Unit 1 - Storyline: **Earth's Place in the Universe - Patterns and Cycles**	**Grade 1**	**Days - 19**
Anchoring Question:		
How can we predict, observe and explain why the sun, moon and stars look different at different times?		
Essential Questions:		
1. What patterns of change can be predicted when observing the sun, moon and stars? 2. How does the sun impact how we live? 3. How can we use a compass rose to track and predict where the sun will be during the day?		
Enduring Understandings:		
- Objects in the sky move based on the rotation of the Earth. - Changes of patterns in the sky are predictable. - Stars, other than the sun, can only be seen at night. - The Sun does not move, instead Earth's movement causes day and night. - Many events are repeated. - The Sun rises in the East and sets in the West. - A compass rose is a tool used to show direction (north, south, east, west)		
Storyline Narrative / Big Ideas: In this unit of study, students will study the movement of the sun, moon and stars and that they can be observed and predicted. When we observe and predict the movements in the sky we understand how the sun and moon rise and set how the stars travel across the sky, and how daylight differs depending on the position of the sun and earth. Students will be planning and carrying out investigations as well as analyzing and interpreting data.		
Key Words: daylight, month, season, shadow, star, sunlight, week, year, rotate, pattern, compass rose, titl, sundial		

Science and Engineering Practices	**Disciplinary Core Ideas**	**Cross Cutting Concept**
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	**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	**Patterns** - Observed patterns in nature guide organization and classification and prompt questions about relationships and causes underlying them.

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)	the amount of daylight to the time of year.	

Consolidated Supply List:
Pictures of Moon, Sun, Stars and Seasons, journal, Flashlights
Aluminum foil, Compass rose - class set, Chalk, Paper plates, Bottle caps. Flour
Construction paper

Episode 1
Engage/Elicit Ideas
Days: 2 days

Lessons	Resources
Lesson 1: Phenomena **Gather** - Elicit ideas - Show phenomena video and elicit initial ideas. Have students draw a model of what they saw in the video in their science journals. Point out what makes a good science model - labels, pictures, arrows, etc. **Reason** - Students write down their noticings and wonders about the phenomena. **Communicate** - Class Discussion - Share their noticings and wonders. Write some claims to the unit anchor question - How can we predict, observe and explain why the sun, moon and stars look different at different times of the day and year? **Lesson 2: Write Around** **Gather** - Place Earth and Sky pictures on pieces of chart paper and place it around the room. Students rotate	Phenomena video -link **Episode Supply List:** Earth/Sky Pictures - link Journal/notebook Noticing/Wonders pdf - link KWL - link

around the room and draw or write what they would do at that time of day. **Reason** - Hang the charts and share the write arounds. Create a class KWL chart with the question - What do you know about the sun, moon and stars at different times of day. **Communicate** - Students look back at KWL created and draw and write about ways we can find out more about what the sun, moon and stars look like at different times of the day. List these **claims** and questions to be answered throughout the unit.	
Episode 2 **Explore** **Days: 4**	
Lessons	**Resources**
Lesson 1: Measure Sun and Shadows **Gather** - After watching the Sun, Height and Shadow Length videos, students will go out three times a day to measure the sun's height and shadow length in the same location using non-standard measurement. Recording data on a student created table or graph in their journals. **Reason** - Students look at data and write down noticings and wonder about the data. **Communicate** - Share their findings with the class. In their journals students write or draw why the sun makes shadow patterns throughout the day. **Lesson 2: Observe the Rotation of the Earth Around the Sun** **Gather** - Students watch the Earth's Rotation video **Reason** - Students draw a model in their journals to show their understanding of the rotation of the Earth around the Sun. **Communicate** - Partners act out the rotation of the sun and earth using themselves as models. One plays the sun the other plays the earth. **Lesson 3: Observe Moon Patterns**	Sun Height and Shadow Length https://www.youtube.com/watch?v=b_vZvEBzAKA And https://www.youtube.com/watch?v=13svt65OU18 Earth's Rotation - https://studyjams.scholastic.com/studyjams/jams/science/solar-system/day-on-earth.htm **Episode Supply List:** Journal Flashlights Aluminum foil

