



# Township of Ocean Schools

Assistant Superintendent  
Office of Teaching and Learning

## **SPARTAN MISSION:**

*Meeting the needs of all students with a proud tradition of academic excellence.*

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### **Curriculum Development Timeline**

**School:** Township of Ocean Elementary Schools

**Course:** Science, Grade 1

**Department:** Science

<b>Board Approval</b>	<b>Supervisor</b>	<b>Notes</b>
February 2009	Jessica Shaw	Born Date
June 2011	Christine Picerno	Revisions
August 2017	Christine Picerno	Revisions
March 2019	Christine Picerno	Review

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*Suggested alignment by units. (Correlations are cross-referenced with Wonders and Mystery Science Units)*

Science		Science	
1	Waves: Light and Sound	11	Structure, Function and Information Processing (Characteristics of Living Things)
2	Waves: Light and Sound	12	Structure, Function and Information Processing (Characteristics of Living Things)
3	Waves: Light and Sound	13	Structure, Function and Information Processing (Characteristics of Living Things)
4	Waves: Light and Sound	14	Structure, Function and Information Processing (Characteristics of Living Things)
5	Waves: Light and Sound	15	Space Systems: Patterns and Cycles
6	Waves: Light and Sound	16	Space Systems: Patterns and Cycles
7	Waves: Light and Sound	17	Space Systems: Patterns and Cycles
8	Structure, Function and Information Processing (Characteristics of Living Things)	18	Space Systems: Patterns and Cycles
9	Structure, Function and Information Processing (Characteristics of Living Things)	19	Space Systems: Patterns and Cycles
10	Structure, Function and Information Processing (Characteristics of Living Things)	20	Space Systems: Patterns and Cycles
Social Studies		Social Studies	
21		31	
22		32	
23		33	
24		34	
25		35	
26		36	
27		37	
28		38	
29		39	

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<b>Time Frame</b>	<b>6-Weeks</b>
<b>Course</b>	
<b>Earth and Space Science</b>	
<b>Title of Unit</b>	
Space Systems: Patterns and Cycles	
<b>Essential Questions</b>	
<ol style="list-style-type: none"><li>1. What objects are in the sky and in what pattern do they seem to move?</li><li>2. What is the relationship between the earth, the sun, and the moon?</li><li>3. What is the relationship between seasons and the amount of daylight hours?</li></ol>	
<b>Enduring Understandings</b>	
<i>Students will understand that...</i> <ul style="list-style-type: none"><li>→ Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted.</li><li>→ Seasonal patterns of sunrise and sunset can be observed, described, and predicted.</li></ul>	

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### **Key Knowledge**

*Students will know.....*

- The sun and moon appear to rise in one part of the sky, move across the sky, and set.
- The shape of the moon appears to change over a period of time in a predictable pattern.
- Stars, other than our sun, are visible at night but not during the day.

### **Concepts and Skills**

*Students will be able to.....*

- Make observations of the sun, moon and stars and predict their interaction.
- Make observations to identify the difference in daylight hours at a particular time of year.
- Draw a sequence of pictures to show the relationship between a shadow's length and the position of the sun throughout the day.

### **Learning Activities**

#### Wonders Unit 5, Week 2 -

- ❖ Weekly Concept - Up in the Sky
- ❖ Essential Question - "What can you see in the sky?"

#### Mystery Science - Spinning Sky

- ❖ Mystery #1 - *Sun, Shadows, and Daily Patterns* - "Could a statue's shadow move?"
- ❖ Mystery #2 - *Sun and Daily Patterns* - "How can the sun help you if you are lost?"

#### Literature Connections

- ❖ "The Moon Book" by Gail Gibbons
- ❖ "If You Decide to go to the Moon" by Faith McNulty
- ❖ "The Moon" by Melanie Chrimer
- ❖ "The Moon" by Melvin & Gilda Berger
- ❖ "Sun, Moon, and Stars" by Stephanie Turnbill
- ❖ "Blast Into Space" by Roger Priddy
- ❖ Discover Kids Readers: Space
- ❖ "Curious George Discovers the Sun" by R.A Rey
- ❖ "The Sun" by Seymour Simon
- ❖ *The Sun is My Favorite Star* by Frank Asch

