

# Energy Study Guide

1. What is energy?
2. Potential Energy is the energy of \_\_\_\_\_ or \_\_\_\_\_ (stored energy).
3. Kinetic Energy is the energy of \_\_\_\_\_.
4. Mechanical Energy is the \_\_\_\_\_ of \_\_\_\_\_ and \_\_\_\_\_ of an object.
5. What is the mathematical formula for Mechanical Energy? \_\_\_\_\_ energy + \_\_\_\_\_ energy.

## Forms of Potential Energy:

6. Energy stored in stretched out items is called \_\_\_\_\_ potential energy.
7. Stored energy given to an object after it has been lifted or elevated is called \_\_\_\_\_ potential energy.
8. Stored energy released from chemical compounds is called \_\_\_\_\_ potential energy.

## Forms of Kinetic Energy:

9. The total energy of an object due to the kinetic energy of its atoms & molecules (heat energy) is called \_\_\_\_\_ energy.
10. Energy made available by the flow of an electric charge through a conductor is called \_\_\_\_\_ energy.
11. Energy caused by electromagnetic radiation is called \_\_\_\_\_ energy.
12. \_\_\_\_\_ energy is energy associated with the vibration or disturbance of matter.
13. The energy associated with the changes in the nucleus of an atom through fission or fusion is called \_\_\_\_\_ energy.
14. Give an example of each type of energy. Write the example beside the name of the energy.
  - a. Elastic
  - b. Light
  - c. Nuclear
  - d. Gravitational
  - e. Sound
  - f. Electrical
  - g. Mechanical
  - h. Chemical
  - i. Thermal

15. A change from one form of energy into another is called an \_\_\_\_\_.

16. Name the different forms or types of energy you would have jumping on a trampoline.

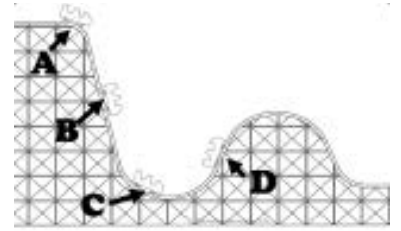
17. What is the formula for Kinetic Energy?

18. How does mass effect energy?

19. How does speed effect energy?

20. At what point does a roller coaster have the greatest potential energy? Explain.

21. At what point does a roller coaster have the greatest kinetic energy? Explain.



22. What is happening at Point B on the roller coaster?

23. What is the energy conversion for each of the following items:

- a. Alarm clock?
- b. Battery?
- c. Light bulb?
- d. Blender?
- e. Photosynthesis?

24. What is the Law of Conservation of Energy? Explain the law.

25. You have 20 joules of chemical energy in a log. Once you put the log on the fire, the energy is converted. How much light energy is converted if you have 10 joules of thermal energy and 2 joules of sound energy? Explain

26. Define Renewable Energy Resource.

27. Give 5 examples of renewable energy.

28. Define Nonrenewable Energy Resource.

29. Give 5 examples of nonrenewable energy.

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