Belvidere Clusterwide Curriculum

Science

1st Grade

Updated Summer, 2024

All Belvidere Cluster curriculum and instruction areas are aligned to the New Jersey Student Learning Standards (NJSLS) in accordance with the NJ Department of Education's curriculum implementation requirements.

Curriculum Coordinator:
Timm Gast
Author:
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UNITS	Duration	Essential Questions:
Unit 1: Plant & Animal Structures and Survival	1 Trimester	• How are young plants and animals alike and different from their parents? • What types (patterns) of behavior can be observed among parents that help offspring survive? • How can humans mimic how plants and animals use their external parts to help them survive and grow? • Why do family members look alike? • Why don't trees blow down in the wind? • What do sunflowers do when you are not looking? • How do animals take care of their babies?
Unit 2: Sun, Moon, and Stars	1 Trimester	• What patterns of change can be predicted when observing the sun, moon, and stars? • What is the relationship between the amount of daylight and the time of year? • Could a statue's shadow move? • What does your shadow do when you are not looking? • How can the sun help you if you are lost? • Why do you have to go to bed early in the summer? • When can you see the full moon? • Why do the stars come out at night? • How can stars help you if you get lost?
Unit 3: Waves, Light and Sound	1 Trimester	• How can you prove that you can only see something when someone shines a light on it or if the object gives off its own light? • What happens to a beam of light when you put different kinds of things in front of it? • How would you design an experiment to prove your thinking? • Where do sounds come from? • What if there were no windows? • Can you see in the dark? • How could you see a secret message from someone far away? • How do boats find their way in the fog?

Student Learning

Career Education (NJDOE CTE Clusters)

21st Century Life and Careers

- 9.1.2.CR.1: Recognize ways to volunteer in the classroom, school and community.
- 9.1.2.FP.1: Explain how emotions influence whether a person spends or saves.
- 9.2.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job.
- 9.2.2.CAP.2: Explain why employers are willing to pay individuals to work.
- 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives
- 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
- 9.4.2.DC.6: Identify respectful and responsible ways to communicate in digital environments

Technology:

- 8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- 8.1.2.NI.1: Model and describe how individuals use computers to connect to other individuals, places, information and ideas through a network.
- 8.1.2.NI.2: Describe how the Internet enables Individuals to connect with others worldwide.
- 8.2.2.ITH.3: Identify how technology impacts or improves life.
- 8.2.2.ITH.4: Identify how various tools reduce work and improve daily tasks.
- 8.2.2.NT.2: Brainstorm how to build a product, improve a designed product, fix a product that has stopped working, or solve a simple problem.
- 8.2.2.ETW.1: Classify products as resulting from nature or produced as a result of technology.
- 8.2.2.EC.1: Identify and compare technology used in different schools, communities, regions, and parts of the world.

Modifications and Accommodations:

<u>Special Education</u>

- Printed copy of board work/notes provided
- Additional time for skill mastery
- Assistive technology
- Behavior management plan
- Center-Based Instruction
- Check work frequently for understanding
- Computer or electronic device utilization
- Extended time on tests/ quizzes
- Have student repeat directions to check for understanding
- Highlighted text visual presentation
- Modified assignment format
- Modified test content
- Modified test format
- Modified test length
- Multiple test sessions
- Multi-sensory presentation
- Preferential seating
- Preview of content, concepts, and vocabulary
- Reduced/shortened written assignments
- Secure attention before giving instruction/directions
- Shortened assignments
- Student working with an assigned partner

