Big Idea/ Topic
Living/Non-Living

Standards Alignment
SKL1. Obtain, evaluate, and communicate information about how organisms (alive and not alive) and non-living objects are grouped.
   a. Construct an explanation based on observations to recognize the differences between organisms and non-living objects.
   b. Develop a model to represent how a set of organisms and non-living objects are sorted into groups based on their attributes.

(An extension is included to connect to SKL2c. Ask questions and make observations to identify the similarities and differences of offspring to their parents and to other members of the same species.)

Crosscutting Concepts: Patterns, Structure and Function

Other Content Area Standards:
ELA
ELAGSEKRL1: With prompting and support, ask and answer questions about key details in a text.

ELAGSEKW2: Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

ELAGSEKW8: With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

ELAGSEKL5: With guidance and support from adults, explore word relationships and nuances in word meanings.
   a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.

Math
MGSEK.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.
MGSEK.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

### Instructional Design

Kindergarten students may have a difficult time distinguishing between organisms that are living and objects that are non-living. A living thing is anything that IS or HAS EVER BEEN alive or part of a living thing (wood, paper, cotton, wool, seeds, etc.). Non-living is used to describe anything that has NEVER been alive (plastic, metal, clay, etc.). A dead animal or plant is considered a living thing even though it is not alive. Students will begin to understand that all living things grow, breathe, reproduce, and move. Students will also begin to understand that living objects need air, water, and food to survive.

The Dear Parent/Caregiver letter can be shared with families to help them prepare for learning.

### DISCLAIMER

The books used as examples for the Georgia Home Classroom’s Digital Learning Plans were selected by Georgia teachers to reinforce skills and knowledge found within the Georgia Standards of Excellence. The Georgia Department of Education (GaDOE) cannot and does not endorse or promote any commercial products, including books. Therefore, the books that were selected serve as examples and are not endorsed or recommended by the GaDOE. Please remember that when selecting books to support instruction, Georgia’s public school teachers and leaders should consult their local school district’s policy for determining age and content appropriateness for their students.

### Engage

**Phenomenon:** Is it alive?

Provide the students with [pictures of three plants]: 1 healthy potted plant, 1 dead plant and 1 fake potted plant.

Ask students to observe the pictures and to make observations about the plants. What do they notice about the leaves? On a sticky note, students will write one word that describes each plant. Students should share their observations. The teacher will ask students to explain how the plants are similar and how the plants are different.

**Plugged:** Student could share their observations synchronously by showing what they write, verbally sharing with the class, or by posting in a shared chat box. In a synchronous or asynchronous setting, they could also post on a shared online “board” (Various platforms support this such as padlet, jamboard, etc. Check with your school district to use their approved resource.)
**Unplugged:** Make color copies of the pictures of the plants to send to students. Ask them to do the activity and share their observations with an adult or in a journal that can be shared with you at the end of the study.

**Exploring**

Students will view the time lapse video of a lima bean.

The teacher will ask the students whether they think that the plant in the video (or pictures or bag) is a living thing. Why or why not? Ask students to explain how they know if something is a living plant/animal or non-living thing. (See suggestions above for ways students to share explanations.) Have students complete the T-Chart with the headings of living and non-living. Students should place their pictures in the appropriate categories and explain their reasoning. Have students count the items in each column and compare. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.

Teachers note: If a student mistakenly puts a picture in the wrong category, do not correct them at this point. You will be revisiting this activity later in the lesson, and students will have the opportunity to reevaluate.

**Unplugged:** Provide pictures of a bean growing from a seed to a plant or provide a bean seed, plastic bag, and paper towel to the student. Have them dampen paper towel and place the seed on the towel and place both into a sealed plastic bag. Place the bag in a warm, sunny spot. Instruct them to add water to the paper towel when it dries out. Tell them to observe over several days (at least 5). Share the outside walk activity with the parents to do with their child. Provide a copy of the T-Chart.

**Explaining**

The teacher will ask: How do we know if something is living? What do living plants/animals do that are different than non-living things? The teacher will give students a stack of picture cards that show examples of both living plants/animals and non-living objects. The students will sort the cards into two piles (living and non-living). Sorting Cards The teacher will ask the students to take a closer look at the stack of cards and ask them which characteristics they have in common. The teacher should guide the discussion to reinforce the following characteristics of living things: Living things move, breath, grow and reproduce. Have students develop a list of questions to ask about each object.

