>
<p>9. State the physical meaning of the heat of fusion (<math>H_f</math>) and heat of vaporization (<math>H_v</math>) for a given substance.</p>	<p>Heat of Fusion is the heat needed to turn a solid into a liquid during the phase change (or the heat removed from a liquid to :fuse” the particles into a solid from a liquid</p> <p>Heat of vaporization is the heat needed to turn a liquid into a gas at the phase</p>