



## PRE-K LITERACY: PLANTS ARE ALL AROUND US!

### UNIT OVERVIEW

Students will explore plants, including their attributes and growth cycle, over the course of one month or longer. This interdisciplinary unit on plants consists of 4 sequences learning plans. Each activity or learning plan works best with a small group of 4-5 students over the course of one week. Duration of student engagement in tasks will vary, but the recommendation is of each activity is 20 minutes or less. This Common Core-aligned literacy task is to be used in correlation with the curriculum embedded common core aligned task for mathematics, How Many Little Seeds?

### TASK DETAILS

**Task Name:** Plants Are All Around Us!

**Grade:** Pre-K

**Subject:** Literacy

**Depth of Knowledge:** 3

**Task Description:** Students observe plants in their neighborhood and classroom and discover how books provide factual information about real life things, like plants.

#### **Standards:**

**PK.RI.1** With prompting and support, ask and answer questions about details in a text.

**PK.RI.10** With prompting and support, actively engage in group.

**PK.W.2** With prompting and support, use a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

#### **Materials Needed:**

- From Seed to Plant by Gail Gibbons
- Paper
- Crayons
- Markers
- Pencils
- Cameras for documentation
- Teacher recording materials



## TABLE OF CONTENTS

The task and instructional supports in the following pages are designed to help educators understand and implement tasks that are embedded in Common Core-aligned curricula. While the focus for the 2011-2012 Instructional Expectations is on engaging students in Common Core-aligned culminating tasks, it is imperative that the tasks are embedded in units of study that are also aligned to the new standards. Rather than asking teachers to introduce a task into the semester without context, this work is intended to encourage analysis of student and teacher work to understand what alignment looks like. We have learned through the 2010-2011 Common Core pilots that beginning with rigorous assessments drives significant shifts in curriculum and pedagogy. Universal Design for Learning (UDL) support is included to ensure multiple entry points for all learners, including students with disabilities and English language learners.

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# PRE-K LITERACY: PLANTS ARE ALL AROUND US!

## TASK ADMINISTRATION DETAILS

This section includes guidelines to implement a culminating Common Core-aligned literacy task based on the unit *Plants*. These guidelines include how to prepare students for a unit on plants, steps to administer a read aloud and writing task, additional supports for students, a student writing template and a teacher record template.

Pre-K Literacy: Plants Are All Around Us!  
Task Administration Details

# How Plants Grow

## Literacy – Reading and Writing

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### GUIDELINES FOR ADMINISTERING THE TASK

The purpose of this task is to encourage a written response (a combination of drawing, writing, and dictating) to informational texts through group activities and with prompting and support.

**Estimated Time:** 15-25 minute time blocks across 3-5 days.

#### Set-up

- Suggested implementation is a whole group read aloud followed by a small group, centers-based read aloud.
- It's recommended that teachers re-read the story at least once to each student individually or in small groups before prompting them to respond on paper.

#### Materials

Informational Text: From Seed to Plant by Gail Gibbons

Writing Response Materials:

- A variety of crayons, markers, and other writing tools.
- Choices of large and small paper, blank sheets, and the written response template.
- Chart paper, blank or with Know-Wonder-Learn (K-W-L) columns.

Additional Materials

- A variety of seeds
- Specimen jars
- Magnifying glasses
- Clipboards with paper

#### Key Words/Vocabulary

Model how to use the following key words during small group read alouds, discussions, and other activities throughout this unit of study on plants. You may want to create a classroom display with pictures alongside the key words. Students are not expected to memorize the definitions of these words:

- Botanists, flower bed, seeds, seed envelopes, leaves, stems, flowers, buds, blossoms, roots, germinate, record, observe, light, water, warmth, soil, thrive, graph, presentations, journals, dramatization, growth cycle-- grow, growing, grew, & tall, taller, tallest.

Pre-K Literacy: Plants Are All Around Us!  
Task Administration Details

# How Plants Grow

## Literacy – Reading and Writing

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### TASK

#### Day 1: PREPARING STUDENTS

- Get ready to become Botanists! Prior to reading the informational text, create a tangible classroom experience that connects to the factual content on planting in the book. For example:
  - Go on a neighborhood nature walk and observe plants.
  - Are there plants growing in the classroom? Observe your class plants with magnifying glasses and discuss what you notice.
  - Introduce a variety of plant seeds in plastic specimen jars at a table during center time, or at circle time. Encourage students to draw what they notice about the size and shapes of seeds.
- After one of the above activities, ask students, “What do you know about plants?” Document their knowledge under KNOW on a K-W-L chart below. You may also use blank chart paper to document what they know about plants.
- Next, ask students, “What do you wonder about plants?” Document their questions under WONDERINGS on a K-W-L chart, or blank chart paper.

#### Know; Wonder; Learn (KWL) Chart:

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What do you KNOW about planting?	What do you WONDER about planting?	What did you LEARN about planting?