**Plugged:** Cards could be shared online and sorted together.

Students will return to the T-Chart in the exploring phase and review their answers. Students should fully explain their reasoning by applying their questions to each picture. Questions will include:

Does it move?
Does it grow?
Does it breathe?
Can it have babies (reproduce)?
Teachers note: Some students may think that plants are non-living because they do not move around freely. You can explain to students that plants move as they grow, and many plants follow the sun (phototropism) by angling their leaves to receive maximum sunlight.

**Unplugged:** Make copies of the card to share with families to use at home. Instruct students to revisit their T-Charts at this time and discuss with an adult or the teacher via a phone call or journal.

**Elaborating**

**Phenomenon:** The Bee & Butterfly

Teacher will show the [photograph](#) to students and ask them to identify the living things in the photo. Students will identify the bee, butterfly, and flower as living things. Teacher will ask students if they have observed bees and butterflies around colorful flowers. Teacher will make the connection for students that bees and butterflies like flowers because they provide food (nectar) for them. Teacher will explain to students that we need to make sure that the area around our school is a safe and welcoming place for bees and butterflies to live and provides an area for them to find nectar. *This instructional segment can be done in conjunction with the earth materials segment which explores earth materials and the organisms’ section which explores plants and animals. Or connections to those lessons, if already completed, could be made.*

Teacher should explain that bees and butterflies need the nectar found in plants to survive. Providing a safe and welcoming place for bees and butterflies to find nectar is as easy as planting a small patch of native wildflowers, herbs or even a pot of flowers. If students explored with the bean seeds, they could monitor their growth and see how they change over time. Students will evaluate areas around the school or their home where they can plant flowers that will provide a safe and welcoming area for bees and butterflies.

Their kindergarten experience of learning to notice the differences organisms and non-living objects is important. This knowledge will help them in first grade, when students will learn more about the basic needs of plants and animals.

**Unplugged:** Provide students with a [picture of the bee and butterfly](#) on the plant.

**Extension**

To begin connecting to other standards consider:

SK2.c. Ask questions and make observations to identify the similarities and differences of offspring to their parents and to other members of the same species.

We will blend the idea of living and nonliving with the similarities and differences of offspring to their parents.

Read a book such as *Are You My Mother?* by P.D. Eastman. In this story the bird goes to many nonliving objects and ask, “Are you my mother.” Read the book aloud to students once. Then return to each encounter the baby bird has and ask students which encounters are with living things and which
are with nonliving things. Can they explain? Why can't an object be the bird's mother? Non-living organisms to discuss from the text are as follows: car, boat, plane, and a “big thing”.

Be sensitive to the idea that other living animals could be the adopted mother of the bird. In this story we do know there is a mother bird. Before she leaves the nest, talk to the students about what they observe about the mother bird (wings, beak, two feet, feathers, …). Why is she leaving her nest? Help students notice how the bird looks like the mother bird. How is the baby bird different from the cat, hen, dog, etc?

Students can select their favorite animal and find a picture of that animal as a baby and an adult. Have the share how they are alike and how they are different.

**Plugged:** There are several online readings of this book or you could read it to your students in a virtual class session. Students could search for animal pictures online.

**Unplugged:** This is a book that is likely in your school or public library. Students could draw pictures of their favorite animal as a baby and as an adult and discuss.

### Evidence of Student Success

- Students will develop an understanding of the difference between living plants and animals and those no longer alive, and non-living objects.
- Students will understand that living animals and plants do or did move, breathe, grow, and reproduce to classify objects.
- Students will differentiate between objects made from animals or plants that were once alive and objects made from materials that were never alive.
- Students will understand that animals and plants that were once living will die, but other objects were never alive.
- Students will understand that living animals and plants need air, water, and food to survive.
- Students T-Charts
- Journal entries or explanation (verbal and written)
- Results of how student sorts cards

### Student Learning Supports

The goal for science education in the state of Georgia is as follows: All Students, over multiple years of school, actively engage in science and engineering practices and apply crosscutting concepts to deepen their understanding of the core ideas in these fields. The learning experiences provided for students should engage them with fundamental questions about the world and with how scientists have investigated and found answers to those questions. This lesson includes the disciplinary core ideas, science and engineering practices and crosscutting concepts to actively engage students in exploring science concepts with real world topics. As part of the vision, we must support the inclusion of all students in science learning.
Some general strategies to include all students in the learning process of science are as follows:
- Provide consistent and positive feedback.
- Keep directions brief and clear.
- Make sure parents and students know schedules, due dates, requirements, expectations, and how assignments/tests are going to be collected.
- Share evaluation results in a timely manner to students and parents.
- Package assignments in a way that students know the sequence, what is required, when it is required, what is available as choice and what is for fun.
- Provide/encourage organizational strategies such as where to work, store work, when and where to turn in assignments, graphic organizers, etc.
- Provide reminders of important dates and requirements.
- Go over notebook and journal ideas and share your entries with students so they can see what you expect.
- Allow dictation and/or text to speech software programs and tools
- Check in with students by phone or online to answer questions, give reminders, and check progress.
- Provide parents with updates on progress and upcoming assignments. Communicate often.
- Provide resources that students can access offline.
- Allow students to give information orally or in drawings.
- Model expectations and demonstrations in video/online/phone.
- The teacher should have students match letter prior to reading or writing to remind them of the alphabet.
- The teacher can have students identify words that they know in any text that they are reading.
- The teacher can provide students with sentence frames to assist students frames to help students get started writing.
- Provide students with the opportunity to interact with numbers.
- The teacher should provide multiple ways for students to gain and show their knowledge.