Gather - Students look at moon phase calendar data for the current month - https://www.moongiant.com/phase/today/ and communicate what they notice with their partner. **Reason** - Students draw a model of the moon's pattern in their journals. **Communicate -** Share the patterns observed. **Lesson 4: Observe How a Shadow Changes** **Gather** - Flashlight experiment - Partners create a sculpture using aluminium foil. Provide students with flashlights and objects to observe how shadows are casted from three different locations. Trace the shadow and Record the measurements of the shadow using non-standard units of measurement. **Reason** - Look at the data recorded and discuss their noticings with their partners. **Communicate** - Share with the class their findings. Reflect back on the claims or KWL made in the Engage lessons to see if any new information can be added or questions answered.	
Episode 3 **Explain** **Days: 8**	
Lessons	**Resources**
Lesson 1:- Vocabulary Splash **Gather** - display all the unit's vocabulary words on the board. Read each word to the class with a brief explanation of the words. **Reason** - partners sort these words in an open sort using their prior knowledge. Label each group of words. **Communicate** - share how they sorted these words to the class. **Lesson 2: Identify How a Compass Rose Helps Show Us the Path the Sun Takes** **Vocab. Focus** - choose a few vocabulary words to focus	**Episode Supply List:** Compass rose - class set Recording sheet/journal Chalk Paper plates Bottle caps Flour Construction paper Vocabulary - daylight, month, season, shadow, star, sunlight, week, year

on. Students write the word, draw a picture of the word and write the word in a sentence in their journals. **Gather** - What is a compass rose? Pass out a compass rose to all the students. Notice the markings on the compass. Watch video on compass rose - https://www.youtube.com/watch?v=sJj-iXx6jK4 **Reason** - Go outside 3 times during the day and track the sun on a recording sheet or in their journals. Jot down the direction of the sun using the compass rose. **Communicate -** Students will share how a compass rose helps us show the path of the sun? In their science notebooks students draw a model of the compass rose with labels. Tell us how it helps us track the path of the sun. **Lesson 3: Identify How to Use a Sundial** **Vocab. Focus** - choose a few vocabulary words to focus on. Students write the word, draw a picture of the word and write the word in a sentence in their journals. **Gather** -, What is a sundial? Read article together https://kids.kiddle.co/Sundial and watch video https://www.youtube.com/watch?v=1SN1BOpLZAs **Reason** - Students make a human sundial with chalk. Go out 3 or more times in the day to record. https://www.crayola.com/lesson-plans/human-sundial-lesson-plan/ **Communicate** - Students draw a model in their notebooks of how a sundial works. **Lesson 4: Identify How the Earth Moves Around the Sun** **Vocab. Focus** - choose a few vocabulary words to focus on. Students write the word, draw a picture of the word and write the word in a sentence in their journals. **Gather** - watch video https://www.youtube.com/watch?v=l64YwNl1wr0, talk about the Earth's tilt with the students and rotation and revolution. **Reason** - students create a t-chart explaining the difference between rotation and revolution.	

Communicate - In journal students write how the Earth moves around the sun causing day and night and the different seasons. **Lesson 5: The Moon** **Vocab. Focus** - choose a few vocabulary words to focus on. Students write the word, draw a picture of the word and write the word in a sentence in their journals. **Gather** - Read Aloud by an Astronaut - A Moon of My Own https://www.youtube.com/watch?v=aN3aGtjDXS8 **Reason -** Moon Art Activity - https://www.teacherspayteachers.com/Product/Moon-Crater-Art-Activity-FREE-4522916?st=fa4334caf51afef98584d4fd8cf49cc9 **Communicate** - Students share 3 interesting facts about the moon and 3 things you like about the moon. Attach to their moon model for a classroom moon exhibit **Lesson 6:- Vocabulary Activity** **Gather** - Review vocab. for this unit. Explain the activity called Draw Me. Modeled after pictionary. This game involves one student drawing pictures of the terms and students guessing the word. **Reason** - Play game.	
Episode 4 **Elaborate/Build New Content/Apply new Content** **Days: 4**	
Lessons	**Resources**
Project - Design Challenge - Students come up with a design solution to this design challenge. **How can we chart the stars, moon or sun at different times of day from the location of the school?** In groups students draw a model of a tool to use for this investigation in science journals. Groups then construct their tool to use.*Students will then track the data in their journals*. Students **evaluate** the data gathered writing about the movement of the sun, moon or stars from the tool engineered. Share with the class.	**Episode Supply List** Depends on students' design.