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- ❖ *Sun Up, Sun Down: The Story of Day and Night* by Jacqui Bailey
- ❖ *What Makes Day and Night?* by Franklyn M. Branley
- ❖ *The Sun: Our Nearest Star* by Franklyn M. Branley
- ❖ *Why the Sun and Moon Live in the Sky* by Elphinstone Dayrell
- ❖ *The Sun is Always Shining Somewhere* by Allan Fowler
- ❖ *Sun Up, Sun Down* by Gail Gibbons

### **Epic Books**

- ❖ [The Sun](#)
- ❖ [The Sun, the Moon and the Stars](#)

### **Brainpopjr. Videos**

- ❖ [The Moon](#)
- ❖ [The Sun](#)
- ❖ [The Earth](#)

### **Pebblego Videos**

- ❖ [The Sun](#)
- ❖ [The Moon](#)
- ❖ [The Earth Rotation](#)

### **Video Resources**

- ❖ [Phases of the Moon](#)
- ❖ [Moon 101](#)
- ❖ [Phases of the Moon Ed Puzzle](#)

### **Prepared Lessons**

- ❖ [BetterLesson.com - Earth's Place in the Universe](#)
- ❖ [BetterLesson.com-Moon Phases](#)
- ❖ [BetterLesson.com-Observing the Sun](#)
  - [Part 2 Analyzing the Sun's Data](#)

### **STEAM Activities**

- ❖ [STEM Challenge - Sundial Engineering Design](#)
- ❖ [Make a Sundial from a Plate](#)
- ❖ [Make a Sundial](#)

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### **Online Interactive Activities**

- ❖ [Sciencekids.com](http://Sciencekids.com)
- ❖ [House of Shadows](http://HouseofShadows.com)

### **Research Investigations:**

- ❖ [Kiddle](http://Kiddle.com)
- ❖ [Wonderopolis](http://Wonderopolis.com)
- ❖ [Plan and Conduct a Moon Investigation](http://PlanandConductaMoonInvestigation.com)

## **Assessments**

### **Formative:**

- BrainPOP-Quiz - About Sun
- BrainPOP-Quiz - About the Moon
- Solar System Online Quiz
- Pre assessment on space systems

### **Summative:**

- BrainPOP-Draw About It-the sun
- BrainPOP-Write About It-the sun
- BrainPOP-Draw About It-Phases of Moon
- BrainPop-Write About It-the Moon
- Post assessment on space systems
- Moon Investigation Conclusions Assessment

### **Benchmark:**

- Engineering Design Process Rubric Assessment 1

### **Alternative STEM Assessments:**

- [STEM Challenge - Sundial Engineering Design](http://STEMChallenge.com)
- [Make a Sundial from a Plate](http://MakeaSundial.com)
- [Make a Sundial](http://MakeaSundial.com)

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## **NGSS and Interdisciplinary Connections**

### **NGSS:**

- **1-ESS1-1.** Use observations of the sun, moon, and stars to describe patterns that can be predicted.
- **1-ESS1-2.** Make observations at different times of year to relate the amount of daylight to the time of year.
- **PS2.A:** Forces and Motion: Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. The patterns of an object's motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it. **(1-ESS1-1);**
- **PS2.B** Objects in contact exert forces on each other; electric, and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart and, for forces between two magnets, on their orientation relative to each other **(1-ESS1-1),(1-ESS1-2) 5-ESS1.B (1-ESS1-1),(1-ESS1-2)**

### **NJSLS – ELA:**

- **W.1.2** Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. **(1-PS4-2)**
- **W.1.7** Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). **(1-PS4-1),(1-PS4-2),(1-PS4-3),(1-PS4-4)**
- **W.1.8** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. **(1-PS4-1),(1-PS4-2),(1-PS4-3)**
- **SL.1.1** Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. **(1-PS4-1),(1-PS4-2),(1-PS4-3)**

### **NJSLS –Math:**

- **MP.5** Use appropriate tools strategically. **(1-PS4-4)**
- **1.MD.A.1** Order three objects by length; compare the lengths of two objects indirectly by using a third object. **(1-PS4-4)**
- **1.MD.A.2** Express the length of an object as a whole number of length units, by layering multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. **(1-PS4-4)**

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### Technology Integration

#### **Technology Learning Activities:**

- Students use Chromebooks to access Mystery Science extension activities.
- Students will use Google Classroom to access links to: interactive activities, science labs, interactive stories and video resources.

