

CHAPTER REVIEW**Chapter 5****Machines****I. Vocabulary Review**

Match each item in Column I with the most appropriate item in Column II. Write the letter for that item in the blank at the left.

Column I	Column II
_____ 1. device that makes work easier but doesn't actually reduce the amount of work to be done	a. wedge
_____ 2. bar that turns or pivots on a fixed point	b. watt
_____ 3. The radius of the effort arm is larger than the radius of the resistance arm.	c. lever
_____ 4. may or may not change the amount of force or direction	d. pulley
_____ 5. ramp that reduces effort by increasing distance	e. inclined plane
_____ 6. inclined plane wound around a post	f. power
_____ 7. changes downward force to an outward force	g. simple machine
_____ 8. tells you how helpful a machine is	h. wheel and axle
_____ 9. rate that you do work	i. screw
_____ 10. equal to one joule per second	j. mechanical advantage

II. Concept Review

In the blank at the left, write the letter of the choice that best completes the statement or answers the question.

- _____ 11. Most simple machines work by _____.
- increasing the effort force over a larger distance
 - decreasing the effort force over a larger distance
 - increasing the effort force over a shorter distance
 - decreasing the effort force over a shorter distance
- _____ 12. You do 300 J of work on one end of a 5-m lever. How much work is done at the other end?
- 300 J
 - 1500 J
 - 60 J
 - 900 J
- _____ 13. The use of a machine can change _____.
- force
 - distance over which force acts
 - work
 - both a and b
- _____ 14. The increased effect of effort force is measured by _____.
- mechanical advantage
 - efficiency
 - power
 - resistance force

Chapter Review 5 (continued)

Answer the following in complete sentences.

15. You find yourself in a situation where you cannot perform a task with only a lever, a wheel and axle, a screw, a wedge, a pulley, or an inclined plane. What might you do? _____

16. Why do people use machines? _____

17. If Maria has more power than John, does that mean that Maria can do more total work?

III. Skills/Process Review

Use Figure 5 to answer the following in the space provided.

18. This simple machine is a(n) _____

19. The work done is _____

20. The power used is _____

21. The mechanical advantage is _____

IV. EYV Review

22. **Science and Society: Pedal Power!** The Arthur Hill High School Technology Club invented the *da Vinci* HPV and entered it in an international contest. Draw or describe your own HPV, designed for speed and efficiency.

