

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Per: \_\_\_\_\_

**Video - The Power of Optics**

1. What powered this Rube Goldberg Machine? \_\_\_\_\_

2. What forms of energy do you see in the video? \_\_\_\_\_

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a. What type(s) of energy is the candle burning? \_\_\_\_\_

b. What type(s) of energy is the marble rolling? \_\_\_\_\_

c. Why type(s) of energy is the balloon expanding? \_\_\_\_\_

3. What do we call the process of the light doing work to start the candle burning?

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4. What happens to the light intensity as it goes through a transformation? Why do you think that is happening?

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5. What is the purpose of the magnifying glasses? \_\_\_\_\_

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6. At the end of the demonstration the white light is passed through a prism. The prism separates the light into the different colors. Do the different colors of light still contain energy? Why is light different colors?

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## Energy Transfer Diagrams

**Energy cannot be created or destroyed but it can be transferred from one form to another.** Energy transfer diagrams show each type of energy, whether it is stored or not, and the processes that are taking place as that energy is transferred. Complete the table below by identifying the type of energy being input (e.g. light, chemical, heat, kinetic, potential, etc) and the energy output of each of the examples shown.

Models of Energy Transformations				
Input: Type of Energy	Energy Source		Transformation	Output: Type of Energy
				
				
				
				
				