



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
Unit 1 6 weeks	Unit 2 6 weeks	Unit 3 5 weeks	Unit 4 6 Weeks
Unit 5 1 week (spread throughout Sept.-December)		Unit 6 6 weeks	Unit 7 6 weeks

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: Properties of Matter (Physical Science)

TIMELINE: 6 WEEKS - GRADING PERIOD 1

Unit Summary: Learners will investigate mixtures and their physical properties. They will describe and classify matter, understand that heating and cooling can change the properties of matter, as well as how solids, liquids, and gases differ.

■ Transfer Goal:

Students will be able to independently use their learning to...

- 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.

Students will know...

- Matter has measurable physical properties that determine how it is classified, changed, and used.
- Ice becomes liquid water, condensation forms on the outside of a glass of ice water, and liquid water being heated to the point of becoming a vapor.
- Information, critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions.

Students will be skilled at...

- Measure, test, and record physical properties of matter, including temperature, mass, magnetism, and the ability to sink or float.
- Describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape and that liquids and gases take the shape of their container.
- Predict, observe, and record changes in the state of matter caused by heating or cooling.
- Explore and recognize that a mixture is created when two materials are combined such as gravel and sand and metal and plastic paper clips.
- Conduct classroom and outdoor investigations following home and school safety procedures and environmentally appropriate practices.
- Use scientific inquiry methods during laboratory and outdoor investigations.
- Use a variety of tools and methods to conduct scientific inquiry.

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

TIMELINE: 6 WEEKS - GRADING PERIOD 2

Unit Summary: Learners will investigate the various types of forces, motion, and energy. They will demonstrate and observe how position and motion can be changed by pushing and pulling objects. They will observe how the forces of magnetism and gravity affect different objects and make inferences and predictions.

■ Transfer Goal:

Students will be able to independently use their learning to...

- 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.

Students will know...

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

Students will be skilled at...

- Explore different forms of energy, including mechanical, light, sound, and heat/thermal in everyday life.
- Demonstrate and observe how position and motion can be changed by pushing and pulling objects such as swings, balls, and wagons.
- Observe forces such as magnetism and gravity acting on objects.
- Conduct classroom and laboratory investigations following home and school safety procedures.
- Use scientific inquiry during laboratory and outdoor investigations.
- Use a variety of tools and methods to conduct science inquiry.

UNIT 3: Earth's Surface (Earth Science)

TIMELINE: 5 WEEKS - GRADING PERIOD 2

Unit Summary: Learners will investigate earthquakes and volcanoes, including how they change the Earth's surface, how they are caused, and how tsunamis are related. They will understand how geologists determine the processes that contributed to the formation of landforms. Finally, they will understand the ways soil is necessary.

■ **Transfer Goal:**

Students will be able to independently use their learning to...

- 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.

Students will know...

- Earth consists of natural resources and its surface is constantly changing.
- Information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions.

Students will be skilled at...

- Explore and record how soils are formed by weathering of rock and the decomposition of plant and animal remains.
- Investigate rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides.
- Explore the characteristics of natural resources that make them useful in products and materials such as clothing and furniture and how resources may be conserved.

- Conduct classroom and outdoor investigations following school and home safety procedures.
- Use scientific inquiry during laboratory and outdoor investigations.
- Use a variety of tools and methods to conduct scientific inquiry.

UNIT 4: Patterns in the Sky (Earth Science)

TIMELINE: 6 WEEKS - GRADING PERIOD 3

Unit Summary: Learners will be able to identify the order of our solar system's planets. Learners will be able to construct a model that demonstrates the moon orbiting the Earth and the Earth revolving around the sun. Learners will be able to describe the Sun as a star that provides light and heat for the Earth.

■ Transfer Goal:

Students will be able to independently use their learning to...

- 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.

Students will know...

- There are recognizable patterns in the natural world and among objects in the sky.
- Information, critical thinking, problem solving, and the contributions of scientists are used in making decisions.
- The Sun is a star composed of gases that provide light and thermal energy.

Students will be skilled at...

- Construct models that demonstrate the relationship of the Sun, Earth, and Moon, including orbits and positions.
- Identify the planets in Earth's solar system and their position in relations to the Sun.
- Conduct classroom and outdoor investigations following school and home safety procedures and environmentally appropriate practices.
- Use scientific inquiry during laboratory and outdoor investigations.
- Use a variety of tools and methods to conduct science inquiry.
- Illustrating and describing the Sun as a star.

UNIT 5: Weather Throughout the Year (Earth Science)

TIMELINE: 1 WEEK (SPREAD THROUGHOUT SEPT TO NOV) - GRADING PERIOD 2ND 9 WEEKS

Unit Summary: Learners will be able to analyze and record weather (ex: temperature, wind direction, precipitation) from various locations. Learners will be able to graph and make conclusions using the data collected.

■ **Transfer Goal:**

Students will be able to independently use their learning to...

- 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.

Students will know...

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

Students will be skilled at...

- Observe, measure, record, and compare day-to-day weather changes in different locations at the same time that include air temperature, wind directions, and precipitation.
- Conduct classroom and outdoor investigations following school and home safety procedures.
- Use scientific inquiry during laboratory and outdoor investigations.
- Use a variety of tools and models to conduct scientific inquiry.

UNIT 6: Interactions and Changes in the Environment (Life Science)

TIMELINE: 6 WEEKS - GRADING PERIOD 4TH 9 WEEKS

Unit Summary: Learners will understand how producers and consumers meet their food energy needs, as well as the original source of energy within food chains. Also, learners will know how environmental changes such as floods and droughts affect the health of an ecosystem.

■ **Transfer Goal:**

Students will be able to independently use their learning to...

- 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.

Students will know that...

- Organisms have characteristics that help them survive.
- Information, critical thinking, and problem solving, and the contributions of scientists are used in making decisions.

Students will be skilled at...

- Describe patterns, cycles, systems, and relationships of organisms within their environments.
- Identify and describe the flow of energy in a food chain and predict how changes in a food chain affect the ecosystem such as removal of frogs from a pond or bees from a field.

- Describe environmental changes such as floods and droughts where some organisms thrive and others perish or move to new locations.
- Conduct classroom and outdoor investigations following school and home safety procedures.
- Use scientific inquiry during laboratory and outdoor investigations.
- Use a variety of tools and methods to conduct scientific inquiry.

UNIT 7: Structures & Life Cycles (Life Science)

TIMELINE: 6 WEEKS - GRADING PERIOD 4TH 9 WEEKS

Unit Summary: Learners will understand how plants get the water and nutrients they need to survive, how organisms grow and develop, and in what ways the structures and functions of plants and animals allow them to survive within their environments.

■ Transfer Goal:

Students will be able to independently use their learning to...

- 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.

Students will know...

- Organisms undergo similar life processes.
- Organisms have structures that help them survive within their environments.
- Information, critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions.

Students will be skilled at...

- Explore how structures and functions of plants and animals allow them to survive in a particular environment.
- Investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs, and lady beetles.
- Conduct classroom and outdoor investigations following school and home safety procedures.
- Use scientific inquiry during laboratory and outdoor investigations.
- Use a variety of tools and methods to conduct scientific inquiry.