Science K-2:

All About Plants: Plantzilla

Intended Audience: Students with significant cognitive disabilities

# **Standards:**

SC.K.L.14.2 Recognize that some books and other media portray animals and plants with characteristics and behaviors that they do not have in real life.

SC.K.L.14.3 Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do.

SC.K.N.1.2 Make observations of the natural world and know that they are descriptors collected using the five senses.

SC.1.L.14.2 Identify the major parts of plants, including stem, roots, leaves, and flowers.

SC.1.N.1.2 Using the five senses as tools, make careful observations, describing objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.

SC.2.L.17.1 Compare and contrast the basic needs that all living things, including humans, have for survival.

SC.2.L.17.2 Recognize and explain that living things are found all over the Earth, but each is only able to live in habitats that meet its basic needs.

SC.2.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.

SC.2.N.1.2 Compare the observations made by different groups using the same tools.

# **Learning Objectives:**

 1. Students will identify the basic parts of a plant.

 2. Students will identify what plants need to grow.

 3. Students will identify differences between a living thing (plant) and a non-living thing.

# **Vocabulary:**

1. plant: a living thing that grows in the ground, has leaves and flowers, and needs sun and water to survive.

2. flower: the part of the plant that is brightly colored

3. stem: the main trunk of the plant

4. root: the part of the plant that grow under the ground

5. leaves: the green parts of the plant that grow from the stem

# Materials:

* Song: [The Parts of a Plant rap](https://www.youtube.com/watch?v=ql6OL7_qFgU)
* Book: Plantzilla by Jerdine Nolen, David Catrow, illus.
* Informational text: [How Plants Work](https://www.readworks.org/article/Plants/13c798aa-6b5f-432f-a83c-a3bdc4291852#!articleTab:content/contentSection:d30389ee-779f-4904-b2be-0af7f4185462/)
* Prepare prior to instruction: pre-read the read aloud, Plantzilla. Mark pages for comprehension and digging deeper in to the text.
* A plant with visible leaves and flowers
* Science journals

# **Essential/Guiding Questions:**

 1. Why is it important to water plants?

 2. How do plants help us to be healthy?

 3. What do living things need for survival?

# Lesson Presentation:

**Activating Prior Knowledge:**

1. Ask students “Where do you see plants and flowers?” Have them share with a partner or jot ideas on a sticky note or in their Science journal.

2. Share out as a whole group. Answers will vary.

3. Play [The Parts of a Plant rap](https://www.youtube.com/watch?v=ql6OL7_qFgU). Tell students that they are going to learn about the parts of a plant and why plants are so important.

**Modeled instruction:**

1. Replay [The Parts of a Plant rap](https://www.youtube.com/watch?v=ql6OL7_qFgU). Draw attention to the vocabulary (i.e. by pointing, with movement, a hand raise).

2. Define vocabulary: plant, flower, stem, root, leaves. Use visual supports.

3. Introduce the read aloud, Plantzilla. Take a picture walk through the text prior to reading aloud. Read Plantzilla by Jerdine Nolen, illus. by David Catrow.

4. Show students the plant and using vocabulary, identify the main parts.

5. Read the short informational text, [How Plants Work](https://www.readworks.org/article/Plants/13c798aa-6b5f-432f-a83c-a3bdc4291852#!articleTab:content/contentSection:d30389ee-779f-4904-b2be-0af7f4185462/). Revisit vocabulary previously defined and highlight those words in the text.

**Supported/Guided instruction:**

1. Replay [The Parts of a Plant rap](https://www.youtube.com/watch?v=ql6OL7_qFgU). Students move/react kinesthetically when they hear vocabulary related to the four main parts of the plant.

2. Redefine vocabulary and reread the informational text, [How Plants Work](https://www.readworks.org/article/Plants/13c798aa-6b5f-432f-a83c-a3bdc4291852#!articleTab:content/contentSection:d30389ee-779f-4904-b2be-0af7f4185462/). If appropriate, give students their own copy of the text and underline the main idea and circle the key details. Put a box around the vocabulary.

3. Show students the plant again and have students identify the parts.

4. Read Plantzilla by Jerdine Nolen, illus. by Davis Catrow. Pause at predetermined locations in the book to check for comprehension. Ask ”how” and “wh questions”. Book should be reread several times to make connection between real plants and the fictional plant in the book. Ask students “How are real plants and Plantzilla the same? How are they different?”

**Independent Work:**

1. Outside, locate various plants. Have students identify the four main parts and describe them. Why are they planted there? Are there other places that the observed plants could live?

