

Science GK

EWING PUBLIC SCHOOLS
2099 Pennington Road
Ewing, NJ 08618

Board Approval Date: January 24, 2022
Produced by: Donald Wahlers, District Supervisor

Michael Nitti
Superintendent

In accordance with The Ewing Public Schools' Policy 2230, Course Guides, this curriculum has been reviewed and found to be in compliance with all policies and all affirmative action criteria.
--

Table of Contents

	<u>Page</u>
Course Description and Rationale.....	3
Career Readiness, Life Literacies, and Key Skills.....	4
Unit 1: Weather and Climate	6
Unit 2: Forces and Interactions: Pushes and Pulls	10
Unit 3: Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment	14
Sample Standards and Implementation.....	18

Course Description and Rationale

Students in this course will learn to explain scientific phenomena. The Next Generation Science Standards (NGSS) performance expectations rely on three dimensions of learning to develop student understanding of scientific concepts. Core conceptual ideas are learned by engaging in scientific and engineering practices and considering crosscutting concepts. These three dimensions support students in developing useable knowledge to explain real world phenomena in the sciences.

In science, performance expectations at the elementary school level use three dimensional learning to foster student understanding of science concepts.

Students will use the following eight NGSS Science and Engineering Practices to demonstrate understanding of the disciplinary core ideas and develop critical thinking skills:

- Asking questions (science) and defining problems (engineering)
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using math and computational thinking
- Constructing explanations (science) and designing solutions (engineering)
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

The following seven crosscutting concepts support the development of a deeper understanding of the disciplinary core ideas:

- Patterns
- Cause and effect: mechanism and explanation
- Scale, proportion, and quantity
- Systems and system models
- Energy and matter: flows, cycles and conservation
- Structure and function

The course is a year-long course that meets for 45 minutes per day, on average for half the days of each marking period. The course uses a project-based approach to exploring many concepts. Many of the core ideas will be applied to engineering problems, allowing students to also develop an understanding of the engineering design process. This will further develop problem-solving and critical thinking skills as students work to design, test, solve, and revise solutions to problems. The crosscutting concepts of patterns through structure and function are used as organizing concepts for these disciplinary core ideas. These performance expectations focus on students demonstrating proficiency in developing and using models, using mathematical thinking, and obtaining, evaluating and communicating information; and to use these practices to demonstrate understanding of the core ideas.

The course content is arranged into three units of study:

- Weather and Climate
- Forces and Interactions: Pushes and Pulls
- Interdependent Relationships in Ecosystems: Animals, Plants and Their Environment

Career Readiness, Life Literacies, and Key Skills

During this course, students will work on developing, to an age appropriate level, the following Career Readiness, Life Literacies, and Key Skills:

Disciplinary Concepts:

- Career Awareness and Planning
 - Different types of jobs require different knowledge and skills
- Creativity and Innovation
 - Brainstorming can create new, innovative ideas.
- Critical Thinking and Problem-solving
 - Critical thinkers must first identify a problem then develop a plan to address it in order to effectively solve a problem.
- Digital Citizenship
 - Young people can have a positive impact on the natural world in the fight against climate change.
- Information and Media Literacy
 - Digital tools and media resources provide access to vast stores of information that can be searched.
 - Digital tools can be used to display data in various ways.
 - A variety of diverse sources, contexts, disciplines and cultures provide valuable and necessary information that can be used for different purposes.
 - Information is shared or conveyed in a variety of formats and sources.
- Technology Literacy
 - Digital tools have a purpose.
 - Collaboration can simplify the work an individual has to do and sometimes produce a better product.

Technology Integration

Computer Science and Design Thinking

During this course, students will work on developing, to an age appropriate level, the following Computer Science and Design Thinking Skills:

Disciplinary Concepts and Core Ideas:

- Data & Analysis
 - Individuals collect, use, and display data about individuals and the world around them.
 - Data can be used to make predictions about the world.
- Engineering Design
 - Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions.
 - Limitations (constraints) must be considered when engineering designs.

