

God's Design for Science®

Life: Student Objectives

The World of Plants

Introduction to Life Science

- Identify the six characteristics of living things.
- Identify the five kingdoms of living things.
- Identify the method of classification of living things.
- Describe the need for scientific names.
- Describe basic parts of a cell using models.

Flowering Plants & Seeds

- Describe the function of each of the organs of flowering plants.
- Describe why grasses are important to mankind.
- Distinguish between deciduous and evergreen trees.
- Distinguish between monocots and dicots.

Roots & Stems

- Describe the types and functions of roots.
- Describe the types and functions of stems.
- Describe the growth of plant stems.

Leaves

- Describe how plants perform photosynthesis.
- Describe the different shapes and arrangements of leaves.
- Explain why leaves change color in the fall.
- Use a field guide to identify plants.

Flowers & Fruits

- Identify and describe the parts of a flower using models.
- Describe the purpose of fruit.
- Explain the different plant life cycles.

Unusual Plants

- Describe the unique features of carnivorous plants.
- Describe the different tropisms and how they benefit plants.
- Describe how various plants are adapted to harsh environments.
- Describe how plants reproduce without seeds.
- Explain why algae and fungi are not plants.

The World of Animals

Mammals

- Distinguish between vertebrates and invertebrates.

Identify the five characteristics of mammals.
Distinguish between apes and monkeys.
Distinguish between marsupials and other mammals.

Birds & Fish

Explain how birds were designed for flight.
Describe the unique characteristics of birds and fish using examples.
Distinguish between warm-blooded and cold-blooded animals.

Amphibians & Reptiles

Describe the unique characteristics of reptiles and amphibians using examples.
Distinguish between reptilian and amphibian life cycles.
Describe how reptiles defend themselves.

Arthropods

Identify the characteristics of arthropods.
Describe the five groups of arthropods using examples.
Distinguish between complete and incomplete metamorphosis.
Describe the body plan of insects, arachnids, crustaceans, and myriapods using models.

Other Invertebrates

Describe the three groups of mollusks using examples.
Illustrate the two-part life cycle of cnidarians.
Describe the basic characteristics of echinoderms.
Describe two ways that sponges reproduce.
Identify three kinds of worms.

Simple Organisms

Describe the differences between monerans and protists.
Identify the relationship between human health and protists, monerans, and viruses.

The Human Body

Body Overview

Describe the function of the major organ systems in the human body.
Describe how cells, tissues, organs, and systems are related.

Bones & Muscles

Identify the major bones of the body.
Describe the relationship between muscles and bones.
Distinguish between voluntary and involuntary muscles.

Nerves & Senses

Describe how the nervous system is related to the rest of the body.
Describe how different parts of the brain control different functions.
Explain how each of the five senses gathers information.

Digestion

Identify and describe the function of the parts of the digestive system.
Describe the importance of proper nutrition.

Heart & Lungs

Describe the flow of blood through the heart, veins, and arteries.
Explain the function of the different parts of blood.
Describe the flow of air through the respiratory system.
Describe how the circulatory and respiratory systems interact.

Skin & Immunity

Identify the source of skin color.
Describe the three layers of the skin.
Describe the parts of the immune system and their function.
Explain how traits are inherited.