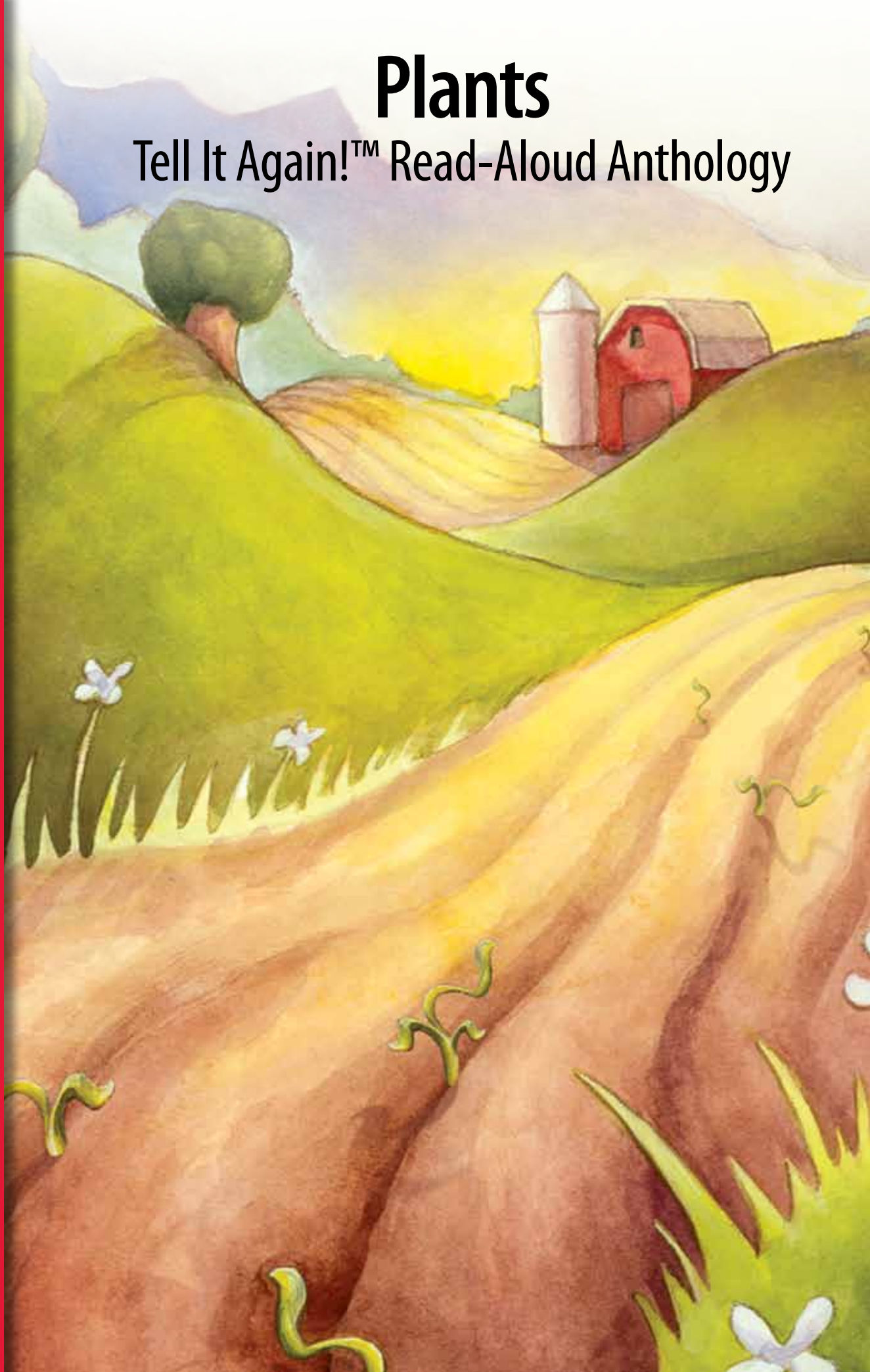
Plants

Tell It Again!™ Read-Aloud Anthology



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Plants

Tell It Again!™ Read-Aloud Anthology

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Tell It Again!™ Read-Aloud Anthology

Alignment Chart for Plants

The following chart contains core content objectives addressed in this domain. It also demonstrates alignment between the Common Core State Standards and corresponding Core Knowledge Language Arts (CKLA) goals.

Alignment Chart for Plants	**Lesson**										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Core Content Objectives											
Explain that different kinds of plants grow in different environments	✓										
Explain that plants are living things	✓										
Describe what plants need to live and grow: food, water, air, and light	✓										
Identify the root, stem, branch, leaf, flower, fruit, and seed of a plant		✓									
Explain that roots anchor the plant and take in water and nutrients		✓									
Explain that stems support the plant and carry water and nutrients to the various parts of the plant		✓									
Explain that the plant makes its food in its leaves		✓									
Explain that seeds are the beginnings of new plants			✓	✓		✓	✓				
Explain the basic life cycle of plants			✓	✓							
Explain that some plants produce fruit to hold seeds						✓					
Compare and contrast the fruits and seeds of different plants						✓					
Identify the parts of specific plants that are eaten by people				✓		✓	✓				
Identify the petals on a flower					✓						
Describe how bees collect nectar and pollen					✓						
Describe how bees make and use honey					✓						
Describe the important role bees play in plant pollination					✓						
Demonstrate familiarity with the tall tale “Johnny Appleseed”							✓				

Alignment Chart for Plants

	Lesson										
	1	2	3	4	5	6	7	8	9	10	11
Compare and contrast deciduous and evergreen trees								✓	✓		
Explain that deciduous trees are a type of plant that loses its leaves in the fall and becomes dormant in the winter								✓			
Explain that evergreen trees are a type of plant that stays green all year and does not become dormant in the winter									✓		
Identify how deciduous trees are important to people and nature								✓			
Identify things that plants provide to people: oxygen, food, and important products										✓	
Describe the life and scientific achievements of George Washington Carver											✓
Reading Standards for Literature: Kindergarten											
Key Ideas and Details											
STD RL.K.1	With prompting and support, ask and answer questions about key details in a text.										
CKLA Goal(s)	With prompting and support, ask and answer questions (e.g., *who, what, where, when*) requiring literal recall and understanding of the details and/or facts of a fiction read-aloud				✓			✓			
	Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a fiction read-aloud, including answering *why* questions that require recognizing cause/effect relationships				✓			✓			
STD RL.K.2	With prompting and support, retell familiar stories, including key details.										
CKLA Goal(s)	With prompting and support, retell or dramatize fiction read-alouds, including key details				✓			✓			
STD RL.K.3	With prompting and support, identify characters, settings, and major events in a story.										
CKLA Goal(s)	With prompting and support, use narrative language to describe characters, setting, things, events, actions, a scene, or facts from a fiction read-aloud				✓			✓			
Craft and Structure											
STD RL.K.4	Ask and answer questions about unknown words in a text.										
CKLA Goal(s)	With prompting and support, ask and answer questions about unknown words in fiction read-alouds and discussions				✓			✓			

Alignment Chart for Plants

		Lesson										
		1	2	3	4	5	6	7	8	9	10	11
STD RL.K.5	Recognize common types of texts (e.g., storybooks, poems).											
CKLA Goal(s)	Listen to, understand, and recognize a variety of texts, including fictional stories, fairy tales, fables, nursery rhymes, and poems				✓			✓				
Integration of Knowledge and Ideas												
STD RL.K.7	With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., what moment in a story an illustration depicts).											
CKLA Goal(s)	With prompting and support, describe illustrations from a fiction read-aloud, using the illustrations to check and support comprehension of the read-aloud				✓							
Range of Reading and Level of Text Complexity												
STD RL.K.10	Actively engage in group reading activities with purpose and understanding.											
CKLA Goal(s)	Actively engage in fiction read-alouds				✓			✓				
Reading Standards for Informational Text: Kindergarten												
Key Ideas and Details												
STD RI.K.1	With prompting and support, ask and answer questions about key details in a text.											
CKLA Goal(s)	With prompting and support, ask and answer questions (e.g., *who, what, where, when*) requiring literal recall and understanding of the details and/or facts of a nonfiction/informational read-aloud						✓					
	Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a nonfiction/informational read-aloud, including answering *why* questions that require recognizing cause/effect relationships						✓					
STD RI.K.2	With prompting and support, identify the main topic and retell key details of a text.											
CKLA Goal(s)	With prompting and support, identify the main topic and retell key details of a nonfiction/informational read-aloud			✓					✓	✓		
STD RI.K.3	With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.											
CKLA Goal(s)	With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a nonfiction/informational read-aloud	✓	✓	✓		✓					✓	✓

