**Virtual Lab Activity on Energy Forms and Changes**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name:** |  | **Grade & Section:** |  |

**General Directions:**

* Copy the link and paste in your browser. (Energy Forms and Changes)

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

* Click “Systems.”
* Follow all the steps in this activity **IN ORDER.**
1. **BOILING WATER**
2. Click the reset button. 
3. Check the box for energy symbols. 
4. Try to make the water boil using all four available energy sources (one at a time and according to image order)  on the generator .
5. Paste the four screenshots here for the four set-ups.

|  |
| --- |
| Set-up A  |
| Set-up B  |
| Set-up C  |
| Set-up D  |

1. Try to make the water boil using all four available energy sources (one at a time and according to image order)  on the solar panel .
2. Paste the four screenshots here for the four set-ups.

|  |
| --- |
| Set-up E  |
| Set-up F  |
| Set-up G  |
| Set-up H  |

1. Describe the conversion of energy from one form to another using a diagram for each set-up. **Example: Mechanical→Electrical→Thermal**

|  |
| --- |
| Set-up A  Change this text into your answer |
| Set-up B  Change this text into your answer |
| Set-up C  Change this text into your answer |
| Set-up D  Change this text into your answer |
| Set-up E  Change this text into your answer |
| Set-up F  Change this text into your answer |
| Set-up G  Change this text into your answer |
| Set-up H  Change this text into your answer |

1. Describe the set-up that worked for boiling water and discuss the energy conversions.

|  |
| --- |
| Change this text into your answer |

1. **LIGHTING UP AN INCANDESCENT BULB**
2. Click the reset button. 
3. Check the box for energy symbols. 
4. Try to make the incandescent bulb light up using all four available energy sources (one at a time and according to image order)  on the generator .
5. Paste the four screenshots here for the four set-ups.

|  |
| --- |
| Set-up A  |
| Set-up B  |
| Set-up C  |
| Set-up D  |

1. Try to make the incandescent bulb light up using all four available energy sources (one at a time and according to image order)  on the solar panel .
2. Paste the four screenshots here for the four set-ups.

|  |
| --- |
| Set-up E  |
| Set-up F  |
| Set-up G  |
| Set-up H  |

1. Describe the conversion of energy from one form to another using a diagram for each set-up. **Example: Mechanical→Electrical→Thermal**

|  |
| --- |
| Set-up A  Change this text into your answer |
| Set-up B  Change this text into your answer |
| Set-up C  Change this text into your answer |
| Set-up D  Change this text into your answer |
| Set-up E  Change this text into your answer |
| Set-up F  Change this text into your answer |
| Set-up G  Change this text into your answer |
| Set-up H  Change this text into your answer |

1. Describe the set-up that worked for lighting up the incandescent bulb and discuss the energy conversions.

|  |
| --- |
| Change this text into your answer |

1. **LIGHTING UP A COMPACT FLUORESCENT BULB**
2. Click the reset button. 
3. Check the box for energy symbols. 
4. Try to make the compact fluorescent bulb light up using all four available energy sources (one at a time and according to image order)  on the generator .
5. Paste the four screenshots here for the four set-ups.

|  |
| --- |
| Set-up A   |
| Set-up B  |
| Set-up C  |
| Set-up D  |

1. Try to make the compact fluorescent bulb light up using all four available energy sources (one at a time and according to image order)  on the solar panel .
2. Paste the four screenshots here for the four set-ups.

|  |
| --- |
| Set-up E  |
| Set-up F  |
| Set-up G  |
| Set-up H  |

1. Describe the conversion of energy from one form to another using a diagram for each set-up. **Example: Mechanical→Electrical→Thermal**

|  |
| --- |
| Set-up A  Change this text into your answer |
| Set-up B  Change this text into your answer |
| Set-up C  Change this text into your answer |
| Set-up D  Change this text into your answer |
| Set-up E  Change this text into your answer |
| Set-up F  Change this text into your answer |
| Set-up G  Change this text into your answer |
| Set-up H  Change this text into your answer |

1. Describe the set-up that worked for lighting up the compact fluorescent bulb and discuss the energy conversions.

|  |
| --- |
| Change this text into your answer |

1. **MAKING THE FAN WORK**
2. Click the reset button. 
3. Check the box for energy symbols. 
4. Try to make the fan work using all four available energy sources (one at a time and according to image order)  on the generator .
5. Paste the four screenshots here for the four set-ups.

|  |
| --- |
| Set-up A  |
| Set-up B  |
| Set-up C  |
| Set-up D  |

1. Try to make the fan work using all four available energy sources (one at a time and according to image order)  on the solar panel .
2. Paste the four screenshots here for the four set-ups.

|  |
| --- |
| Set-up E  |
| Set-up F  |
| Set-up G  |
| Set-up H  |

1. Describe the conversion of energy from one form to another using a diagram for each set-up. **Example: Mechanical→Electrical→Thermal**

|  |
| --- |
| Set-up A  Change this text into your answer |
| Set-up B  Change this text into your answer |
| Set-up C  Change this text into your answer |
| Set-up D  Change this text into your answer |
| Set-up E  Change this text into your answer |
| Set-up F  Change this text into your answer |
| Set-up G  Change this text into your answer |
| Set-up H  Change this text into your answer |

1. Describe the set-up that worked for making the fan move and discuss the energy conversions.

|  |
| --- |
| Change this text into your answer |

**CONCLUSION:**

**What can you conclude from this activity? Why did some set-ups work and the others didn’t? (Explain your answer in one paragraph with 50-100 words)**

|  |
| --- |
| Change this text into your answer |