

GREEN TEAM SCIENCE: Mrs. Ferdinand
Energy Unit Assessment Study Guide
Test Date: Wednesday, January 10, 2018

Vocabulary

You should know the definitions and applications of the following vocabulary words.
(Use your *Energy Quiz 1* as a study resource).

1. Potential Energy
2. Gravitational Potential Energy
3. Kinetic Energy
4. Chemical Energy
5. Thermal Energy
6. Light Energy
7. Nuclear Energy
8. Electrical Energy
9. Elastic Energy
10. Energy Transformation
11. Energy Transfer
12. The Law of Conservation of Energy
13. Energy Efficiency
14. Insulator
15. Conductor

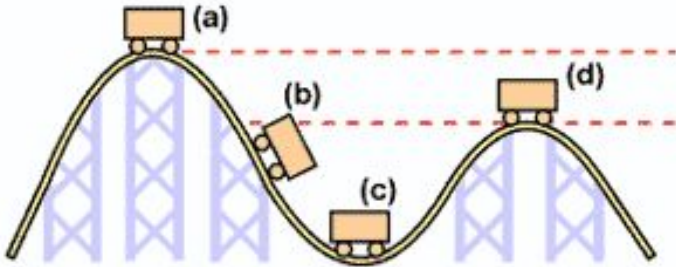
Activity 53: Home Energy Use

Review your answers to the Analysis Questions for this activity

- Look at the table of home features of A and B (page D6)
- If given a choice between 2 or more homes or home features, you must be able to determine which is the most energy efficient choice
- Using the table, cite evidence from the table to support your choice
- Be able to cite one tradeoff in your response

Activity 55: Roller Coaster Energy

- Be able to answer questions based on a diagram such as the one below. Use your Energy Quiz 1 to as a study resource.



1. At which point does the roller coaster train have the most kinetic energy? _____
 2. At which point does the roller coaster train exhibit the most gravitational potential energy? _____
 3. At which point did the energy transformation from gravitational energy to kinetic energy happen?

- You must be able to select an example of kinetic energy.
 - (Similar to # 3 on your Energy Quiz - Multiple Choice)

Activity 56: Shake the Shot

- How are temperature and heat different?
- How are temperature and heat related?

Activity 57: The Conservation of Energy

- You should be able to apply the *Law of Conservation of Energy* to an energy flow diagram. For example:
 - Apply the *Law of Conservation of Energy* to the following energy flow (transformation) diagram happening within a solar powered calculator:



- You should be able to draw an energy flow diagram (like the one above) which shows the type of energy before and after a transformation.

Activity 58: Follow The Energy

- Refer to the *Follow The Energy* table which you completed (and we discussed in class) showing the energy before and after the transformations on the 16 different event cards.

- You should be able to “*follow the energy*” for a given scenario.

Activity 59 and 60: Ice Melting Contest & Ice-Preserving Contest

- Know the difference between conduction and insulation
- Know the difference between a conductor and an insulator.
- What is the purpose of insulation?