



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

First Nine Weeks	Second Nine Weeks	Third Nine Weeks	Fourth Nine Weeks
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Unit 1: Matter 6 weeks	Unit 2: Force, Motion, Energy 5 weeks	Unit 3: Earth’s Surface 5 weeks	Unit 4: Air & weather 5 weeks	Unit 5: Earth in Space 4 weeks	Unit 6: Changes in Living Things 6 weeks	Unit 7: Where Living Things Live 5 weeks
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Assurances for a Guaranteed and Viable Curriculum

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: Physical Science: Properties of Matter

TIMELINE: 6 WEEKS

Unit Summary:

The learner will be able to classify objects by the properties they are made of. When given a box of assorted items, learners sort and group them according to similar observable properties and justify their reasoning to others. For example they will sort by larger and smaller, heavier and lighter, shape, color, and texture.

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Students will know...

Objects have properties and patterns.

Information and critical thinking are used in scientific problem solving.

Students will be skilled at...

- Classify objects by observable properties of the materials from which they are made such as larger and smaller, heavier and lighter, shape, color, and texture.
- Predict and identify changes in materials caused by heating and cooling such as ice melting, water freezing, and water evaporating.
- Conduct classroom and outdoor investigations following home and school safety procedures.
- Use environmentally appropriate and responsible practices.
- Ask questions and seek answers in classroom and outdoor investigations.
- Use age-appropriate tools and models to investigate the natural world.

UNIT 2: Physical Science: Force, Motion, and Energy

TIMELINE: 5 WEEKS

Unit Summary: The learner will be able to identify and talk about how different kinds of energy are important to everyday life. Learners design a device, such as a toy, that uses energy such as light or sound to communicate over a distance or that uses a variety of forces to cause a variety of types of motion. For the chosen device, the learner effectively communicates how and why it works as it does. As an extension, learners can use tools and materials to design and build their device.

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Students will know...

Force, motion, and energy are related and are part of everyday life.
Information and critical thinking are used in scientific problem solving.

Students will be skilled at...

- Identify and discuss how different forms of energy such as light, heat, and sound are important to everyday life.
- Predict and describe how a magnet can be used to push or pull an object.
- Describe the change in the location of an object such as closer to, nearer to, and farther from.
- Demonstrate and record the ways that objects can move such as in a straight line, zigzag, up and down, back and forth, round and round, and fast and slow.
- Conduct classroom and outdoor investigations following home and school safety procedures.
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UNIT 3: Earth Science: Earth's Surface

TIMELINE: 5 WEEKS

Unit Summary: The learner will observe, describe, and compare soil, and give examples of why rocks, soil, and water are useful. The learners will collect local rocks and minerals and develop a collection. They will sort the rocks and minerals into groups based upon observable properties, such as size, color, and texture, and display them with group names based upon characteristics. The learner will create models of the components and layers (horizons) making up the soil in our area. They will label the models and will explain how soil and the different soil layers form.

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Students will know...

- Objects have properties and patterns.
- The natural world includes rocks, soil, and water that can be observed in cycles, pattern, and systems.
- Information and critical thinking are used in scientific problem solving.

Students will be skilled at...

- Observe, compare, describe, and sort components of soil by size, texture, and color.
- Identify and describe a variety of natural sources of water, including streams, lakes, and oceans.
- Gather evidence of how rocks, soil, and water help to make useful products.
- Conduct classroom and outdoor investigations following home and school safety procedures.
- Use environmentally appropriate and responsible practices.
- Ask questions and seek answers in classroom and outdoor investigations.

- Use age-appropriate tools and models to investigate the natural world.

UNIT 4: Earth Science: Air and Weather

TIMELINE: 5 WEEKS

Unit Summary: The learner will observe and record changes of objects in the sky. They will be able to record weather information, identify characteristics of the seasons of the year. Learners will record weather information daily, including wind observations, for a period of time and observe and record changes in the appearances of objects in the sky and in conditions during day vs. night and through various seasons. Learners will review their collected evidence (observations) and will make claims about the general trends in weather supported by that evidence.

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Students will know...

- Objects have properties and patterns.
- The natural world includes the air around us and objects in the sky.
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Students will be skilled at...

- Record weather information, including relative temperature, such as hot or cold, clear or cloudy, calm or windy, and rainy or icy.
- Observe and record changes in the appearance of objects in the sky such as clouds, the Moon, and stars, including the Sun.
- Identify characteristics of the seasons of the year and day and night.
- Demonstrate that air is all around us and observe that wind is moving air.
- Conduct classroom and outdoor investigations following home and school safety procedures.
- Use environmentally appropriate and responsible practices.
- Ask questions and seek answers in classroom and outdoor investigations.

UNIT 5: Earth Science: Earth in Space

TIMELINE: 5 WEEKS

Unit Summary:

The learner will understand that the Earth's movement in the solar system causes predictable patterns in the appearance of objects in the sky, such as the Moon, stars, and the Sun. Learners will conduct investigations and collect, organize and analyze data comparing each of the following: shadow patterns at various times of the day, temperatures in sunlight as compared with shade for similar surfaces. Learners will reflect on the data collected and will make claims supported by the data as to why the average temperature changes with the changing seasons.

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- The natural world includes the air around us and objects in the sky.
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Students will be skilled at...

- Observe and record changes in the appearance of objects in the sky such as clouds, the Moon, and stars, including the Sun.
- Identify characteristics of the seasons of the year and day and night.
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UNIT 6: Life Science: Changes in Living Things**TIMELINE: 5 WEEKS****Unit Summary:**

The learners will understand where animals live, how they move, and what they eat. They will see changes in the life cycle of plants and animals, compare ways that young animals look like their parents and identify and compare the parts of plants. Learners will observe a habitat such as an aquarium, zoo, or pond and will record ways in which external features of plants and animals relate to where they live, what they eat, and how they move.

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Students will know...

The living environment is composed of relationships between organisms and the life cycles that occur. Organisms resemble their parents and have structures and processes that help them survive within their environments. Information and critical thinking are used in scientific problem solving.

Students will be skilled at...

- Sort and classify living and nonliving things based upon whether or not they have basic needs and produce offspring.
- Investigate how the external characteristics of an animal are related to where it lives, how it moves, and what it eats.

- Identify and compare the parts of plants
- Compare ways that young animals resemble their parents.
- Observe and record life cycles of animals such as a chicken, frog, or fish.
- Conduct classroom and outdoor investigations following home and school safety procedures.
- Use environmentally appropriate and responsible practices.
- Ask questions and seek answers in classroom and outdoor investigations.

UNIT 7: Life Science: Where Living Things Live

TIMELINE: 5 WEEKS

Unit Summary: The learners will gather evidence of interdependence between plants and animals in their environments. Learners will observe a terrarium or aquarium that includes both plants and animals and will draw and label diagrams that explain the ways in which the components within the ecosystem interact and depend upon each other.

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Students will know...

- The living environment is composed of relationships between organisms and the life cycles that occur.
- Organisms resemble their parents and have structures and processes that help them survive within their environments.
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Students will be skilled at...

- Analyze and record examples of interdependence found in various situations such as terrariums and aquariums or pet and caregiver.
- Gather evidence of interdependence among living organisms such as energy transfer through food chains and animals using plants for shelter.
- Investigate how the external characteristics of an animal are related to where it lives, how it moves, and what it eats.
- Conduct classroom and outdoor investigations following home and school safety procedures.
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