<table>
<tr><td>Unit: Earth's Place in the Universe</td><td>Grade Level: 1</td><td>Time Frame: September- December</td></tr>
<tr><td colspan="3">Standards:
Science:
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.
Common Core State Standards Connections:
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-ESS1-1),(1-ESS1-2)
W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-ESS1-1),(1-ESS1-2)
Mathematics –
MP.2 Reason abstractly and quantitatively. (1-ESS1-2)
MP.4 Model with mathematics. (1-ESS1-2)
MP.5 Use appropriate tools strategically. (1-ESS1-2)
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 to represent the problem. (1-ESS1-2)
1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer</td></tr>
<tr><td>Essential Questions:
➢ What objects are in the sky?
➢ What is the location of the sun, moon and stars from Earth?
➢ How does the sun, stars and moon move?
➢ How do objects in the sky seem to change?
➢ How does the amount of daylight change with the seasons?</td><td colspan="2">Unit Goals: Students are able to observe, describe, and predict some patterns of the movement of objects in the sky.</td></tr>
<tr><td>Skills:
❖ Plan and carry-out investigations.
❖ Analyze and interpret data.
❖ Identify the pattern of the sun and the moon
❖ Compare and contrast the differences and similarities between the objects in the sky.</td><td>Vocabulary:
Sun
Motion Set
Observe
Daylight
Describe
Predict
Seasons
Spring
Summer
Winter
Moon
Shadow</td><td>Cycle
Stars
Visible
Pattern
Rise
Fall
Planets
Solar System
Universe</td></tr>
<tr><td>Demonstration of Learning/Assessments:
1. Students will participate in shared research and writing projects students may:
• explore a number of "how-to" books on a given topic and use them to write a sequence of instructions
2. Students will recall information from experiences or gather information from provided sources to answer a question formulated by their peers, self or teacher with guidance and support from teacher
3. Students will create a book about the objects in the sky.</td><td colspan="2">21st Century Themes:
Global Awareness: How seasons change around the world
Health Literacy: Understanding preventive sun exposure
Environmental Literacy: Understand how the environment is influenced by the sun
Creativity and Innovation:
• Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts
• Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work
Flexibility and Adaptability: Incorporate feedback effectively
Social and Cross-cultural skills: Know when it is appropriate to listen and when to speak</td></tr>
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Resources: Additional/ Supplementary	Reading A-Z	Performance Tasks (Labs) *Listed below are the suggested activities that can be used to perform the labs. Teachers will have the autonomy to change the materials to make the proper adjustments needed in order to perform lab task.*
Online tools: Brainpopjr.com Brainpopespanol.com Jonesvilleschools.org **Books:** • Earth Cycles by Michael Elsohn Ross • The Sun: Our Nearest Star by Franklyn M. Branley • The Moon Book by Gail Gibbons • Faces of the Moon by Bob Crelin • The Moon by Seymour Simon • The Moon (Scholastic) by Melanie Chrismer • Day and Night (Patterns in Nature) by Margaret Hall • Earth Is Tilting (My Science Library) by Conrad J. Storad • The Moon Seems to Change by Franklyn M. Branley	• Our Solar System • The Sun, Earth and Moon • -Science Clubhouse Workshop lessons • --Read Works, Science Close Reading • Passages • Sunlight in the Night • A Day For Fishing • What is the Solar System? • Day to Night	**1. Students will use observations of the sun, moon, and stars to describe patterns that can be predicted (1-ESS1-1)** ❖ Measuring Shadows(can be continued throughout the year so that they can compare the measures of shadows throughout the season) ******To be completed at the beginning of each season**** **2. Students will build a model to represent relationships, relative scale (big or smaller) of objects of the natural world.** ❖ Seasonal Collage to reflect the amount of sunlight based on the season ***To be completed at the beginning of each season**** **3. Make observations at different times of year to relate the amount of daylight to the time of year.** ❖ Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall

Unit: Structure, Function, and Information Processing	**Grade Level: 1**	**Time Frame: January- March**

Standards:
Science:
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-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents

Common Core State Standards Connections:
ELA/Literacy –
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)
Mathematics –
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 one 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 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)

Essential Questions:

- How do organisms live, grow, respond to their environment and reproduce?
- How (and why) do organisms interact with their environment and what are the effects of these interactions?
- How are characteristics of one generation passed to the next?
- How can individuals of the same species and even siblings have different characteristics?

Unit Goals: Students are expected to develop understanding of how plants and animals use their external parts to help them survive, grow, and meet their needs as well as how behaviors of parents and offspring help the offspring survive. The understanding is developed that young plants and animals are like, but not exactly the same as, their parents.

