

Study Guide for Heat and Energy Unit

Textbook Resources: Unit B Chapters 1 and 2 Pages 9 - 55 B

Test Dates: **A day- December 17th**
B day -December 18th

Be able to define, describe, explain, and apply the following terms and concepts:

Energy
 Mechanical Energy
 Thermal Energy
 Heat
 Conduction
 Insulator
 Thermal expansion

Kinetic Energy
 Sound Energy
 Electromagnetic Energy
 Kinetic Theory of Matter
 Convection
 Conductor

Potential Energy
 Chemical Energy
 Nuclear Energy
 Temperature
 Radiation
 Specific Heat

Review Questions:

1. How are potential and kinetic energy related? (How are they different?)
2. Identify and describe the different forms of energy (mechanical, chemical..etc)
3. Describe how particles move in all three states of matter
 (Remember modeling how they move in our class.)
4. How are kinetic energy and temperature related?
5. What is heat? In which direction does it flow?
6. How can we measure heat using temperature?
7. How is conduction and convection similar? How are they different?
8. How does specific heat relate to a substances ability to be a good conductor or a good insulator?
9. What factors influence kinetic energy?
10. What factors influence potential energy?
11. How do conduction, convection, and radiation all transfer energy?
12. What are some examples of good conductors and good insulators, why are they either good conductors or good insulators?.
13. What is Thermal Expansion? Provide a few examples.

<p>6.P.3.1 How is energy transferred? What is conservation of energy? How can heat be transferred? How does heat travel by conduction, convection, and radiation?</p>	<p>6.P.3.2 What is the electromagnetic spectrum? How are forms of electromagnetic radiation the same? How are they different?</p>	<p>6.P.3.3 How is thermal energy transferred? Why do materials expand and contract? What materials are good conductors? What materials are good insulators? How does the rate of expansion and contraction of a material affect its suitability for use in technological design?</p>
---	---	---