Kindergarten Science Unit 1: Basic Needs of Living and Human Things

Unit Summary: In this unit of study, students develop an understanding of what plants, animals and humans need to survive and the relationship between their needs and where they live.

Concepts & Vocabulary:

- All living things breathe, reproduce, move, and grow.
- Plants need air, water, light and space to survive.
- Animals need air, water, food and a home to survive.
- A habitat is where an animal lives.
- Animals live in an area where all of their needs can be met.
- Plants and animals can change the land to meet their needs.
- Plants and animals can change their environment.
- Living things need water, air, resources from land to survive.
- Humans use natural resources from the environment.

Stage 1: Desired Results (Also see Disciplinary Core Ideas below)

Performance Expectations: (PE) (Established Goals / Content Standards)

K-LS1-1 Use observations to describe patterns of what plants and animals 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.]

K-ESS3-1 Use a model to represent the relationship between the needs of different plants and animals 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.]

K-ESS2-2 Construct an argument supported by evidence for how plants and animals 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.]

K-ESS3-3 Communicate solutions that will reduce the impact of 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.]

K-2 ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out Investigations ● Make observations (firsthand or	**LS1.C: Organization for Matter and Energy Flow in Organisms** ● All animals need food in order	**Patterns** ● Patterns in the natural and human designed world can be

from media) to collect data that can be used to make comparisons. (K-PS3-1) **Analyzing and Interpreting Data** ● Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1) **Developing and Using Models** ● Use a model to represent relationships in the natural world. (K-ESS3-1) Engaging in Argument from Evidence ● Construct an argument with evidence to support a claim. (K-ESS2-2)	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) **ESS3.A: Natural Resources** ● 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) **ESS2.E: Biogeology** ● Plants and animals can change their environment. (K-ESS2-2)	observed and used as evidence. (K-LS1-1) **Systems and System Models** ● Systems in the natural and designed world have parts that work together. (K-ESS3-1), (K-ESS2-2)Connections to Nature of Science Scientific Knowledge is Based on Empirical Evidence Scientists look for patterns and order when making observations about the world. (K-LS1-1)

Enduring Understandings Students will understand that: ● Humans use natural resources from the environment. ● Plants, animals and their surroundings make a system, they work together to meet needs. ● Living things live in places that have what they need to survive.	**Essential Questions** *What do plants and animals need to survive? *How do plants and animals change the environment to meet their needs?

Questions that Guide Lessons:

- How can you tell that something is living or nonliving?
- What is a habitat?
- What are the different types of habitats and name their characteristics?
- What is hibernation?
- How can plants and animals change the land?
- What is the relationship between animals and what they eat, and how does that determine where they live?
- What features help plants and animals survive in different environments?
- How are these features used?
- How do plants and animals depend on the land, air, and water and survive?

Stage 2 – Model Assessments	
Summative Performance Task(s) ● Students will model the relationships between the needs of different plants and animals and the places they live. (drawing, model, etc.) They will describe patterns of what plants and animals need to survive	**Formative Evidence:** Through what other evidence will students demonstrate achievement of the desired results? ● (Suggested) 2-4 question oral comprehension checks

(chart, drawing, etc.) and how they can change the environment to meet their needs (create shelter, move location, etc.) **Audience:** ● Peers, teacher, self-reflection **Criteria:** ● Teacher observation	● Teacher observation ● Class Discussion/ Anecdotal notes ● (possible) Mystery Science end-of-mystery assessment

Stage 3 – Learning Plan Resources and Activities
Suggested Resources for Planning: ● **Mystery Science: Plant and Animal Secrets Mysteries 1-6** ● **Tower Garden lessons** ● **Kindergarten Science Unit 1 Suggested Activities Folder** ● **Reading A to Z Non-Fiction Anchor Texts** ● **Needs of Living Things Vocabulary** ● **Why Do Sunflowers Follow the Sun? Phenomena Video** ● **Exploring Microhabitats Phenomena Video**
Learning Activities: Mystery Science, njctl.org, Scholastic News, STEM lesson: Design a shelter for an animal using certain constraints and limitations based on what they learned. Needs of an Animal Song

Suggested Methods: (The following methods anchor learning with a purpose, mitigating the “why do I need to know this” questions.)

