Course Description: Third-grade science introduces students to experimentation as they journey through the earth and its many miracles. They will begin by learning about the basic needs of all life on Earth. By participating in simple experiments students will explore the water cycle, the weather and its patterns, energy, and the role of plants in the production of oxygen and their importance to human survival. Learners will expand their knowledge through videos, pictures, short readings, projects, and hands-on experiments. Learners will understand that experiments require the use of instruments, observation, recording, and drawing evidence-based conclusions. Grade 3 science provides students with the opportunity to expand their minds and see for themselves the way that science is a part of their everyday lives.

Module	Lesson Title	Objectives
Module 1- Needs of Living Things	Characteristics of Life	• Describe the characteristics of living things. • Differentiate between biotic and abiotic.
	Basic Needs of Plants and Animals	• Describe the basic needs of all living things. • Apply understanding of basic needs to determine the specific needs of various living things.
	The Sun: Life on Earth	• Explain why the sun is necessary for life on Earth. • Investigate what happens if a plant doesn't have sunlight.
Module 2- Plant Functions	Making Food	• Observe a leaf using scientific tools. • Draw the basic process of photosynthesis.
	Respiration and Relationship	• Identify the basic structure of a plant. • Explain the relationship between respiration for animals and plants.
	Protection	• Observe structures that protect plants. • Compare ways different plants protect themselves.

Module	Lesson Title	Objectives
Module 3- Plant Adaptations	Water Transport	• Investigate how plants absorb water. • Draw Conclusions about how water is transported through a plant.
	Reproduction and Growth	• Observe root formation in plants. • Recognize that plants reproduce with or without seeds. • Classify flowering and nonflowering plants.
	Surviving Harsh Climates	• Identify various plants that live in harsh climates. • Describe adaptations plants make to extreme climates. • Apply understanding of plant needs and adaptations to create a unique plant.
	DIY Plant Experiment	• Design an experiment to determine specific needs of a plant. • Compare findings of an experiment with other experiments.
Module 4- Patterns of Earth and Beyond	Seasons	• Explain how Earth's tilt and revolution around the sun applies to seasonal changes. • Display data in charts or graphs to show seasonal patterns.
	Earth, Moon, and Sun	• Construct a model of how the seasons and days are caused. • Make observations about the rotation of the Earth and day/night. • Observe the phases of the moon.
	The Solar Systems and Stars	• Make observations about the Earth's movement and stars apparent movement across the sky. • Describe characteristics of stars. • Identify planets and their positions in the solar system.
Module 5- Tracking the Weather	Types of Weather	• Describe types of weather. • Build a wind vane. • Chart daily weather observations.
	Weather Patterns	• Use tools to collect weather data. • Collect and display data about the wind, temperature, and humidity.

Module	Lesson Title	Objectives
		• Describe daily weather and weather patterns.
	The Daily Weather Report	• Make weather predictions based on data collected. • Create a weather report to apply understanding of weather patterns.
Module 6- Moving Water Around the World	The Water Cycle	• Describe how the water cycle works. • Complete an experiment to investigate the water cycle.
	Evaporation and Condensation	• Observe and record the rate at which water evaporates. • Investigate condensation and record findings.
	States of Water	• Describe changes water goes through in different states. • Differentiate between the three states of water. • Demonstrate how heating and cooling cause changes in properties of water.
	Water Cycle Weather	• Make connections between the water cycle and weather. • Create a news report to apply understanding weather and the water cycle.
Module 7- Exploring Energy	Types of Energy	• Identify different forms of energy and their uses. • Explain how energy causes motion or creates change.
	Mechanical Energy	• Investigate kinetic and potential energy. • Draw conclusions about mechanical energy.
	Electrical Energy	• Explain where electricity can be found. • Describe causes and effects of static electricity.