Alignment Chart for Plants

		Lesson										
		1	2	3	4	5	6	7	8	9	10	11
Craft and Structure												
STD RI.K.4	With prompting and support, ask and answer questions about unknown words in a text.											
CKLA Goal(s)	With prompting and support, ask and answer questions about unknown words in nonfiction/informational read-alouds and discussions	✓	✓	✓		✓	✓		✓	✓	✓	✓
Integration of Knowledge and Ideas												
STD RI.K.7	With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).											
CKLA Goal(s)	With prompting and support, describe illustrations from a nonfiction/informational read-aloud, using the illustrations to check and support comprehension of the read-aloud	✓	✓	✓		✓	✓		✓	✓	✓	✓
STD RI.K.9	With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).											
CKLA Goal(s)	With prompting and support, compare and contrast similarities and differences within a single nonfiction/informational read-aloud or between two or more nonfiction/informational read-alouds									✓		
Range of Reading and Level of Text Complexity												
STD RI.K.10	Actively engage in group reading activities with purpose and understanding.											
CKLA Goal(s)	Actively engage in nonfiction/informational read-alouds	✓	✓	✓		✓	✓		✓	✓	✓	✓
Writing Standards: Kindergarten												
Text Types and Purposes												
STD W.K.2	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.											
CKLA Goal(s)	Use a combination of drawing, dictating, and writing to present information from a nonfiction/informational read-aloud, naming the topic and supplying some details								✓	✓		

Alignment Chart for Plants

		Lesson										
		1	2	3	4	5	6	7	8	9	10	11
Speaking and Listening Standards: Kindergarten												
Comprehension and Collaboration												
STD SL.K.1	Participate in collaborative conversations with diverse partners about Kindergarten topics and texts with peers and adults in small and large groups.											
STD SL.K.1a	Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).											
CKLA Goal(s)	Use agreed-upon rules for group discussions, (e.g., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc.)						✓					
STD SL.K.1b	Continue a conversation through multiple exchanges.											
CKLA Goal(s)	Carry on and participate in a conversation over four to five turns, stay on topic, initiate comments or respond to a partner's comments, with either an adult or another child of the same age						✓					
STD SL.K.2	Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.											
CKLA Goal(s)	Ask and answer questions to clarify information in a fiction or nonfiction/ informational read-aloud						✓					
STD SL.K.5	Add drawings or other visual displays to descriptions as desired to provide additional detail.											
CKLA Goal(s)	Add drawings or other visual displays to descriptions as desired to provide additional detail		✓	✓					✓	✓		
STD SL.K.6	Speak audibly and express thoughts, feelings, and ideas clearly.											
CKLA Goal(s)	Speak audibly and express thoughts, feelings, and ideas clearly						✓					
Language Standards: Kindergarten												
Conventions of Standard English												
STD L.K.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.											
STD L.K.1b	Use frequently occurring nouns and verbs.											
CKLA Goal(s)	Use frequently occurring nouns and verbs in oral language						✓					

Alignment Chart for Plants

		Lesson										
		1	2	3	4	5	6	7	8	9	10	11
STD L.K.1f	Produce and expand complete sentences in shared language											
CKLA Goal(s)	Answer questions orally in complete sentences						✓					
	Produce and expand complete sentences in shared language						✓					
Vocabulary Acquisition and Use												
STD L.K.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on Kindergarten reading and content.											
STD L.K.4a	Identify new meanings for familiar words and apply them accurately (e.g., knowing *duck* is a bird and learning the verb *to duck*).											
CKLA Goal(s)	Identify new meanings for familiar words and apply them accurately (e.g., knowing *duck* is a bird and learning the verb *to duck*)	✓					✓					
STD L.K.5	With guidance and support from adults, explore word relationships and nuances in word meanings.											
STD L.K.5a	Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.											
CKLA Goal(s)	Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent	✓	✓									
STD L.K.5c	Identify real-life connections between words and their use (e.g., note places at school that are *colorful*).											
CKLA Goal(s)	Identify real-life connections between words and their use (e.g., note places at school that are *colorful*)						✓					
STD L.K.6	Use words and phrases acquired through conversations, reading and being read to, and responding to texts.											
CKLA Goal(s)	Use words and phrases acquired through conversations, being read to, and responding to texts						✓					
	Learn the meaning of common sayings and phrases			✓								✓
Additional CKLA Goals												
Listen to a variety of texts, including nonfiction/informational text		✓	✓	✓		✓	✓		✓	✓	✓	✓
Prior to listening to an nonfiction/informational read-aloud, identify orally what they know and/or have learned about a given topic		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓

Alignment Chart for Plants

	Lesson										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Prior to or while listening to an nonfiction/informational read-aloud, orally predict what will happen in the read-aloud based on pictures and/or text heard thus far				✓				✓			
Discuss personal responses to favorite foods and fruits they eat and connect those to the fruits discussed in the read-aloud						✓					
Use temporal language to express story events in sequential order							✓				
Evaluate and select read-alouds or stories on the basis of personal choice for rereading											✓

These goals are addressed in all lessons in this domain. Rather than repeat these goals as lesson objectives throughout the domain, they are designated here as frequently occurring goals.

Introduction to Plants

This introduction includes the necessary background information to be used in teaching the *Plants* domain. The *Tell It Again! Read-Aloud Anthology* for *Plants* contains eleven daily lessons, each of which is composed of two distinct parts, so that the lesson may be divided into smaller chunks of time and presented at different intervals during the day. Each entire lesson will require a total of fifty minutes.

This domain includes a Pausing Point following Lesson 4, after plant parts and the life cycle are introduced. At the end of the domain, a Domain Review, a Domain Assessment, and Culminating Activities are included to allow time to review, reinforce, assess, and remediate content knowledge. **You should spend no more than fifteen days total on this domain.**

Week One				
Day 1 #	**Day 2** ⑩#	**Day 3** #	**Day 4** ⑩#	**Day 5** ⑩#
Lesson 1A: "Introduction to Plants" (35 min.)	Lesson 2A: "Plant Parts" (35 min.)	Lesson 3A: "The Life Cycle of a Plant" (35 min.)	Lesson 4A: "The Gigantic Turnip" (35 min.)	Pausing Point (35 min.)
Lesson 1B: Extensions (15 min.)	Lesson 2B: Extensions (15 min.)	Lesson 3B: Extensions (15 min.)	Lesson 4B: Extensions (15 min.)	Pausing Point (15 min.)
50 min.	50 min.	50 min.	50 min.	50 min.

Week Two				
Day 6 #	**Day 7** #	**Day 8**	**Day 9**	**Day 10**
Lesson 5A: "Polly the Honeybee's Flower Tour" (35 min.)	Lesson 6A: "The Fruits of Polly's Labor" (35 min.)	Lesson 7A: "Johnny Appleseed" (35 min.)	Lesson 8A: "Deciduous Trees" (35 min.)	Lesson 9A: "Evergreen Trees" (35 min.)
Lesson 5B: Extensions (15 min.)	Lesson 6B: Extensions (15 min.)	Lesson 7B: Extensions (15 min.)	Lesson 8B: Extensions (15 min.)	Lesson 9B: Extensions (15 min.)
50 min.	50 min.	50 min.	50 min.	50 min.

Week Three				
Day 11	**Day 12**	**Day 13**	**Day 14** ⑩	**Day 15**
Lesson 10A: "Plants and People" (35 min.)	Lesson 11A: "George Washington Carver" (35 min.)	Domain Review (35 min.)	Domain Assessment (35 min.)	Culminating Activities (35 min.)
Lesson 10B: Extensions (15 min.)	Lesson 11B: Extensions (15 min.)	Domain Review (15 min.)	Domain Assessment (15 min.)	Culminating Activities (15 min.)
50 min.	50 min.	50 min.	50 min.	50 min.

⑩ Lessons include Student Performance Task Assessments

Lessons require advance preparation and/or additional materials; please plan ahead

Domain Components

Along with this Anthology, you will need:

- *Tell It Again! Media Disk* or the *Tell It Again! Flip Book* for *Plants*
- *Tell It Again! Image Cards* for *Plants*
- *Tell It Again! Supplemental Guide* for *Plants*
- *Tell It Again! Multiple Meaning Word Posters* for *Plants*

Recommended Resource:

- *Core Knowledge Kindergarten Teacher Handbook,* edited by E.D. Hirsch, Jr. and Souzanne A. Wright (Core Knowledge Foundation, 2004) ISBN: 978-1890517694

Why Plants Are Important

There are millions of living things on earth. Scientists classify these living things into groups called kingdoms. Plants make up one kingdom in this classification system. Over 350,000 species of highly diverse plants are found on almost every part of the earth. By listening to the read-alouds in this domain, students will acquire a fundamental understanding of the parts of plants and how they grow. They will learn what plants need in order to stay alive and will be introduced to the concepts of the life cycle of plants, pollination, and photosynthesis. This basic knowledge about plants will lay the foundation for a broader understanding of ecology and the interdependence of all living things, topics that will be addressed in other Kindergarten domains (*Farms* and *Taking Care of the Earth*), as well as in subsequent grades.

Core Vocabulary for Plants

The following list contains all of the core vocabulary words in *Plants* in the forms in which they appear in the read-alouds or, in some instances, in the "Introducing the Read-Aloud" section at the beginning of the lesson. Boldfaced words in the list have an associated Word Work activity. The inclusion of the words on this list does not mean that students are immediately expected to be able to use all of these words on their own. However, through repeated exposure throughout the lessons, they should acquire a good understanding of most of these words and begin to use some of them in conversation.

