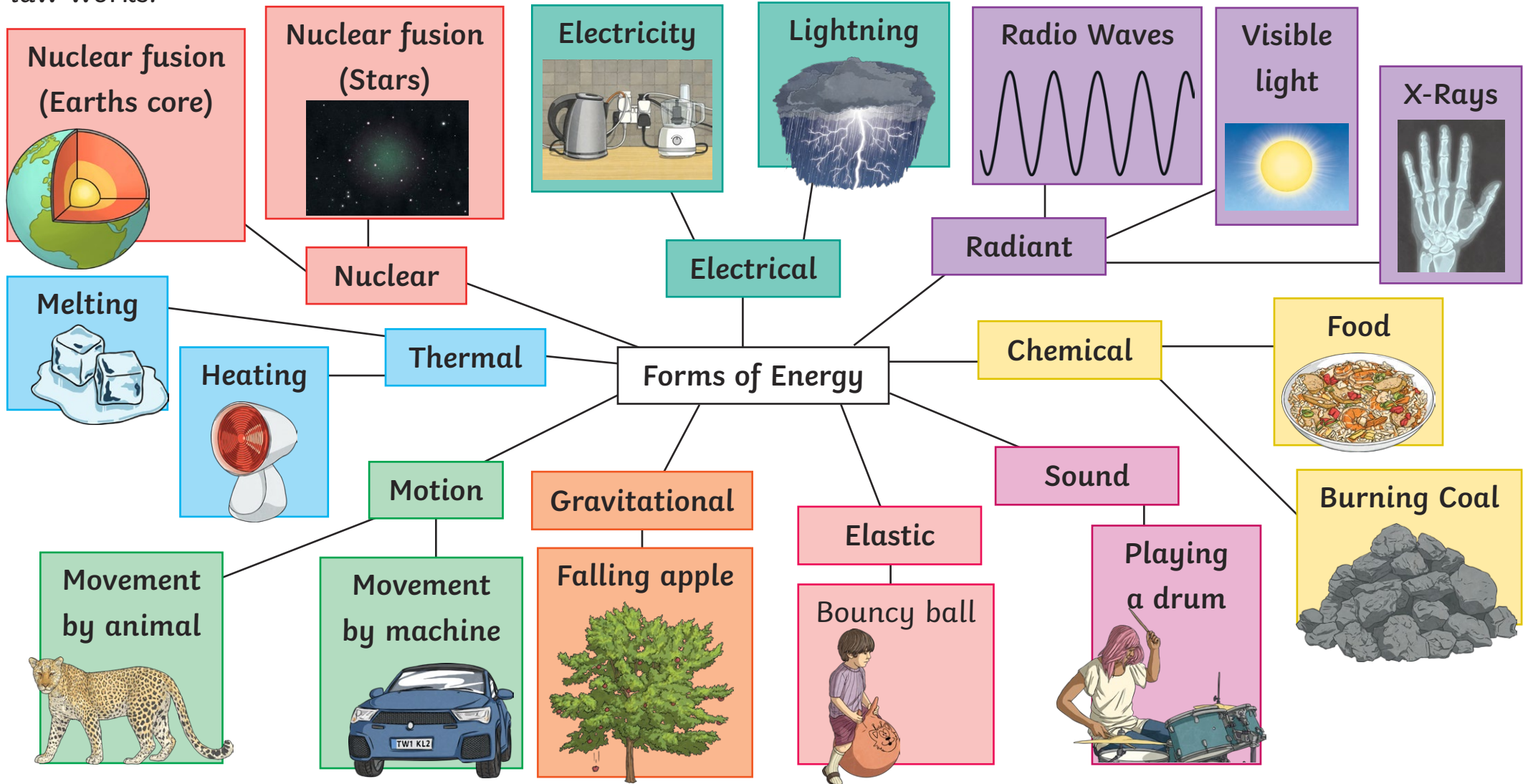


# Types of Energy

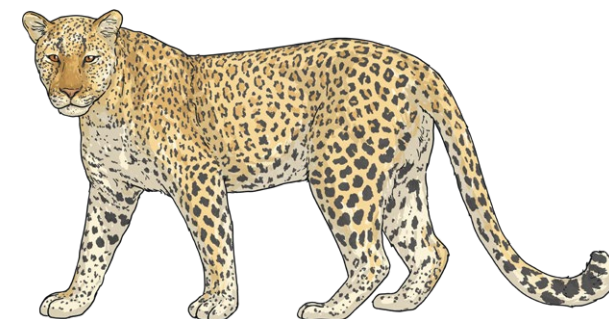
Energy is all around us. Einstein's first Law of Conservation of Energy, states that 'Energy can neither be created nor destroyed; energy can only be transferred or changed from one form to another.' Take a look at how this law works:



We get two main forms of energy: kinetic energy and potential energy. Kinetic energy is the energy created by movement and potential energy is the energy that is stored.

There are nine different types of energy:

1. **Heat energy** - This type of energy is created by the vibrations of atoms and molecules inside different substances. The faster they move, the more energy they have and the more heat they give off.
2. **Radiant energy** - This type of energy is also known as light or electromagnetic energy. Radiant energy is a type of kinetic energy because it moves in waves.
3. **Chemical energy** - Chemical energy is found in atoms and molecules - it is the energy that holds these particles together. Chemical energy is stored energy that can be found in food, coal and natural gas.
4. **Nuclear energy** - Nuclear energy is stored in the nucleus of atoms. To release this energy either: nuclei are joined together (the process called fusion) or, the nucleus is split apart (called fission). Nuclear power plants use fission. They generate energy by splitting the atoms of plutonium or Uranium.