Pre-K Literacy: Plants Are All Around Us!  
Task Administration Details

# How Plants Grow

## Literacy – Reading and Writing

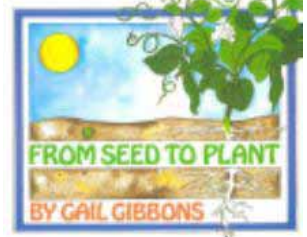
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### TASK

#### Day 2: INFORMATIONAL READ ALOUD

**Suggested Text:** From Seed to Plant by Gail Gibbons

**Suggested Read Aloud Time:** 15 minutes



- Explain to students that you will be reading an “informational book on how plants grow from seeds.” This book will provide “real life information, or facts, on how plants grow from seeds.”
- Introduce the front cover of the book and underline the title of the story with your finger from left to right while reading the title, “From Seed to Plant.”
- State the author/illustrator’s name, “Gail Gibbons.” Briefly explain that the author writes the book and the illustrator creates the pictures.
- Take a moment to closely examine the front cover. Prompt students to “look closely at the pictures to figure out what the story is about.”
- Start reading the text while pausing to prompt the students with the following:
  - “What do you notice in this picture?”
  - “What is this part of the plant called? Stem, leaf, root?”
  - “What do you think will happen next?”
  - “Let’s show how people plant seeds with their hands!”
  - “What do you think would happen if nobody watered the plants?”
- As you read, point to illustrations that connect to the key words listed above. Provide definitions in students’ dominant and heritage languages.
- After the read aloud, chart what students learned about plants from the book under LEARN. Label what they say in response with their names.

Pre-K Literacy: Plants Are All Around Us!  
Task Administration Details

## How Plants Grow

### Literacy – Reading and Writing

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#### TASK

#### Day 3: WRITTEN RESPONSE TO INFORMATIONAL TEXT

- The next day, revisit the K-W-L chart and re-read From Seed to Plant by Gail Gibbons with a small group of students (or one to one with a student).
- At a table during center time, set-up a variety of drawing and writing materials. Include an audio recording or copy of the book From Seed to Plant. Encourage students to revisit the book.
- Prompt students to draw and/or write about what they learned from the book. A teacher should be present at the table for prompting and support while students are engaged in this activity.
- After each student finishes, prompt him/her to “tell me about your work” and “tell me what you learned from the book.”
- Explain that you’ll write exactly what they say in their own words.
- Write the student responses on a separate sheet of paper (see template below).
- Read the responses back to students, pointing to each word as you read.

#### Additional Supports:

To encourage all students to participate in this activity, please use the following resources and consider what adaptations are necessary for the students in your class.

- Offer additional art materials such as collage paper, paints, and stamps to motivate all students to respond to the informational text on paper.
- If a student does not respond on paper, prompt him/her to tell you about the book and document exactly what he/she says through video, audio, or a written transcription.
- If a student does not verbally annotate his/her work when prompted, explain that you will revisit the work at a later date and go back and prompt the child the next day.
- Encourage a group of children to act out a story about planting in the dramatic play area. Record their actions and responses.
- During the read aloud, create illustrations on chart paper for students to follow the storyline. After the story is complete have students retell story from the beginning to end using the teacher’s illustration as a point of reference.
- Offer a variety of writing tools to support children’s various motor strengths. For additional information on resources and tools, visit *Therapro* at: <http://www.therapro.com/Handwriting-Grips-and-Tools-C4245.aspx>.

Pre-K Literacy: Plants Are All Around Us!  
Task Administration Details

# How Plants Grow

## Literacy – Reading and Writing

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### Formative Assessment Questions:

These questions have various Depth of Knowledge (DOK) levels to provide multiple entry points for all students. While reading aloud and prompting students to respond on paper, write a list of questions and document how students respond to the questions.

- Do you have plants at home? Do you help care for them? How do you care for them?
- What do you notice in this picture?
- What did the boys and girls just do to help the seeds grow?
- What are the colors of the plants growing here?
- What is this part of the plant called? Stem, leaf, root?
- What do you think will happen next?
- Let's look at this picture. What is the boy or girl about to do with that tool?
- Can we think back to the steps for planting seeds? What comes first, second, third?
- Let's show how people plant seeds with their hands...
- How did the boys and girls help plants grow?
- What do you think would happen if...nobody watered the plants / somebody stepped on the plants / etc.?
- How are the plants in this book the same as the plants in our classroom? Outside of our classroom? How are these different?
- Can you tell me a story about other things that grow like plants?

### RUBRIC

Not Yet	In Process		Proficient
With prompting and support, the student does not express knowledge, information, and/or ideas from the text through drawing, writing, or dictation.	With prompting and support, the student makes purposeful marks on paper that resemble letter-like symbols and/or drawings, but the meaning attached is not directly related to the information in the text.	With prompting and support, the student is observed and documented clearly expressing knowledge, information, and/or ideas related to the text, but did not participate in a response on paper with prompting and support.	With prompting and support, the student uses a combination of drawing, dictation and/or emergent writing to express knowledge, information, and/or ideas from the text.



