Energy Test Outline (Science 10)

LEARNING MAP CRITERIA:

Relevance	Extending	Proficient	Developing	Emerging
Types of Energy, Energy Transfers and Transform-ations ☑	Evaluate scenarios using the law of conservation of energy as it applies to each case. (E.g. Where does the 'lost' energy go? Recognizing that no processes are 100% efficient. Proposing solutions to minimize energy loss in various scenarios.)	~~Define and distinguish between types of systems: isolated, closed, open.~~ Identify the types of energy involved in energy transfers and energy transformations.	Identify the type of energy given in an example. Define energy transfer and give an example. Define energy transformation and give an example. State the law of conservation of energy.	Give examples of energy from previous science courses and everyday life (e.g. light, heat, electrical current).
Calculations with Kinetic Energy and Potential Energy ☑	Complete kinetic energy and potential energy calculations with a high degree of accuracy, including those with: unit conversions, multiple steps, different forms of the equations, extraneous information, and utilization of the law of conservation of energy.	Perform single-step unit conversions (e.g. pounds to kg, km to miles) Utilize all forms of the kinetic energy and potential energy equations.	Perform single-step metric unit conversions (e.g. km to m, ms to s, cm to mm) Determine the mechanical kinetic energy of an object when given mass and speed. Determine the gravitational potential energy of an object when given mass, gravity, and height.	

VOCABULARY:

(Disclaimer: This is not meant to be an exhaustive list. Vocabulary words may appear on the test that are not in this list.)

- Energy
- ~~System~~
- ~~Surroundings~~
- ~~Universe~~
- ~~Open system~~
- ~~Isolated system~~
- ~~Closed system~~
- Kinetic energy
- Potential energy
- Mechanical kinetic energy
- Radiant energy
- Thermal energy
- Sound energy
- Electrical kinetic energy
- Elastic potential energy
- Chemical potential energy
- Gravitational potential energy
- Nuclear energy
- Electrical potential energy
- Magnetic potential energy
- Law of conservation of energy
- Energy transformation
- Energy transfer
- Velocity or speed
- Mass
- Joules
- Gravity

PRIMARY STUDY MATERIAL:

- 3.1 Powerpoint
- In-class notes
- 3.1 Textbook section
- 3.1 Workbook pages and exercises
- Practise quizzes
- Extra worksheets: unit conversion, kinetic and potential energy