

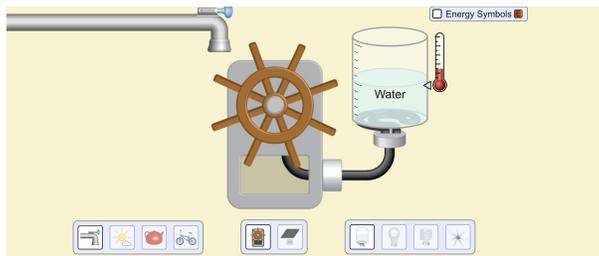
Name: _____ Date: _____ Hour: _____

Types of Energy Transfer Lab Simulation

The following activity uses the lab simulation found at:

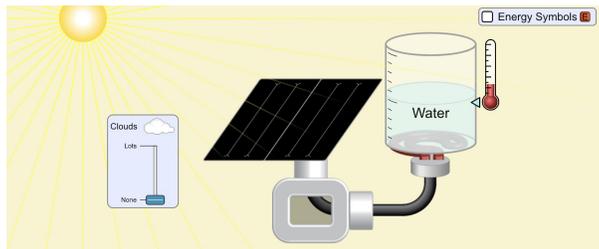
https://phet.colorado.edu/sims/html/energy-forms-and-changes/latest/energy-forms-and-changes_en.html

1. In the picture below, energy is being converted to heat water. What type of energy transformations take place in this model?



_____ → _____ → _____

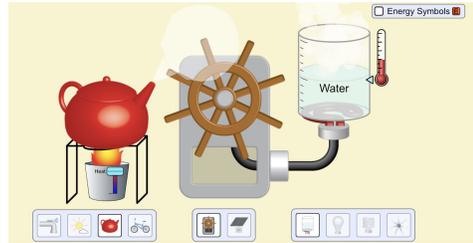
2. a. In the picture below, energy is being converted to heat water. What type of energy transformations take place in this model?



_____ → _____ → _____

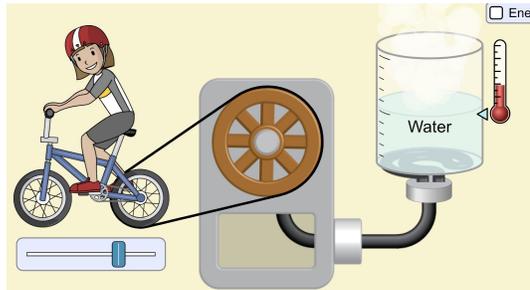
b. What happens to the energy transferred when you have lots of clouds?

3. In the picture below, energy is being converted to heat water. What type of energy transformations take place in this model?



_____ → _____ → _____ → _____

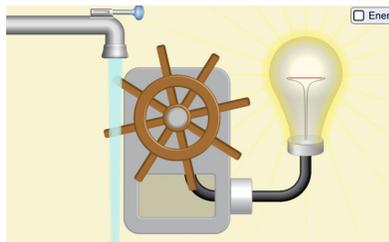
4. a. In the picture below, energy is being converted to heat water. What type of energy transformations take place in this model?



_____ → _____ → _____ → _____

b. What kind of energy is converted to waste energy by the bicycle? _____
 What force is causing this waste energy? _____

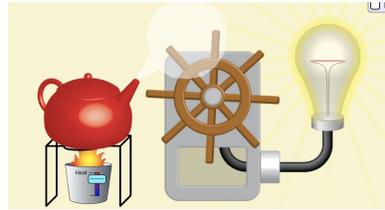
5. a. In the picture below, energy is being converted to light a bulb. What type of energy transformations take place in this model?



_____ → _____ → _____ → _____

b. What kind of energy is converted to waste energy from the bulb? _____

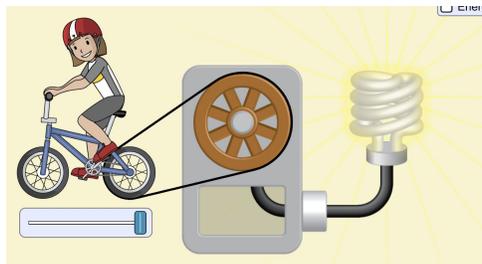
6. In the picture below, energy is being converted to light a bulb. What type of energy transformations take place in this model?



_____ → _____ → _____ → _____

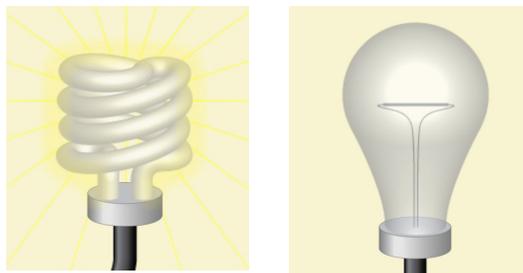
- b. What kind of energy is converted to waste energy from the kettle? _____

7. In the picture below, energy is being converted to light a bulb. What type of energy transformations take place in this model?



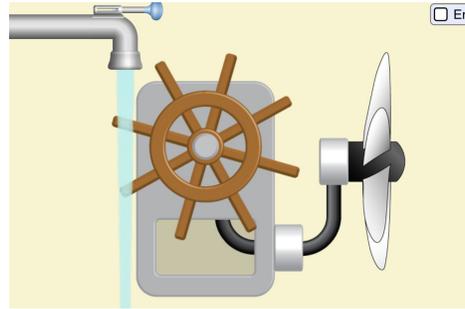
_____ → _____ → _____ → _____

8. Observe the energy produced between the two types of bulbs below.



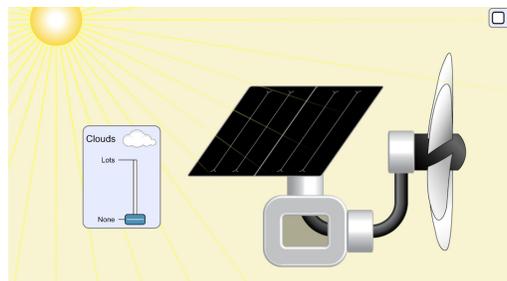
- a. What is different about the energy produced between these two bulbs?
- b. Circle the bulb that produces the *least* amount of waste energy.

9. In the picture below, energy is being converted to heat water. What type of energy transformations take place in this model?



_____ → _____ → _____

10. In the picture below, energy is being converted to heat water. What type of energy transformations take place in this model?



_____ → _____ → _____

After observing different forms of energy transfer, which form or forms of energy have the least amount of waste? Justify your answer with evidence you have gathered from the simulation.