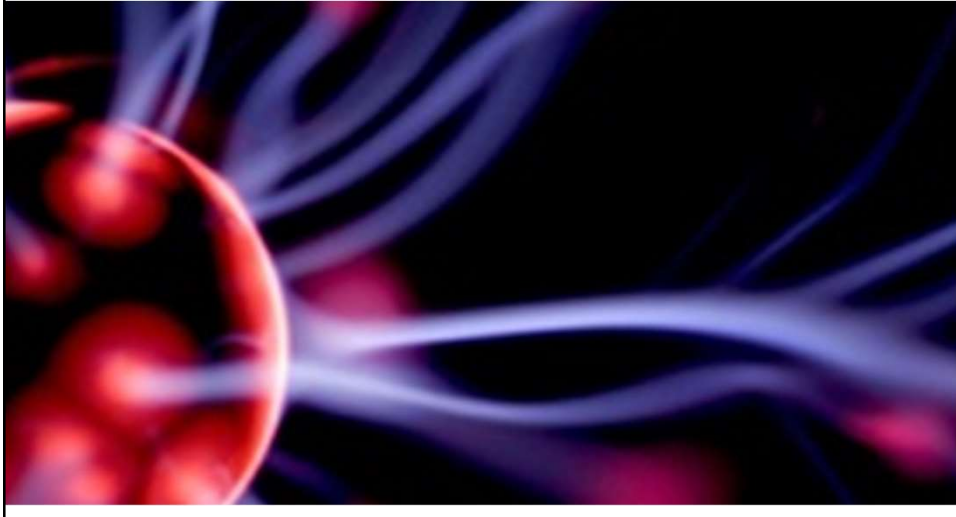


Lesson 1: What is Energy?



1



Energy is the ability to do work. It is the capacity or ability to cause a physical change.

2

There are two major types of energy:

1. **Potential Energy** - energy that is stored in an object; energy that an object has because of its position relative to other objects
2. **Kinetic Energy** - energy that is doing work; the energy that an object has because of its motion

3

Discovery Education Video: Potential and Kinetic Energy

Potential energy is stored energy, or energy of position. Kinetic energy is energy of motion. A book that has been lifted from the floor and placed on a table has stored potential energy due to gravity. A falling book, however, has kinetic energy, and the force of its impact with the ground will release energy. Likewise, the first hill of a rollercoaster should be the highest, so that the most potential energy is stored before the ride drops and potential energy is converted to kinetic energy. A battery has chemical potential energy, and its chemical energy is stored until it is connected to a circuit, where its chemical energy can be changed to electrical energy.

4

Discovery Education Video: **Potential and Kinetic Energy**

Potential energy is stored energy. It is the energy of position. Kinetic energy is the energy of motion.

5

Energy can exist in several forms.

- 1. Electrical Energy**
- 2. Heat Energy**
- 3. Light Energy**
- 4. Sound Energy**
- 5. Mechanical Energy**
- 6. Magnetic Energy**

6

The Law of Conservation of Matter and Energy tells us that matter and energy cannot be created or destroyed.

But they can change forms!

7

Key Questions:

- 1) What is energy?**
- 2) What are the two types of energy? How are these types of energy different?**
- 3) What is the Law of Conservation of Matter and Energy? What does it tell us about the different forms of energy.**

8