



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 10 weeks			Fourth Nine Weeks 11 weeks
Unit 1 Matter 4 weeks	Unit 2 Force, Motion, and Energy 4 weeks	Unit 3 Earth's Surface 5 Weeks	Unit 4 Earth's Resources 3 weeks	Unit 5 Earth's Weather 4 Weeks	Unit 6 Earth and Moon 4 Weeks	Unit 7 Life Processes of Living Things 6 weeks	Unit 8 Energy in Ecosystems 7 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: Physical Science-Matter

TIMELINE: 4 WEEKS

Unit Summary: In this unit, learners will explore how matter changes, as well as classify and measure various properties of matter. They will also represent the natural world using models.

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Students will know...

Matter has measurable physical properties and those properties determine how matter is classified, changed, and used.

Students will be skilled at...

- Measure, compare, and contrast physical properties of matter including size, mass, volume, state, temperature, magnetism, and the ability to sink or float.
- Compare and contrast a variety of mixtures and solutions.
- Conduct classroom and outdoor investigations following home and school safety procedures.
- Use scientific inquiry methods during laboratory and outdoor investigations.
- Use critical thinking and scientific problem solving to make informed decisions.
- Use a variety of tools, materials, equipment, and models to conduct science inquiry.

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

TIMELINE: 4 WEEKS

Unit Summary: In this unit, learners will differentiate among the forms of energy, differentiate between conductors and insulators of thermal and electrical energy, and demonstrate that electricity travels in a closed path.

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Students will know...

Energy exists in many forms and can be observed in cycles, patterns, and systems.

Students will be skilled at...

- Differentiate among forms of energy, including mechanical, sound, electrical, light, and heat/thermal.

- Differentiate between conductors and insulators.
- Demonstrate that electricity travels in a closed path, creating an electrical circuit, and explore an electromagnetic field.
- Design an experiment to test the effect of force on an object such as a push or a pull, gravity, friction, or magnetism.
- Conduct classroom and outdoor investigations following home and school safety procedures.
- Use scientific inquiry methods during laboratory and outdoor investigations.
- Use critical thinking and scientific problem solving to make informed decisions.
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UNIT 3: Earth Science-Earth's Surface

TIMELINE: 5 WEEKS

Unit Summary: In this unit learners will extend their knowledge of soil properties, including color, texture, capacity to retain water, and to support plant growth. They will also learn about slow changes to the Earth's surface caused by weathering, erosion, and deposition.

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Students will know...

Earth consists of useful resources and its surface is constantly changing.

Students will be skilled at...

- Examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants.
- Observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice.
- Conduct classroom and outdoor investigations following home and school safety practices.
- Use scientific inquiry methods during laboratory and outdoor investigations.
- Use critical thinking and scientific problem solving to make informed decisions.
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UNIT 4: Earth Science-Earth's Resources

TIMELINE: 3 WEEKS

Unit Summary: In this unit learners will identify and classify different types of natural resources such as renewable and nonrenewable resources and the importance of conserving them.

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Students will know...

Earth consists of useful resources and its surface is constantly changing.

Students will be skilled at...

- Identify and classify Earth's renewable resources, including air, plants, water, and animals.
- Identify and classify Earth's nonrenewable resources, including coal, oil, and natural gas.
- Explain the importance of conservation.
- Conduct classroom and outdoor investigations following home and school safety procedures and environmentally appropriate and ethical practices.
- Use scientific inquiry methods during laboratory and outdoor investigations.
- Use critical thinking and scientific problem solving to make informed decisions.
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UNIT 5: Earth Science-Earth's Weather

TIMELINE: 4 WEEKS

Unit Summary: In this unit learners will describe and illustrate how the water cycle works and that the sun is the primary energy source that drives it. They will also collect data about weather on an ongoing basis.

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Students will know...

There are recognizable patterns in the natural world and among the Sun, Earth, and Moon system.

Matter has measurable physical properties and those properties determine how matter is classified, changed, and used.

Students will be skilled at...

- Measure and record changes in weather and make predictions using weather maps, weather symbols, and a map key.
- Describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process.

- Predict the changes caused by heating and cooling such as ice becoming liquid water and condensation forming on the outside of a glass of ice water.
- Conduct classroom and outdoor investigations following home and school safety procedures.
- Use scientific inquiry methods during laboratory and outdoor investigations.
- Use critical thinking and scientific problem solving to make informed decisions.
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UNIT 6: Earth Science-Earth & Moon

TIMELINE: 4 WEEKS

Unit Summary: In this unit learners will collect and analyze data to predict patterns of change in the appearance of shadows, the appearance of the moon, and the seasons.

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Students will know...

There are recognizable patterns in the natural world and among the Sun, Earth, and Moon system.

Students will be skilled at...

- Describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process.
- Collect and analyze data to identify sequences and predict patterns of change in shadows, seasons, and the observable appearance of the Moon over time.
- Conduct classroom and outdoor investigations following home and school safety practices.
- Use scientific inquiry methods during laboratory and outdoor investigations.
- Use critical thinking and scientific problem solving to make informed decisions.

UNIT 7: Life Science-Life Processes of Living Things

TIMELINE: 6 WEEKS

Unit Summary: In this unit learners will explore and describe different examples of inherited traits and learned behaviors and they will explore, illustrate, and compare different kinds of plant and animal life cycles.

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Students will know...

Organisms undergo similar life processes and have structures that help them survive within their environment.

Students will be skilled at...

- Explore how adaptations enable organisms to survive in their environment.
- Demonstrate that some likenesses between parents and offspring are inherited, passed from generation to generation, whereas other likenesses are learned.
- Explore, illustrate, and compare life cycles in living organisms such as butterflies, beetles, radishes, or lima beans.
- Conduct classroom and outdoor investigations following home and school safety procedures.
- Use scientific inquiry methods during laboratory and outdoor investigations.
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UNIT 8: Life Science-Energy in Ecosystems

TIMELINE: 7 WEEKS

Unit Summary: In this unit learners will investigate the different needs that producers have that must be met in order to produce their own food and that consumers are dependent upon other organisms for their food. Learners will also describe the flow of energy through food webs and how changes in the ecosystem may impact the food web.

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Students will know...

Investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food.

Students will be skilled at...

- Describe the flow of energy through food webs, beginning with the Sun, and predict how changes in the ecosystem affect the food web such as the fire in a forest.
- Conduct classroom and outdoor investigations following home and school safety procedures.
- Use scientific inquiry methods during laboratory and outdoor investigations.

- Use critical thinking and scientific problem solving to make informed decisions.
- Use a variety of tools, materials, equipment, and models to conduct science inquiry.