



**CREST**  
*Olympiads*  
#CRESTInnovator



# CREST Science Olympiad (CSO) **Worksheet** *for* **Class 5**



**Topic**

## Work and Energy



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# Worksheet on Work and Energy

1. In order to increase the amount of work done, what should you do?

- a. Increase the distance over which the force is applied.
- b. Decrease the force applied.
- c. Decrease the time taken to perform the work.
- d. Keep the force and distance the same.

2. Which experiment can demonstrate the conversion of light energy to thermal energy?

- a. Burning a candle
- b. Heating water using a solar panel
- c. Turning on a switch to light an LED bulb
- d. Observing the movement of windmill blades

3. Three friends, Miranda, Ethan, and Lizzy made comments about the conservation of energy. This is what they said:

**Miranda:** Energy can be created or destroyed.

**Ethan:** Work can be done with or without energy.

**Lizzy:** Energy can be converted from one form to another.

Who made the correct statement?

- a. Only Miranda
- b. Only Ethan
- c. Only Lizzy
- d. Ethan And Lizzy

4. Which of the following is an example of a non-renewable energy source that is used for cooking?

- a. Biomass
- b. Hydroelectric power
- c. Geothermal energy
- d. Charcoal

**5. Match the following types of energy with their corresponding examples:**

	Column I		Column II
1.	Kinetic energy	1.	A stretched rubber band
2.	Potential energy	2.	Heat from a burning fire
3.	Thermal energy	3.	A moving car
4.	Chemical energy	4.	Batteries in a flashlight

- a. 1:A, 2:C, 3:D, 4:B  
b. 1:B, 2:A, 3:C, 4:D  
c. 1:D, 2:B, 3:A, 4:C  
d. 1:C, 2:A, 3:B, 4:D

### Answer Key

1. a - When the distance over which a force is applied increases, more work is done because the force is exerted over a larger distance. This allows for more energy to be transferred and more work to be accomplished.
2. b - A solar panel absorbs sunlight (light energy) and converts it into thermal energy, which can be used to heat water. This demonstrates the conversion of one form of energy (light) into another form (thermal).
3. c - Only Lizzy made the correct statement. Energy can indeed be converted from one form to another, as stated by Lizzy. Miranda's statement contradicts the principle of conservation of energy, which states that energy cannot be created or destroyed. Ethan's statement is incorrect because work requires the use of energy.
4. d - Charcoal is derived from wood and is a non-renewable energy source. It is commonly used for cooking, especially in barbecues and grills.
5. d -  
Kinetic energy: A moving car  
Potential energy: A stretched rubber band  
Thermal energy: Heat from a burning fire  
Chemical energy: Batteries in a flashlight

**More Questions Coming Soon – Keep Learning!**



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