

1. Why does the falling apple have the ability to do work?
2. What is kinetic energy?
3. Read the "Vocabulary Skills Tip" on page 300. What is the origin of the word "kinetic"? What is the meaning of this word?
4. Kinetic energy depends on _____ and _____
5. Write the formula for kinetic energy in words and in abbreviations (symbols):
6. In these formulas, what does each of the following variables represent?
 - a) m
 - b) $KE =$
 - c) v
7. What is the unit of kinetic energy?
8. Look at Figure 9-12. Based on the information presented in the graph, determine the following:
 - a) What is the speed of the apple when it has 1.75 J energy?
 - b) What is the KE of the apple at 2.0 m/s?
 - c) The speed of the apple is when it has 5.0 J of energy.
9. Why does a driving a car over the speed limit cause more damage in a collision?
10. Kinetic energy combined with potential energy is:
11. What will we learn about in chapter ten?
12. What happens in chemical reactions that involve a decrease in energy?
13. What organisms are at the bottom of the food chain?
14. What do these organisms do that is so important to all other life forms?
15. In your body, energy is gained from what process?

16. What is the sun's energy from?

17. What kind of process do nuclear plants use?

18. How does electricity result?

19. Light energy travels across a space in the form of

20. Which end of the spectrum has more energy: blue or red (circle the answer).

21. Read the Math Skills box on pg 301. Copy the three steps for solving kinetic energy problems:

a)

b)

c)

On the bottom of this paper, following the steps you just wrote, and looking at the example in the book, do the kinetic energy practice problems on page 301. Do 1 a, b, and c. You **MUST** show **ALL YOUR WORK** for each problem.