- Phenomena based learning
- Problem Based Learning (PBL)
- Inquiry Based Learning
- Case studies
- Engaging in Argument w/ evidence

Kindergarten Science Unit 2: Pushes and Pulls

Unit Summary: During this unit of study, students 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. The crosscutting concept of cause and effect is called out as the organizing concept for this disciplinary core idea. Students are expected to demonstrate grade-appropriate proficiency in planning and carrying out investigations and analyzing and interpreting data. Students are also expected to use these practices to demonstrate understanding of the core ideas.

Concepts and Vocabulary:

- Pushes and Pulls can have different strengths and directions.
- When objects touch or collide, they push on one another and can change motion.

Stage 1 – Desired Results

Performance Expectations: (PE) (Established Goals / Content Standards)

(K-PS2-1) 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.]

(K-PS2-2) 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.]

(K-2-ETS1-3) Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

Unit Summary: During this unit of study, students 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. The crosscutting concept of cause and effect is called out as the organizing concept for this disciplinary core idea. Students are expected to demonstrate grade-appropriate proficiency in planning and carrying out investigations and analyzing and interpreting data. Students are also expected to use these practices to demonstrate understanding of the core ideas.

This unit is based on K-PS2-1, K-PS2-2, and K-2 ETS1-3.

Enduring Understandings	Essential Questions
Students will understand that: ● Pushing or pulling on an object can change the speed or direction of its motion and start or stop it. ● A larger push or pull makes things go faster.	● How does pulling or pushing on an object change the speed or direction of its motion and start or stop it? ● What tools can we use to increase the speed of an object or make the object turn?

Questions that guide lessons:

- Can pushes and pulls have different strengths and directions?
- What happens when objects touch or collide?
- What does a bigger push or pull do to an object?

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out Investigations ● With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2- 1) **Analyzing and Interpreting Data** ● Analyze data from tests of an object or tool to determine if it works as intended. (K-PS2-2) **Asking Questions and Defining Problems** ● Ask questions based on observations to find more information about the natural and/or designed world(s). (K-2-ETS1-1) ● Define a simple problem that can be solved through the development of a new or improved object or tool. (K-2-ETS1-1) **Developing and Using Models** ● Develop a simple model based on evidence to represent a proposed object or tool. (K-2-ETS1-2)	**PS2.A: Forces and Motion** ● Pushes and pulls can have different strengths and directions. (K-PS2-1), (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) PS2.B: Types of Interactions ● When objects touch or collide, they push on one another and can change motion. (K-PS2-1) PS3.C: Relationship Between Energy and Forces ● A bigger push or pull makes things speed up or slow down more quickly. (secondary to K-PS2-1) ETS1.A: Defining Engineering Problems ● 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 K-PS2-2) ETS1.A: Defining and Delimiting Engineering Problems ● A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2-ETS1-1) ● Asking questions, making observations, and gathering information are helpful in thinking about problems.	**Cause and Effect** ● Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1), (K-PS2-2) **Structure and Function** ● The shape and stability of structures of natural and designed objects are related to their function(s). (K-2-ETS1-1) **Connections to the Nature of Science Scientific Investigations Use a Variety of Methods** ● Scientists use different ways to study the world. (K-PS2-1)

	(K-2-ETS1-1) ● Before beginning to design a solution, it is important to clearly understand the problem. (K-2-ETS1-1)	
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Stage 2 – Assessment Evidence	
Summative Performance Task(s): ● Students will model the relationships between pushes and pulls. (drawing, model, etc.) to include at least three real life examples and demonstrate how pushing and pulling effects an object. Students will plan and conduct an investigation to compare the effects of different strengths or directions of pushes and pulls on the motion of an object. Students will determine if the design solution worked as intended. **Audience:** ● Peers, teacher, self-reflection **Criteria:** ● Teacher observation	**Formative Evidence:** Through what other evidence will students demonstrate achievement of the desired results? ● (Suggested) 2-4 question oral comprehension checks ● Teacher observation ● Class Discussion/ Anecdotal notes ● (possible) Mystery Science end-of-mystery assessment ● PBL activity (car tracks, roller coaster design) ●