Lesson 1

environment
nutrients
plants, n.
plant, v.
soil

Lesson 2

flowers
leaves
photosynthesis
roots
seeds
stems
survival

Lesson 3

germinate
life cycle
mature
sapling
seedlings

Lesson 4

budge
gigantic
stew

Lesson 5

honey
nectar
petals
pollen
pollination

Lesson 6

blossoms
core
fruit
produce
scrumptious

Lesson 7

eventually
hero
orchards

Lesson 8

bare
deciduous
dormant
habitat
sheds

Lesson 9

cones
conifers
deciduous
evergreen
needles

Lesson 10

bouquet
lumberjack
medicines
oxygen
provide

Lesson 11

botanist
botany
canvas
crops

Student Performance Task Assessments

In the *Tell It Again! Read-Aloud Anthology* for *Plants,* there are numerous opportunities to assess students' learning. These assessment opportunities range from informal observations, such as *Think Pair Share* and some Extension activities, to more formal written assessments. These Student Performance Task Assessments (SPTA) are identified in the *Tell It Again! Read-Aloud Anthology* with this icon: 10. There is also an end-of-domain summative assessment. Use the Tens Conversion Chart located in the Appendix to convert a raw score on each SPTA into a Tens score. On the same page, you will also find the rubric for recording observational Tens scores.

Above and Beyond

In the *Tell It Again! Read-Aloud Anthology* for *Plants,* there are numerous opportunities in the lessons and the Pausing Point to challenge students who are ready to attempt activities that are above grade-level. These activities are labeled "Above and Beyond" and are identified with this icon: .

Supplemental Guide

Accompanying the *Tell It Again! Read-Aloud Anthology* is a *Supplemental Guide* designed to assist education professionals who serve students with limited English language skills or students with limited home literacy experience, which may include English Language Learners (ELLs) and children with special needs. Teachers whose students would benefit from enhanced oral language practice may opt to use the *Supplemental Guide* as their primary guide in the Listening and Learning strand. Teachers may also choose to begin a domain by using the *Supplemental Guide* as their primary guide before transitioning to the *Tell It Again! Read-Aloud Anthology,* or may choose individual activities from the S*upplemental Guide* to augment the content covered in the *Tell It Again! Read-Aloud Anthology.*

The *Supplemental Guide* activities that may be particularly relevant to any classroom are the Multiple Meaning Word Activities and

accompanying Multiple Meaning Word Posters, which help students determine and clarify different meanings of words; Syntactic Awareness Activities, which call students' attention to sentence structure, word order, and grammar; and Vocabulary Instructional Activities, which place importance on building students' general academic, or Tier 2, vocabulary. These activities afford all students additional opportunities to acquire a richer understanding of the English language. Several of these activities have been included as Extensions in the *Tell It Again! Read-Aloud Anthology.* In addition, several words in the *Tell It Again! Read-Aloud Anthology* are underlined, indicating that they are multiple-meaning words. The accompanying sidebars explain some of the more common alternate meanings of these words. *Supplemental Guide* activities included in the *Tell It Again! Read-Aloud Anthology* are identified with this icon: ⇆.

Recommended Resources for Plants

Trade Book List

The *Tell It Again! Read-Aloud Anthology* includes a number of opportunities in Extensions, the Pausing Point, and the and Culminating Activities for teachers to select trade books from this list to reinforce domain concepts through the use of authentic literature. In addition, teachers should consider other times throughout the day when they might infuse authentic domain-related literature. If you recommend that families read aloud with their child each night, you may wish to suggest that they choose titles from this trade book list to reinforce the domain concepts. You might also consider creating a classroom lending library, allowing students to borrow domain-related books to read at home with their families.

1. *The Boy Who Didn't Believe in Spring,* by Lucille Clifton and illustrated by Brinton Turkle (Puffin, 1992) ISBN 978-0140547399
2. *The Carrot Seed,* by Ruth Krauss and Crockett Johnson (HarperTrophy, 2004) ISBN 978-0064432108
3. *City Green,* by DyAnne DiSalvo-Ryan (HarperCollins, 1994) ISBN 978-0688127862

4. *Daisy (Looking at Life Cycles),* by Victoria Huseby (Smart Apple Media, 2009) ISBN 978-1599201795
5. *Eating the Alphabet: Fruits & Vegetables from A to Z,* by Lois Ehlert (Voyager Books, 1993) ISBN 978-0152244361
6. *The Empty Pot,* by Demi (Henry Holt, 2007) ISBN 978-0805082272
7. *Eyewitness Plant (DK Eyewitness Books),* by David Burnie (DK Publishing, 2011) ISBN 978-0756660352
8. *Flower Garden,* by Eve Bunting and illustrated by Kathryn Hewitt (Voyager Books, 2000) ISBN 978-0152023720
9. *From Bud to Blossom (Apples)*, by Gail Saunders-Smith (Capstone Press, 2006) ISBN 978-1560659518
10. *From Seed to Plant,* by Gail Gibbons (Live Oak Media, 2012) ISBN 978-1430110798
11. *The Great Kapok Tree: A Tale of the Amazon Rainforest,* by Lynne Cherry (Sandpiper, 2000) ISBN 978-0152026141
12. *Growing Vegetable Soup,* by Lois Ehlert (Voyager Books, 1990) ISBN 978-152325800
13. *The Honey Makers,* by Gail Gibbons (HarperTrophy, 2000) ISBN 978-0688175313
14. *How a Seed Grows (Let's-Read-and-Find-Out Science 1),* by Helene J. Jordan and illustrated by Loretta Krupinski (Collins, 1992) ISBN 978-0064451079
15. *I Am a Leaf (Hello Reader! Science, Level 1),* by Jean Marzollo and Judith Moffatt (Cartwheel, 1999) ISBN 978-0590641203
16. *I Am an Apple (Hello Reader! Science, Level 1),* by Jean Marzollo and Judith Moffatt (Scholastic, 1997) ISBN 978-0590372237
17. *I'm a Seed (Hello Reader! Science, Level 1),* by Jean Marzollo and Judith Moffatt (Cartwheel, 1996) ISBN 978-0590265867
18. *Jack's Garden,* by Henry Cole (HarperTrophy, 1997) ISBN 978-0688152833

19. *Johnny Appleseed,* by Reeve Lindbergh and illustrated by Kathy Jakobsen Hallquist (Little, Brown Young Readers, 1993) ISBN 978-0316526340
20. *Johnny Appleseed (Rookie Biographies),* by Christin Ditchfield (Children's Press, 2003) ISBN 978-0516278162
21. *The Life and Times of the Honeybee,* by Charles Micucci (Houghton Mifflin, 1997) ISBN 978-0395861394
22. *The Life and Times of a Peanut,* by Charles Micucci (Houghton Mifflin, 2000) ISBN 978-0618033140
23. *Mama Miti: Wangari Maathai and the Trees of Kenya,* Donna Jo Napoli and illustrated by Kadir Nelson (Simon & Schuster, 2010) ISBN 978-1416935056
24. *Maple Syrup Season,* by Ann Purmell and illustrated by Jill Weber (Holiday House, 2008) ISBN 978-0823418916
25. *Oak Tree (Looking at Life Cycles),* by Victoria Huseby (Smart Apple Media, 2009) ISBN 978-1599201788
26. *OLIVIA Plants a Garden (Olivia Ready-to-Read),* by Emily Sollinger and illustrated by Jared Osterhold (Simon Spotlight, 2011) ISBN 978-1442416758
27. *One Bean,* by Anne Rockwell and pictures by Megan Halsey (Walker Publishing Company, Inc., 1998) ISBN 978-0802775726
28. *Plant a Little Seed,* by Bonnie Christensen (Roaring Brook Press, 2012) ISBN 978-1596435506
29. *Planting a Rainbow,* by Lois Ehlert (Voyager Books, 1992) ISBN 978-0152626105
30. *The Reason for a Flower (Ruth Heller's World of Nature),* by Ruth Heller (Topeka Bindery, 1999) ISBN 978-0833590008
31. *The Seasons of Arnold's Apple Tree,* by Gail Gibbons (Sandpiper, 1988) ISBN 978-0152712457
32. *Seed, Soil, Sun,* by Cris Peterson and photographs by David R. Lundquist (Boyds Mills Press, 2010) ISBN 978-1590787137

33. *Soil Basics/Lo Básico de la Tierra,* by Carol Lindeen (Capstone, 2010) ISBN 978-1429653473
34. *The Tiny Seed (The World of Eric Carle),* by Eric Carle (Aladdin, 2001) ISBN 978-0689842443
35. *Wangari's Trees of Peace: A True Story from Africa,* by Jeanette Winter (Harcourt, 2008) ISBN 978-0152065454
36. *Why Do Leaves Change Color? (Let's-Read-and-Find-Out Science, Stage 2),* by Betsy Maestro and illustrated by Loretta Krupinski (HarperCollins, 1994) ISBN 978-0064451260
    Note: This book is more appropriate for individualized reading.