Skills:

- Construct explanations and design Solutions
- Obtain, evaluate and communicate information

Vocabulary:
survive, root, stems, leaves, flowers, fruit, similar, different, offspring
Challenge Words:
organism, characteristics, generation

Demonstration of Learning/Assessments:

1. Students will ask and answer questions about key details about patterns in behavior of parents and offspring that help offspring survive
2. Students will identify the main topic and retell key details of a text/video or movie about the following topic:
   - How plants and animals use their external parts to help them survive, grow, and meet their needs
3. Students will participate in a shared research and writing project:
   - How behaviors of parents and offspring help the offspring survive
4. Students will gather information from provided sources (movies, video clips, books) to answer the essential questions

21st Century Themes:
Global Awareness: Understanding the role of animals in different parts of the world
Health Literacy: Understanding how animals and plants help our health
Environmental Literacy: Demonstrate knowledge and understanding of the environment and the circumstances and conditions affecting it, particularly food, and plants
Creativity and Innovation:

- Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts
- Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work

Flexibility and Adaptability:

- Incorporate feedback effectively

	Social and Cross-cultural skills: • Know when it is appropriate to listen and when to speak
Resources: Additional/ Supplementary **Online tools:** **www.scholastic.com/Animalsareeverywhere** **Youtube.com- animal structures and what they mean** **Books:** • From Seed to Plant by Gail Gibbons • The Tiny Seed by Eric Carle • The Very Hungry Caterpillar by Eric Carle • Seeds by Vijaya Bodach • Parts of a Plant by Wiley Blevins • Stems by Vijaya Bodach • Roots by Vijaya Bodach • A Trip to the Zoo by Karen Wallace • Amazing Animals by Rosario Ortiz Santiago • Stellaluna by Janell Cannon • A Color of His Own by Leo Leoni	**Performance Tasks (Labs)** ***Listed below are the suggested activities that can be used to perform the labs. Teachers will have the autonomy to change the materials to make the proper adjustments needed in order to perform lab task.*** 1. **Students will 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.** ❖ Examples of human problems that can be solved by mimicking plant or animal solutions could include designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and, detecting intruders by mimicking eyes and ears. 2. **Students will read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive** ❖ Students will provide examples of patterns of behaviors including: signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting the offspring). 3. **Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.** ❖ Students will compare the features that plants and animals share

Unit 1: Waves: Light and Sound	**Grade Level: 1**	**Time Frame: April- June**

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 can be seen only when illuminated.
1-PS4-3. Plan and conduct an investigation 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.

Common Core State Standards Connections:

ELA/Literacy

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.)
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).
W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question
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.

Mathematics

MP.5 Use appropriate tools strategically.
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

Essential Questions:

- What happens when materials vibrate?
- What happens when there is no light?
- What happens when light is blocked or when materials of different kinds are placed in the path of a beam of light?

Unit Goals:

Students are expected to develop understanding of the relationship between sound and vibrating materials as well as between the availability of light and ability to see objects. The idea that light travels from place to place can be understood by students at this level through determining the effect of placing objects made with different materials in the path of a beam of light.

Skills:

- Plan and carry-out investigations.
- Analyze and interpret data
- Construct explanation and design solutions
- Obtain, evaluate and communicate information

Vocabulary:

Translucent
Transparent
Opaque
Reflective
Illumination
Vibration
Communication

Demonstration of Learning/Assessments:

1. Student will write an informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.
2. Students will participate in shared research and writing projects Students may:
   - explore a number of "how-to" books on the given topic and use the information to write a sequence of instructions
3. Student will recall information from experience or gather information from provided sources to answer questions formulated by their peers, self or teacher with guidance and support from teacher
4. Students will participate in collaborative conversations with diverse partners about topics from the unit with peers and adults in small and larger groups.

Performance Tasks (Labs) ***Listed below are the suggested activities that can be used to perform the labs. Teachers will have the autonomy to change the materials to make the proper adjustments needed in order to perform lab task.***

1. **Students will plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make material vibrate:**
   - Teacher will provide examples of vibrating materials that make sound (tuning forks and plucking a stretched string) if materials are not provided teachers can incorporate technology by viewing vibrating materials on Youtube.com
   - Students will make observations from the video to construct examples of how sound can make matter vibrate *(this can include holding a piece of paper near a speaker making sound and holding an object near a vibrating tuning fork.)*
2. **Students will make observations to construct an evidence-based account that objects can be seen only when illuminated. Examples of observations could include those made in:**
   - A completely dark room, a pinhole box, a video of a cave explorer with a flashlight.
3. **Students will plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light examples of materials can be:**
   - transparent (plastic, wax paper)
   - opaque (cardboard)
   - reflective (such as a mirror)
4. **Students will use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance examples of devices could include:**
   - a light source to send signals, paper cup and string "telephones," and a pattern of drum beats

Resources: Additional/Supplementary	**21st Century Themes**
Books: 1. All About Sound by Trumbauer, Lisa 2. Light Helps Me See by Boothroyd, Jennifer 3. Sending Messages With Light and Sound by Boothroyd, Jennifer 4. What Are Sound Waves? by Johnson, Robin *Online websites* **www.sciencekids.co.nz** **www.youtube.com** The Magic School Bus: • In the Haunted House • Sound is Vibration • Grade 1 light and sound • The Science of the String Phone Computer Games: 1. How We See 2. Sunlight and Shadows	**Global Awareness:** Understanding how people around the world use light and sound **Financial and Economic Literacy:** Understanding how to reduce household electricity consumption **Creativity and Innovation:** • Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts • Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work **Flexibility and Adaptability:** Incorporate feedback effectively **Social and Cross-Cultural Skills:** Know when it is appropriate to listen and when to speak