Episode 5 **Evaluate** **Days: 1**	
Lessons	**Resources**
What do you need to create a shadow? https://docs.google.com/document/d/1CcNesAqPHgsgE_5FS5wIyWjq43NwdonyX9gqyShDAUc/edit In their journals pick 2 yes pictures and 2 no pictures and write why. Or **Me and My Shadow** https://docs.google.com/document/d/1-0io6bCLhuyrAvotxC8d3rKRCOvOW7HkiND5fVIDEwo/edit?usp=sharing	**Episode Supply List** Object pictures - link

Unit 2 Topic/Storyline: Waves- Light and Sound	**Grade 1**	**Days- 17**
Question		
What makes sound and how can we see light?		
Essential Questions:		
1. How does sound impact the way we live? 2. How does light impact the way we live? 3. Why is it important to know about light and sound energy?		
Enduring Understandings		
- Sound & light can travel - We are able to see things due to light - Light travels in a straight line - Natural sources include the sun while artificial sources include light bulbs and tv. - Sound is another type of wave and these waves allow us to hear music, people and noise.		
Storyline Narrative / Big Ideas:		

In this unit of study, students will be exploring light and sound around us. Students will learn that light is created by both natural and artificial sources. Light travels in a straight line and is energy we can see. Students will also learn that shadows are areas of darkness behind an object that is being illuminated. The students will be able to define the terms opaque, transparent, translucent, refraction, and reflection. While exploring sound, students will learn that sound is another type of wave. Sound waves are created by vibrations. Sound waves travel through a medium, such as wires (headphones) or the molecules in the air.

Key Words: reflect, sound, space, speed, tuning fork, vibrate, beam, light source, human-made, transparent, translucent, opaque

Science and Engineering Practices	Disciplinary Core Ideas	Cross Cutting Concepts
Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in K-2 builds on prior experience and progresses to simplep investigations, based on fair tests, which provide data to support explanations or design solutions. ● Plan and conduct investigations collaboratively to produce 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 construction evidence-based accounts of natural phenomenon and designing solutions. ● Make observations (firsthand or from media) to construct an evidence-based account	**1- PS4.A: Wave Properties** Sound can make matter vibrate, and vibrating matter can make sound. (1-PS4-1) **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	**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) **Influence of Science, Engineering, and Technology 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)

for natural phenomena. (1-PS4-2) ● Use tools and materials provided to design a device that solves a specific problem. (1-PS4-4) **Scientific Investigations Use a Variety of Methods** ● Scientists use different ways to study the world. (1-PS4-1) ● Science investigations begin with a question. (1-PS4-1)	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) **1-PS4.C: Information Technologies and Instrumentation** People also use a variety of devices to communicate (send and receive information) over long distances. (1-PS4-4)	
Consolidated Supply List - Tuning forks, pie pans, objects that can be classified as opaque, transparent, and translucent; such as printer paper, construction paper, paper plates, glass/plastic, cardboard, aluminum foil, flashlights.		
Episode 1 **Engage/Elicit Ideas** **Days: 2**		
Lessons		**Resources**
Lesson 1: Phenomena **Gather** - Elicit ideas - Show phenomena video and elicit initial ideas. Have students draw a model of what they saw in the video in their science journals. Point out what makes a good science model - labels, pictures, arrows, etc. **Reason** - Students write down their noticings and		**Episode Supply List:** Phenomena- Sound & Light Travel in Waves Noticing/Wonder PDF- Notice and Wonder Note Catcher KWL- KWL Chart Digital KWL Chart Write Around Pictures- WriteAroundPictures

wonders about the phenomena. **<u>Communicate</u>** - Class Discussion - Share their noticings and wonders. Write some claims to the unit anchor question - How can we predict, observe and explain how vibrations allow us to hear? **Lesson 2: Write Around** **<u>Gather</u>**- Place pictures of different objects around the room (flashlight, rubber band, computer, projector, piece of paper, instruments, etc). Students will rotate around the room and answer the question: Do you think this object makes a sound or provides light? **<u>Reason</u>-** Share student predictions from the write around. Then create a KWL chart with the question: What do you know about sound/light? **<u>Communicate</u>**- Students draw and write about ways sound can be made (shaking, strumming, plucking, etc.) and some sources of light (ie. electricity, stars, lightning, fire) List these **claims** and questions to be answered throughout the unit.	
Episode 2 **Explore** **Days: 3**	
Lessons	**Resources**
Lesson 1: Identifying Sources of Light and Sound Waves **<u>Gather</u>**- After watching the BrainPop videos on sound and light, students will explore the objects they saw pictures of the day before in the write around. Students will be able to touch the objects and observe how the object makes sound or creates light. **<u>Reason</u>-** Students will record their observations and wonder about how sound/light travel. **<u>Communicate</u>-** Students will share their findings with the class. In their journals students write or draw how they believe sound/light travel through the air. **Lesson 2: Tuning Fork Experiment**	Episode Supply List: BrainPop Jr. Sound video: Brain Pop Jr - Sound BrainPop Jr. Light video: Brain Pop Jr Light Tuning Fork Cause/Effect: CauseandEffectGraphicOrganizerFreePrintable-1.pdf Student notebooks Tuning forks Classroom objects that make sound/light

