

Name _____

The First Law of Thermodynamics: Energy Conservation Explained

Open-Ended Response Answer Key

1. Answers may vary, but students could describe how the stove (energy source) provides heat energy to cook food. Energy from the stove transforms into thermal energy, which then cooks the ingredients, ultimately producing the meal.
2. Energy conservation is essential to reduce waste and protect the environment. Individuals can contribute by turning off lights when not in use, using energy-efficient appliances, and conserving water to reduce energy consumption.
3. A scenario might be a magician seemingly creating energy during a magic trick. However, the first law of thermodynamics would explain that the magician is merely changing the form of energy, not creating it.
4. A simple explanation could be: "Energy is like a special coin that never disappears. It can change into different types, like heat or light, but it always stays the same amount. It's like playing with marbles, no matter what you do with them; you'll always have the same number."