Websites and Other Resources

Student Resources

1. Parts of Plant Game
   http://www.softschools.com/science/plants/plant_parts/
2. Plant Games
   http://www.cookie.com/kids/games/grow-plant.html
3. "Groovy Garden" Game
   http://pbskids.org/arthur/games/groovygarden/groovygarden.html

Teacher Resources

4. George Washington Carver
   http://www.ideafinder.com/history/inventors/carver.htm
5. "Biology of Plants"
   http://www.mbgnet.net/bioplants/main.html

Introduction to Plants

1

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Explain that plants are living things
- ✓ Describe what plants need to live and grow: food, water, air, and light
- ✓ Explain that different kinds of plants grow in different environments

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ Orally compare and contrast a houseplant and desert cactus (RI.K.3)
- ✓ Define and use new words, such as *soil,* from the read-aloud and the discussion about "Introduction to Plants" (RI.K.4)
- ✓ Describe images of living things in "Introduction to Plants," using the images to check and support comprehension of the read-aloud (RI.K.7)
- ✓ Actively engage in the nonfiction/informational read-aloud "Introduction to Plants" (RI.K.10)
- ✓ Identify multiple meanings of *plant* and use them in appropriate contexts (L.K.4a)
- ✓ Sort common objects into living and nonliving categories (L.K.5a)

- ✓ Listen to a variety of texts, including informational text such as "Introduction to Plants"
- ✓ Prior to listening to "Introduction to Plants," identify orally what they know about plants

Core Vocabulary

environment, *n.* The place where living things live
Example: Cacti live in a desert environment.
Variation(s): environments

nutrients, *n.* Things that help plants or animals grow and be healthy in the same way that food and vitamins help children grow and be healthy
Example: The nutrients in the ground helped the sunflower plant grow to be strong and tall.
Variation(s): nutrient

plants, *n.* Living things that grow in the ground or water
Example: The plants in our classroom need to be watered twice a week.
Variation(s): plant

plant, *v.* To put a seed or plant in soil and cover it with additional soil so it will grow
Example: My mom and I will plant the flower seeds in front of our house.
Variation(s): plants, planted, planting

soil, *n.* The top layer of dirt where seeds or plants are planted
Example: I used a shovel to dig into the soil to plant my flower.
Variation(s): soils

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**Domain Introduction**	chart paper, chalkboard, or whiteboard	10
	Purpose for Listening		
Presenting the Read-Aloud	**Introduction to Plants**		10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Soil		5
	Complete Remainder of the Lesson Later in the Day		
Extensions	**Plants and Their Environments**	images of various plants in various environments [This exercise requires advance preparation.]	15
	Multiple Meaning Word Activity: Plants	Poster 1M: Plants	
Take-Home Material	**Family Letter**	Instructional Masters 1B-1 and 1B-2	*

Introduction to Plants

1A

Introducing the Read-Aloud — *10 minutes*

Domain Introduction

Tell students that they will be learning about plants for the next few weeks. Tell them that plants are a type of living thing that they see all around them.

Show image 1A-1: Living things

Explain to students that all living things need food, water, and air. People and animals are living things because they all need food, water, and air. Living things also reproduce or make babies that look like themselves. Since plants are living things, they also reproduce to make other plants that look like themselves. Help students name the living things in the image.

Be sure to reinforce the fact that nonliving things, such as rocks or buildings, do not reproduce or have babies, and they do not need food, water, or air because they are not alive.

Explain to students that you are going to read a list of things—some that are living and some that are nonliving. If what you name is alive, students should say, "_____ is living." If what you name is not alive, students should say, "_____ is nonliving." If students answer incorrectly, provide feedback and correct their responses by helping them use and apply the criteria for living things described above.

- dog (A dog is living.)
- tree (A tree is living.)
- rock (A rock is nonliving.)
- cat (A cat is living.)
- chalkboard (A chalkboard is nonliving.)
- crayon (A crayon is nonliving.)

- person (A person is living.)
- table (A table is nonliving.)
- flower (A flower is living.)

Purpose for Listening

Tell students to listen to find out some of the many different places that plants can live.

Presenting the Read-Aloud — *10 minutes*

Introduction to Plants

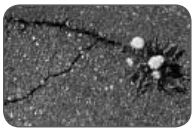
Show image 1A-1: Living things [1]

There are many different kinds of people, animals, and **plants** that live in our world. [2] You probably recognize many of the living things in this picture. In some ways, people, animals, and plants are alike—they are all alive. They need food, water, and air to grow and stay alive. But plants, people, and animals are different in many other ways. [3] Unlike animals and people, plants do not make sounds, and they cannot move from one place to another.

1 What do you see in this picture?

2 Here, the word *plants* means living things that have leaves and roots and make their own food. The word *plants* can have other meanings. The word *plants* also means puts seeds into the ground.

3 How do you think plants and animals are different?



Show image 1A-2: Dandelion in the sidewalk

Plants need four basic things in order to live and grow: food, water, air, and light. If a plant has these things, then it can survive—even in a little crack in the sidewalk.

The yellow flowering plant in this picture is called a dandelion. A few weeks ago, a tiny dandelion seed floated through the air and landed in this crack, where there was just enough **soil** for it to begin to grow. [4] This dandelion gets plenty of sun here in the sidewalk, and it also gets plenty of air, water, and **nutrients.** [5]

4 Soil is the top layer of dirt where plants can grow.

5 Nutrients are like the vitamins you get from your food.

Show image 1A-3: Hardwood forest

This shady forest is home to many different types of plants, from the tallest tree to the tiniest flower. A forest is a large area of land where many trees grow close together. Animals that live in the forest depend on these plants for food and for their homes. This forest is just one **environment**—or place where living things live—of many on this earth.

Show image 1A-4: Pine forest

This is another type of forest. There are some major differences between the colors and shapes of the leaves on these trees and the leaves on the trees in the last picture. In a later lesson, you will learn about two different types of trees.

Show image 1A-5: Desert cactus

This environment looks very different from the forests we saw in the last images. All plants need food, water, air, and light. But, not every place in the world has exactly the same amount of food, water, air, or light. This is a desert, where it is hot and dry all year round. Plants that grow here, such as this cactus, have adapted to a life in sandy soil with very little rainfall beneath the blazing hot sun. That tough little dandelion and the trees you saw earlier would wither and die if you tried to **plant** them here.[6] And the cactus in this desert would not be able to live in either the sidewalk crack or the forest! Different types of plants grow in different environments or places.

6 When you plant something, you place seeds or plants in the ground to grow.

Show image 1A-6: Underwater plants

This picture shows an underwater environment. Fish may be the first things that come to mind when you think about underwater life, but there are plants down there, too. Underwater plants need the same things other plants need, including food, water, air, and light.[7]

7 Have you ever seen underwater plants?

Show image 1A-7: City park

This environment is not a forest, not a desert, and definitely not underwater. This is a city park, made when some people gathered seeds and planted them in the ground. People plant grass seeds on lawns and in parks so there are nice places to play and relax. People plant flowers and trees to make the world a prettier place.

Show image 1A-8: House plant

Some plants can be grown indoors. Maybe you even have one in your classroom. If so, someone needs to water it from time to time so it stays healthy and green.

All plants have four basic needs—food, water, air, and light. But not all plants can grow in all the same places on earth. A dandelion cannot grow in the desert, and a corn plant cannot grow underwater. Over the next several days, you will learn all about

different types of plants and plant parts, and you will understand why plants are so important to animals and people.

Discussing the Read-Aloud *15 minutes*

Comprehension Questions *10 minutes*

If students have difficulty responding to questions, reread pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding students' responses using richer and more complex language. Ask students to answer in complete sentences by having them restate the question in their responses.

1. *Literal* Plants need four things to live. What four things do they need? (Plants need food, water, air, and light.)
2. *Literal* Name some different places where plants live. (Plants can live in the desert, underwater, and in parks.)

Show image 1A-5: Desert cactus

Show image1A-8: House plant

3. *Inferential* How are these plants the same and how are they different? (Both plants need food, water, air, and light to survive. The cactus and the house plant live in different places or environments.)
4. *Inferential* Are plants living or nonliving? (Plants are living things.) What did you learn about plants in this read-aloud that makes you think they are living things? (Plants need food, water, air, and light to live, just like people.)
5. *Inferential* What do you think would happen if plants didn't have food, water, air, and light? (If plants did not have food, water, air, and light, they would not be able to stay alive.)

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

Show image 1A-1: Living things

6. *Evaluative* *Think Pair Share:* Name one way that plants and animals are the same and one way that they are different. (Answers may vary.)
7. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Soil

5 *minutes*

1. In the read-aloud you heard, "A few weeks ago, a tiny dandelion seed floated through the air and landed in this crack, where there was just enough *soil* for it to begin to grow."
2. Say the word *soil* with me.
3. Soil is the part of the ground where plants are planted and grow.
4. The plant pushed its way through the soil as it grew.
5. What kinds of plants would you plant in soil? [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "I would plant _____ in the soil."]
6. What's the word we've been talking about?

Use a *Sharing* activity for follow-up. Directions: Share with the class what you might plant in the soil. Be sure to begin your responses with "I would plant _____ in the soil because . . ."