Gather- Students will hit a tuning fork against various objects and record what they see. Students will then hit a tuning fork against object and place into water (make sure to use pie pan) **Reason**- Students will construct a cause and effect for the cause of the sound made by the tuning fork. **Communicate-** Students will communicate the explanation about the cause and effect of hitting the tuning fork. Students can communicate their findings through a Flipgrid if you so choose. **Lesson 3: Opaque, Transparent, Translucent, & Reflective Experiment** **Gather**- With the lights off, students will explore various objects with a flashlight while in stations. Students will shine the light on each object and record their observations. **Reason-** Students will draw or write what happens to the light after being shone onto each different object (Certain objects will absorb the light while others reflect). **Communicate-** Students will share the data they collected while completing the experiment.	
Episode 3 **Explain** **Days: 5**	
Lessons	**Resources**
Lesson 1:- Vocabulary Splash **Gather** - Display all the unit's vocabulary words on the board. Read each word to the class with a brief explanation of the words. **Reason -** Partners sort these words in an open sort using their prior knowledge. Label each group of words. **Communicate** - Share how they sorted these words to the class. **Lesson 2: How Could You Send a Secret Message?** **Vocab. Focus** - choose a few vocabulary words to focus	**Vocabulary Words:** reflect, sound, space, speed, tuning fork, vibrate, beam, light source, human-made **Episode Supply List:** Flashlights Mystery Science Hands-on Activity- Mystery Science - Lights and Sounds - Mystery 3 - Color Codes Light Sources Graphic Organizer- SourcesofLightEnergy-1.pdf Student notebooks 3 different colored markers

on. Students write the word, draw a picture of the word and write the word in a sentence in their journals. **Gather-** Watch the Mystery Science video about communicating using light and sound. How could you send a secret message to someone far away? **Reason**- Partners will send secret messages to each other using flashlights. **Communicate-** Students will share how they were able to send a secret message to their partner using light and color. **Lesson 3:What are Sound Waves?** **Vocab. Focus** - choose a few vocabulary words to focus on. Students write the word, draw a picture of the word and write the word in a sentence in their journals. **Gather-** Read the book ***What are Sound Waves?*** on Epic! https://www.getepic.com/app/read/10647 **Reason-** Wrap different sized rubber bands (thick/thin) around a plastic cup. Students will pluck the rubber bands and observe the vibrations and the different sounds each band makes. **Communicate**- Students will draw and label a diagram of how the rubber bands make sound. **Lesson 4: Where Does Light Come From?** **Vocab. Focus** - choose a few vocabulary words to focus on. Students write the word, draw a picture of the word and write the word in a sentence in their journals. **Gather-** Watch the video Light for Kids | Where does light come from? Learn all about light in this fun introduction video. **Reason-** Students will draw and label three different sources of light as well as determine whether it is a nature-made or human-made source. SourcesofLightEnergy-1.pdf **Communicate**- Students will share the three sources they identified as a light source and whether they are nature-made or human-made.	Plastic cups Rubber bands (various thickness) 