- Interaction of Technology and Humans
 - Human needs and desires determine which new tools are developed.
 - Technology has changed the way people live and work.
 - Various tools can improve daily tasks and quality of life.
- Effects of Technology on the Natural World
 - The use of technology developed for the human designed world can affect the environment, including land, water, air, plants, and animals.
 - Technologies that use natural sources can have negative effects on the environment, its quality, and inhabitants.
 - Reusing and recycling materials can save money while preserving natural resources and avoiding damage to the environment.

ELA Integration:

- **NJSLS.RI.K.1** With prompting and support, ask and answer questions about key details in a text. (K-ESS2-2, K-ESS3-2 & K-PS2-2)
- **NJSLS.SL.K.3** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. (K-ESS3-2, K-ESS3-2 & K-PS-2)
- **NJSLS.SL.K.5** Add drawings or other visual displays to descriptions as desired to provide additional detail. (K-ESS3-1)
- **NJSLS.W.K.1** Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book. (K-ESS2-2)
- **NJSLS.W.K.2** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. (K-ESS2-2 & K-ESS3-3)
- **NJSLS.W.K.7** Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-ESS2-1, K-LS1-1, K-PS2-1, K-PS3-1 & PS3-2)

Mathematics Integration:

- **NJSLS.MP.2** Reason abstractly and quantitatively. (K-ESS2-1, K-ESS3-1 & K-PS2-1)
- **NJSLS.MP.4** Model with mathematics. (K-ESS2-1, K-ESS3-1 & K-ESS3-2)
- **NJSLS.K.CC** Counting and Cardinality (K-ESS3-1 & K-ESS3-2)
- **NJSLS.K.CC.A** Know number names and the count sequence. (K-ESS2-1)
- **NJSLS.K.MD.A.1** Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. (K-ESS2-1 & K-PS2-1)
- **NJSLS.K.MD.A.2** Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. (K-LS1-1, K-PS2-1, K-PS3-1 & K-PS3-2)
- **NJSLS.K.MD.B.3** Classify objects into given categories; count the number of objects in each category and sort the categories by count. (K-ESS2-1)

Unit 1: Weather and Climate

Recommended Pacing - 30 days

Why Is This Unit Important?

This unit targets two major areas of weather and climate:

- Students are expected to develop understanding of patterns and variations in local weather
- Students are expected to develop understanding of the purpose of weather forecasting to prepare for, and respond to, severe weather.

Disciplinary Core Ideas:

- Sunlight warms Earth's surface. (K-PS3-1),(K-PS3-2)
- Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time. (K-ESS2-1)
- Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events. (K-ESS3-2)
- Asking questions, making observations, and gathering information are helpful in thinking about problems. (*secondary to K-ESS3-2*)

Science and Engineering Practices:

- Ask questions based on observations to find more information about the designed world. (K- ESS3-2)
- Make observations (firsthand or from media) to collect data that can be used to make comparisons. (K-PS3-1)
- Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-ESS2-1)
- Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. (K-PS3-2)
- Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world. (K-ESS3-2)

Cross Cutting Concepts:

- Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (K-ESS2-1)
- Events have causes that generate observable patterns. (K-PS3-1),(K-PS3-2),(K-ESS3-2)

Enduring Understandings:

- The sun is the source of Earth's energy.
 - Weather is a temporary condition at any given location and changes over time.
 - Weather tends to follow patterns over time.
 - Some kinds of severe weather are more likely than others in a given region.
 - By forecasting severe weather, communities can prepare for and respond to these events.
 - Asking questions, making observations, and gathering information are helpful in thinking about problems.
 - Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.
 - Events have causes that generate observable patterns.
 - People encounter questions about the natural world every day.
 - People depend on various technologies in their lives; human life would be very different without technology.
 - Scientists use different ways to study the world.
 - Scientists look for patterns and order when making observations about the world.
- Air moves from areas of high pressure to an area of low pressure.