Complete Remainder of the Lesson Later in the Day

Introduction to Plants

1B

Extensions

15 *minutes*

Plants and Their Environments

Materials: Images of various plants in various environments

Show students pictures of ten plants in different environments (e.g., a cactus in a desert or a palm tree on a beach). Ask students why the plants look different. (Possible answers may include that the plants look different because they live in different places.) Encourage students to think about why these environments may produce different kinds of plants. Also, make a connection between different kinds of habitats.

Multiple Meaning Word Activity

Sentence in Context: Plants

1. [Show Poster 1M: Plants.] In the read-aloud you heard, "There are many different kinds of people, animals, and *plants* that live in our world." Here *plants* means living things that have leaves and roots and make their own food. [Have students hold up one, two, or three fingers to indicate which image on this poster shows this meaning.]
2. *Plants* can also mean other things. *Plants* also means to put seeds into the ground. [Have students hold up one, two, or three fingers to indicate which image on this poster shows this meaning.]
3. *Plants* can also mean manufacturing buildings or factories where people make things. [Have students hold up one, two, or three fingers to indicate which image on this poster shows this meaning.]
4. Now with your neighbor, make a sentence for each meaning of *plants*. Remember to use complete sentences. I will call on some of you to share your sentences. [Call on a few students to share their sentences.]

Take-Home Material

Family Letter

Send home Instructional Masters 1B-1 and 1B-2.

Plant Parts

2

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Identify the root, stem, leaf, flower, and seed of a plant
- ✓ Explain that roots anchor the plant and take in water and nutrients
- ✓ Explain that stems support the plant and carry water and nutrients to the various parts of the plant
- ✓ Explain that the plant makes its own food in its leaves

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ Discuss personal characteristics that make people similar and different and connect those to the parts of a plant and how they are similar and different (RI.K.3)
- ✓ Define and use new words, such as *survival,* from the read-aloud and the discussion about "Plant Parts" (RI.K.4)
- ✓ Describe an illustration of a sunflower and an apple tree in "Plant Parts," using the illustration to check and support comprehension of the read-aloud (RI.K.7)
- ✓ Actively engage in the nonfiction/informational read-aloud "Plant Parts" (RI.K.10)

- ✓ Create a drawing with sufficient detail of the things that are important to a plant's survival (SL.K.5)
- ✓ Sort common objects into living and nonliving categories (L.K.5a)
- ✓ Listen to a variety of texts, including informational text such as "Plant Parts"
- ✓ Prior to listening to "Plant Parts," identify orally that plants are living and need four things to survive: food, water, air, and light

Core Vocabulary

flowers, *n.* Parts of the plant where seeds are; blossoms
Example: On my mom's birthday, I gave her flowers with pink petals.
Variation(s): flower

leaves, *n.* The parts of the plant that make food for the plant
Example: My sister has a leaf collection with leaves of many different sizes, shapes, and colors.
Variation(s): leaf

photosynthesis, *n.* The process in green plants that uses light to turn water and air into food
Example: Plants can make their own food through the process of photosynthesis.
Variation(s): none

roots, *n.* The parts of the plant that keep it in the ground and take up food and water
Example: I made sure that the roots of the plant were covered with soil when I planted it.
Variation(s): root

seeds, *n.* The small, protected parts of a plant that are able to grow into a new plant
Example: Carlos saved sunflower seeds to plant in his garden.
Variation(s): seed

stems, *n.* The parts of the plant that support the plant and through which water and nutrients travel to the rest of the plant
Example: After Mrs. Bryant cut the stems of the flowers, she put the flowers in a vase of water.
Variation(s): stem

survival, *n.* The act of staying alive
Example: A plant needs food for its survival.
Variation(s): none

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Have We Already Learned?**		10
	Purpose for Listening		
Presenting the Read-Aloud	**Plant Parts**		10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Survival	drawing paper and drawing tools	5
	**Complete Remainder of the Lesson Later in the Day**		
Extensions	**Plant Parts**	Instructional Master 2B-1; drawing paper, scissors, glue	15
	Stem Activity	cups; red and blue food coloring; carnations or stalks of celery [This exercise requires advance preparation.]	

Plant Parts

2A

Introducing the Read-Aloud *10 minutes*

What Have We Already Learned?

In the last lesson, we learned that plants are living things. Remind students that living things need food, water, air, and light. Living things also reproduce, or create more of themselves. Explain to students that you are going to read them a list of things—some that are living and some that are not. If what you name is alive, students should say, "_____ is living." If what you name is not alive, students should say, "_____ is nonliving." If students answer incorrectly, provide feedback and correct their responses by helping them use and apply the criteria for living things described above.

- desk (A desk is nonliving.)
- tree (A tree is living.)
- pencil (A pencil is nonliving.)
- rosebush (A rosebush is living.)
- mouse (A mouse is living.)
- paper (Paper is nonliving.)

Ask students if they remember the four things that plants need to survive. If students have trouble, remind them that plants need food, water, air, and light to survive.

Purpose for Listening

Ask several students to stand up. Point out that there are many ways the students are different, citing the fact that they have different names, live in different places, are different sizes, etc. Now remind the class that there are ways in which the standing students are similar. Point out they are all human beings and that they all have similar body parts. Ask them to point to their arms, their feet, and

their nose as examples. Now, tell students that even though there are many different plants, all plants have similar parts.

Tell students that the main topic, or main idea, in this lesson is plant parts. Tell students to listen carefully to the read-aloud to learn more about the topic: the different parts of plants and how these different parts use nutrients (or food), water, air, and light.

Presenting the Read-Aloud — **10** *minutes*

Plant Parts

Show image 2A-1: Sunflower

Even though there are many, many different kinds of plants living in our world, all plants need nutrients (or food), water, air, and light.[1] And most plants also have similar basic parts—**roots, stems, leaves, flowers,** and **seeds.**[2]

Take a look at this sunflower. The parts of the plant you see down here at the bottom are the roots. The roots of the plant are covered with soil. So, when we see plants growing in nature, we usually aren't able to see the roots unless we take the plants out of the ground.

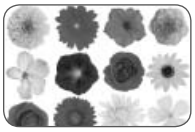
The plant's roots reach down into the soil and grow underground. They help to hold the plant in place in the soil. But most important, the roots take up water and nutrients that are in the soil. Nutrients help plants grow and stay healthy just like vitamins help you grow and stay healthy. The water and nutrients move through the roots up into the stem of the plant, which holds the plant up tall, toward the light. As the water and nutrients travel up the stem, they are able to reach other parts of the plant, like the leaves. The leaves are the parts of a plant that are attached to and grow out from the stem. The leaves are usually green, but they can be other colors as well.

Many plants have flowers which are also called blossoms. Look at the blossoms on this sunflower plant. Around the outside, it has many bright yellow petals. The flower petals of different plants come in every color you can imagine!

Now look in the center part of the sunflower blossom, the part that has many petals around it. This part of the plant is made up of many small seeds. One sunflower seed is only about the size of one of your fingernails! If the seeds of the sunflower plant are put into the soil, they will make a new sunflower plant! Sometimes people eat the seeds from some plants. You may have even tasted a sunflower seed yourself.

1 What do you see in this picture? [Point to the parts of the flower as you talk about them.]

2 Here, the word *leaves* means the parts of plants that make food for the plant. The word *leaves* can have other meanings. The word *leaves* also means to go away from a place.



Show image 2A-2: Flowers

Even though most plants have the same basic parts—roots, a stem, leaves, flowers, and seeds—these parts may look different on different kinds of plants. These beautiful flowers are from many different kinds of plants. Did you notice that, not only are the colors of the flowers different, but the flower petals from different plants have different shapes, too?

Show image 2A-3: Apple tree [3]

This apple tree has the same parts as the other plants that we have been looking at. We can't see any apples because this picture was taken in the spring, when the blossoms, or flowers, come out. The apples will start growing in the summer and will be ready for picking in the fall. We can't see the roots of the apple tree because they are growing underground, but we can see several other parts. We can see many stems on the tree. The smaller stems are called branches. [4] Do you see the apple blossoms and the leaves? There are many, many leaves attached to the branches on this apple tree.

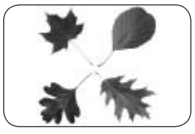
3 What do you see in this picture?

4 [Point to the branches.]

Show image 2A-4: Bark

The largest part of the tree is called the trunk. The outside of the trunk is covered in bark. Bark is kind of like clothing for trees: it protects the inside of the tree. [5]

5 What do you think this bark feels like?



Show image 2A-5: Leaves [6]

Here are some leaves from different kinds of trees. Take a close look, and you will notice that the leaves have different shapes. In fact, one way to tell what kind of tree you are looking at is to look closely at its leaves. The leaf on the top left is from a sugar maple tree. The leaf below that is from a white oak tree. The leaf on the top right is from a witch hazel tree, and the leaf below that is from a black oak tree. Remember, many plants—not just trees—have leaves. In fact, leaves are especially important to the **survival** of all plants. [7]

6 [Point to the leaves as you name them.]

7 This means that the leaves are especially important in making sure that plants stay alive.

Show image 2A-6: Leaves in sunlight

When light shines on the green leaves of any plant, the leaf absorbs—or soaks up—energy from the light. Through an amazing process called **photosynthesis,** the leaf uses the light to turn the water and air already in the plant into food for the rest of the plant!

