



Living and Non-Living

Kindergarten

Duration

Pre-Visit: 45-60 minutes

Visit: 30 minutes

Post-Visit: 30 minutes

Location

Nature Gardens

Supplies

- Worksheets
- Pencils
- Paper
- Markers, crayons or colored pencils
- Cameras (optional)
- Clipboards (optional)

Standards

[NGSS K-LS1-1](#)

[CCSS ELA.K.W.5.8](#)

Vocabulary

Living

Non-living

Characteristics

Energy

Environment

Reproduce

Adapt

Respond

Grow

Waste

Nutrients



Concepts

- Our world is made up of living and non-living things.
- Living things have characteristics that non-living things do not have.

Objectives

- Students will observe living and non living things and articulate ideas about what characteristics they have.
- Students will see the pattern of characteristics living things share.
- Students will write sentences to explain why they think something is living or non-living.

Outline

1. In the classroom before visiting the Museum, make observations and consider what makes you see that makes you think something is living or non-living. Using a T-chart, list student ideas about what living and non-living have in common. Use student ideas to show the patterns of characteristics shared by living things. Complete workshop to clarify and re-enforce information.
2. At the Museum, explore the Nature Gardens and have students identify at least one living and non-living thing to record and share with the class. Have students articulate to the adult what they see that makes them think something is alive or not.
3. Back in the classroom, have students create a culminating project using their observations from the Museum and sharing their work with the class.

Pre-Visit

Have your class practice identifying things as living or non-living, either casually throughout the day or week or in a focused session. Begin in the classroom, then take the class outdoors to walk around and explore and find and identify living and non-living things in nature. As students become more confident in their answers, challenge them to articulate: What do you see that makes you say it is alive/not alive?

Teachers' Note: While it takes more time, making observations over the course of a few days allows you to point out and show students characteristics they might not have been able to observe or discuss in a single day, and offer casual comparisons between living and non-living things.

In a focused classroom session, introduce the essential question: What characteristics tell us that something is living? Discuss how living things, such as animals, plants, insects, and even bacteria have characteristics that non-living things do not.

Draw a T-chart on the board (example below) and ask students: What do you notice about things that are alive? What do you notice about things that are not alive? Write responses on the T-chart, discussing and clarifying ideas as you go.

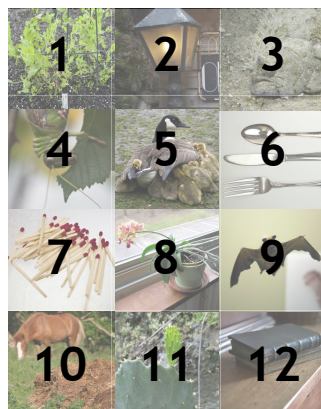
Next, use their ideas from the T-chart to show them how they have noticed a pattern of characteristics that living things share. For example, students might list that living things move, grow and eat. Circle or point these ideas out and say 'we observed that living things move, grow and eat. This tells us that living things use energy' then write 'living things use energy' on a list next to the T-chart. Continue until you have pulled out and listed as many characteristic as you feel the students identified. Keep a copy of this list handy for the field trip portion of the lesson.

Living	Non-Living	Seven Characteristics of Living Things:
		<ol style="list-style-type: none"> 1. Living things use energy 2. Living things respond to their environment 3. Living things reproduce 4. Living things adapt to their environment 5. Living things grow 6. Living things get rid of waste 7. Living things take in and use nutrients

Teacher's Note: Responses might be evidence for multiple characteristics. For example, having babies might tell us that a living thing reproduces and grows. Eating tells us that living things use energy and take in nutrients. Additionally, not all seven characteristics might be observed by students.

Next, distribute the *Living or Non-Living* worksheet and have students circle whether they think picture shows something living or non-living. Go through the answers as a class (reference below) and discuss what the students answered to review the characteristics of living things.

Worksheet Reference



1. Living (Peas): Grow, Nutrients (from soil via roots)
2. Non-Living (Lamp)
3. Living (Flounder): Adapt (camouflage)
4. Living (Grasshopper): Eat, Use energy
5. Living (Geese): Reproduce, Grow, Respond (goslings sheltered from rain)
6. Non-Living (Silverware)
7. Non-Living (Matches)
8. Living (House Plant): Grow, Nutrients (sun), Respond (growing towards sunlight)
9. Living (Bat): Use energy
10. Living (cow): Eat, Waste
11. Living (Cactus) Grow, Reproduce, Adapt
12. Non-Living (Book)

Museum Visit

Gather students in the Nature Gardens at the Museum, and review the characteristics of living things. Have students give you some examples of living things and non-living things they remember seeing. Explain that today, the goal is for them to find one living and one non-living thing in the Nature Gardens to share with the group back at school. Explain the activity (two adaptations below).

Option A: Cameras

If using cameras, distribute to students or student groups. Explain that they are to take a picture of themselves or the group (use this later to identify who the pictures belong to), then take a picture of one living and one non-living discovery they find in the Nature Gardens and would like to share with the class. As students work, have chaperones and teachers challenge students to articulate why they think something is living or non-living. Collect cameras to take back to the classroom, and print photos before the next classroom session.

Option B: Pencil and Paper

If using pencils and paper, distribute to students and have them fold the paper in half hamburger-style. On each side draw a picture of one living and one non-living discovery they find in the Nature Gardens and would like to share with the class. Write names on the back. As students work, have chaperones and teachers challenge students to verbally articulate why they think something is living or non-living. Collect papers and pencils to take back to the classroom.

Post-Visit

Back in the classroom, reflect on the visit to the Nature Gardens and complete the culminating project.

Option A: Cameras

Distribute printed pictures and a piece of paper to their photographers. Remind students that they took a picture of one living and one non-living thing they saw in the Nature Gardens. Have students fold the paper in half hamburger-style, then label one side of the fold LIVING and the other side NON-LIVING and glue the appropriate picture on each side of the paper.

Option B: Pencil and Paper

Distribute student work back to the students and have them label which picture is LIVING and which is NON-LIVING. You may choose to also give them time to add color and detail to the pictures.

For both options, write these prompts on the board for students to copy and complete for each picture:

In the Nature Gardens I saw _____; I know it is living because _____.

In the Nature Gardens I saw _____; I know it is non-living because _____.

When students are finished, write each characteristic on the board, leaving space underneath to tape pictures. Have students come up and present their work (if they like) and place their picture under which characteristic they used to identify something as living or non-living.

For example, if a student drew a hummingbird eating nectar from a flower, it might get taped under 'Take in and use nutrients'.

Living or Non-Living?

Are these living or non-living?

Carefully observe each picture below then circle if you think it is living or non-living.

