

Honors **Integrated** Science

Name: _____ Date: _____ Per. _____

Directions: Answer the following questions in complete sentences and thoughts, using the information from the video to support your learning. For all math questions, show your work and your final answer should include appropriate units and significant figures.

1. A machine produces a larger force than you exert to operate the machine. How does the input distance of the machine compare to its output distance?
2. You do 200 J of work pulling the oars of a rowboat. What can you say about the amount of work the oars do to move the boat? Explain.
3. How can you increase the work output of a machine?
4. When you swing a baseball bat, how does the output distance the end of the bat moves compare with the distance you move your hands through? Why might this difference be useful?

Honors **Integrated** Science

Name: _____ Date: _____ Per. _____

8. Explain why you might shift into a lower gear to climb a hill on a bike. Your explanation should include a discussion of the input force and distance.