#### **Alignment to Standards:**

- **TECH.8.1.2.A.CS2** Select and use applications effectively and productively
- **TECH.8.2.2.A.2** Describe how design products and systems are useful at school, home, and work.
- **TECH. 8.2.2.B.2** Demonstrate how reusing a product affects the local and global environment.

### 21st-Century Skills

**9.2.4.A.1** Identify reasons why people work, different types of work, and how work can help a person achieve personal and professional goals.

### Career Ready Practices

**CRP 4.** SW communicate clearly and effectively and with reason while working collaboratively with partners on STEM activities.

**CRP 6.** SW demonstrate creativity and innovation while accessing [Sciencekids.com](http://Sciencekids.com) and [House of Shadows](http://House of Shadows).

<b>Time Frame</b>	7-Weeks
<b>Course</b>	
Physical Science	
<b>Title of Unit</b>	
Waves: Light and Sound	
<b>Essential Questions</b>	
<ol style="list-style-type: none"><li>1. What is the relationship between sound and vibrating materials?</li><li>2. What is the effect of different materials in the path of a beam of light?</li><li>3. How does the appearance of an object change when different amounts of light are applied?</li></ol>	

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### **Enduring Understandings**

*Students will understand that...*

- Sound can make matter vibrate, and vibrating matter can make sound.
- Objects can be seen if light is available to illuminate them or if they give off their own light.
- People use a variety of devices to communicate (send and receive information) over long distances.

### **Key Knowledge**

*Students will know...*

- when objects vibrate, a sound is created
- sound will cause objects to vibrate
- an object can be seen when light reflected from its surface enters the eye
- mirrors can be used to redirect a light beam
- light travels from place to place
- some materials allow light to pass through them and others block all light

### **Concepts and Skills**

*Students will be able to.....*

- plan and conduct investigations to collect evidence that shows that vibrating materials can make sound and that sound can make materials vibrate
- make observations and demonstrate accounts that objects can be seen only when illuminated
- observe shadows and determine how shadows are produced by a light source and another object, which blocks the light.
- plan and conduct an investigation to determine the effects of placing objects made of different materials in the path of a beam of light
- create a model to demonstrate how light or sound can be used to communicate over a distance

### **Learning Activities**

**Wonders Unit 5, Week 4 -**

- ❖ **Weekly Concept** - Sounds All Around
- ❖ **Essential Question** - “What Sounds can you hear? How are they made?”

**Mystery Science - Lights and Sounds**

- ❖ **Mystery #1** - *Sounds, Vibrations* - “How do they make silly sounds in cartoons?”
- ❖ **Mystery #2** - *Light, Materials, Transparent & Opaque* - “What if there were no

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windows?"

### **Literature Connections**

- ❖ "Theodoric's Rainbow" by Stephen P. Kramer
- ❖ "Nothing Sticks Like A Shadow" by Ann Tompert
- ❖ "Shadow" by Carolyn B. Otto
- ❖ "My Five Senses" by Alike
- ❖ "The Listening Walk" by Paul Showers
- ❖ "All About Sound" by Lisa Trumbauer
- ❖ "Fireflies" by Julie Brinckloe

### **Epic Books**

- ❖ [What Are Sound Waves?](#)
- ❖ [What Are Light Waves?](#)
- ❖ [How Does Sound Change?](#)
- ❖ [What Are Shadows and Reflections?](#)

### **Brainpopjr. Videos**

- ❖ [Light](#)
- ❖ [Sound](#)
- ❖ [Vibrations](#)

### **Pebblego Videos**

- ❖ [Physical Science-Light, Sound](#)

### **STEAM Lessons**

- ❖ [STEM and sound-Day 1](#)
- ❖ [STEM and sound-Day 2](#)
- ❖ [STEM and light-Day 1](#)
- ❖ [STEM and light-Day 2](#)
- ❖ [Communicating with Light and Sound: Fire!](#)

### **Video Resources**

- ❖ [Sound for first graders](#)
- ❖ [What is Sound?](#)
- ❖ [Sound Waves and Vibrations](#)
- ❖ [What is Light Energy?](#)
- ❖ [Sound Light Travels in Waves](#)