# How Plants Grow

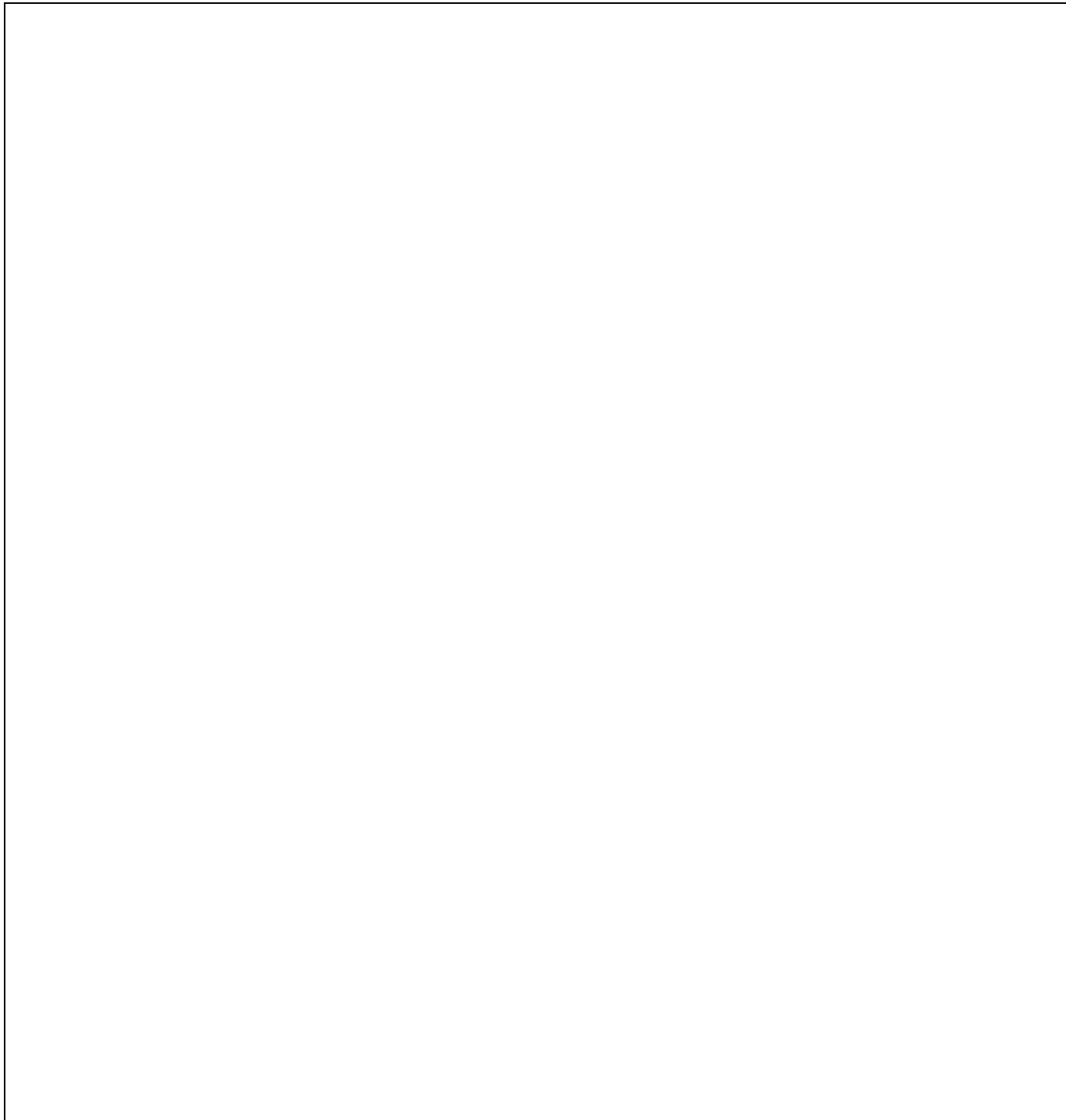
## Literacy – Reading and Writing

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### WRITING RESPONSE TEMPLATE:

**Student Prompt:** Draw and/or write about what you learned about plants from the book.

Pre-K Literacy: Plants Are All Around Us!  
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**Student Dictation:**  
After the child is finished state, “Tell me about your work.” Transcribe exactly what the student says in response in the space below. Do not paraphrase.

Pre-K Literacy: Plants Are All Around Us!  
Task Administration Details

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**Teacher Notes:**  
Include observation notes about the student's process. Ask questions to increase understanding of work and document the question and responses below.

