

Program Transfer Goals

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

Pacing

Semester One
<u>Quarter One</u>
Introduction: Science Safety/What is a Scientist?/Isaac Newton (8 days) Safety Contracts K.1C, K.1D, K.4B
<u>Unit 1, Topic 1: Objects (18 days)</u> K.6A RTC: K.5E - <u>Energy & Matter</u>
SEPs and Themes (8 days throughout Q1 - see calendar) SEPs: K.1A, K.1C, K.1D, K.1F RTCs: K.5A - Patterns, K.5E - Energy & Matter
<u>Unit 2, Topic 4: Patterns in the Sky (7 days)</u> K.9AB, K.10BC, K.4B RTC: K.5A - <u>Patterns (Report Card Assessment)</u>
<u>Quarter Two</u>
<u>Unit 2, Topic 4: Patterns in the Sky (16 days) - continued</u> K.9AB, K.10BC, K.4B RTC: K.5A - Patterns
SEPs and Themes (4 days between Unit 2 and 3 - see calendar) SEPs: K.1A, K.1C, K.1D, K.1F RTC: K.5B - Cause & Effect (<u>Report Card Assessment</u>)
<u>Unit 3, Topic 2: Magnets and Motion (15 days)</u> K.7A RTC: K.5B - Cause & Effect

Semester Two
<u>Quarter Three</u>
<u>Unit 4, Topic 3: Light and Shadows (14 days)</u> K.8AB RTCs: K.5A - Patterns, K.5B - Cause & Effect
SEPs and Themes (6 days throughout Q3 - see calendar) SEPs: K.1A, K.1C, K.1D, K.1F RTCs: K.5C - Scale, Proportion & Quantity, K.5E - Energy & Matter, K.5D - Systems & System Models
<u>Unit 5, Topic 5: Rocks, Soil, and Water (18 days)</u> K.10A, K.11 RTCs: K.5C - Scale, Proportion & Quantity (<u>Report Card Assessment</u>), K.5E - Energy & Matter, K.5D - Systems & System Models
<u>Quarter Four</u>
<u>Unit 6, Topic 6: Plants (23 days)</u> K.12A, K.13ACD, K.4B RTCs: K.5F - Structure & Function, K.5G - Stability & Change
SEPs and Themes (5 days within Topic 6- see calendar) SEPs: K.1A, K.1C, K.1D, K.1F RTCs: K.5F - Structure & Function, K.5G - Stability & Change
<u>Unit 7, Topic 7: Animals (14 days)</u> K.12B, K.13B RTC: K.5F - Structure & Function (<u>Report Card Assessment</u>)

Assurance 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 elements of science and engineering practices, content, recurring themes and concepts, and assessments through phenomenon 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.

Storyline 1: Objects

Timeline: 18 days

Unit Summary: In this unit, students learn about how different objects can be classified. First, in Experience 1, they will identify observable physical properties of objects, including shape, color, texture, and material. Then, in Experience 2, they will generate ways to classify objects based on physical properties.

Recurring Themes and Concept: Matter and Energy

Storyline 2: Patterns in the Sky

Timeline: 16 days

Unit Summary: In this unit, students explore recognizable patterns in the natural world and among objects in the sky. Additionally, students will understand that the natural world includes earth materials and systems that can be observed. First, in Experience 1, students observe, describe, and draw the objects they see in the day sky and night sky, as well as identify and describe patterns of day and night. Then, in Experience 2, students use weather tools to observe, describe, and record weather measurements where they live. Finally, in Experience 3, students observe and identify different types of weather commonly experienced during each season.

Recurring Themes and Concept: Patterns

Storyline 3: Magnets and Motion**Timeline:** 15 days

Unit Summary: In this unit, students will learn how a magnet can create a force that causes changes in motion and position of some everyday objects. First, in Experience 1 they will describe and predict how a magnet interacts with different materials. Then, in Experience 2, they will use magnets to investigate how they can push and pull different objects.

Recurring Themes and Concept: Cause and Effect**Storyline 4: Light and Shadows****Timeline:** 14 days

Unit Summary: In this unit, students learn that the effects of light can be observed in everyday light. In Experience 1, students communicate the idea that light sources, such as the sun or a flashlight, enable us to see, but objects in dim or bright light can look different. In experience 2, students demonstrate and explain how light can travel through some objects, such as a window or a glass, but it is blocked by other objects, sometimes creating a shadow.

Recurring Themes and Concept: Patterns; and Cause and Effect**Storyline5: Rocks, Soil, and Water****Timeline:** 18 days

Unit Summary: In this unit, students learn about rocks and other natural resources. First, in Experience 1, they observe, describe, and classify rocks by size, shape, color, and texture. Then, in Experience 2, they observe and give examples of how people use rocks, soil, and water every day.

Recurring Themes and Concept: Scale, Proportion, and Quantity; Matter and Energy; Systems and System Models

Storyline 6: Plants**Timeline:** 23 days

Unit Summary: In this unit, students learn about plants. First, in Experience 1, students will identify the structures and functions of plant parts, including roots, stems, leaves, flowers, and fruit. Then, in Experience 2, students will observe, describe, and identify how plants depend on air, sunlight, water, soil nutrients, and space to grow. Finally, in Experience 3, students will identify and record the steps within a simple plant life cycle and identify and compare the parts of young plants that resemble parts of the parent plant.

Recurring Themes and Concept: Structure and Function; Stability and Change

Storyline 7: Animals**Timeline:** 14 days

Unit Summary: In this unit, students learn about animal needs and animal parts. First, in Experience 1, students identify the needs of all animals for air, water, food, space, and shelter. In Experience 2, they investigate which animal parts help them meet those needs.

Recurring Themes and Concept: Structure and Function