Essential Questions:

- What is the weather like today?
- How is the weather different from yesterday?
- What is 'severe' weather?
- What types of severe weather are there?
- Which types of severe weather are we likely to experience where we live?
- How can we get ready for severe weather?
- What patterns do we see?

Acquired Knowledge:

- Sunlight warms Earth's surface.
- Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time.
- Some kinds of severe weather are more likely than others in a given region.
- Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.

Acquired Skills:

- Ask questions based on observations to find more information about the world.
- Make observations (firsthand or from media) to collect data that can be used to make comparisons.
- Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.
- Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem.
- Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world.

Assessments:

Formative Assessment:

- Group discussions/presentations:
 - Propose higher order questions
 - Present information to students and ask a question
 - Have students discuss their answers with their peers at their table and discuss together as a group

Summative Assessment:

- Projects:
 - Design a Structure

Benchmark Assessment:

- Students will be assessed on their ability to use and share observations of local weather conditions to describe patterns over time. [Clarification Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.] [Assessment Boundary: Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.]
- Students will be assessed on their ability to ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather. [Clarification Statement: Emphasis is on local forms of severe weather.]
- Students will be assessed on their ability to make observations to determine the effect of sunlight on Earth's surface. [Clarification Statement: Examples of Earth's surface could include sand, soil, rocks, and water] [Assessment Boundary: Assessment of temperature is limited to relative measures such as warmer/cooler.]
- Students will be assessed on their ability to use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area. [Clarification Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.]

Alternative Assessment:

- Modified project requirements and rubrics

Suggested Learning Experiences and Instructional Activities:

Anticipatory Sets:

- The sun warms Earth

In-Class Activities and Laboratory Experiences:

- Warmth from the Sun
- Weather
- Weather Patterns

Closure and Reflection Activities:

- Career Exploration: Weather Expert

Instructional Materials:

Exploring Science Cengage & National Geographic Learning; 2016

Technology Connections:

- <https://climatekids.nasa.gov/menu/play/>
- <http://interactivesites.weebly.com/seasons--weather.html>
- <https://www.google.com/search?q=Kindergarten+Weather+and+Climate+interactive+website&oq=Kindergarten+Weather+and+Climate+interactive+website&aqs=chrome..69i57.11039j0j8&sourceid=chrome&ie=UTF-8>

Unit 2: Forces and Interactions: Pushes and Pulls

Recommended Pacing - 30 days

Why Is This Unit Important?

This unit targets a major area of Forces and Interactions: Pushes and Pulls:

- Students are able to apply an understanding of the effects of different strengths or different directions of pushes and pulls on the motion of an object to analyze a design solution

Disciplinary Core Ideas:

- Pushes and pulls can have different strengths and directions. (KPS2-1),(K-PS2-2)
- Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (K-PS2-1),(K-PS2-2)
- When objects touch or collide, they push on one another and can change motion. (K-PS2-1)
- A bigger push or pull makes things speed up or slow down more quickly. (secondary to K-PS2-1)
- A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions. (secondary to KPS2-2)

Science and Engineering Practices:

- With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2-1)
- Analyze data from tests of an object or tool to determine if it works as intended. (K-PS2-2)

Cross Cutting Concepts:

- Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1),(K-PS2-2)

Enduring Understandings:

- Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.
- When objects touch or collide, they can change each others' motion.
- A bigger push or pull makes things change quicker.
- Science uses different ways to study the world.
- A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.
- Simple tests can be designed to gather evidence to support or refute student ideas about causes.

Essential Questions:

- What is motion?
- How can you change an object's speed?
- How can you change the direction of motion of an object?
- What happens if you push or pull an object harder?
- What happens when objects collide?

Acquired Knowledge:

- Pushes and pulls can have different strengths.
- Pushes and pulls can have different directions.
- Pushing or pulling on an object can change the speed of its motion and can start or stop it.
- Pushing or pulling on an object can start or stop it.
- Pushing or pulling on an object can change the direction of its motion.
- When objects touch or collide, they push on one another.