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**Rubric Rating:**

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PRE-K LITERACY: PLANTS ARE ALL AROUND US!  
UNIVERSAL DESIGN FOR LEARNING (UDL)  
PRINCIPLES

## **Plants – ELA Pre-Kindergarten Common Core Learning Standards/ Universal Design for Learning**

The goal of using Common Core Learning Standards (CCLS) is to provide the highest academic standards to all of our students. Universal Design for Learning (UDL) is a set of principles that provides teachers with a structure to develop their instruction to meet the needs of a diversity of learners. UDL is a research-based framework that suggests each student learns in a unique manner. A one-size-fits-all approach is not effective to meet the diverse range of learners in our schools. By creating options for how instruction is presented, how students express their ideas, and how teachers can engage students in their learning, instruction can be customized and adjusted to meet individual student needs. In this manner, we can support our students to succeed in the CCLS.

Below are some ideas of how this Common Core Task is aligned with the three principles of UDL; providing options in representation, action/expression, and engagement. As UDL calls for multiple options, the possible list is endless. Please use this as a starting point. Think about your own group of students and assess whether these are options you can use.

**REPRESENTATION:** *The “what” of learning.* How does the task present information and content in different ways? How do students gather facts and categorize what they see, hear, and read? How are they identifying letters, words, or an author's style?

*In this task, teachers can...*

- ü **Provide physical objects and spatial models to convey perspective by** having students plant seeds and observe their growth in the classroom.

**ACTION/EXPRESSION:** *The “how” of learning.* How does the task differentiate the ways that students can express what they know? How do they plan and perform tasks? How do students organize and express their ideas?

*In this task, teachers can...*

- ü **Provide sentence starters or sentence strips** to prompt students to ‘show and explain’ their responses for their drawing/writing tasks.

**ENGAGEMENT:** *The “why” of learning.* How does the task stimulate interest and motivation for learning? How do students get engaged? How are they challenged, excited, or interested?

*In this task, teachers can...*

- ü **Provide feedback that encourages perseverance, focuses on development of efficacy and self-awareness, and encourages the use of specific supports and strategies in the face of challenge** by listening to, and communicating with, students on their drawing/writing tasks.

Visit <http://schools.nyc.gov/Academics/CommonCoreLibrary/default.htm> to learn more information about UDL.



# PRE-K LITERACY: PLANTS ARE ALL AROUND US!

## ANNOTATED STUDENT WORK

Student work collections in pre-k are concrete representations of student performance and thinking across the Common Core State Standards and curriculum. In order to articulate student performance and thinking across the standards, teachers annotate student work to provide more information on what, when, where, and how a task took place. Annotated student work tells us something unique about the students and his/her approach to learning. Some suggestions for annotations include factual observations notes on students engaged in the task, reflection notes and discussions with students and teacher reviewing and monitoring notes.

# How Plants Grow

## Literacy – Reading and Writing

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### SAMPLE STUDENT WORK

#### Written Response Sample A: *Isabella*

**Student Dictation:**

After the child is finished state, “Tell me about your work.” Transcribe exactly what the student says in response. Do not paraphrase. Read the sentence back to the child, pointing to each word as your read.

Isabella, 6/15/11:

“I put the seed inside the dirt and then the sun comes up. Then the seed grows and then there’s a rose.”

**Teacher Notes:**

Include observation notes about the student’s process here.

From Seed to Plant was read to the whole class and reviewed the next day in small groups. Isabella pointed to the pink flower and told me she was going to draw that flower. We reviewed some of the names of the flowers in the book, and she recalled the name “rose.” Isabella chose not to write any letters or words on her picture.

**Rubric Rating:**

Proficient

Pre-K Literacy: Plants Are All Around Us!  
Annotated Student Work

# How Plants Grow

## Literacy – Reading and Writing

### Written Response Sample B: *Adrian*



**Student Dictation:**

After the child is finished state, “Tell me about your work.” Transcribe exactly what the student says in response. Do not paraphrase. Read the sentence back to the child, pointing to each word as your read.

**Adrian, 6/14/11:**

“This is the seeds that landed in the dirt. They grow into flowers of different colors. I drew butterflies here.”

**Teacher Notes:**

Include observation notes about the student’s process here.



Adrian tends to draw and sometimes writes letters/symbols around his pictures. When he discusses his work he points to the letters to tell me what it says.

**Rubric Rating:**

Proficient

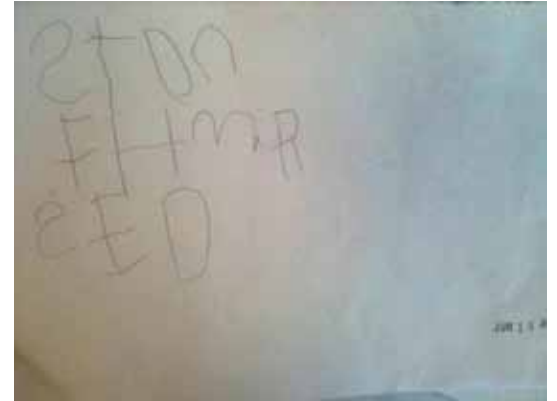


Pre-K Literacy: Plants Are All Around Us!  
Annotated Student Work

# How Plants Grow

## Literacy – Reading and Writing

### Written Response Sample C: *Zariyah*



**Student Dictation:**

After the child is finished state, “Tell me about your work.” Transcribe exactly what the student says in response. Do not paraphrase. Read the sentence back to the child, pointing to each word as you read.