Show image 2A-7: Leaf close-up

Do you remember earlier that we said that the roots and stem of a plant move water and nutrients from the soil to the other parts of a plant, such as the leaves? During photosynthesis, water, nutrients, air, and light come together in the plant's leaves. This is how plants make food for themselves. It's a good thing, too, because plants can't move like animals or people, so they aren't able to go find food somewhere else. Plants have to make food for themselves. Once the water and nutrients are made into food through photosynthesis, parts of the leaves called the veins carry the food back to the stem.[8] From there, food is taken to the rest of the plant where it is needed.

8 [Point to the veins in the picture.]

Show image 2A-8: Boy watering plant

Now you have learned about most of the basic parts of many plants. Plants begin as seeds, which sprout and grow roots, stems, leaves, and then flowers. The roots, stems, and leaves work together with water, nutrients, air, and light to make food for the plant through photosynthesis. Say that word three times to help you remember it: *photosynthesis, photosynthesis, photosynthesis*.

Discussing the Read-Aloud **15** *minutes*

Comprehension Questions **10** *minutes*

If students have difficulty responding to questions, reread pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding students' responses using richer and more complex language. Ask students to answer in complete sentences by having them restate the question in their responses.

Show image 2A-1: Sunflower

1. *Literal* [Have different students point to the different parts of the plant.] Point to the roots, stem, flower, leaves, and seeds.
2. *Literal* What part of the plant keeps it in the ground and takes in nutrients and water for the plant? (The roots keep a plant in the ground and take in water and nutrients for the plant.)
3. *Literal* What part of the plant supports the plant and moves water and nutrients to the rest of the plant? (The stem supports the plant and moves water and nutrients to the rest of the plant.)
4. *Literal* What part of the plant does the plant use to make its food? (The plant makes its own food in its leaves.)
5. *Inferential* What would happen if a plant didn't have roots? (If the plant didn't have roots, it wouldn't be able to take in nutrients and water.)
6. *Inferential* What would happen if a plant didn't have a stem? (If the plant didn't have a stem, it would fall over, and it wouldn't be able to move the water and nutrients from the roots to the rest of the plant.)
7. *Inferential* What would happen if a plant didn't have leaves? (If the plant didn't have leaves, it would not be able to make food for itself.)

8. *Evaluative* [Using image 2A-1, ask a student volunteer to complete the following task.] Trace the upward path the water and nutrients take from the ground to the roots, through the stem, and finally to the leaves. [As the student traces the path, help him or her use the core vocabulary to describe the plant parts.]

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

9. *Evaluative* ***Think Pair Share:*** Using image 2A-1, talk about each part of the plant (especially the roots, stem, and leaves) and what each part does to help the plant survive. (The roots keep the plant in the ground and take in water and nutrients. The stem holds the plant up tall and carries water and nutrients to the other parts. The leaves are where the plant makes food for itself.)

10. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Survival *5 minutes*

1. In the read-aloud you heard, "In fact, leaves are especially important to the *survival* of all plants."
2. Say the word *survival* with me.
3. Survival is the act of staying alive.
4. Food, water, air, and light are important to a plant's survival.
5. Why are these things important to a plant's survival? Try to use the word *survival* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "_____ is important to a plant's survival because . . ."]
6. What's the word we've been talking about?

Use a *Drawing* activity for follow-up. Directions: Draw a picture of the things that are important to a plant's survival. Be sure to begin your responses with: "_____ is important to a plant's survival because . . ." when you talk about your picture.

Complete Remainder of the Lesson Later in the Day

Plant Parts

2B

Extensions

***15** minutes*

⑩ Plant Parts (Instructional Master 2B-1)

Using Instructional Master 2B-1, have students cut out and paste the plant parts onto a separate sheet of paper to make a whole plant. Check to ensure students' understanding of the function of each plant part. Walk around and talk with students as they complete the worksheet, incorporating core vocabulary when possible.

Stem Activity

Fill two cups with water. Then put red food coloring in one cup and blue food coloring in another cup. Put a freshly-cut carnation or a stalk of celery in each cup. Use this to demonstrate to students how water moves up through the stem of the plant over the course of two days. Have students talk about what happens to the flower or stalk of celery. Explain to students that the celery or flower changed color because the stem of the plant moved the water (and the dye with it) through the stem of the plant all the way to the top. As a result, the dye changed the color of the plant.

The Life Cycle of a Plant 3

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Explain that seeds are the beginning of new plants
- ✓ Explain the basic life cycle of plants

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ With prompting and support, identify the main topic and retell key details from "The Life Cycle of Plants" (RI.K.2)
- ✓ Describe the connection between the parts of the plant and their development in the life cycle of a plant (RI.K.3)
- ✓ Define and use new words, such as *germinate,* from the read-aloud and the discussion about "The Life Cycle of a Plant" (RI.K.4)
- ✓ Describe illustrations of the phases of germination and a seedling in "The Life Cycle of a Plant," using the illustrations to check and support comprehension of the read-aloud (RI.K.7)
- ✓ Actively engage in the nonfiction/informational read-aloud "The Life Cycle of a Plant" (RI.K.10)
- ✓ Draw the important parts of a plant, including the stem (provided), roots, leaves, and flowers (SL.K.5)

- ✓ Explain the meaning of “great oaks from little acorns grow” and use in appropriate contexts (L.K.6)
- ✓ Listen to a variety of texts, including informational text such as “The Life Cycle of a Plant”
- ✓ Prior to listening to “The Life Cycle of a Plant,” identify orally the parts of a plant learned in the previous read-aloud of “Plant Parts”

Core Vocabulary

germinate, *v.* To start to grow
Example: The rain will help the seeds in the garden germinate.
Variation(s): germinates, germinated, germinating

life cycle, *n.* The stages and changes that happen in living things, like plants and animals
Example: The life cycle of a tree begins with a seed and ends as the tree decomposes in the soil and another seed starts to germinate.
Variation(s): life cycles

mature, *v.* To develop fully; to grow into an adult or full-grown animal or plant
Example: It takes time for a seedling to mature into a full-grown, adult plant.
Variation(s): matures, matured, maturing

sapling, *n.* A young tree
Example: Every day I check the sapling we planted to see how much it has grown.
Variation(s): saplings

seedlings, *n.* Young or baby plants that have grown from a seed
Example: At the apple orchard, we saw many small seedlings that will one day grow into apple trees.
Variation(s): seedling

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Have We Already Learned?**		10
	Purpose for Listening		
Presenting the Read-Aloud	**The Life Cycle of a Plant**	ruler or yardstick; different types of seeds	10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Germinate		5
	**Complete Remainder of the Lesson Later in the Day**		
Extensions	**Sayings and Phrases: Great Oaks from Little Acorns Grow**		15
	Syntactic Awareness Activity: Expanding Sentences	Image Card 19	
	Vocabulary Instructional Activity: Cycle		

The Life Cycle of a Plant

3A

Introducing the Read-Aloud

***10** minutes*

What Have We Already Learned?

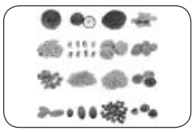
Show image 3A-1: Sunflower

Have students identify each part of the plant. Review with students what each part of the plant does and why it is important. Reinforce the role that each part plays in the survival of the plant.

Purpose for Listening

Tell students that the main topic, or main idea, of today's lesson is the life cycle of a plant. Explain to students that when a plant first starts to grow, it does not have all of the parts they have learned about. Tell students to listen to find out more about today's topic: how the plant grows and changes during its life.

Presenting the Read-Aloud — **10** *minutes*



The Life Cycle of a Plant

Show image 3A-2: Seeds

You have already learned about the different parts of a plant. One of those parts is the seed.[1] Many plants begin with a seed. Seeds come in all shapes and sizes and, as you might guess, the seeds from different plants look different.[2] Each seed is a plant waiting to sprout, or grow. If the seed is planted in the right place, then the seed will sprout and grow into a new plant. Only a sunflower plant can grow from a sunflower seed, and only an apple tree can grow from an apple seed. What type of plant do you think would grow if you planted a watermelon seed? How about a pumpkin seed?

1 Where can you find the seeds on a plant? [The seeds are found in the center of the flower.]

2 [Show students the different examples of seeds you have prepared.]

Show image 3A-3: Phases of germination

Seeds are the beginnings of new plants. Like all living things, plants live according to a life cycle. A **life cycle** includes the stages and changes that happen in living things.

The life cycle of a plant starts with a seed. Most seeds have nutrients inside them that feed the new plants for just a little while. In order to **germinate**—or begin growing into new plants—seeds must have water, light from the sun, and nutrients from the soil.[3]

3 What are the four things a plant needs to survive?

When a plant first starts to grow from a seed, it looks very different from a fully grown or mature plant. Baby plants are called **seedlings.** This image shows a plant's growth from germination to seedling.[4]

4 What do you see in this picture?

The very first picture shows a newly germinated seed that is just beginning to sprout. Germination begins when the seed gets just the right amounts of light from the sun, water, and nutrients. This causes the seed to open and the seedling to poke up through the soil. If you look very carefully at this first picture, you can see that the new plant is just starting to grow its first root.[5] The next pictures show the same plant over several days. As the plant

5 [Point to each part of the image as it is described in the read-aloud.]

grows, you can see thin roots branching off deeper into the soil. The roots absorb water and nutrients and push them up through the plant's stem, which grows above ground.