Stage 3 – Learning Plan / Road Map (Design to make as student centered as possible)
Suggested Resources for Planning: **Mystery Science** **Unit 2 Pushes and Pulls Suggested Activities Folder** **Force and Motion Mentor Texts** **Phenomena Videos** **Pushes & Pulls Vocabulary**

Learning Activities:
Mystery Science, njctl.org, Scholastic News,Teaching Engineering
Create a Backscratcher
Intro to Creating Inventions
Create a Crash Test Car and Test
STEAM: Creating Art Using Force & Motion
4 Simple Experiments to Introduce Physics

Suggested Methods: (The following methods anchor learning with a purpose, mitigating the “why do I need to know this” questions.)

- Phenomena based learningC
- Problem Based Learning (PBL)
- Inquiry Based Learning
- Case studies
- Engaging in Argument w/ evidence

Kindergarten Science Unit 3: Weather

Unit Summary: In this unit of study, students develop an understanding of patterns and variations in local weather and the use of weather forecasting to prepare for and respond to severe weather. The crosscutting concepts of patterns; cause and effect; interdependence of science, engineering, and technology; and the influence of engineering, technology, and science on society and the natural world are called out as organizing concepts for the disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in asking questions, analyzing and interpreting data, and obtaining, evaluating, and communicating information. Students are also expected to use these practices to demonstrate understanding of the core ideas.
Note: Unlike other science units, the Weather unit is intended to become a part of the classroom routine throughout the year. Some weather patterns are not obvious unless the students collect data over long periods of time. For example, in some locations it is sunnier during some parts of a year than others. The temperature outside will change from fall, winter, spring, to summer. Also, during some periods, the weather data should be recorded in the morning and then again in the afternoon. Students will be able to observe patterns in temperature through the course of the day.

Concepts and Vocabulary:

- There are different types of weather: sunny, cloudy, rainy, windy and snowy.
- Temperature is the measure of how warm or cold the air is.
- A thermometer is used to measure the temperature.
- How to track weather over a period of time.
- There are different types of severe weather.
- Weather scientists help us prepare for severe weather.
- We can prepare for severe weather.

Stage 1 – Desired Results

Performance Expectations: (PE) (Established Goals / Content Standards)

• K-ESS2-1 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.]

*** K-ESS3-2 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.]

*** K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.**

Enduring Understandings Students will understand that: • How to dress appropriately for different weather conditions. • Weather follows patterns over time. • Where you live can determine what types of severe weather occurs.	**Essential Questions** • EQ: *Why do we dress differently for different weather? *What kind of pattern does the weather where we live follow? *What regions have certain types of severe weather?

Questions that guide lessons:

- What are the different types of weather?
- What is temperature and what tool do we use to measure the temperature?
- How can we track the weather?
- What types of severe weather can you name?
- How do we prepare for severe weather?

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data • Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-ESS2-1) Asking Questions and Defining Problems • Ask questions based on observations to find more information about the designed world. (K-ESS3-2) • Ask questions based on observations to find more information about the natural and/or designed world(s). • Define a simple problem that can be solved through the development of a new or improved object or tool. (K-2-ETS1-1) Obtaining, Evaluating, and Communicating Information • Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world. (K-ESS3-2)	**ESS2.D: Weather and Climate** • 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. (KESS2-1) ESS3.B: Natural Hazards • 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) ETS1.A: Defining and Delimiting an Engineering Problem • A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2-ETS1-1)	**Patterns** • Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (K-ESS2-1) Cause and Effect • Events have causes that generate observable patterns. (K-ESS3-2) • Connections to Nature of Science Science Knowledge is Based on Empirical Evidence • Scientists look for patterns and order when making observations about the world. (K-ESS2-1) • Connections to Engineering, Technology, and Applications of Science Interdependence of Science, Engineering, and Technology