Module	Lesson Title	Objectives
Module 8- How Light Travels	Properties of Light	• Describe the properties of light. • Investigate, observe, and explain that things that give off light often give off heat.
	Reflection and Absorption	• Investigate how light reflects or is absorbed by materials. • Draw conclusions about how light travels.
	Refraction	• Investigate why light refracts. • Compare and contrast how light travels.
Module 9- Heat Transfer	Creating Heat	• Explain that friction causes heat. • Investigate how friction causes heat.
	How Heat Travels	• Observe how heat transfers. • Explain the different ways heat can be transferred.
	Conductors and insulators	• Explore different materials to determine which are best for conducting or insulating heat. • Compare and contrast conductors and insulators.
	Solar Oven	• Design a solar oven that will use heat from the sun to cook food. • Apply the engineering design process to create the design.
Module 10- Science Rocks	Soil	• Observe and describe different types of soil. • Explain how soil is formed.
	Decomposition	• Observe the process of decomposition. • Explain how natural materials are broken down to enrich the soil.

Module	Lesson Title	Objectives
	Rocks and Minerals	• Identify the properties of rocks and minerals. • Compare and contrast rocks and minerals.
Module 11- Global Climates Zones	Tropical and Temperate	• Describe tropical and temperate climate zones.
	Dry	• Describe dry climate zones.
	Cold and Polar	• Describe cold and polar climate zones. • Identify the five global climate zones.
Module 12- Weather Extremes	Winter Storms	• Identify and describe extreme winter weather conditions.
	Thunderstorms	• Describe hurricanes and tornadoes.
	Flooding and Landslides	• Determine the causes of flooding and landslides.
	Problems with Floods	• Apply the engineering design process to design a solution to a weather problem.
Module 13- Classifying Animals	Vertebrates	• Summarize the characteristics of vertebrates.
	Invertebrates	• Summarize the characteristics of invertebrates. • Compare and contrast vertebrates and invertebrates.

Module	Lesson Title	Objectives
	Classifying Vertebrates and Invertebrates	• Differentiate between vertebrates or invertebrates.
Module 14- Animals With Backbones	Mammals	• Identify and describe characteristics that help mammals survive. • Compare and contrast variations in mammals.
	Birds & Fish	• Identify and describe characteristics that help birds and fish survive. • Compare and contrast variations in birds and fish.
	Reptiles & Amphibians	• Identify and describe characteristics that help reptiles and amphibians survive. • Compare and contrast variations in reptiles and amphibians.
Module 15- Animals Without Backbone	Sea Creatures	• Identify and describe characteristics that help undersea invertebrates survive. • Compare and contrast variations in undersea invertebrates.
	Mollusks and Worms	• Identify and describe characteristics that help mollusks and worms survive. • Compare and contrast variations in mollusks and worms.
	Arthropods	• Identify and describe characteristics that help arthropods survive. • Compare and contrast variations in arthropods.
	Organizing Animals	• Classify animals by specific characteristics. • Cite evidence to show survival advantages for various species.
Module 16- Cycles of Life	Life Cycle of an animal	• Illustrate the life cycle of an animal. • Describe each part of an animal's life cycle.

Module	Lesson Title	Objectives
	Life Cycle of an Insect	• Illustrate the life cycle of an insect. • Describe each part of an insect's life cycle.
	Life Cycle of a Plant	• Illustrate the life cycle of a plant. • Describe each part of a plant's life cycle. • Make connections between all life cycles.
Module 17- Animal Cooperation	A Herd of Elephants	• Observe examples of animals working together. • Describe how elephants cooperate in a herd.
	A Pack of Wolves	• Describe how wolves cooperate in a pack. • Write a story to summarize how animals work together.
	A Pod of Orcas	• Describe how orcas cooperate in a pod. • Construct an argument to support that animals form groups to help them survive.
Module 18- Energy for Plants and Animals	Follow the Energy Flow	• Illustrate various food chains. • Infer patterns in food chains.
	Food Webs	• Illustrate a food web based on a particular ecosystem. • Explain how a food web differs from a food chain.
	Analyzing a Food Web	• Analyze a food web to make predictions about what would happen if one organism was removed.
	Bye-Bye Bees	• Create a food web that includes bees. • Analyze what would happen if bees were removed from the ecosystem completely.