**Zariyah, 6/14/11:**

“These are um, um flowers and those are the eggs, that um the eggs that flew away from these. This is the sun and the wind is coming so the sun is going down so the rain can come.” I asked, “And what happens when the rain comes?” Zariyah answered, “Everything mess up; the park mess up and the flowers mess up.” Then I asked, “Why do you say they get messed up did it say that in the book, that the flowers get messed up? What happens when the rain comes down?” Zariyah replied, “Everyone has to go home but the flowers have to stay outside so they can grow.” I asked, “What makes them grow?” She said, “Water.” Then I said, “Ok, so when it rains is that water that comes down?” Zariyah nodded up and down and said, “Ummm...” I prompted, “And is water good for the plants?” Zariyah answered, “Yes.” I asked, “And what else did you write about in your picture? You wrote some words.” Zariyah pointed and said, “Soil. This is the soil right here, you can call it dirt.” I asked her if she wanted to read what she wrote. “I wrote this I know how to spell it blew in the wind.”

**Teacher Notes:**

Include observation notes about the student’s process here.

Zariyah needs continuous prompting to stay on task and to get her thoughts out. Her pictures have some markings that represent some of the content in the story, but, when prompted, she included events and information that is not related to story. She is beginning to write letters to spell out words.

**Rubric Rating:**

In Process

# How Plants Grow

## Literacy – Reading and Writing

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### Written Response Sample D: *Gabriel*



**Student Dictation:**

After the child is finished state, “Tell me about your work.” Transcribe exactly what the student says in response. Do not paraphrase. Read the sentence back to the child, pointing to each word as your read.

**Gabriel, 6/14/11**

“I made a snail and he was trying to find a plant and he couldn’t find one...”

**Teacher Notes:**

Include observation notes about the student’s process here.

When prompted, Gabriel created a story that was unrelated to the informational text. He continued with a story about a snail but I could not get all of his words down.

**Rubric Rating:**

In Process

Pre-K Literacy: Plants Are All Around Us!  
Annotated Student Work

# How Plants Grow

## Literacy – Reading and Writing

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Written Response Sample E: **Britney**

(No Sample)

**Student Dictation:**

After the child is finished state, "Tell me about your work." Transcribe exactly what the student says in response. Do not paraphrase. Read the sentence back to the child, pointing to each word as you read.

None

**Teacher Notes:**

Include observation notes about the student's process here.

Britney sat on the carpet during the read aloud of *From Seeds to Plants* by Gail Gibbons. Britney did not participate in the whole group discussion on the K-W-L chart, and did not draw or write about the book when prompted.

