**Name:**

**Date:**

**School:**

**Facilitator:**

7.03 Energy Transformation Questions

**Open the PhET Energy Forms and Changes interactive linked on the Task page. Select Systems. Then, follow the directions below.**

**Test 1: Select the faucet from the energy source at the left bottom. Select the water wheel from the center menu. Select the burner with the beaker of water from the right menu. Turn on the faucet by pulling the blue spigot.**

1. **The**       **energy of the water wheel is changed to**       **energy in the wire.**
2. **The**       **energy travelling through the wire is transformed to**       **energy in the burner to heat the water.**
3. Change the burner on the end to a fan. Describe in a sentence how this changes the energy transformations in this system.

**Test 2: Select the sun from the energy source at the left bottom. Select the solar panel from the center menu. Select the standard light bulb (round, not spiral) from the right menu.**

1. **The**       **energy of the sun is changed to**       **energy in the wire.**
2. **The**       **energy travelling through the wire is transformed to**       and       **energy in the light bulb.**
3. Change the light bulb on the end to the energy-efficient light bulb. Describe in a sentence how this changes the energy transformations in this system. Why do you think this bulb is more efficient?

**Test 3: Select the cyclist from the energy source at the left bottom. Select the water wheel from the center menu. Select the fan from the right menu. Make the cyclist pedal by adjusting the slider under the bike.**

1. **The**       **energy of the cyclist is changed to**       **energy in the wire.**
2. **The**       **energy travelling through the wire is transformed to**       **energy in the fan.**
3. **Let the simulation run for some time. What do you have to do in order to keep the system running? What energy transformation is involved? Use sentences to explain.**

**Test 4: Set up your own system using components from the system. Do not repeat a system we have used already. Describe the parts of your system and the energy transformations in a short paragraph.**

| Type your answer in the space below. |
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