



Program Transfer Goals

- Ask questions, recognize and define problems, and propose solutions.
- Safely and ethically collect, analyze, and evaluate appropriate data.
- Use models to understand the world.
- Make valid claims and informed decisions based on scientific evidence.
- Effectively communicate scientific reasoning to a target audience.

PACING

1ST 9 WEEKS (8 WEEKS)	2ND 9 WEEKS (8 WEEKS)	3RD 9 WEEKS (10 WEEKS)		4TH 9 WEEKS (10 WEEKS)
UNIT 1 (8 WEEKS) **EXTRA TIME FOR B.O.Y. PROCEDURES AND EXPLICIT TEACHING OF PROCESS SKILLS**	UNIT 2 (6 WEEKS)	UNIT 3 (5 WEEKS)	UNIT 4 (7 WEEKS)	UNIT 5 (10 WEEKS)

Assurances for a Guaranteed and Viable Curriculum [STANDARDIZED ACROSS ALL CONTENT AREAS]

Adherence to this scope and sequence affords every member of the learning community clarity on the knowledge and skills on which each learner should demonstrate proficiency. In order to deliver a guaranteed and viable curriculum, our team commits to and ensures the following understandings:

Shared Accountability: Responding to the Needs of All Learners

- High levels of learning for all students.
- The district and course formative assessments aligned to the standards for this course support educators and learners in monitoring academic achievement and leveraging interventions.

Shared Understanding: Curriculum Design

- The district curriculum design weaves together the elements of content, skills and assessments in order to adhere to curriculum design at the macro and micro level, ensuring vertical alignment.
- The district curriculum incorporates standards, scope and sequence, enduring understandings, essential questions, performance assessments, and recommended resources.

Interdependence: Curriculum Units

Members of the learning community utilize the curriculum units, plan collaboratively, and reflect on results for continuous improvement.

The district curriculum units may be found: <http://tinyurl.com/Coppell-Curriculum>

UNIT 1: Properties of Science and Matter

TIMELINE: 8 WEEKS-GRADING PERIOD 1

Unit Summary: In this unit, learners will discover the practice and procedures for "doing" science; including journaling, science safety, thinking like a scientist, and familiarizing themselves with common science tools. These skills will be spiraled and utilized throughout the rest of the year. By the end of this unit, learners should understand that matter has physical properties and those properties determine how it is described, classified, changed, and used.

■ **Transfer Goal:** *Students will be able to independently use their learning to...*

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Students will know...

- Matter has physical properties that determine how it is described, classified, changed, and used.
- Information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions.

Students will be skilled at...

- Classifying matter by physical properties, including relative temperature, texture, flexibility, and whether material is a solid or a liquid (**Remember the standard does not include gases**).
- Comparing changes in materials caused by heating and cooling.
- Demonstrating that things can be done to materials to change their physical properties such as cutting, folding, sanding, and melting.
- Combining materials that when put together can do things that they cannot do by themselves such as building a tower or a bridge and justify the selection of those materials based on their physical properties.
- Conducting classroom and outdoor observations following home and school safety procedures.
- Conducting scientific inquiry in classroom and outdoor investigations.
- Using age-appropriate tools and models to investigate the natural world.

UNIT 2: Force and Motion

TIMELINE: 6 WEEKS - GRADING PERIOD 1 & 2

Unit Summary: During this unit, learners will deepen their understanding of physical science by investigating the various forms of energy and how the properties of matter and applied force are related. Learners will investigate how light, heat, and sound energy affect an object or the surrounding environment. They will also trace and compare the different types of motion and how magnets can be used to solve problems in everyday life.

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Students will know...

- Forces cause change and energy exists in many forms.
- Information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions.

Students will be skilled at...

- Communicating how heat energy can cause change to specific objects.
- Communicating how sound energy interacts with other objects based on their properties of matter.
- Communicating how light energy can cause change to specific objects.
- Investigating how magnets can be used in everyday life to solve problems.
- Comparing patterns of movement between objects, including sliding, spinning and rolling.

UNIT 3: The Earth's Surface & Materials

TIMELINE: 5 WEEKS- GRADING PERIOD 2 & 3

Unit Summary: In this unit, learners will investigate the earth's materials and how to use and conserve them. We will identify, compare, and learn methods for conservation of water sources. In addition, learners will distinguish between natural and manmade resources. They will learn how to reduce, reuse and properly dispose of natural resources. We will also investigate and compare properties of rocks.

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Students will know...

- The natural world includes earth materials.
- The Earth's surface is constantly changing.
- Information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions.
- Freshwater and saltwater have different properties
- Manmade and natural resources are created from different things

Students will be skilled at...

- Observing and describing rocks by size, texture, and color.
- Identifying and comparing the properties of natural sources of freshwater and saltwater.
- Distinguishing between natural and manmade resources.
- Conducting classroom and outdoor investigations following home and school safety procedures.
- Conducting scientific inquiry in classroom and outdoor investigations.
- Using age-appropriate tools and models to investigate the natural world.
- Strategies for conserving water and other natural resources

UNIT 4: Earth's Weather

TIMELINE: 7 WEEKS- 3RD GRADING PERIOD

Unit Summary: Learners will understand that there are recognizable patterns in the natural world and among objects in the sky. More specifically, learners will investigate the pattern in the lunar cycle and seasonal weather. Learners will analyze, measure, and communicate weather information including temperature, wind conditions, precipitation and cloud coverage in order to identify patterns and make appropriate choices.

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Students will know...

- There are recognizable patterns in the natural world and among objects in the sky.
- Weather patterns affect choices in clothing, activities, and transportation.
- Information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions.

Students will be skilled at...

- Measuring, recording, and graphing weather information, including temperature, wind conditions, precipitation, and cloud coverage, in order to identify patterns in the data.
- Identifying the importance of weather and seasonal information to make choices in clothing, activities and transportation.
- Observing, describing, and recording patterns of objects in the sky, including the appearance of the Moon.
- Conducting classroom and outdoor investigations following home and school safety procedures.
- Conducting scientific inquiry in classroom and outdoor investigations.
- Using age-appropriate tools and models to investigate the natural world.

UNIT 5: Living Things

TIMELINE: 10 WEEKS- 4TH GRADING PERIOD

Unit Summary: In this unit, learners will investigate the basic needs of living things and how their physical characteristics and behaviors help the organism to survive in their environment. Learners will also investigate and describe the interdependent relationship that living things have with various factors in a habitat, including the weather and other organisms. There will be a specific focus on the changes insects undergo as part of their unique life cycle.

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Students will know...

- Living organisms have basic needs that must be met for them to survive within their environment.
- Organisms resemble their parents and have structures and processes that help them survive within their environments.
- Information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions.

Students will be skilled at...

- Identifying the basic needs of plants and animals.
- Identifying factors in the environment, including temperature and precipitation, that affect growth and behavior such as migrations, hibernation, and dormancy of living things.
- Comparing and giving examples of the ways living organisms depend on each other and on their environments such as food chains within a garden, park, beach, lake, and wooded area.
- Observing, recording, and comparing how the physical characteristics and behaviors of animals help them meet their basic needs such as fins help fish move and balance in the water.
- Observing, recording, and comparing how the physical characteristics of plants help them meet their basic needs such as stems carry water throughout the plant.
- Investigating and recording some of the unique stages that insects undergo during their life cycle.
- Conducting classroom and outdoor investigations following home and school safety procedures.