

## Study Guide for Exam 3 – Energy and Heat

### Required Materials:

- Scantron (#882)
- #2 pencil
- Scientific calculator

**Optional Materials:** Any handwritten note sheets.

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### Vocabulary

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Kinetic energy	Heat	Specific heat
Potential energy	Internal energy	Absolute zero
Power	Conduction	Condensation
Work	Convection	Evaporation
Temperature	Radiation	

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### Calculations

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1. Kinetic energy
2. Potential energy
3. Work
4. Power
5. Heat & Specific Heat
6. Conservation of energy: kinetic energy  $\leftrightarrow$  potential energy

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### Important Concepts

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7. Phases of matter: solids, liquids, gasses
8. Units for Energy and Power: Joules, Calories, Watts
9. Energy conservation
10. Celsius scale versus Fahrenheit scale
11. Work-Energy Theorem
12. Temperature versus internal energy
13. Thermal Equilibrium
14. Heat Transfer – Conduction, convection, radiation

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### Be prepared to answer questions on the following experiments

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15. Supplemental Activity: Conservation of Energy
16. Supplemental Activity: Mixing Warm and Cold Water
17. Experiment 18: Specific Heat