

# Potential and Kinetic Energy

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## Investigation 1

### Scientist's Glossary



#### Tool: Rehearsal

Rehearsal strategies include:

- saying the definition to yourself.
- being quizzed by someone else.
- drawing a diagram or picture from memory.
- looking for everyday examples of terms.
- using the terms to solve a problem.
- conducting experiments that use these terms.

1. **Kinetic energy:** The energy of motion.
2. **Law of Conservation of Energy:** A principle which states that energy is neither created nor destroyed, it simply changes form.
3. **Potential energy:** The energy stored in an object or substance.
4. **Property:** A characteristic that can be observed or measured.
5. **Mechanical energy:** The energy in an object has because of its position or motion; the ability to do work.

# Energy of Sound

## Investigation 2

### Scientist's Glossary



Tool: **Rehearsal**

1. **Amplitude:** The height of a sound wave. Amplitude determines the volume of a sound and the strength of the vibration which causes the sound.
2. **Decibels:** A unit for measuring the loudness of volume.
3. **Frequency:** The number of times molecules of matter vibrate within an interval of time.
4. **Hertz:** A unit of frequency equal to one cycle per second. Pitch can be described in terms of hertz.
5. **Law of Conservation of Energy:** A principle which states that energy is neither created nor destroyed, it simply changes form.
6. **Pitch:** The lowness or highness of a sound dependent on the frequency of sound waves.
7. **Sound energy:** The energy of vibrating molecules.
8. **Sound waves:** Vibrations that pass through solids, liquids or gases.
9. **Vibration:** A back and forth motion.
10. **Volume:** The loudness or softness of a sound.

# Electricity and Energy

## Investigation 3

### Scientist's Glossary



Tool: Rehearsal

1. **Artificial light:** Light produced by electrical sources.
2. **Battery:** A device that stores chemical energy and can be used to produce electrical current.
3. **Bulb:** A device consisting of a filament, base, and tip that uses electricity to produce visible light.
4. **Circuit:** A continuous path along which an electrical current can move.
5. **Current:** A flow of electrons along a path.
6. **Electricity:** An event that occurs when electrons move through or between objects or materials.
7. **Electrons:** Tiny particles found outside the nucleus of an atom. Electrons have a negative charge.
8. **Law of Conservation of Energy:** A principle which states that energy is neither created nor destroyed, it simply changes form.
9. **Light energy:** A form of energy that travels in a wave.
10. **Natural light:** Light that comes from natural sources such as the sun.
11. **Parallel circuit:** A circuit that allows electrons to follow several different paths.
12. **Series circuit:** A circuit that directs electrons to follow a single path.

# Chemical Energy and Heat Investigation 4

## Scientist's Glossary



Tool: Rehearsal

1. **Chemical energy:** The energy of chemical reactions.
2. **Chemical reaction:** When two or more substances interact chemically to form two or more different substances.
3. **Endothermic reaction:** A chemical reaction that absorbs heat from its surroundings.
4. **Exothermic reaction:** A chemical reaction that releases heat into its surroundings.
5. **Heat energy:** The energy transferred from one molecule to another because of a difference in kinetic energy between the two molecules.
6. **Law of Conservation of Energy:** A principle which states that energy is neither created nor destroyed, it simply changes form.

# Energy and Motion

## Investigation 5

### Scientist's Glossary



Tool: Rehearsal

1. **Chemical energy:** The energy of chemical reactions.
2. **Chemical reaction:** The process in which one or more substances interact chemically to form one or more different substances.
3. **Kinetic energy:** The energy of motion.
4. **Law of Conservation of Energy:** A principle which states that energy is neither created nor destroyed, it simply changes form.
5. **Mechanical energy:** The energy in an object has because of its position or motion; the ability to do work.
6. **Potential energy:** The energy stored in an object or substance.