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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Work, Energy, and Machines

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|  |  |  |  |  |  | 5  I |  |  | 6  M | E | C | H | A | N | I | C | A | L | A | D | V | A | N | T | A | G | E |  |  |
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|  |  |  |  |  |  | L |  | 8  B |  | N |  |  |  |  |  | N |  |  |  |  |  | C |  | 9  P |  |  |  |  |  |
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|  |  |  |  |  |  | 21  P | U | L | L | E | Y |  |  |  |  |  |  |  |  |  |  | Y |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  | 22  E | N | E | R | G | Y |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| **Across**  **3.** The fixed point at which a lever pivots.  **6.** A number that tells how many times a machine multiplies the input force.  **7.** The energy that an object has because of the position, condition, or chemical composition of the object.  **11.** An inclined plane that is wrapped in a spiral around a cylinder.  **12.** The transfer of energy to an object by using a force that causes the object to move in the direction of the force.  **14.** The type of pulley that is used on a flag pole is called \_?  **15.** The tyoe of pulley that is attached to the object being moved is called what?  **16.** A see-saw is an example of what class of lever?  **18.** The energy of an object that is due to the object's motion.  **19.** A simple machine that is made of a wheel connected to a smaller cylindrical object.  **21.** A simple machine that has a grooved wheel that holds a rope or cable.  **22.** The ability to do work. | **Down**  **1.** A quantity, usually expressed as a percentage, that measures the ratio of work output to work input in a machine.  **2.** The sum of an object's kinetic energy and potential energy due to gravity.  **4.** A stapler is an example of what class of lever?  **5.** A simple machine that is a straight, slanted surface. (2 words)  **8.** A set of pulleys that multiplies the input force by 4 is called what?  **9.** The rate at which work is done.  **10.** A simple machine that has a bar that pivots at a fixed point.  **13.** A device that helps do work by changing the magnitude and or direction of an applied force.  **17.** A softball bat is an example of what class of lever?  **20.** A pair of inclined planes that move. |