

Motion and Energy ▪ *Reading/Notetaking Guide***Energy** (pp. 358–363)

This section explains how work, power, and energy are related. It also identifies the two basic kinds of energy.

Use Target Reading Skills

As you read about energy, complete the outline below. Use the red headings for main topics and the blue headings for subtopics. If no blue headings exist, create your own subtopics. Include supporting details or examples where indicated in the outline.

Energy	
I.	Kinetic Energy
A.	
B.	
II.	Potential Energy
A.	
1.	
2.	
B.	
1.	
2.	
III.	Energy Transformation and Conservation
A.	
1.	
2.	
B.	
1.	
2.	

Introduction (p. 358)

1. The ability to do work or cause change is called _____.
2. Why can work be thought of as the transfer of energy?

3. What are the two general kinds of energy?
 - a. _____
 - b. _____

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Kinetic Energy (p. 359)

4. What is kinetic energy?

5. The kinetic energy of an object depends on both its _____ and its _____.

6. Kinetic energy increases as speed _____.

7. What formula do you use to calculate kinetic energy?

8. Because speed is squared in the kinetic energy equation, doubling an object's speed will _____ its kinetic energy.

Potential Energy (p. 360)

9. What is potential energy?

10. What is the potential energy called that is associated with objects that can be stretched or compressed?

11. What is potential energy called that depends on height?

12. What is the formula you use to determine the gravitational potential energy of an object?

13. Is the following sentence true or false? The greater the height of an object, the greater its gravitational potential energy.

Energy Transformation and Conservation (pp. 361–363)

14. What two forms of energy are associated with mechanical energy?

15. How would you calculate an object's mechanical energy?

16. What SI unit is used to measure mechanical energy?

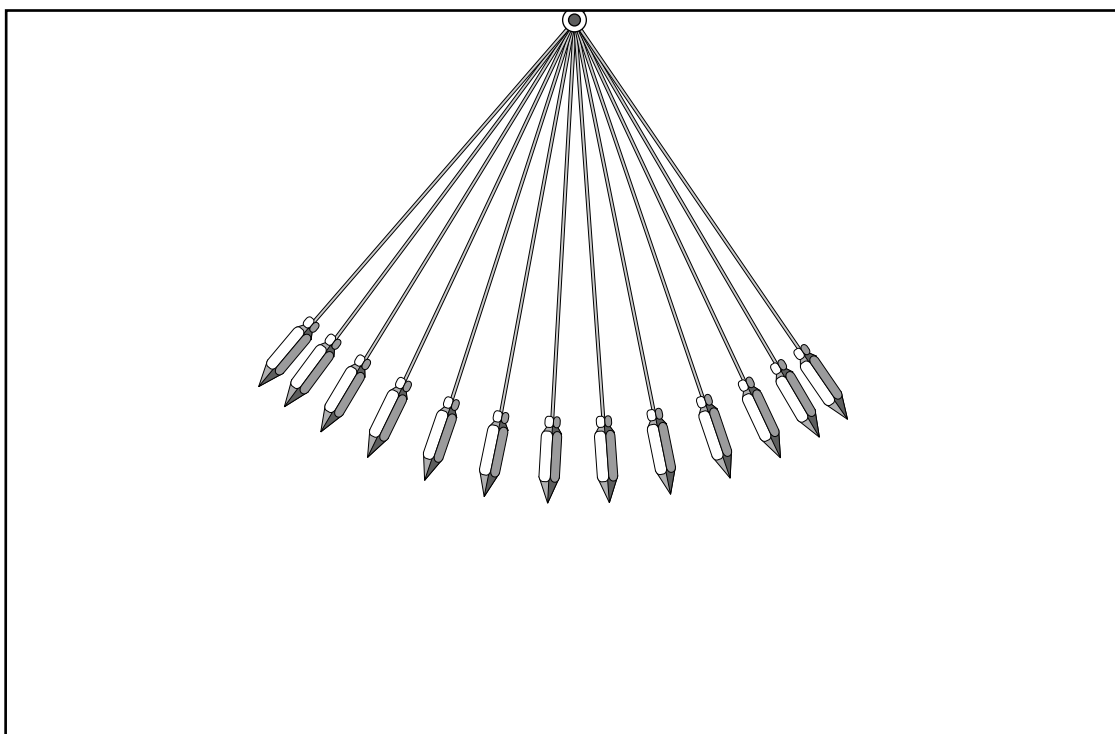
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Energy (*continued*)

17. When you throw an orange up into the air, what kind of energy increases as its height increases? _____

18. As an orange falls from its greatest height, what kind of energy increases and what kind of energy decreases?

19. On the diagram of a moving pendulum, label the places where the pendulum has maximum potential energy and where it has maximum kinetic energy.



20. What does the law of conservation of energy state?