Acquired Skills:

- With guidance, plan and conduct an investigation in collaboration with peers.
- Analyze data from tests of an object or tool to determine if it works as intended.

Assessments:

Formative Assessment:

- Group discussions/presentations:
 - Propose higher order questions
 - Present information to students and ask a question
 - Have students discuss their answers with their peers at their table and discuss together as a group

Summative Assessment:

- Projects:
 - Plan and Conduct an Investigation
 - Analyze Data

Benchmark Assessment:

- Students will be assessed on their ability to plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. [Clarification Statement: Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.] [Assessment Boundary: Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.]
- Students will be assessed on their ability to analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull. [Clarification Statement: Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn.] [Assessment Boundary: Assessment does not include friction as a mechanism for change in speed.]

Alternative Assessment:

- Modified project requirements and rubrics

Suggested Learning Experiences and Instructional Activities:

Anticipatory Sets:

- How Things Move

In-Class Activities and Laboratory Experiences:

- Hard and Soft Pushes
- Weak and Strong Pulls
- Starting and Stopping
- Changing Direction
- Changing Speed

Closure and Reflection Activities:

- Career Exploration: Pilot

Instructional Materials:

Exploring Science Cengage & National Geographic Learning; 2016

Technology Connections:

- <http://www.learningliftoff.com/kindergarten-science-learning-game-push-pull/#.WTAWJZLyvcs>
- <https://www.bbc.co.uk/bitesize/topics/zvpp34j>
- <https://www.weareteachers.com/simple-physics-experiments-for-kids-pushing-and-pulling/>
- <https://www.topmarks.co.uk/Interactive.aspx?cat=67>

Unit 3: Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment

Recommended Pacing - 30 days

Why Is This Unit Important?

This unit targets a major area of Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment:

- Students are expected to develop understanding of what plants and animals (including humans) need to survive and the relationship between their needs and where they live.

Disciplinary Core Ideas:

- All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1)
- Plants and animals can change their environment. (K-ESS2-2)
- Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1)
- Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (secondary to K-ESS2-2),(K-ESS3-3)
- Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (secondary to K-ESS3-3)

Science and Engineering Practices:

- Use a model to represent relationships in the natural world. (K-ESS3-1)
- Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1)
- Construct an argument with evidence to support a claim. (K-ESS2-2)
- Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas. (K-ESS3-3)

Cross-Cutting Concepts:

- Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1)
- Events have causes that generate observable patterns. (K-ESS3-3)
- Systems in the natural and designed world have parts that work together. (K-ESS2-2),(K-ESS3-1)

Enduring Understandings:

- Plants and animals can change their environment.
- Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.
- Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.
- Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.
- Patterns in the natural and human designed world can be observed and used as evidence.
- Events have causes that generate observable patterns.
- Systems in the natural and designed world have parts that work together.
- Scientists look for patterns and order when making observations about the world.

Essential Questions:

- What do animals need to live and grow?
- What do plants need to live and grow?
- Where do animals live and why do they live there?
- What can plants and animals change about where they live and grow?
- What do humans need to live and grow?
- What can humans change about where they live and grow?

Acquired Knowledge:

- All animals need food in order to live and grow.
- Animals obtain their food from plants or from other animals.
- Plants need water and light to live and grow.

Acquired Skills:

- Use a model to represent relationships in the natural world.
- Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.
- Construct an argument with evidence to support a claim.
- Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas.

Assessments:

Formative Assessment:

- Group discussions/presentations:
 - Propose higher order questions
 - Present information to students and ask a question
 - Have students discuss their answers with their peers at their table and discuss together as a group

Summative Assessment:

- Projects:
 - Observe
 - Share Solutions

Benchmark Assessment:

- Students will be assessed on their ability to use observations to describe patterns of what plants and animals (including humans) need to survive. [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.]
- Students will be assessed on their ability to construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. [Clarification Statement: Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.]
- Students will be assessed on their ability to use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. [Clarification Statement: Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.]
- Students will be assessed on their ability to communicate solutions that will reduce the impact of climate change and humans on the land, water, air, and/or other living things in the local environment. [Clarification Statement: Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.]