**Rubric Rating:**

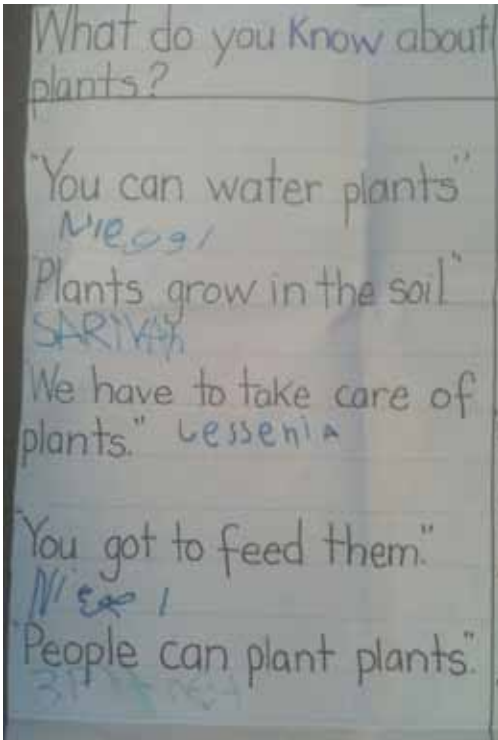
Not Yet

# How Plants Grow

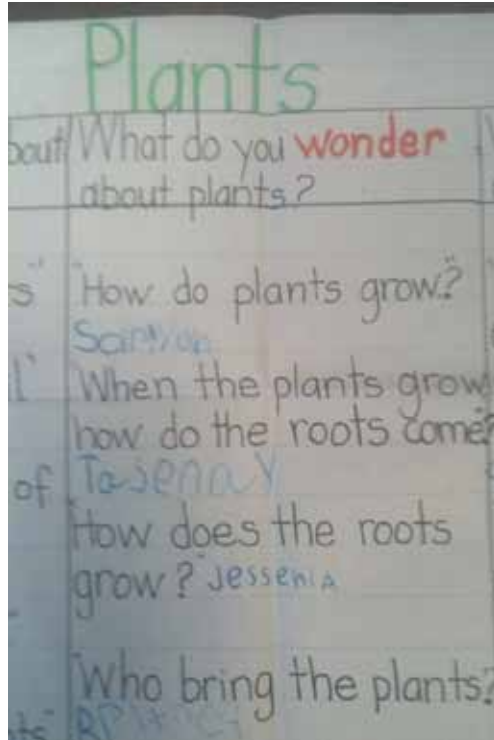
## Literacy – Reading and Writing

### PREPARING STUDENTS-- Sample *K-W-L Chart*

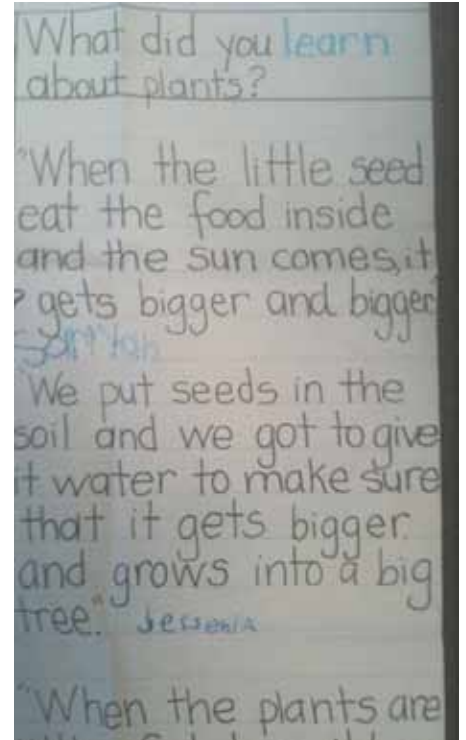
#### Know



#### Wonder



#### Learn



### INFORMATIONAL READ ALOUD

The teacher sits with a student to revisit the book, From Seed to Plant, by Gail Gibbons before the student draws in response to the text.





# PRE-K LITERACY: PLANTS ARE ALL AROUND US! INSTRUCTIONAL SUPPORTS

The instructional supports on the following pages include a unit outline with formative assessments and suggested learning activities. This interdisciplinary unit is to be used in correlation with the curriculum embedded Common Core-aligned task for mathematics, How Many Little Seeds?

# Unit Outline –Pre-K Literacy/Math

**INTRODUCTION:** This unit outline provides an example of how teachers may integrate performance tasks into a unit. *Teachers may (a) use this unit as it is described below; (b) integrate parts of it into a currently existing curriculum unit; or (c) use it as a model or checklist for a currently existing unit on a different topic.*

## Pre-Kindergarten Unit: *Plants*

### UNIT TOPIC AND LENGTH:

- Students will explore plants, including their attributes and growth cycle, over the course of one month or longer. This unit on plants consists of 4 sequenced learning plans. Each activity or learning plan works best with a small group of 4-5 students, in centers, over the course of one week. Duration of student engagement in tasks will vary, but the recommendation is that each activity is 20 minutes or less.

### COMMON CORE LEARNING STANDARDS:

#### ELA & Literacy: Reading

- PK.RI.1: With prompting and support, ask and answer questions about details in a text.
- PK.RI.10: With prompting and support, actively engage in group reading activities with purpose and understanding.

#### ELA & Literacy: Writing

- PK.W.2: With prompting and support, use a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

#### Mathematics: Counting and Cardinality

- PK.CC.4: Count to answer “how many?” questions about as many as 10 things arranged in a line, a rectangular array, or a circle, or as many as 5 things in a scattered configuration; given a number from 1-10, count out that many objects.

#### Mathematics: Operations and Algebraic Thinking

- PK.OA.1: Demonstrates an understanding of addition and subtraction by using objects, fingers, and responding to practical situations (e.g. if we have 3 apples and add two more, how many do we have?).

#### Mathematics: Measurement and Data

- PK.MD.1: Identify measurable attributes of objects, such as length, and weight. Describe them using correct vocabulary. (e.g. small, big, short, tall, empty, full, heavy, and light.)

### BIG IDEAS/ENDURING UNDERSTANDINGS:

- We can learn about plants by exploring nature and reading informational books on

### ESSENTIAL QUESTIONS:

- What is a plant?
- How do the parts of plants help us identify them?