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- ❖ [EdPuzzle - Sounds of Science](#)
- ❖ [EdPuzzle - The Science of Light](#)

### **Research Investigations:**

- ❖ [Kiddle](#)
- ❖ [Wonderopolis](#)

### **Prepared Lessons**

- ❖ [Light and Sound](#)
- ❖ [BetterLesson.com-Waves and Their Application in Technologies](#)
- ❖ [First Grade Blog-Sound](#)
- ❖ [Hooked on Science](#)-Sound Blaster
- ❖ [Va-Va Vibrations](#)

### **Online Interactive Activities**

- ❖ [Science Kids.com](#)
- ❖ [Scholastic Light Virtual Lab](#)
- ❖ [Scholastic Sound Virtual Lab](#)

### **Hands On Activities**

- ❖ [BrainPOP-shadow puppets](#)
- ❖ [BrainPOP-sound](#)
- ❖ [BetterLesson.com-Good,Good,Good Vibrations-tissue box guitar](#)

## **Assessments**

### **Formative:**

- Online Energy Quiz
- BrainPOP-quiz about light
- BrainPOP-draw about light
- BrainPOP-write about light
- BrainPOP-draw about sound
- BrainPOP-write about sound
- BrainPOP-quiz about sound

### **Benchmark:**

- Engineering Design Process Rubric Assessment 2

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### **Alternative STEM Assessments:**

- [STEM and sound-Day 1](#)
- [STEM and sound-Day 2](#)
- [STEM and light-Day 1](#)
- [STEM and light-Day 2](#)
- [Communicating with Light and Sound: Fire!](#)

## **NGSS and Interdisciplinary Connections**

### **NGSS:**

- **PS4.A**-Sound can make matter vibrate, and vibrating matter can make sound. **(1-PS4-1)**
- **PS4.B**-Objects can be seen only when light is available to illuminate them. **(1-PS4-2)**  
**(1-PS4-3)**
- **PS4.C**-People use devices to send and receive information. **(1-PS4-4)**

### **NJSLS – ELA:**

- **W.1.2** Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. **(1-PS4-2)**
- **W.1.7** Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). **(1-PS4-1),(1-PS4-2),(1-PS4-3),(1-PS4-4)**
- **W.1.8** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. **(1-PS4-1),(1-PS4-2),(1-PS4-3)**
- **SL.1.1** Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. **(1-PS4-1),(1-PS4-2),(1-PS4-3)**

### **NJSLS –Math:**

- **MP.5** Use appropriate tools strategically. **(1-PS4-4)**
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### Integrated 21st-Century Skills and Career Ready Practices (NJSLS 9)

#### **Technology Learning Activities:**

- Students use Chromebooks to access Mystery Science extension activities.
- Students will use Google Classroom to access links to: interactive activities, science labs, interactive stories and video resources.

#### **Alignment to Standards:**

- **TECH.8.1.2.A.CS2** Select and use applications effectively and productively
- **TECH. 8.2.2.B.2** Demonstrate how reusing a product affects the local and global environment.
- **TECH.8.2.2.C** The design process is a systematic approach to solving problems

#### 21st-Century Skills

**9.2.4.A.4** Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

#### Career Ready Practices

**CRP 8.** SW utilize critical thinking to make sense of problems and persevere in solving them while completed their hands-on STEM projects.

**CRP 11.** SW use technology to enhance productivity by accessing EdPuzzle, Science Kids.com, [Scholastic Light Virtual Lab](#) and [Scholastic Sound Virtual Lab](#)

<b>Time Frame</b>	<b>7-Weeks</b>
<b>Course</b>	
<b>Physical Sciences</b>	
<b>Title of Unit</b>	
Structure, Function and Information Processing (Characteristics of Living Things)	
<b>Essential Questions</b>	
<ol style="list-style-type: none"> <li>1. How are young plants and animals alike and different from their parents?</li> <li>2. How have animals and plants adapted to their environment to meet their needs for survival?</li> <li>3. What types (patterns) of behavior can be observed among parents that help offspring survive?</li> </ol>	
<b>Enduring Understandings</b>	
<i>Students will understand that...</i>	
→ All organisms have external parts. Different animals use their body parts in different ways to see,	

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hear, grasp objects, protect themselves, move from place to place, and seek, find and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them grow.