- Teacher initiated weekly assignment sheet
- Use open book, study guides, test prototypes
- Cubing activities
- Exploration by interest
- Flexible grouping
- Goal setting with students
- Jigsaw
- Mini workshops to re-teach or extend skills Open-ended activities
- Think-Pair-Share
- Varied supplemental materials
-
- **ELL**
- Allowing students to correct errors (looking for understanding)
- Teaching key aspects of a topic Eliminate nonessential information Using videos, illustrations, pictures, and drawings to explain or clarify
- allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slideshows, videos, etc.) to demonstrate student's learning
- Allowing students to correct errors (looking for understanding)
- Allowing the use of note cards or open-book during testing
- Decreasing the amount of work presented or required
- Having peers take notes or providing a copy of the teacher's notes
- Modifying tests to reflect selected objectives
- Providing study guides
- Reducing the number of answer choices on a multiple choice test
- Tutoring by peers
- Explain/clarify key vocabulary terms
-
- **At Risk**
- Allowing students to correct errors (looking for understanding)
- Teaching key aspects of a topic Eliminate nonessential information allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slideshows, videos, etc.) to demonstrate student's learning
- Allowing students to select from given choices .
- Allowing the use of note cards or open-book during testing
- Collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be determined prior to giving the test
- decreasing the amount of work presented or required .
- Having peers take notes or providing a copy of the teacher's notes
- Marking students' correct and acceptable work, not the mistakes
- Modifying tests to reflect selected objectives
- Providing study guides
- Reducing the number of answer choices on a multiple choice test
- Tutoring by peers
- Using authentic assessments with real-life problem-solving
- Using true/false, matching, or fill in the blank tests in lieu of essay tests
- using videos, illustrations, pictures, and drawings to explain or clarify
- Flexible grouping
- Goal setting with students
- Jigsaw
- Mini workshops to re-teach or extend skills Open-ended activities

- Think-Pair-Share
- Varied supplemental materials
-
- **Gifted and Talented**
- Alternative formative and summative assessments
- Choice boards
- Games and tournaments
- Group investigations
- Independent research and projects Interest groups for real world application
- Learning contracts
- Leveled rubrics
- Multiple intelligence options
- Personal agendas
- Project-based learning
- Problem-based learning
- Stations/centers
- Think-Tac-Toes
- Tiered activities/assignments
- Tiered products_____
-
- **504**
- Printed copy of board work/notes provided
- Additional time for skill mastery
- Assistive technology
- Behavior management plan
- Center-Based Instruction
- Check work frequently for understanding
- Computer or electronic device utilization
- Extended time on tests/ quizzes
- Have student repeat directions to check for understanding
- Highlighted text visual presentation
- Modified assignment format
- Modified test content
- Modified test format
- Modified test length
- Multiple test sessions
- Multi-sensory presentation
- Preferential seating
- Preview of content, concepts, and vocabulary
- Reduced/shortened written assignments
- Secure attention before giving instruction/directions
- Shortened assignments
- Student working with an assigned partner
- Seacher initiated weekly assignment sheet
- Use open book, study guides, test prototype
- Exploration by interest
- Flexible grouping
- Goal setting with students
- Mini workshops to re-teach or extend skills Open-ended activities
- Think-Pair-Share
- Varied supplemental materials

Unit 1 Overview: Plants,Animal Structures and Survival

Unit 1 Summary: Students explore how parts of plants and animals are essential for survival. Students also make observations of parents and their offspring, determining how they are similar and how their behaviors help offspring survive.

Essential Questions:

- How are young plants and animals alike and different from their parents?
- What types (patterns) of behavior can be observed among parents that help offspring survive?
- How can humans mimic how plants and animals use their external parts to help them survive and grow?
- Why do family members look alike?
- Why don't trees blow down in the wind?
- What do sunflowers do when you are not looking?
- How do animals take care of their babies?

New Jersey Student Learning Standards

New Jersey Student Learning Standards: Science

- K-ESS3-1. 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.]
- 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-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.]

Interdisciplinary Connections:

Speaking and Listening:

- 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.
- 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.
- L.1.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- L.1.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

English Language Arts

- RL.1.1. Ask and answer questions about key details in a text.
- RL.1.9. Compare and contrast the adventures and experiences of characters in stories.
- W.1.5. With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers and self-reflection, and add details to strengthen writing and ideas as needed.

SEL:

- Utilize positive communication and social skills to interact effectively with others
- Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways

Mathematics:

- 1.MD.C Represent and interpret data.