# Unit Outline –Pre-K Literacy/Math

<p>plants.</p> <ul style="list-style-type: none"> <li>➤ Plants have parts with names.</li> <li>➤ We can measure, add, subtract, and count the parts of a plant.</li> <li>➤ Plants require specific conditions and care to grow.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Why is it important to take care of plants? How many more seeds do we need?</li> <li>➤ What do you notice about how plants grow?</li> <li>➤ How can we measure the growth of these plants?</li> </ul>
<p><b>CONTENT:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Plant Facts</b> <ul style="list-style-type: none"> <li>▪ Plants in the local environment</li> <li>▪ Basic Parts of Plants: stem, leaf, root, seed, flower)</li> <li>▪ Care of Plants in different environments</li> </ul> </li> <li>-----</li> <li>➤ <b>Informational Text</b> <ul style="list-style-type: none"> <li>▪ Texts that provide facts on plants</li> <li>▪ Details from text that provide the needed information</li> <li>▪ Images and media that provide information</li> </ul> </li> <li>-----</li> <li>➤ <b>Math Operations</b> <ul style="list-style-type: none"> <li>▪ 1 to 1 correspondence</li> <li>▪ Adding/Subtracting Plant Parts</li> <li>▪ Counting Plant Parts</li> </ul> </li> <li>-----</li> <li>➤ <b>Math Data</b> <ul style="list-style-type: none"> <li>▪ Measurable Attributes used as the way botanists describe plants: observation as scientists</li> </ul> </li> </ul>	<p><b>SKILLS:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Explore and observe</b> plants in the local environment.</li> <li>➤ <b>Identify</b> parts of plants. (i.e. stem, leaf, root, seed, flower, etc.)</li> <li>➤ <b>Draw</b> plants and plant parts.</li> <li>➤ <b>Describe</b> the role of a botanist as scientist; observer and caretaker of plants.</li> <li>➤ <b>Develop and implement</b> a plan to take care of classroom and school plants</li> <li>-----</li> <li>➤ <b>Comprehend</b> non-fiction picture books to learn about plants.</li> <li>➤ <b>Recognize and explain</b> that books provide information and facts on living things, such as plants.</li> <li>➤ <b>Articulate</b> what is known and what is wondered about plants.</li> <li>➤ <b>Identify</b> important details from read-aloud texts.</li> <li>-----</li> <li>➤ <b>Explore then describe</b> how to add and subtract seeds and other plant parts to get a total number.</li> <li>➤ <b>Count</b> to answer how many plants or plant parts.</li> <li>➤ <b>Demonstrate</b> one to one correspondence by matching numeral to number of plant parts.</li> <li>-----</li> <li>➤ <b>Identify</b> measurable attributes of plants. (i.e. small, big, short, tall, etc.)</li> </ul>
<p><b>VOCABULARY/KEY TERMS:</b></p> <ul style="list-style-type: none"> <li>➤ Botanists, flower bed, seeds, seed envelopes, leaves, stems, flowers, buds, blossoms, roots, germinate, record, observe, light, water, warmth, soil, thrive, graph, presentations, journals, dramatization, growth cycle-- grow, growing, grew, &amp; tall, taller, tallest.</li> <li>➤ Total Number, Add is to combine, Subtract is to take away, How many? How much more? How much less? Less than, More than, Sum, Addition, Subtraction</li> </ul>	



# Unit Outline –Pre-K Literacy/Math

## ASSESSMENT EVIDENCE AND ACTIVITIES:

### INITIAL ASSESSMENT :

- Prompt students to share what they already know about plants, making connection to real life experiences.
- Document student observations while on a nature walk; ask questions about what they wonder.
- After a whole group read aloud on plants, discuss and document the details they learned from the book.
- Dictate student responses on chart paper or on a Know-Wonder-Learn chart. Write the students' names next to their responses.
- Identify and differentiate between different plants and parts of a plant by their measurable attributes. If a student will not share aloud in a whole group setting, prompt the student one to one.
- Introduce a variety of plant seeds in plastic specimen jars or plastic bags. Encourage students to sort by size and/or shape and to draw what they notice about the seeds. Document their process and ask mathematical questions.
- Introduce counting and subtracting while singing a song about seeds. Document students' performance as they sing the song, follow hand movements, and countdown using fingers.


### FORMATIVE ASSESSMENT:

- Demonstrate solutions to plant related math equations including adding and subtracting parts of plants.
- Identify and differentiate between different plants and plant parts by their measurable attributes.

### FINAL PERFORMANCE TASK:

- Encourage students to use a combination of drawing, dictating, or writing to provide details about what they learned from an informational text about plants (*See Literacy Task, "How Plants Grow"*).
- Demonstrate solutions to plant-related mathematical concepts including adding and subtracting parts of plants (*See Math Task, "How Many Little Seeds?"*).

### EXTENSION:

Create a class Storybird at:  [Storybird- Web 2.0 Application for Sharing Observations and Stories](#)

Children work in small groups of three or four to devise a plan to take care of classroom plants in a Web 2.0 application, such as Storybird. Children work together to develop strategies to ensure that each plant will receive the proper care and placement in the classroom. Students monitor the plant's growth in the classroom over a three to four week period and, with prompting and support, detail their work on the visual chart.

Teachers can document the process through observation notes, pictures, and videos of students engaged in the development of their plan.

### LEARNING PLAN & ACTIVITIES:

Week 1: *How plants grow!* A neighborhood walk and literacy task with and informational text provide students with an introduction to plants.

Week 2: *Let's observe the sprout!* Planting seeds to observe and track the growth cycle of a plant.