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Stage 2 – Assessment Evidence	
Summative Performance Task(s) ● Students will model the relationships between weather and seasons (drawing, model, etc.) to include at least three things that change depending on the weather (clothing, outdoor activities, planning). **Audience:** ● Peers, teacher, self-reflection **Criteria:** ● Teacher observation, written evidence	**Formative Evidence:** Through what other evidence will students demonstrate achievement of the desired results? ● (Suggested) 2-4 question oral comprehension checks ● Teacher observation ● Class Discussion/ Anecdotal notes ● (possible) Mystery Science end-of-mystery assessment

Stage 3 – Learning Plan / Road Map (Design to make as student centered as possible)
Suggested Resources for Planning: Kindergarten Science Unit 3 Suggested Activities Folder Reading A to Z Non-Fiction Anchor Texts Phenomena Videos: Weather Folklore Lightning Blizzard
Learning Activities: Ten Freaky Forces of Nature Weather Videos for Kids **Suggested Methods**: (The following methods anchor learning with a purpose, mitigating the “why do I need to know this” questions.) ● Phenomena based learning ● Problem Based Learning (PBL) ● Inquiry Based Learning ● Case studies

● Engaging in Argument w/ evidence

Kindergarten Science Unit 4: Effects of the Sun

Unit Summary: During this unit of study, students apply an understanding of the effects of the sun on the Earth's surface. The crosscutting concepts of cause and effect and structure and function are called out as organizing concepts for this disciplinary core idea. Students are expected to demonstrate grade-appropriate proficiency in developing and using models; planning and carrying out investigations; analyzing and interpreting data; and designing solutions. Students are also expected to use these practices to demonstrate understanding of the core ideas.

Stage 1 – Desired Results

Performance Expectations: (PE) (Established Goals / Content Standards)

K-PS3-1 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.]
K-PS3-2 Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on Earth's surface. [Clarification Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.]
K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

Enduring Understandings	**Essential Questions**
Students will understand • The sun is a star and warms Earth's surfaces in different amounts. • Shade is an area where the sun is blocked. • It is cooler in the shade than in the sun. • Earth spins which gives us night and day.	• EQ: *How does the sun warm different surfaces and why? *How can we reduce the warming effect of the sun? *How does the sun give us daytime?

Questions that guide lessons:

- What are the characteristics of the sun?
- What does the sun do for the earth?
- Does the sun warm water or sand more? Why?
- What is shade?

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out	**PS3.B: Conservation of Energy**	**Cause and Effect**

Investigations ● Make observations (firsthand or from media) to collect data that can be used to make comparisons. (K-PS3-1) **Constructing Explanations and Designing Solutions** ● 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) **Asking Questions and Defining Problems** ● Ask questions based on observations to find more information about the natural and/or designed world(s). (K-2-ETS1-1) ● Define a simple problem that can be solved through the development of a new or improved object or tool. (K-2-ETS1-1)	**and Energy Transfer** ● Sunlight warms Earth's surface. (K-PS3-1),(K-PS3- 2) **ETS1.A: Defining and Delimiting Engineering Problems** ● A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2-ETS1-1) ● • Asking questions, making observations, and gathering information are helpful in thinking about problems. (K-2-ETS1-1) ● Before beginning to design a solution, it is important to clearly understand the problem. (K2-ETS1-1)	● Events have causes that generate observable patterns. (K-PS3-1),(K-PS3-2) Structure and Function • The shape and stability of structures of natural and designed objects are related to their function(s). (K-2-ETS1-2) **Connections to Nature of Science Scientific Investigations Use a Variety of Methods** ● Scientists use different ways to study the world. (K-PS3-1)
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Stage 2 – Assessment Evidence	
Summative Performance Task(s) ● Students will model the effects of the sun through several real life experiments, including a melting station, evaporation, and clothing choices Save a snowman STEM activity Build a UV sensitive animal a shelter from the sun Homemade sundial **Audience:** ● Peers, teacher, self-reflection **Criteria:** ● Teacher observation	**Formative Evidence:** Through what other evidence will students demonstrate achievement of the desired results? ● (Suggested) 2-4 question oral comprehension checks ● Teacher observation ● Class Discussion/ Anecdotal notes ● (possible) Mystery Science end-of-mystery assessment ● PBL activity -Will It Melt?