- Adult plants and animals can have young. In many animal families, parents and the offspring themselves engage in behaviors that help the offspring to survive.
- Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs.
- Young animals are very much, but not exactly, like their parents. Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.

## **Key Knowledge**

### ***Students will know...***

- Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.
- Scientists look for patterns and order when making observations about the world.
- Adult plants and animals can have young.
- In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring survive.

## **Concepts and Skills**

### ***Students will be able to...***

- Use materials to create a model to demonstrate how plants and/or animals use their external parts to help them survive, grow and meet their needs.
- Read texts and use media to determine patterns in the behavior of parents and offspring that help offspring survive.
- Make observations to compare and contrast how young plants and animals are alike, but not exactly like, their parents.

## **Learning Activities**

### **ELA Connection**

#### **Wonders Unit 3 Week 2**

- ❖ Weekly Concept- Watch It Grow
- ❖ Essential Question-How do plants change as they grow?

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### **Wonders Unit 4, Week 1 -**

- ❖ Weekly Concept - Animal Features
- ❖ Essential Question - "How do animals' bodies help them?"

### **Wonders Unit 4, Week 2 -**

- ❖ Weekly Concept - Animals Together
- ❖ Essential Question - "How do animals help each other?"

### **Wonders Unit 4, Week 3 -**

- ❖ Weekly Concept - In the Wild
- ❖ Essential Question - "How do animals survive in nature?"

### **Mystery Science - Animal Superpowers**

- ❖ Mystery #1 - Structure & Survival - "Why do birds have beaks?"
- ❖ Mystery #2 - Structure & Survival - "Why are polar bears white?"

### **Literature Connections**

- ❖ National Geographic - "5 Strange Ways Animal Mothers Carry Their Babies"
- ❖ "Are You My Mother?" P.D Eastman

### **Epic Books**

- ❖ Classifying Animals
- ❖ Animal Adaptations
- ❖ Animal Adaptations
- ❖ Animal Legs
- ❖ Plants are Living Things
- ❖ Plant Life Cycles

### **Brainpopjr. Videos**

- ❖ Classifying Animals
- ❖ Animal Habitats
- ❖ Parts of a Plant
- ❖ Plant Adaptations
- ❖ Plant Life Cycle

### **Pebblego Videos**

- ❖ Living or Nonliving Things
- ❖ Animal Adaptations
- ❖ Animal heredity/offspring
- ❖ Animal Classification, Behavior, Habitat
- ❖ Plant Classification, Parts, Habitats

### **STEAM Lessons**

- ❖ STEM, Plants, and Biomimicry Day 1
- ❖ STEM, Plants, and Biomimicry Day 2
- ❖ Engineering Solutions - Design a Better Claw
- ❖ STEM Lab: Designing a Feeder

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- ❖ [STEM Lab: Building and Evaluating a Feeder](#)

### **Research Investigations:**

- ❖ [Kiddle](#)
- ❖ [Wonderopolis](#)
- ❖ [How do animals protect their babies research project](#)
- ❖ [Animal Research Project - Student Packet](#)
- ❖ [Animal Research Project - Teacher Instructions](#)

### **Prepared Lessons**

- ❖ [BetterLesson.com - From Molecules to Organisms & Heredity](#)

### **Online Interactive Activities**

- ❖ [ScienceKids.com](#)

### **Hands On Activities**

- ❖ [Investigating Seeds](#)

## **Assessments**

### **Formative:**

- Organisms Online Quizzes
- Plants Online Quizzes
- Habitats Online Quiz
- BrainPOP-draw about plant parts
- BrainPOP-plant life cycle quiz

### **Summative:**

- [Animal Research Project - Student Packet](#)

### **Benchmark:**

- Engineering Design Process Rubric Assessment 3

### **Alternative STEM Assessments:**

- [STEM, Plants, and Biomimicry Day 1](#)
- [STEM, Plants, and Biomimicry Day 2](#)
- [Engineering Solutions - Design a Better Claw](#)
- [STEM Lab: Designing a Feeder](#)

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- [STEM Lab: Building and Evaluating a Feeder](#)

## **NGSS and Interdisciplinary Connections**

### **NGSS:**

- **1-LS1-1.** Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
- **1-LS1-2.** Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
- **1-LS1-3.** Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

