Objective

By the end of this lesson, you will understand how energy can be transformed from one form to another.

Materials and Prep

- Paper and pen for notes
- No prior knowledge required

Activities

- **Energy Transformations Scavenger Hunt:** Look around your house and identify at least 5 objects/devices that involve energy transformation. Write down how energy changes form in each case.
- **Energy Transfer Chain:** Draw a diagram showing the transfer of energy from the sun to a plant, then to an animal, and finally to you. Label the different forms of energy involved.
- **Energy Transformations in Motion:** Watch a video of a roller coaster ride and identify the different forms of energy at play during the ride. Discuss with a family member or friend.

Talking Points

- **Kinetic and Potential Energy:** "When an object is in motion, it possesses kinetic energy. When an object is at rest, it has potential energy waiting to be used."
- **Law of Conservation of Energy:** "Energy cannot be created or destroyed, only transformed from one form to another. This means the total energy in a closed system remains constant."
- **Examples of Energy Transformation:** "Think about how a toaster transforms electrical energy into thermal energy to toast bread, or how a car engine transforms chemical energy in gasoline into kinetic energy for movement."
- **Renewable Energy Sources:** "Solar panels transform sunlight into electrical energy, while wind turbines transform wind energy into mechanical energy. These are examples of using natural resources for energy transformation."