

Grade Kindergarten

- Describe the four seasons.
- Identify the parts of a plant.
- Identify parts of the body.
- Explain the life cycle of the butterfly.
- Classify living and nonliving objects.

Grade One

- Describe what is in soil.
- Sort and organize materials into two different groups.
- Improve a tool that sorts earth materials.
- Understand what an insect needs to survive.
- Measure, record, and describe life cycle of a darkling beetle.

Grade Two

- Understand how to balance shapes and objects.
- Demonstrate how objects move.
- Describe and use solids and liquids.
- Understand how water changes from one state to another.
- Understand how plants grow and change.
- Measure, record, and describe weather conditions.

Grade Three

- Identify the life cycle of the Monarch.
- Explain what migration is.
- Understand that sound is caused by vibration.
- Explain how light travels.
- Describe how the sun, moon, and stars change in a predictable pattern.

Grade Four

- Understand that magnets stick to iron and steel and attract and repel.
- Build a complete circuit and electromagnet.
- Recognize the properties of various earth materials.

- Define mineral and rock.
- Describe the various states of water.
- Understand the affects of temperature on water in a variety of states.
- Recognize your body’s natural defenses against germs.
- Give examples of diseases that can be prevented through vaccination.

Grade Five

- Use the scientific method and design processes to solve problems
- Understand the impact of human interactions with Earth’s systems
- Recognize examples of simple machines and how they utilize or change energy
- Explain how natural Earth processes form and change the Earth’s surface

Grade Six

- Measure matter
- Apply design process to creating/improving a product
- Explain energy transformations
- Explain how forces affect motion
- Explain how waves transfer energy

Grade Seven

- Demonstrate how energy flows through an ecosystem
- Perform scientific process and procedural skills, STEM
- Recognize building blocks of life (matter, cells, genetics)
- Explore the human body systems and their interdependence to maintain homeostasis
- Classify the diversity of living organisms and how they have evolved

Grade Eight

- Create a scientific investigation
- Demonstrate causes and effects of geological processes
- Demonstrate the position and motions of objects in the universe

- Describe the flow of water through Earth systems
- Describe Earth’s atmosphere and how it develops weather patterns

Intro to Physics

- Measure and convert from unit to unit in the metric system
- Analyze the motion of an object thru graphing and graph interpretation
- Use Newton’s laws to explain the motion of objects
- Describe how electricity is produced and transformed into other forms of energy
- Describe how waves and sound show properties of energy transfer thru waves

Biology

- Understand the eight characteristics of living organisms to maintain homeostasis and the importance of biochemistry (carbohydrates, lipids, proteins, nucleic acids & water) to keep organisms living.
- Describe how cells regulate fluids, energy and growth of living organisms (cell theory).
- Understand the flow of energy through an ecosystem (producers to consumers, nutrient cycles).
- Explain DNA’s role in genetic traits, reproduction and genetic engineering technologies.
- Describe Darwin’s theory of Natural Selection and speciation.

Chemistry