Science:

- Climate Change

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

Disciplinary Core Ideas

- **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)
- **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)

- **ESS3.C: Human Impacts on Earth Systems**
  - 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. (K-ESS3- 3)
- **ETS1.A: Defining and Delimiting an Engineering Problem**
  - Asking questions, making observations, and gathering information are helpful in thinking about problems. (secondary to K-ESS3-2)
- **ETS1.B: Developing Possible Solutions**
  - 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

Asking Questions and Defining Problems

- Asking questions and defining problems in grades K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.
  - Ask questions based on observations to find more information about the designed world. (K-ESS3-2)

Developing and Using Models

- Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, storyboard) that represent concrete events or design solutions.
  - Use a model to represent relationships in the natural world. (K-ESS3-1)

Obtaining, Evaluating, and Communicating Information

- Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.
  - Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world. (K-ESS3-2)
  - Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas. (K-ESS3-3)

Crosscutting Connections

Cause and Effect

- Events have causes that generate observable patterns. (K-ESS3-2),(KESS3-3)

Systems and System Models

- Systems in the natural and designed world have parts that work together. (K-ESS3-1)

Connections to Engineering, Technology, and Applications of Science Interdependence of Science, Engineering, and Technology

- People encounter questions about the natural world every day. (K-ESS3-2)

Influence of Engineering, Technology, and Science on Society and the Natural World

- People depend on various technologies in their lives; human life would be very different without technology. (K-ESS3- 2)

Unit 1 Student Learning Objectives

Students will know:

- How to identify characteristics on things that help animals survive in nature.
- How to identify mimicry through the use of straws and cheerios.
- How to move Cheerios from one area to another using a straw to mimic feeding their baby animals.
- That plants and animals thrive in their own natural habitats.
- The concept of biomimicry and be able to give examples of nature -inspired human technology
- To create a windmill out of paper and straw to discover the direction of wind.
- How to identify the different parts of a plant.
- The importance of the different parts of a plant.
- The concept of structures like roots, branches, and leaves that keep trees from blowing down.
- To understand how they can prevent climate change by reducing, reusing, and recycling a variety of objects or tools
- How they can take care of the Earth by constructing a bird feeder using recycled materials.
- Construct a tree-inspired umbrella that can withstand the force of wind using a variety of crafts.

Students will be able to:

- Identify unique and specialized external structures that help plants and animals meet their basic needs for survival in their own particular habitat
- Understand the concept of biomimicry and give examples of nature-inspired human technology
- Use the engineering design process to create an original product, based on nature, to solve a human problem
- Identify unique and specialized external structures that help plants and animals meet their basic needs for survival in their own particular habitat
- Understand the concept of biomimicry and give examples of nature-inspired human technology
- Use the engineering design process to create an original product, based on nature, to solve a human problem
- Examine the structures that represent plants such as seeds, roots, stems, and leaves
- Make observations based on the parts of a plant
- Examine structures like roots, branches, and leaves that keep trees from blowing down.
- Discover how they can prevent climate change by reducing, reusing and recycling objects or tools
- Understand how they can take care of the Earth, participate in creating a tool for birds to use and explain how this correlates to climate change
- Make observations to create tree-inspired umbrellas that stay up in the wind

Unit 1 Assessments

Formative Assessments

- Entrance/Exit Tickets, Science Notebook, Activities

Summative Assessments

- Science Lesson Assessments, Rubrics for Exploration

Benchmark Assessments

- End of Unit Assessment

Alternative Assessment:

- Self Assessment Rubric

Unit 2 Overview: Sun, Moon and Stars

Unit 2 Summary: Students observe that the Sun, Moon, and stars move in patterns in the day and night sky. Students make observations of the Sun and shadows throughout the day and across the seasons. They also determine why stars are only visible at night.