Show image 3A-4: Seedling

It takes time for a seedling to grow into a full-grown, adult plant. The amount of time it takes depends on the type of plant. If you plant a sunflower seed, it will take about a month before the seedling begins to look more like a full-grown sunflower plant. If you plant an apple seed, it will take several years for the seedling to grow into a full-grown tree! [6]

6 Why do you think it takes longer for a tree seedling to grow into a full-grown plant than for a sunflower seedling to grow into a full-grown plant?

When the plant dies, it decays and breaks down into little pieces and goes back into the ground to become nutrients in the soil. A new life cycle of a plant begins!

Show image 3A-5: Acorn and oak

Now, let's explore the life cycle of this oak tree. This acorn contains the seed of an oak tree. [7] You may have seen acorns before, lying outside next to full-grown trees or being carried away by squirrels.

7 [Point to the acorn.]

Show image 3A-6: Squirrel eating an acorn

Squirrels spend all day running around looking for food and hiding food. They bury so many acorns that they often forget where they put some of them. The acorn that the squirrel forgets stays in the soil, giving the oak seed inside a better chance to germinate underground. [8] Once the seed sprouts, it will quickly grow into a seedling, but the young tree will grow only a foot or two in its first year. [9]

8 What does *germinate* mean? Germinate means to begin growing into new plants.

9 [Show students how tall one or two feet is with a ruler or yardstick.]

Show image 3A-7: Young oak

After a few years, the oak will grow to a height of ten or more feet, but it is still considered a young tree or **sapling.** [10] This tree will still be called a sapling for several years to come.

10 [Show students how tall ten feet is with a ruler or yardstick.]

Show image 3A-8: Mature oak

Oak trees take a long time to **mature.** [11] In fact, it takes about fifty years for the average oak tree to mature so that it can produce acorns. An oak tree can produce tens of thousands of acorns over the course of its lifetime. Only a few of those acorns will germinate and grow into new oak trees.

11 or grow into an adult or full-grown tree

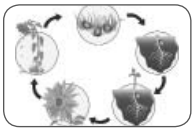
Show image 3A-9: Dead tree

Some oak trees can live for over two hundred years. Eventually, like all living things, the oak tree will die. The oak tree will die slowly over the course of several years. It will produce fewer and fewer leaves each year, its branches will drop off one by one, and gradually its wood will become softer and softer.

Show image 3A-10: Decomposition

Finally, the roots will die and the tree will fall down with a big crash on the forest floor. The tree's branches will be the first to rot and disappear into the soil, but the woody trunk will take many years to completely decay.

All of the nutrients in the wood will decay and become part of the soil once again. The more decayed plants there are in the soil, the more nutrients that soil will have. And, the more nutrients there are, the easier it will be for new seeds, like the acorn seeds, to germinate and grow.



Show image 3A-11: Life cycle of a sunflower

As we have seen, all plants live according to a life cycle. This diagram shows you the life cycle of a sunflower. [12] A new plant begins when the sunflower seed germinates and sprouts to become a seedling. If the seedling receives the right amount of water, nutrients, and light, then the plant will continue to grow. Eventually, the plant will become mature and make more seeds from which new plants will grow. When the sunflower dies and decays, it becomes the nutrients in the soil so that seeds can germinate and grow into new plants. And a new life cycle of a plant begins!

12 [Point to each part of the life cycle as it is reviewed.]

Discussing the Read-Aloud — 15 *minutes*

Comprehension Questions — 10 *minutes*

If students have difficulty responding to questions, reread pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding students' responses using richer and more complex language. Ask students to answer in complete sentences by having them restate the question in their responses.

1. *Inferential* What is the main topic, or main idea, of today's lesson? (The main topic of today's read-aloud is the life cycle of a plant.)
2. *Literal* A plant's life cycle begins with what part of the plant? (A plant's life cycle begins with the seed.)
3. *Literal* What things does a seed need to germinate? (A seed needs water, warmth from the sun, and nutrients.)
4. *Literal* What is a seedling? (A seedling is a young plant.)

Show image 3A-4: Seedling

5. *Literal* What parts of a plant does a seedling have? (A seedling has roots, a stem, and leaves.)
6. *Inferential* Explain the life cycle of a plant. (First, the seed germinates and sprouts into a seedling. Next, the seedling continues to grow until it is an adult plant. Then, the adult plant will make more seeds from which new plants will grow. Finally, the plant will decay and turn into nutrients in the soil.)
7. *Literal* What kind of tree does an acorn grow into? (An acorn grows into an oak tree.)

[Please continue to model the *Think Pair Share* process for the students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

8. *Evaluative* ***Think Pair Share:*** Compare the life cycle of a plant to the life cycle of a human. How are they similar? How are they different? (Both plants and humans start off small and grow to be big. Plants grow from seeds, whereas humans do not grow from seeds.)

9. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Germinate

5 *minutes*

1. In the read-aloud you heard, "In order to *germinate*—or begin growing into new plants—seeds must have water, light from the sun, and nutrients from the soil."
2. Say the word *germinate* with me.
3. *Germinate* means to sprout from a seed and begin growing into a new plant.
4. My bean plant has started to germinate, and I can see it sprouting out of the ground!
5. Tell about the things that a seed needs to germinate. Try to use the word *germinate* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase students' responses: "A seed needs _____ to germinate."]
6. What's the word we've been talking about?

Use an *Acting* activity for follow-up. Directions: I would like you to pretend that you are seeds and demonstrate what happens when a seed germinates and starts to grow. Make sure to explain each stage as you demonstrate it. Be sure to begin your responses with "When a seed germinates, it . . ."

Complete Remainder of the Lesson Later in the Day

The Life Cycle of a Plant

3B

Extensions

***15** minutes*

Sayings and Phrases: Great Oaks from Little Acorns Grow

Proverbs are short, traditional sayings that have been passed along orally from generation to generation. These sayings usually express general truths based on experiences and observations of everyday life. Although some proverbs do have literal meanings—that is, they mean exactly what they say—many proverbs have a richer meaning beyond the literal level. It is important to help students understand the difference between the literal meanings of the words and their implied or figurative meanings.

Read students the saying "great oaks from little acorns grow." This saying means that just as a small acorn can grow into a towering oak tree, something that starts out small or not really important can turn out big or really important.

Explain that this saying is often used to describe people who start from very simple beginnings and then, later in life, become very important. Share with students that Abraham Lincoln was born in a log cabin and read books by the light of a fire. His family was very poor, but he became one of the greatest presidents of the United States! When talking about his life, it is a good time to use the saying, "great oaks from little acorns grow."

Ask students to share or give examples of other individuals who grew to be very important and made a difference. Prompt students, if necessary, by reminding them of various individuals whom they have learned about in read-alouds from other domains.

To reinforce the concept of the life cycle, have students think of other plants and trees to invent new sayings. For example, say "Tall pines from small pine seeds grow" or "Juicy peaches from small pits grow."

Syntactic Awareness Activity

Expanding Sentences

Directions: I will show you a picture. Then I will ask one question at a time. Each time a question is answered, we will add it to our sentence to make our sentence expand.

Note: There may be variations in the sentences created by your class. Allow for these variations and restate students' sentences so that they are grammatical.

1. [Show Image Card 19: Tree with roots.] What do you see in this picture? (a tree)

   I see a tree.

   It is a tree.

2. Is the tree tall or short? (tall)

   I see a tall tree.

   It is a tall tree.

3. What is on the tree? (leaves)

   I see a tall tree with leaves.

   It is a tall tree with leaves.

   The tall tree has leaves.

4. What color are the leaves on the tree? (green)

   I see a tall tree with green leaves.

   It is a tall tree with green leaves.

   The tall tree has green leaves.

Vocabulary Instructional Activity

Word Work: Cycle

1. In the read-aloud you heard, "Like all living things, plants live according to a life *cycle*. A life *cycle* includes the stages and changes that happen in living things."
2. Say the word *cycle* with me.
3. A cycle is a repeated series of events, or things that happen over and over again in a particular order.
4. The life cycle of a chicken begins when it is an egg.
5. What other living things can you describe the life cycles of? Try to use the word *cycle* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "The life cycle of a _____ begins when . . ."]
6. What's the word we've been talking about?

Use a *Drawing* activity for follow-up. Directions: Work with your neighbor to draw the life cycle of a plant or animal. Be sure to begin your explanation with "My drawing shows the life cycle of a _____."