Stage 3 – Learning Plan / Road Map (Design to make as student centered as possible)

Suggested Resources for Planning:
Kindergarten Science Unit 4 Suggested Activities Folder
Reading A to Z Non-Fiction Anchor Texts
Phenomena photos & videos

Learning Activities:

STEM Activity:

Create a doghouse to protect your puppy from the sun
How to make a sundial
Art extension after melting crayons
How does the sun warm the earth's surfaces
7 STEM activities on effects of the sun
Sun Protection Activity

Suggested Methods: (The following methods anchor learning with a purpose, mitigating the "why do I need to know this" questions.)

- Phenomena based learning
- Problem Based Learning (PBL)
- Inquiry Based Learning
- Case studies
- Engaging in Argument w/ evidence

Kindergarten Science
Course Compendium

UNITS OF STUDY*

Unit 1- *Basic Needs of Living and Human Things*
Unit 2- *Pushes and Pulls*
Unit 3- *Weather*
Unit 4- *Effects of the Sun*

INTERDISCIPLINARY CONNECTIONS

ELA Standards:

- RI.K.1. With prompting and support, ask and answer questions about key details in a text.
- RI.K.2. With prompting and support, identify the main topic and retell key details of a text.
- RI.K.3. With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text
- 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, state an opinion or preference about the topic or book. (K-ESS2-2)
- W.K.1 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)
- W.K.2 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-LS1-1)
- W.K.7 Add drawings or other visual displays to descriptions as desired to provide additional detail. (K-ESS3-1)
- W.K.6.With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (K-2-ETS1-1)
- W.K.8. Recall information from experiences or gather information from provided sources to answer a question. (K-2-ETS1-1)
- SL.K.5 With prompting and support, ask and answer questions about key details in a text. (K-ESS2-2) R.K.1

Math Standards

- 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)
- MP.2 Reason abstractly and quantitatively. (K-ESS3-1) MP.2
- MP.4 Model with mathematics. (K-ESS3-1) MP.4
- MP.5. Use appropriate tools strategically. (K-2-ETS1-1)
- K.CC. Counting and Cardinality (K-ESS3-2)
- K.CC.A. Know number names and the count sequence. (K-ESS2-1)
- 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)

**See individual units for Pacing Guide, NJSLS Standards, Transfer Skills, Enduring Understandings, Essential Questions, Learning Objectives, Key Vocabulary, Skills, Resources, & Assessments*

- 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)
- 2. MD. D.10. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (K-2-ETS1-1)

- K.CC Counting and Cardinality (K-ESS3-1) K.CC

21st Century Life and Careers

- **CRP2**. Apply appropriate academic and technical skills.
- **CRP4**. Communicate clearly and effectively and with reason.
- **CRP6.** Demonstrate creativity and innovation.
- **CRP11**. Use technology to enhance productivity.
- **9.2.4.A.3** Investigate both traditional and nontraditional careers and relate information to personal likes and dislikes.
- **9.2.4.A.4** Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
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Technology

- **8.2.2.B.4** Identify how the ways people live and work has changed because of technology.
- **8.2.2.C.1** Brainstorm ideas on how to solve a problem or build a product.