Essential Questions:

- What patterns of change can be predicted when observing the sun, moon, and stars?
- What is the relationship between the amount of daylight and the time of year?
- Could a statue's shadow move?
- What does your shadow do when you are not looking?
- How can the sun help you if you are lost?
- Why do you have to go to bed early in the summer?
- When can you see the full moon?
- Why do the stars come out at night?
- How can stars help you if you get lost?

New Jersey Student Learning Standards

New Jersey Student Learning Standards: Science

- 1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted. [Clarification Statement: Examples of patterns could include that the sun and moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our sun are visible at night but not during the day.] [Assessment Boundary: Assessment of star patterns is limited to stars being seen at night and not during the day.
- 1-ESS1-2 Make observations at different times of year to relate the amount of daylight to the time of year.
  [Clarification Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.] [Assessment Boundary: Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.]
- 1-ESS1-B- Seasonal patterns of sunrise and sunset can be observed, described, and predicted
- 1-PS4-3. Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.
- 1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

Interdisciplinary Connections:

- **Speaking and Listening:**
  - 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
- **English and Language Arts**
  - RL.1.1. Ask and answer questions about key details in a text.
  - RL.1.9. Compare and contrast the adventures and experiences of characters in stories.
  - W.1.5. With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers and self-reflection, and add details to strengthen writing and ideas as needed.
  - W.1.8 - With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
  - L.1.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
  - L.1.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- **SEL**
  - Utilize positive communication and social skills to interact effectively with others.
  - Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways.
- **Mathematics**
  - 1.MD.A.2 Express the length of an object as a whole number of length units
  - 1.MD.C.4 Organize and represent and interpret data with up to three categories, ask and answer questions about the total number of data points
  - 1.OA.A.1 - Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem
  - MP.2 - Reason abstractly and quantitatively.
  - MP.4 - Model with mathematics.
  - MP.5 - Use appropriate tools strategically.

Disciplinary Core Ideas

- **ESS1.A: The Universe and its Stars**
  - Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted. (1- ESS1-1)
- **ESS1.B: Earth and the Solar System**
  - Seasonal patterns of sunrise and sunset can be observed, described, and predicted. (1-ESS1-2)

Science and Engineering Practices

Planning and Carrying Out Investigations

- **P**lanning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.
- Make observations (firsthand or from media) to collect data that can be used to make comparisons. (1-ESS1-2)

Analyzing and Interpreting Data

- Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.
- Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (1- ESS1-1)

Crosscutting Connections

Patterns

- Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (1-ESS1-1),(1-ESS1-2)

Connections to Nature of Science Scientific Knowledge Assumes an Order and Consistency in Natural Systems

- Science assumes natural events happen today as they happened in the past. (1-ESS1-1) ▪ Many events are repeated. (1-ESS1-1)

Unit 2 Student Learning Objectives

Students will know:

- How to make a stationary object's shadow move and write about how a shadow's placement reflects on the sun’s position in the sky.
- The sun's position in the sky is different at different times of the year and the amount of daylight present during specific times of the year correlates with the sun’s position.
- How to create a Star Projector, using paper cups to project stars onto a sky picture, and observe what happens to these stars when a flashlight acts as a model of the Sun.
- How to identify the patterns of the sun moon and stars and describe different patterns in the sky.
- The Moon’s shape changes each evening and will predict when the next full moon will appear

Students will be able to:

- Investigate what it takes to make a stationary object’s shadow move and reflect on what this means about the sun’s place in the sky.
- Develop a model of the sun’s daily path across the sky and make observations at different times of the year to relate the amount of daylight to the time of the year

- Use a model to investigate why the stars are visible at night but disappears when the sun comes out during the day
- Use observations of the sun, moon, and stars to describe patterns that can be predicted.
- Explore all of the different shapes of the Moon that can appear on different nights and draw pictures of the Moon's phases

Unit 2 Assessments

Formative Assessments:
- Entrance/Exit Tickets, Science Notebook Entries, Activities

Summative Assessments:
- Science Lesson Assessments, Rubrics for Exploration

Benchmark Assessments:
- End of Unit Assessment

Alternative Assessments:
-

Unit 3 Overview: Waves, Light, Sound

Unit 3 Summary: Students investigate light and sound. They explore how materials vibrate and how vibrating materials can make sounds. They also investigate light and illumination and use those investigations to create simple devices that allow them to communicate across a distance.