Lesson 5: Final Vocabulary Activity **Gather** - Review vocab. for this unit. **Reason** - Play a Kahoot! https://create.kahoot.it/share/light-and-sound-grade-1/beb9419d-9de2-4a98-ac0c-76b0fa69308f **Communicate** - Students use vocabulary words to create a conversation between two people. iMessages	
Episode 4 **Elaborate/Build New Content/Apply new Content** **Days: 4-5**	
Activity	**Resources**
Project: Design Challenge **Gather**- Design a structure that uses light or sound to solve a communication problem defined by the class. ● Have students come up with a problem they see where students are not getting information across a distance. For example, they want to send a message to a friend who lives across the street, or the teacher needs to call students to attention from anywhere in the classroom. ● Students may use available materials. These may be a variety of materials: flashlights, paper cups, string, balloons, boxes, sticks, paper **Reason-** Students will brainstorm different ways to get their message across then design a structure that uses light or sound to send information over a distance. Students should draw the structure, include the materials used, and show how the device sends the message. *Questions you can ask to help students design a solution:* ● *What message are you trying to convey?* ● *How will you send your message?* ● *How will this design send the message over the distance?* ● *What materials will be useful?* ● *How will others know what the message means?* ● *How will the device work?* ● *How will it use light/sound to communicate?* **Communicate-** Students communicate their argument for their structure and how it uses light or sound to	**Episode Supply List:** flashlights, paper cups, string, balloons, boxes, sticks, paper, or other classroom items students can use

communicate over a distance as a solution to the defined problem.	
Episode 5 **Evaluate** **Days: 1**	
Assessment	**Resources**
Create a gallery walk around the room with all the student devices. Students will go around and comment/provide feedback to their classmates' devices. Students should use relevant vocabulary when providing feedback to classmates. Students may also share their devices on a Flipgrid and share their feedback using comments on classmates' videos. After reviewing classmate devices, students will then self assess their devices using a rubric. Teacher will then assess devices using a teacher rubric.	**Episode Supply List:** Jamboard with feedback sentence starters- Gallery Walk Student self assessment rubric- SelfAssessmentRubric Teacher rubric- TeacherRubric

Unit 3 Topic/Storyline: Animal Powers (Molecules to Organisms	Grade 1	Days
Question		
Essential Questions:		
4.		
Enduring Understandings		
-		
Storyline Narrative / Big Ideas:		

Key Words:

Science and Engineering Practices	Disciplinary Core Ideas	Cross Cutting Concepts

Consolidated Supply List -

Episode 1
Engage/Elicit Ideas
Days:

Instructional Goals:
Motivates students Phenomena - short video, text, picture, gifs, song, demonstration, maps
Notice and Wonder Statements (10 observations and 10 Questions)
Model
Students draw a model to explain or predict. Then write about what they drew or label the model.
Claim - make a claim about the phenomena.

Lessons	Resources
Lesson 1: Gather Reason Communicate Lesson 2: Gather Reason Communicate	Episode Supply List:

Episode 2
Explore
Days:

Instructional Goals:
Experience - Students explore and carry out investigations from wonder statements or claims from the first episode.
Data - Collect data from the investigations.
Research - obtain information.
Model - Students revise their models

Lessons	Resources
Lesson 1: Gather Reason Communicate Lesson 2: Gather Reason Communicate Lesson 3: Gather Reason Communicate	Episode Supply List:

Episode 3
Explain
Days:

Instructional Goals:
Learn information to make sense of their science explorations from the explore phase.
Analyze and interpret the data (SP4) .
How does the Evidence support this claim?
Reading, listening and/or discussing text, articles, videos
Vocabulary Instruction
Teacher directed lessons.

Lessons	Resources
Lesson 1: Gather Reason Communicate Lesson 2: Gather Reason Communicate Lesson 3: Gather Reason Communicate Lesson 4:	Episode Supply List:

Gather Reason Communicate	
Episode 4 **Elaborate/Build New Content/Apply new Content** Days: Instructional Goals: Students have the opportunity to practice what they have learned in the introduction section to consolidate learning and develop understanding. Use what they learned to apply to another experience. Back to phenomena to explain the Reasoning Independent Activities STEM projects Choice Boards Debates	
Activity	Resources
	Episode Supply List:
Episode 5 **Evaluate** Days: Instructional Goals: Assessment -problem solving, system analysis, decision making, rubrics, project, student self assessment, journal writing Reflect	
Assessment	Resources
	Episode Supply List:

Unit 4 Topic/Storyline: Heredity	**Grade 1**	**Days**

Question

Why do young plants and animals look alike, but not exactly like, their parents?

Essential Questions:

1. Are the features of plants or animals similar or different?
2. What features of a plant or animal vary in size, color and shape?

Enduring Understandings:

- Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.
- Plants have the same features but are different.
- Animals share the same features but are different.

Storyline Narrative / Big Ideas:
Students will observe that adult and young plants and animals share similarities and differences and record these findings in their science journals. They will be able to explain the life cycle of a plant and what features are similar and different about an animal or plants offspring.

