Science
Grade 7
2nd Nine Weeks

This academic overview can be used to monitor and support your child's at -home learning progress.

Unit 3: Body Systems and Homeostasis

Student Learning Targets

- I can describe and identify the main functions of the systems of the human organism.
- I can describe the different systems of the body and why they are classified as systems.
- I can explain how the human body systems work together to carry out body functions and tasks.
- I can create a representation of the body systems of the human organism.
- I can describe an organism's response to external stimuli.
- I can describe an organism's response to internal stimuli.

Questions to Check for Unit Understanding

- What are the different systems and why are they classified as systems?
- What is the main function(s) of the following systems: circulatory, respiratory, skeletal, muscular, digestive, excretory, reproductive, integumentary, nervous and endocrine?
- What is homeostasis and how is it maintained by our body's response to internal and external stimuli?
- What is homeostasis?
- How does an organism's response to external or internal stimuli relate to homeostasis?

Key Academic Vocabulary

- Homeostasis: the tendency of an organism or cell to maintain a balanced state to maintain health and function
- Stimuli: an action or condition that provokes a response
- Response: a change in a system resulting from a stimulus

Unit 4: Introduction to Genetics

Student Learning Targets

- I can define heredity and explain the passing of traits from one generation to the next generation.
- I can explain the difference between acquired and inherited traits.
- I can describe how traits are passed on from parent to offspring using academic vocabulary.
- I can identify where the genetic material is found within a cell.

Questions to Check for Unit Understanding

- Based on your knowledge, what role do genes and chromosomes play in heredity?
- How are genes, DNA, chromosomes, and the nucleus organized in the cell?
- How are characteristics transferred from one generation to the next?

Key Academic Vocabulary

- Heredity: the transfer of genetic information from parent to offspring
- Gene: the basic physical and functional unit of heredity made up of DNA
- Chromosome: a single, highly organized and structured piece of DNA
- Trait: a characteristic of an organism; can be inherited or acquired

Unit 5: The Flow of Energy

Student Learning Targets

- I can accurately describe the process of photosynthesis.
- I can illustrate the process of photosynthesis.
- I can diagram the flow of energy through living systems including food chains, food webs, and energy pyramids.
- I can explain the flow of energy through a food chain, food web, and energy pyramid.

Questions to Check for Unit Understanding

- How do you explain the interdependence of a producer, consumer, and decomposer in an ecosystem?
- How is energy transferred and consumed in an energy pyramid?
- What are the steps taken and the reactants needed in the process of photosynthesis?
- In what ways is energy transformed through living organisms?
- How does the Law of Conservation apply to the transformation of energy within an organism?

Key Academic Vocabulary

- Photosynthesis: a chemical reaction during which plants convert radiant energy from the Sun to chemical energy; the reaction converts carbon dioxide and water into sugar (glucose) and oxygen
- Energy Pyramid: a diagram that shows the total amount of energy contained within each trophic level