2. In Science journals, draw a flower and label the four parts.

3. Narrative writing: Pretend that Plantzilla is living in your house. Tell why you like to have him live with you.

**Small group suggestions:**

1. Students can read a related informational text found on ReadWorks.org (see additional resources) and show what they know. (Running record/lexile level should match text.)

2. Students can compare and contrast information found in two informational texts on the same topic (see additional informational text aligned to lesson below).

3. Students can write and draw pictures about plants in their Science journals.

4. Students can match and label the parts of a plant.

# Assessment:

1. Students will identify the four main parts of a plant.

2. Students will identify at least one way that plants keep us healthy.

2. Teachers should utilize district created rubrics to score student work.

# UDL:

**Multiple means of representation:**

1. Students can use a web graphic organizer to show the 4 main parts of a plant.

2. Students can draw a Venn diagram and complete it to show similarities and differences between living and non-living things.

3. Students can create a video using a live plant to show that they know the 4 main parts of a plant.

4. Students can write Science journal entries about parts of a plant and its importance to us.

5. Students can write Science journal entries or draw pictures to show that they know some differences between living and non-living things.

6. Students can work individually, in pairs, or in a small group.

7. Students can work independently with peer or adult supports.

**Multiple means of expression:**

1. Students can use an iPad or other touch device to show similarities and differences.

2. Text to speech options are available for computers, iPads and other hand held devices. Google Chrome offers free extensions, such as Selection Reader and Select and Speak-Text to Speech, and apps, such as Text to Speech, Text to Speech with Google Drive, and TTS Reader- Unlimited Text-to-Speech.

3. Speech to text options are also available from Google. Extensions include Voice Note II-Speech to Text, Online speech recognition, and Co: Writer Universal. Voice Note II is also available as an app; Speech notes-Speech to Text Notepad is available as well.

4. Additional information about text to speech and speech to text options are available through your district Assistive Technology Department.

5. Expression may come in the form of verbal responses, signed responses, pointing/gestures, eye gaze, or through the use of a low or high tech device.

6. All students should have access to expressive language/technology that is appropriate for their specific need.

**Multiple means of engagement:**

1. Provide students with choices of how to interact with materials (i.e. a live plant, virtual plant or photos).

2. Provide students or small groups with various places in the classroom in which to work, i.e. floor, desks, at the board.

3. Limit distractions in the work areas.

4. Encourage collaboration with peers in partners or small groups.

5. Allow students to work independently.

6. Allow students to be positioned for maximum learning engagement.

7. Provide students with additional materials, if necessary.

8. Provide supervision to students who need assistance when handling hard, and potentially dangerous, objects.

# Assistive Technology Recommendations:

1. All students should have a means of expressive communication and a way to be actively engaged in learning.

2. Response modes may include, but are not limited to: eye gaze, gesturing or pointing to pictures/words/phrases, signing, low tech devices (Go Talks, etc.), or dynamic devices (iPad, etc.)

3. Lesson vocabulary, photos/pictures and graphic representations should be created and/or printed prior to the lesson to provide all students with an opportunity to be engaged in discussion.

**Technology Needed:**

* Smartboard

**Additional Resources:**

* Virtual Read Aloud: [Plantzilla by Jerdine Nolen, David Catrow illus.](https://www.youtube.com/watch?v=bgWbFhBP2-o)
* Book: The Tiny Seed, by Eric Carle
* Book: Planting a Rainbow, by Lois Ehlert
* Book: The Carrot Seed, by Ruth Kraus and Crocket Johnson
* Informational text: [All Kinds of Plants](https://www.readworks.org/article/Plants/13c798aa-6b5f-432f-a83c-a3bdc4291852#!articleTab:content/contentSection:66e382b6-7e92-4f88-a545-d69964ed89ff/)
* Informational text: [How Plants Get Water and Food](https://www.readworks.org/article/Plants/13c798aa-6b5f-432f-a83c-a3bdc4291852#!articleTab:content/contentSection:d43549a4-c237-4331-89fb-11338979b03c/)
* Informational text: [How Plants Grow](https://www.readworks.org/article/How-Plants-Grow/1ff55338-d20f-48f3-9b09-cfd7e708ac2d#!articleTab:content/contentSection:90bdb0ec-b3ef-48e8-8252-c0b822aa2cf2/)
* Additional lesson task ideas: [How Plants Grow](https://www.education.com/lesson-plan/how-plants-grow/),
* Additional lesson task ideas: [The Beginning of Plant Inquiry](http://adayinfirstgrade.com/2017/03/the-beginning-of-a-plant-inquiry.html)

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