Key Words:

Science and Engineering Practices	Disciplinary Core Ideas	Cross Cutting Concepts
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-LS3-1)	**1-LS3.A:** Inheritance of Traits Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents. (1- LS3-1) **1-LS3.B:** Variation of Traits Individuals of the same kind of plant or animal are	**Patterns:** Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (1-LS3-1)

Consolidated Supply List -

Episode 1
Engage/Elicit Ideas

Days: 1 day	
Lessons	**Resources**
Lesson 1: Phenomena Gather - Display photos of twins on smartboard/white board, maternal and paternal, puppies with an adult dog, family pictures - doc link Reason - Students look at pictures and write down what they notice or wonder about the pictures on their graphic organizer. Communicate - share findings with the class to make a class chart of noticings and wonders.	**Episode Supply List:** Pictures - doc. Notice and Wonders Student Chart - link
Episode 2 **Explore** **Days:** Instructional Goals: Experience - Students explore and carry out investigations from wonder statements or claims from the first episode. Data - Collect data from the investigations. Research - obtain information. Model - Students revise their models	
Lessons	Resources
Lesson 1: Seeds Gather - Read Aloud The Tiny Seed book, observe different shapes, sizes etc. seeds, Reason - sort their seeds and grapn their results to create data Communicate: group share how they sorted and their data to the class Lesson 2: Planting a Seed Gather - plant and see how they resemble their parents, measure, pea seeds Step 1: I give each child a zip-lock and write their name with a permanent marker. Step 2: I give each child a dry piece of paper towel folded in half and have them place it in the zip-lock bag. Step 3: I pour the water in the bags - just enough to	Episode Supply List: Bird seed, magnifying glass, baggies, paper towels Venn diagram

moisten the paper towel. I make sure the paper towel is not dripping because this can cause the pea to mold. Step 4: Place a row of staples through the middle of the zip-lock bag. - Zip lock bag and seeds Step 5: Allow each child to place a dry bean on top of the staples and seal the bag. *Before moving onto Step 6, my students record their seed again and this time predict how long it will take to start growing.* Journal Entry - Part 2 Journal Entry - Part 2 Journal Entry - Part 2 Step 6: Tape each bag to a window or a wall that gets the most sunlight. Step 7: The seeds will begin to germinate in 3-6 days. Step 8: When the students take their seeds down to observe have them moisten the paper towels if they seem dry. I like to have my students to use medicine droppers. Step 9: These seeds can be placed in a garden after 1.5 to 2 weeks Throughout the growing process I have my students measure, observe and record seed growth in their Seed Journals. Lesson 3: Adults and their Young Gather - Read Aloud - Are you my mother? Reason- students look at a picture of an animal and its mother, talk with a partner about what is the same and what is different. Communicate - share out observations and jot down on venn diagram. Lesson 4: Gather: Look at the chart of our noticings and wonderings Reason: Answer any wonderings Communicate: Add any other wonderings to the chart	
Episode 3 **Explain**	

Days: Instructional Goals: Learn information to make sense of their science explorations from the explore phase. Analyze and interpret the data (SP4) . How does the Evidence support this claim? Reading, listening and/or discussing text, articles, videos Vocabulary Instruction Teacher directed lessons.	
Lessons	Resources
Lesson 1: Vocabulary Splash Gather - Display the words up on the board Reason - Students sort the words with a partner Communicate - share with the class how you sorted the words. **Lesson 2: Life Cycle of a Plant** Gather - read aloud Jack and the Beanstalk Reason - draw a picture of how the beanstalk grew Communicate - share how the life cycle of the beanstalk **Lesson 3: Plant Secrets** Gather- Book - Plant Secrets Reason - Communicate - diagram of the life cycle Lesson 4: Gather Reason Communicate Lesson 5: Gather Reason Communicate	Episode Supply List:

Episode 4
Elaborate/Build New Content/Apply new Content
Days:

Instructional Goals:
Students have the opportunity to practice what they have learned in the introduction section to consolidate learning and develop understanding. Use what they learned to apply to another experience.
Back to phenomena to explain the Reasoning
Independent Activities
STEM projects
Choice Boards
Debates

Activity	Resources
Who Do You Look Like?	Episode Supply List:

Episode 5
Evaluate
Days:

Instructional Goals:
Assessment -problem solving, system analysis, decision making, rubrics, project, student self assessment, journal writing
Reflect

Assessment	Resources
	Episode Supply List: