Physical Science Guided Reading

NAME DATE PERIOD

Section 5.2 – Using Machines, pp. 132 – 137

1. Explain the errors in the statement, “Machines do less work for us”.
2. What are the three ways that a machine accomplishes work for us?
3. List and describe the four components of work accomplished on and by a machine.
4. In general, machines “trade” one component of work input for another component of work output. Which two components are increased and which two components are decreased?
5. If a 0.75 kg book is carried up a flight of stairs (some 4.2 m), how much work is done.
6. Machines can multiply force, not work. Which scientific law explains this and how is it always true? What explains any “missing” work from an actual, not ideal, machine?
7. A 100 W incandescent lightbulb only converts about 20 W to light, the rest is converted to heat. What is the efficiency of an incandescent light bulb?