### **NJSLS – ELA:**

- **RI.1.1** Ask and answer questions about key details in a text. **(1-LS1-2),(1-LS3-1)**
- **RI.1.2** Identify the main topic and retell key details of a text. **(1-LS1-2)**
- **RI.1.10** With prompting and support, read informational texts appropriately complex for grade. **(1-LS1-2)**
- **W.1.7** Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). **(1-LS1- 1),(1-LS3-1)**
- **W.1.8** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. **(1-LS3-1)**

### **NJSLS – Math:**

- **MP.2** - Reason abstractly and quantitatively. **(1-LS3-1)**
- **MP.5** - Use appropriate tools strategically. **(1-LS3-1)**
- **1.NBT.B.3** - Compare two two-digit numbers based on the meanings of the tens and ones digits, recording the results of comparisons with the symbols **.(1-LS1-2)**
- **1.NBT.C.4** - Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning uses. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. **(1- LS1-2)**
- **1.NBT.C.5** - Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. **(1-LS1-2)**
- **1.NBT.C.6** - Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate

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the strategy to a written method and explain the reasoning used. **(1-LS1-2)**

- **1.MD.A.1** - Order three objects by length; compare the lengths of two objects indirectly by using a third object. **(1-LS3-1)**
  - school, home, and work.

### Technology Integration

#### **Technology Learning Activities:**

- Students use Chromebooks to access Mystery Science extension activities.
- Students will use Google Classroom to access links to interactive activities, science labs, interactive stories and video resources.

#### **Alignment to Standards:**

- **TECH.8.1.2.E.1** Use digital tools and online resources to explore a problem or issue.
- **TECH.8.2.2.A.2** Describe how design products and systems are useful at school, home, and work.
- **TECH. 8.2.2.B.2** Demonstrate how reusing a product affects the local and global environment.

### 21st-Century Skills

**9.2.4.A.4** Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

### Career Ready Practices

**CRP 4.** SW communicate clearly and effectively and with reason.

**CRP 8.** SW utilize critical thinking to make sense of problems and persevere in solving them when completing the following activities: Designing a Better Claw and a Bird Feeder.

**CRP 11.** SW use technology to enhance productivity by accessing the following online resources: [Living or Nonliving Things](#), [Animal Adaptations](#), [Animal heredity/offspring](#), [Animal Classification](#), [Behavior](#), [Habitat](#), and [Plant Classification, Parts, Habitats](#)

## **Modifications (ELL, Special Education, At-Risk Students, Gifted and Talented, and 504 Plans)**

### **ELL:**

- Work toward longer passages as skills in English increase
- Use visuals
- Introduce key vocabulary before lesson
- Teacher models reading aloud daily
- Provide peer tutoring
- Use of Bilingual Dictionary
- Guided notes and/or scaffold outline for written assignments
- Provide students with English Learner leveled readers.

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### **Supports for Students With IEPs:**

- Allow extra time to complete assignments or tests
- Guided notes and/or scaffold outline for written assignments
- Work in a small group
- Allow answers to be given orally or dictated
- Use large print books, Braille, or books on CD (digital text)
- Follow all IEP modifications

### **At-Risk Students:**

- Guided notes and/or scaffold outline for written assignments
- Introduce key vocabulary before lesson
- Work in a small group
- Lesson taught again using a differentiated approach
- Allow answers to be given orally or dictated
- Use visuals / Anchor Charts
- Leveled texts according to ability

### **Gifted and Talented:**

- Create an enhanced set of introductory activities (e.g. advance organizers, concept maps, concept puzzles)
- Provide options, alternatives and choices to differentiate and broaden the curriculum
- Organize and offer flexible small group learning activities
- Provide whole group enrichment explorations
- Teach cognitive and methodological skills
- Use center, stations, or contracts
- Organize integrated problem-solving simulations
- Propose interest-based extension activities
- Expose students to beyond level texts.

### **Supports for Students With 504 Plans:**

- Follow all the 504 plan modifications
- Text to speech/audio recorded selections
- Amplification system as needed
- Leveled texts according to ability
- Fine motor skill stations embedded in rotation as needed
- Modified or constrained spelling word lists
- Provide anchor charts with high frequency words and phonemic patterns

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