Some strategies specific to this lesson are as follows:
- The teacher should consider providing students with graphic organizers that students can use to organize their thoughts and ideas. The teacher can provide images for students to cut and paste into the graphic organizer if that is appropriate.
- The teacher can lead a discussion to elicit student ideas and brainstorm characteristics of living things as they work through the lesson.
- The teacher may need to use guiding questions to help students put their ideas into words that can be communicated to the class.
- The teacher should consider showing the video of the lima bean growing more than once as needed for students.
- The teacher should consider having students collaborate on their list of characteristics by either having students discuss as partners or working together as a class.
- The teacher can have students share their observations with each other as they work through the lesson.
• The teacher can consider using an online platform (Padlet, Jamboard, etc.) Check with your
district to use their approved resources) to have students drag and drop images into
categories.
• The teacher should consider time lapse videos or images to help students see the way that
plants grow.
• The teacher should provide parents with instructions for activities that are being done in
class. This will allow parents to assist students that need it when students are in a
virtual/distance format.
• The teacher should provide students with multiple ways to share their knowledge and ideas
with the class.
• The teacher should consider sorting images into living and non-living categories with students
and then having them develop a list of things that living things have in common.
• The teacher may need to help students develop a list of questions by modeling writing the
first question.
• The teacher should consider showing an example of trees growing toward light, discuss how
plants sway in the wind and show how flowers open/close depending on the weather to
illustrate to students that plants do move.
• The teacher may need to discuss with students what would constitute a safe environment for
the bees and butterflies prior to asking students to evaluate areas around the school.

Engaging Families

• [Dear Parent/Caregiver Letter]
• Encourage families to learn outside and walk/talk about what they see. Is it living or non-
living? Go on a scavenger hunt to look for living and non-living things. Count the number
of items you find. What do you see the most of?
• Free phone apps like “Seek” can help families identify the plants and animals they see on
their walks.
• [Georgia Home Classroom Kindergarten Science Resources] – A collaboration between
GPB and GaDOE
• [Sesame Street: Who’s Alive?] – YouTube video with Cookie Monster
• Spend time looking at family photos – baby pictures and beyond to notice how humans
grow over time.
• While sharing a meal, discuss your favorite foods. Living things need to eat.
Dear Parent/Caregiver:

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Sorting and classifying objects using physical attributes is prominent in each of the standards in kindergarten. Students will observe, compare, and contrast. Students need sufficient practice in asking questions and developing models to classify objects: those being seen in the sky (day/night/both), rocks based on their physical attributes (size, weight, texture, color), soils (texture/color), objects based on materials they are made from (cloth, clay, plastic, wood, paper and metal), common objects based on physical attributes (color, size, shape, weight, texture, sink/float), based on the relationship between an object’s physical attributes and its resulting motion, objects as living and nonliving, grouping plants and animals according to their features (also noting similarities/differences between offspring and parents). Similar skills are addressed in math when students describe shapes and work with sets of objects.

You can help support your student’s learning by talking about living and non-living things in your home or on nature walks. Let students ask questions about their observations and sort things into groups.

Enjoy!
Pictures of Plants

Plant 1

Plant 2

Plant 3
Pictures of Beans

"Wax Bean Seeds for my Home Kitchen Garden" by Daniel Gasteiger is licensed under CC BY 2.0

"Sprouted" by arbyreed is licensed under CC BY-NC-SA 2.0

"Sprouting bean shoots" by allispossible.org.uk is licensed under CC BY-NC 2.0

"tamarind" by davecito is licensed under CC BY 2.0
<table>
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<tr>
<th>T-Chart</th>
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<tr>
<td>Living</td>
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- [Living](#)
- [Non-Living](#)
Sorting Cards
Bee & Butterfly