Alternative Assessment:

- Modified project requirements and rubrics

Suggested Learning Experiences and Instructional Activities:

Anticipatory Sets:

- Living Things?

In-Class Activities and Laboratory Experiences:

- Make a Model: Living Things Change the Places They Live
- Explain Change: People Using Resources
- Sustainability Project – Be A Recycling Superhero

Closure and Reflection Activities:

- Career Exploration: Wildlife Expert

Instructional Materials:

Exploring Science Cengage & National Geographic Learning; 2016

Technology Connections:

- <http://ngss-k-5-ausd.weebly.com/kinterdependent-relationships-in-ecosystems.html>
- <http://www.pbs.org/parents/education/science/activities/preschooler-kindergarten/backyard/>
- Climate Change: <https://www.youtube.com/watch?v=WkvPdUtYhX8>

Sample Standards Integration

Career Readiness, Life Literacies, and Key Skills

9.4.2.IML.2

For example, in Unit 2, students will have to communicate the results of their data analysis on whether or not their design solution worked to change the speed and direction of an object.

9.4.2.CT.1

For example, in Unit 3, students will have to communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

9.4.2.CI.2

For example, in Unit 1, students will use tools and materials to design and build a structure that will reduce the warming effect of sunlight in an area.

9.4.2.CT.2

For example, in Unit 2, students will have to plan, conduct, and analyze the results of their data on whether or not they were successful in their goal of changing the speed and direction of an object.

8.1 Computer Science and Design Thinking

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

For example; in Unit 3, students will access, manage, evaluate, and synthesize information on humans' impact on land, water, air, and/or other living things in the local environment to plan and design a solution that will reduce these impacts.

Interdisciplinary Connection

NJSLS.RI.K.1 With prompting and support, ask and answer questions about key details in a text. (K-ESS2-2, K-ESS3-2 & K-PS2-2)

NJSLS.SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood. (K-ESS3-2, K-ESS3-2 & K-PS-2)

NJSLS.SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail. (K-ESS3-1)

NJSLS.W.K.1 Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book. (K-ESS2-2)

NJSLS.W.K.2 Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. (K-ESS2-2 & K-ESS3-3)

NJSLS.W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-ESS2-1, K-LS1-1, K-PS2-1, K-PS3-1 & PS3-2)

These standards are met through the completion of the benchmark performances in all 3 units. For example, in Unit 1, students will include written claims supporting the design's effectiveness in reducing the warming effect of sunlight on an area.

NJSLS.MP.2 Reason abstractly and quantitatively. (K-ESS2-1, K-ESS3-1 & K-PS2-1)

NJSLS.MP.4 Model with mathematics. (K-ESS2-1, K-ESS3-1 & K-ESS3-2)

These standards are met through the completion of the benchmark performances in all 3 units. For example, in Unit 3, students will have to reason both abstractly and quantitatively in regards to what they observe and research regarding the needs of certain plants and animals and their environment. They then have to model, both qualitatively as well as quantitatively the relationships they discover.

NJSLS.K.CC Counting and Cardinality (K-ESS3-1 & K-ESS3-2)

NJSLS.K.CC.A Know number names and the count sequence. (K-ESS2-1)

These standards are met through the completion of the benchmark performances in all 3 units. For example, in Unit 1, students will have to track observations in weather patterns analyzing the quantitative amounts of the various types they observe.

NJSLS.K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. (K-ESS2-1 & K-PS2-1)

NJSLS.K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. (K-LS1-1, K-PS2-1, K-PS3-1 & K-PS3-2)

NJSLS.K.MD.B.3 Classify objects into given categories; count the number of objects in each category and sort the categories by count. (K-ESS2-1)

These standards are met through the completion of the benchmark performances in all 3 units. For example, in Unit 2, students will conduct an investigation measuring data to determine speed and direction of objects.