5. **Electrical energy** - Electrical energy is the movement of electrons (tiny particles that are one of the building blocks of atoms). Electricity is electrons moving through a wire.
6. **Motion energy** - This can also be called kinetic energy. It is the energy released through movement. Chemical potential and elastic potential are examples of stored energy. Someone going for a run is an example of motion energy.



- 7. Sound energy** - Sound moves in waves and is generated when a force makes an object vibrate. Like banging on a drum. There is less energy in sound in comparison to some other kinds of energy.
- 8. Elastic energy** - This is a type of potential energy. The energy is stored in an elastic object, such as a spring or elastic band. They store elastic energy when a force, like a pull or a squeeze, causes them to be stretched or squashed.
- 9. Gravitational energy** - This is the energy we get as a result of gravitational force on an object's height.



Did you know that the word 'energy' comes from the Greek word 'energeia' - to do any activity?

Take a look at the following pictures. Which kind of energy are they showing?

1. Striking a match



2. A frog jumping



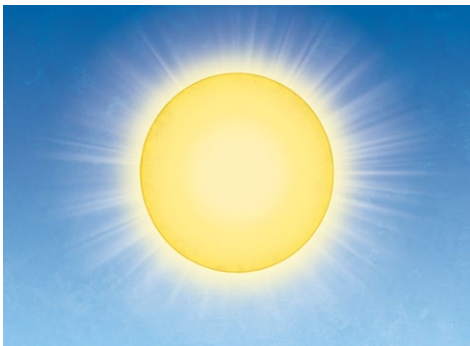
3. A lit bulb



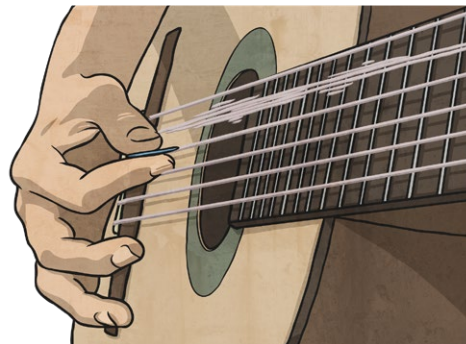
4. A bouncing ball



5. Suntanning



6. Plucking a guitar string



7. Skydiving



# Types of Energy Answers

1. Chemical energy
2. Motion energy
3. Electrical energy
4. Elastic energy
5. Radiant energy
6. Sound energy
7. Gravitational energy