

8th Grade Science Essential Learning Outcomes

1st Quarter:

1. Report and refine laboratory findings in written format with viable and defensible conclusions.
2. Identify forms of energy that are related to change in matter and explain how changes in matter are related to changes in energy.
3. Understand the structure of the Periodic Table and recognize the importance of chemical reactions in real-life applications.
4. Explain how formulas and names of compounds are written.
5. *Demonstrate and practice safe laboratory procedures.*
6. *Apply metric measurements in a variety of laboratory situations.*
7. *Apply the concepts of the scientific inquiry method to problems through experimentation.*

2nd Quarter:

1. State the principle of Conservation of Mass and demonstrate what a balanced chemical equation must show.
2. Describe how concentration is measured and why solubility is useful in identifying substances.
3. Distinguish between acids and bases.

3rd Quarter:

1. Demonstrate how forces dictate the motion of objects.
2. Distinguish between Newton's 3 laws of motion and apply them to everyday experiences.
3. State and apply both Bernoulli's and Pascal's Principles of Fluid Pressure.
4. Name and describe the two basic kinds of energy (Kinetic and Potential) and show how different kinds of energy are related.
5. Describe the three forms of heat transfer and identify the direction in which heat moves.

4th Quarter:

1. Describe how living things interact with each other and their environment.
2. Justify the use of alternative energy resources in everyday life.
3. State Darwin's Theory of Evolution and explain natural selection.

** Learning outcomes in italics will be utilized throughout the entire year.*