Essential Questions:

- How can you prove that you can only see something when someone shines a light on it or if the object gives off its own light?
- What happens to a beam of light when you put different kinds of things in front of it?
- How would you design an experiment to prove your thinking?
- Where do sounds come from?
- What if there were no windows?
- Can you see in the dark?
- How could you see a secret message from someone far away?
- How do boats find their way in the fog?

New Jersey Student Learning Standards
(Please Bold all Climate related standards met throughout all Units)

New Jersey Student Learning Standards: Science

- 1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.
- 1-PS4-2. Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated.
- 1-PS4-3. Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.
- 1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

Interdisciplinary Connections:
Speaking and Listening

- 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.
- 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.

English Language Arts

- RL.1.1. Ask and answer questions about key details in a text.
- RL.1.9. Compare and contrast the adventures and experiences of characters in stories.
- W.1.8 - With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
- L.1.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- L.1.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

SEL

- Utilize positive communication and social skills to interact effectively with others.
- Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways.

Mathematics

- 1.MD.A.1 - Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- 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. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.
- MP.5 - Use appropriate tools strategically.

Disciplinary Core Ideas

- **PS4.A: Wave Properties**
  - Sound can make matter vibrate, and vibrating matter can make sound. (1-PS4-1)
- **PS4.B: Electromagnetic Radiation**

- Objects can be seen if light is available to illuminate them or if they give off their own light. (1-PS4-2)
- Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (Boundary: The idea that light travels from place to place is developed through experiences with light sources, mirrors, and shadows, but no attempt is made to discuss the speed of light.) (1- PS4-3)

- **PS4.C: Information Technologies and Instrumentation**
  - People also use a variety of devices to communicate (send and receive information) over long distances.

Science and Engineering Practices

Planning and Carrying Out Investigations

- Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions. ▪ Plan and conduct investigations collaboratively to produce data to serve as the basis for evidence to answer a question. (1-PS4-1)(1-PS4-3)

Constructing Explanations and Designing Solutions

- Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.
  - Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (1- PS4-2**)**
  - Use tools and materials provided to design a device that solves a specific problem. (1-PS4-4)

Connections to Nature of Science

- **Scientific Investigations Use a Variety of Methods**
  - Science investigations begin with a question. (1-PS4-1)
  - Scientists use different ways to study the world. (1-PS4-1)

Crosscutting Connections

Cause and Effect

- Simple tests can be designed to gather evidence to support or refute student ideas about causes. (1-PS4-1),(1-PS4-2),(1-PS4-3)

Connections to Engineering, Technology, and Applications of Science

- **Influence of Engineering**, **Technology, and Science, on Society and the Natural World**
  - People depend on various technologies in their lives; human life would be very different without technology. (1-PS4-4)

Unit 3 Student Learning Objectives

Students will know:

- All sounds come from vibrations (including people's voices) and vibrations cause all sounds
- People use their ears to sense sounds
- Light travels in different ways through different materials.
- Mirrors reflect light.
- That light is all around us, that light helps us see, and that light comes from many different sources.

- We use our eyes to sense light.
- Light and sound can be used to send messages across a distance.
- Light and sound travel across distances.

Students will be able to:

- Investigate vibrations as a source of sound.
- Define the terms used to describe how light passes through different objects
- Understand what light is and where it comes from.
- Use light and sound to send signals and make patterns.

Unit 3 Assessments

Formative Assessments
- Entrance/Exit Tickets, Slate Work, Science Notebook Entries, Activities

Summative Assessments
- Science Lesson Assessments, Rubrics for Exploration

Benchmark Assessments
- End of Unit Assessment

Alternative Assessment:
- Sound Energy workbook
- Sound Sort Assessment Option #2 Printable
- Various sources