GENERAL CONSIDERATIONS FOR DIVERSE LEARNERS		
English Language Learners	**Students Receiving Special Education Services**	**Advanced Learners**
• WIDA Can Do Descriptors for Kindergarten* • WIDA Essential Actions Handbook • FABRIC Paradigm • Wall Township ESL Grading Protocol *Use WIDA Can Do Descriptors in coordination with Student Language Portraits (SLPs). **Potential Accommodations for ELLs** • Personal glossary • Text-to-speech • Extended time • Simplified / verbal instructions • Frequent breaks • Small group/One to one	• New Jersey Tiered System of Supports • National Center on Universal Design for Learning - About UDL • UDL Checklist • UDL Key Terms Students within this class receiving Special Education/Section 504 programming have specific goals and objectives, as well as accommodations and modifications outlined within their Individualized Education Plans (IEP)/504 Plans due to an identified disability and/or diagnosis. In addition to exposure to the general education curriculum, instruction is differentiated based upon the student's needs. The IEP/504 Plan acts as a supplemental curriculum guide inclusive of instructional strategies that support each specific learner. **Potential Accommodations for Special Education**	• Knowledge and Skill Standards in Gifted Education for All Teachers • Pre-K-Grade 12 Gifted Programming Standards • Gifted Programming Glossary of Terms **Potential Accommodations for Advanced Learners** • Use of high level academic vocabulary/texts • Problem-based learning • Pre-assess to condense curriculum • Interest-based research • Authentic problem-solving • Homogeneous grouping opportunities

**See individual units for Pacing Guide, NJSLS Standards, Transfer Skills, Enduring Understandings, Essential Questions, Learning Objectives, Key Vocabulary, Skills, Resources, & Assessments*

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- Additional time
- Review of directions
- Student restates information
- Extra visual and verbal cues and prompts
- Preferential seating
- Verbal and visual cues regarding directions and staying on task
- Checklists
- Immediate feedback

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Presentation accommodations:
- Listen to audio recordings instead of reading text
- Pre-teach unknown vocabulary through pictures or videos, and relate to prior knowledge
- Work with fewer items per page and/or materials in a larger print size
- Use a visual blocker
- Use visual presentations of verbal material, such as word webs and visual organizers
- Be given a written list of instructions/picture cues

Response accommodations:
- Give responses in a form (oral or written) that's easier for him/her
- Dictate answers to a scribe
- Capture responses on an audio recorder
- Use a spelling dictionary or electronic spell-checker
- Use a word processor to give responses in class
- Use a calculator or table of "math facts"

Setting accommodations:
- Work or take a test in a different setting, such as a quiet room with few distractions
- Sit where he/she learns best (for example, near the teacher)
- Take a test in small group setting

Timing accommodations:
- Take more time to complete a task or a test
- Have extra time to process oral information and directions
- Take frequent breaks, such as after completing a task

Assignment modifications:
- Complete fewer or different homework problems than peers
- Shorten assignment
- Answer fewer or different test questions
- Create alternate projects or assignments

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Students with 504 Plans

Teachers are responsible for implementing designated services and strategies identified on a student's 504 Plan.

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<td colspan="3">At Risk Learners / Differentiation Strategies</td>
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</table>

**See individual units for Pacing Guide, NJSLS Standards, Transfer Skills, Enduring Understandings, Essential Questions, Learning Objectives, Key Vocabulary, Skills, Resources, & Assessments*

Alternative Assessments	Independent Research & Projects	Jigsaw
Choice Boards	Multiple Intelligence Options	Think-Tac-Toe
Games and Tournaments	Project-Based Learning	Cubing Activities
Group Investigations	Varied Supplemental Activities	Exploration by Interest
Guided Reading	Varied Journal Prompts or RAFT Writing	Flexible Grouping
Learning Contracts	Tiered Activities/Assignments	Goal-Setting with Students
Leveled Rubrics	Tiered Products	Homework Options
Literature Circles	Graphic Organizers	Open-Ended Activities
Multiple Texts	Choice of Books/Activities	Use of Reading Buddies
Personal Agendas	Mini-Workshops to Reteach or Extend	Varied Product Choices
	Think-Pair-Share by readiness or interest	Stations/Centers
	Use of Collaboration of Various Activities	Work Alone/Together

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