# Unit Outline –Pre-K Literacy/Math

Week 3: How many little seeds? A mathematical game with addition & subtraction

Week 3: Parts of plants: Measure and graph how tall a stem is, and explore which ones have grown leaves, buds, or blossoms. What do the parts of a plant do to help it live and grow?

Week 4: Plants help us grow big and strong too. Plants are a healthy food that we need to eat every day. Let's try different plants as food and choose our favorite.

Week 5: Class trip to a garden. Visit the local community garden (i.e. Brooklyn Botanical Garden or New York Botanical Garden) to learn more about plants and living things that grow.

## RESOURCES

### WEBSITES:

- [Eartheasy.com](http://eartheasy.com/grow_gardening_children.htm) ([http://eartheasy.com/grow\\_gardening\\_children.htm](http://eartheasy.com/grow_gardening_children.htm)) --Tips and resources on what to plant for young gardeners...
- [New York Botanical Garden](http://www.nybg.org/edu/) (<http://www.nybg.org/edu/>) --Children's gardening program information at the Bronx Botanical Gardens
- [Brooklyn Botanical Garden](#) -- Information about the Brooklyn Botanic Garden Educational Program
- [United States Department of Agriculture](http://www.bbg.org/discover/gardens/childrens_garden/) ([http://www.bbg.org/discover/gardens/childrens\\_garden/](http://www.bbg.org/discover/gardens/childrens_garden/))-- A database on national plants.
- [Lowes' Gardening with Young Children](http://www.lowes.com/cd_Gardening+with+Children_1272982901_) ([http://www.lowes.com/cd\\_Gardening+with+Children\\_1272982901\\_](http://www.lowes.com/cd_Gardening+with+Children_1272982901_)) -- Benefits of gardening with children, what to plant and safety in the garden.
- [Teacher's College Press](http://www.tpress.com/) (<http://www.tpress.com/>) -- A free downloadable Project Planning Journal from *Young Investigators* by Judy Harris Helm and Lilian Katz; a free download
- [Storybird](http://storybird.com/) (<http://storybird.com/>) --Web 2.0 application for sharing observations and stories

### CHILDREN'S BOOKLIST:

From Seeds to Plants by Gail Gibbons: A simple introduction to growth from seed to plant.

From Seed to Sunflower by Gerald Legg: Large illustration and simple text present the life cycle of a sunflower.

Oh Say Can You Seed? All About Flowering Plants by Bonnie Worth: The Cat in the Hat examines various parts of plants seeds and flowers; basic photosynthesis and pollination.

The Reason for a Flower by Ruth Heller: Brief text and lavish illustrations explain plant reproduction and the purpose of a flower.

The Tiny Seed by Eric Carle: The story of a small seed that starts with other seeds on a journey from a flower to its very own spot.

The Dandelion Seed by Joseph Anthony: The story describes the journey of a little dandelion seed.

City Green by DyAnne DiSalvo-Ryan: Marcy transforms an abandoned lot by planting sunflowers. The last page explains how to start a neighborhood community garden.

Flower Garden by Eve Bunting: In an urban neighborhood a girl and her father by flowers at a grocery store and plant a window box.

## Unit Outline –Pre-K Literacy/Math

Fran's Flower by Lisa Bruce: A little girl learns about the foods that nurture a plant.

Jack's Garden by Henry Cole: A cumulative story that traces a little boy's backyard flower garden from tilling the soil to enjoying the blossoms.

The Maybe Garden by Kimberly Burke-Weiner: A little girl envisions the garden of her dreams. It is nothing like the garden her mother enjoys.

Planting a Rainbow by Lois Ehlert: A mother and her child plant bulbs in the fall, order seeds in the winter, anticipate the first shoots in spring, select seedlings in the summer and watch a rainbow of colors grow.

Sunflower House by Eve Bunting: Lyrical rhyming text about planting sunflowers.

Sunflower Sal by Janet S. Anderson: A little girl finds peace and success in growing hundreds of sunflowers throughout her village.

The Little Red Hen by Lucinda McQueen

### **Children's Alphabet and Number Books:**

Alison's Zinnia by Anita Lobel

Counting Wildflowers by Bruce McMillan

The Flower Alphabet Book by Jerry Pallotta

### **TEACHER RESOURCES:**

Chalfour, Ingrid & Worth, Karen. (2003). *Discovering Nature with Young Children: A pre-school nature curriculum designed to guide children's learning through open and focused science explorations*. St. Paul, MN: Red Leaf Press

Midden, Karen, Olthof, Marla & Starbuck, Sara (2002). *Hollyhooks and Honeybees: Garden Projects for Young Children*. St. Paul, MN: Red Leaf Press

Neumann-Hinds, Carla. (2007). *Picture Science: Using digital Photography to Teach Young Children*. St. Paul, MN: Red Leaf Press

Sangliolo, Maria. (2011). *Maria and Friends-Planting Seeds*. CD. Amazon.com