Elementary Science Course

Overview

Aligned with the Disciplinary Core Ideas (DCIs) of the Next Generation Science Standards (NGSS), the content of the elementary science course encompasses four domains of the NGSS: Engineering, Technology, and Application of Science; Earth Science; Life Science; and Physical Science.

Alignment to NGSS Domains

Elementary Science | Course	
Engineering, Technology, and Application of Science	Students learn what science is and what scientists do. Students are introduced to the scientific method and how other tools, like our senses and microscopes, help scientists explore and understand the world around us.
Earth Science	In these units, students learn all about weather and its relationship with climate. This introduction to these two key concepts provides students with an understanding of the water cycle, temperature and how it changes depending on latitude, and the differences between hot, cold, and ocean climates.
Life Science	In these units, which comprise half the grade 3 course, students learn out about the plants and animals found right outside their windows. Over the course of these lessons, students are introduced to the basics of genetics and inheritance, various ecosystems, plant and animal life cycles, as well as some of the fun but “gross” aspects of life on Earth—germs, fungus, and mucus.
Physical Science	These lessons focus on motion. From push and pull forces to inertia and friction, students discover what makes items move and stop. To further this discussion, students are introduced into the world of physicists by exploring how forces of motion work in amusement park rides.

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Elementary Science Units and Lessons

Unit

Science: What's It All About?

Lessons

- What is a Scientist?
- The Scientific Method
- Tools of the Trade
- Changing Explanations
- Myths and Theories: New Understandings Lead to New Possibilities

Summary

This introductory unit teaches students about scientists. They will discover what scientists' study, the basics of the scientific method, and the way scientists change their thinking or ideas based on their experiments and new information.

Unit

Weather Around the World

Lessons

- What Is Weather, Anyway?
- Climates Around the United States
- A Trip to Some of the Hottest Climates on Earth
- Earth's Coldest Climates
- Ocean Climates and Weather Predication

Summary

In this unit, students discover how weather patterns change depending on the climate. Students also explore how places with similar climates can experience different weather.

Unit

Inheritance: It's All in the Genes

Lessons

- Why We Look the Way We Do
- What Color Are Your Eyes? It's Thanks to Your Genes
- A Crash Course in Dragon Genetics
- Curious Pigeons on the Fly
- Designer Dogs: What Marvelous Mixes!

Summary

Students uncover the mystery behind our appearance. This unit teaches students about genes, and the dominant and recessive traits inherited from our parents.

Unit

Exploring Ecosystems

Lessons

- Wetlands
- Beaches: What Lives There?
- Dry and Dusty: Deserts
- Wonders of Tropical Rainforests
- The Tundra

Summary

This unit introduces students to a few of the world's ecosystems.

Unit

Weird World of Plants

Lessons

- Welcome to Whole New World of Weird Plants
- Beware of Killer Plants!
- Who's Tallest, and Who's Smallest?
- Making Sense of Scents
- Plants on the Move

Summary

The world is full of unique and unusual plants and in this unit, students are introduced to some of them. From plants that can "strangle" to some that smell like skunks, students discover that plants can come in all shapes, sizes, and smells.

Unit

Invasive Species

Lessons

- What is an Invasive Species?
- Invasive Species and Evolution
- How Does a Species Invade?
- Species and Their Environments
- Dangers of Invasive Species

Summary

This unit is an introduction to Darwin and his theories of natural selection. Students explore various animal and plant adaptations that allow them to survive and thrive in their environments.

Unit

Life and Death in the Wild

Lessons

- Success and Survival
- Strange Ways to Eat Well
- No Easy Lunch: Creatures That Defend Themselves
- Attraction and Entertainment: Mating in the Wild
- Change Over the Time Can Help Animals to Survive

Summary

This unit explores the circle of life in the animal kingdom. Students discover how some animals hunt their prey, how others avoid being eaten, the ways animals choose mates, and ways that animals have adapted to survive.

Unit

Buzzing about Bees and Wasps

Lessons

- Bees and Wasps: Close Relatives
- Life in a Honey Bee Nest
- What About Wasps?
- Bees and Wasps: Helpful or Harmful?
- Bees Making Mysterious Disappearances

Summary

Students learn more about these buzzing pollinators and why the role they play in nature is so important in this unit.

Unit

Birds of a Feather

Lessons

- What Makes a Bird a Bird?
- Feathers and Flight
- From Dinosaurs to Birds
- A Bird's Life
- Extreme Birds

Summary

This unit is all about birds. Students learn what features all birds have in common, as well as some unique traits.

Unit

Unbalanced Forces

Lessons

- Pushes and Pulls Set Our World In Motion
- Soccer Forces
- Stop That Motion!
- Forces Near and Far: They've Got the Power!

Summary

Motion is the focus of this unit. Students learn about and explore the push and pull forces that set our world in motion.

Unit

Amusement Part Physics

Lessons

- The Science of Ups, Downs, and Loops
- Dropping Fast in Free Fall
- Roller-Coaster Loops and Turns
- Bumper Cars: A Crash Course
- The Swinging Boat Ride

Summary

What makes your bumper car go? How do roller coasters make loops safely? In this unit, students explore some fun science as they explore the physics behind some amusement park rides.

Unit

Our Gross World

Lessons

- That's So Gross…But Helpful!
- Mucus: Icky but Important Slime
- Funky Fungus
- Introducing Arthropods
- Gross and Glorious Germs… and Other Microbes

Summary

Mucus, fungus, and germs. This unit is all about yucky stuff. Students learn how mucus and microbes help our bodies and how fungus and arthropods perform important jobs in our ecosystems.