The Gigantic Turnip

4

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Identify the parts of specific plants that are eaten by people
- ✓ Explain that seeds are the beginning of new turnip plants
- ✓ Explain the basic life cycle of a turnip plant

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ Recall facts from "The Gigantic Turnip" and accurately answer questions such as *who, what, where, when* (RL.K.1)
- ✓ Interpret information to answer questions and express opinions about "The Gigantic Turnip," including answering *why* questions that require recognizing cause/effect relationships (RL.K.1)
- ✓ Sequence four pictures illustrating events in "The Gigantic Turnip" (RL.K.2)
- ✓ With prompting and support, use narrative language to describe characters and events in "The Gigantic Turnip" (RL.K.3)
- ✓ Define and use new words, such as *gigantic,* from the read-aloud and the discussion about "The Gigantic Turnip" (RL.K.4)
- ✓ Listen to a variety of texts, including fictional stories such as "The Gigantic Turnip" (RL.K.5)

- ✓ Describe an image of a turnip accompanying "The Gigantic Turnip," using the image to check and support comprehension of the read-aloud (RL.K.7)
- ✓ Actively engage in fiction read-alouds (RL.K.10)
- ✓ Prior to listening to "The Gigantic Turnip," identify orally what they know about gardens
- ✓ While listening to "The Gigantic Turnip," orally predict what will happen in the read-aloud based on text heard thus far, and then compare the actual outcome to the prediction

Core Vocabulary

budge, *v.* To move a little
Example: Tisha and I tried very hard to push the big rock out of the way, but it would not budge.
Variation(s): budges, budged, budging

gigantic, *adj.* Very large
Example: By studying the bones of dinosaurs, scientists know that some were small and others were gigantic.
Variation(s): none

stew, *n.* A soup, usually with meat and vegetables, cooked a long time
Example: I am helping my mom cut vegetables for the beef stew she is making for dinner.
Variation(s): stews

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Do We Know?**	a real turnip with stems and leaves, if available	10
	Purpose for Listening		
Presenting the Read-Aloud	**The Gigantic Turnip**		10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Gigantic		5
	Complete Remainder of the Lesson Later in the Day		
Extensions	**A Turnip's Life Cycle**	Instructional Master 4B-1; drawing paper, drawing tools, scissors, glue	15

The Gigantic Turnip

4A

Introducing the Read-Aloud

***10** minutes*

What Do We Know?

Show image 4A-1: Turnip

Tell students they are about to hear a story called "The Gigantic Turnip." Explain that a turnip is a plant that some people grow in their gardens, and show them a real turnip (if available). Ask students what they already know about gardens. What are some other plants that people grow in gardens? Why might people plant gardens?

Explain that one reason people have gardens is to grow food, such as turnips, to eat. Tell students that some people like to eat the turnip leaves, or greens, that grow above ground. Tell students that another part of the turnip that people like to eat grows underground and is actually the root of the plant. When a farmer wants to harvest a turnip, he has to dig it up or pull the root out of the ground. Tell students that this story is about a very big turnip.

Purpose for Listening

Tell students to listen carefully to find out who helps the farmer pull the turnip out of the ground.

Presenting the Read-Aloud — **10** *minutes*

The Gigantic Turnip

➡ **Show image 4A-2: Farmer planting a turnip seed**

Once upon a time there was an old man who planted vegetable seeds every year, to grow vegetables for himself and his wife. One spring day, he planted turnip seeds in a field just over the hill from his house. He let the sun shine on them and the rain water them, and when he thought they should be ready to eat, he went to have a look. As he came up over the hill, to his surprise he saw a strange bush growing in the middle of the field. When he drew nearer, he saw that it was not a bush, but the top of a **gigantic** turnip! [1]

1 *Gigantic* means very large. What part of the turnip plant was the farmer looking at?

"I've never seen a turnip as big as this one!" he said to himself. "I must show it to my wife."

➡ **Show image 4A-3: Farmer pulling turnip** [2]

So he took hold of the turnip top, and with a great grunt, he pulled and pulled and pulled, but the turnip would not **budge.** [3] So the old man shouted for his wife to come and help.

2 [Point to the top of the turnip.]

3 When something will not budge, that means it will not move.

"All right," said the old woman. "I'm coming."

➡ **Show image 4A-4: Farmer and wife pulling turnip**

The old woman took hold of the old man, the old man took hold of the turnip, and they pulled and pulled. But they couldn't pull the turnip out of the ground. So the old woman called to their granddaughter.

"All right," said the granddaughter. "I'm coming."

The granddaughter took hold of the old woman, the old woman took hold of the old man, the old man took hold of the turnip, and they pulled and pulled, but they couldn't pull the turnip out. So the granddaughter called the grandson over.

"All right," said the grandson. "I'm coming."

Show image 4A-5: Farmer, wife, granddaughter, and grandson pulling turnip

The grandson took hold of the granddaughter, the granddaughter took hold of the old woman, the old woman took hold of the old man, the old man took hold of the turnip, and they pulled and pulled, but they couldn't pull the turnip out. So the grandson called the dog over. [4]

4 Why do you think the grandson called the dog over?

The dog barked four times. If it could have spoken, it would have said, "All right. I'm coming."

The dog took hold of the grandson, the grandson took hold of the granddaughter, the granddaughter took hold of the old woman, the old woman took hold of the old man, the old man took hold of the turnip, and they pulled and pulled, but they couldn't pull the turnip out.

So the dog called the cat over.

Show image 4A-6: Farmer, wife, granddaughter, grandson, dog, and cat pulling turnip

The cat meowed loudly. If it could have spoken, it would have said, "All right. I'm coming."

The cat took hold of the dog, the dog took hold of the grandson, the grandson took hold of the granddaughter, the granddaughter took hold of the old woman, the old woman took hold of the old man, the old man took hold of the turnip, and they pulled and pulled, but they couldn't pull the turnip out. So the cat called the mouse over.

The mouse squeaked. If it could have spoken, it would have said, "All right. I'm coming." [5]

5 Do you think they will be able to pull the turnip out with the mouse's help?

The mouse took hold of the cat, the cat took hold of the dog, the dog took hold of the grandson, the grandson took hold of the granddaughter, the granddaughter took hold of the old woman, the old woman took hold of the old man, the old man took hold of the turnip, and they pulled and pulled.

Show image 4A-7: Whole group tumbling to the ground

Finally, the turnip popped out, sending everybody tumbling along the ground. [6]

6 What do you think the farmer and his family will do with the turnip?

That evening, the old woman peeled the turnip, sliced it up, and cooked a delicious turnip **stew.** [7]

7 A stew is a type of soup.

Show image 4A-8: Turnip stew

She invited the grandson, the granddaughter, the dog, the cat, and the mouse to eat the stew with them. She gave the mouse an extra helping, because he had shown that sometimes a little bit of help can make a big difference. [8]

8 What does "a little bit of help can make a big difference" mean?

Discussing the Read-Aloud ***15*** *minutes*

Comprehension Questions **10** *minutes*

If students have difficulty responding to questions, reread pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding students' responses using richer and more complex language. Ask students to answer in complete sentences by having them restate the question in their responses.

1. *Literal* Who are the characters in this story? (The characters in this story are the old man, the old woman, the granddaughter, the grandson, the dog, the cat, and the mouse.)
2. *Literal* What does the old man plant? (The old man plants turnip seeds.)
3. *Literal* What grows out of the turnip seed? (A turnip grows from the turnip seed.)
4. *Inferential* Why does the old man want to plant a turnip? (The old man wants to plant a turnip so he and his wife can eat it.)
5. *Inferential* Why does the old man need so much help pulling the turnip out of the ground? (The old man needs help because the turnip is gigantic and too large for him to pull out alone.)

6. *Literal* Are all turnips as large as the turnip in the story? (No, all turnips are not as large as the turnip in the story.)

7. *Inferential* Why does the mouse get an extra serving of turnip stew? (It was with his help that they were finally able to pull the turnip out of the ground. "A little help can make a big difference.")

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will have several of you share what you discussed with your partner.

8. *Evaluative* *Think Pair Share:* Do you think a turnip plant could really grow as large as the one in the story? Why or why not? What would a plant that large need? (Answers may vary.)

9. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Gigantic

5 *minutes*

1. In the read-aloud you heard, "When [the farmer] drew nearer, he saw that it was not a bush, but the top of a *gigantic* turnip!"

2. Say the word *gigantic* with me.

3. When someone says something is gigantic, it means that thing is very, very large.

4. That house is gigantic—it has twenty bedrooms!

5. Tell about something you have seen that is gigantic. Try to use the word *gigantic* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "I saw a gigantic_____."]

6. What's the word we've been talking about?

Use a *Making Choices* activity for follow-up. Directions: I am going to name some things. If the thing I name is gigantic, say, "That is gigantic!" If the thing I name is not gigantic, say, "That is not gigantic." Remember to answer in complete sentences.

1. a mouse the size of your thumb (A mouse the size of your thumb is not gigantic.)
2. a mouse the size of a shoebox (A mouse the size of a shoebox is gigantic!)
3. a person the size of your hand (A person the size of your hand is not gigantic.)
4. a pizza as big as a truck (A pizza as big as a truck is gigantic!)
5. a book the size of a door (A book the size of a door is gigantic!)

Complete Remainder of the Lesson Later in the Day

The Gigantic Turnip

4B

Extensions

***15** minutes*

⑩ A Turnip's Life Cycle (Instructional Master 4B-1)

Have students color the four images. Next, have them cut out each of the images of the turnip and put them in the correct order of the life cycle of the turnip. Students should then glue the pictures in the correct sequence onto a separate sheet of paper.

Above and Beyond: Have two or three students describe the life cycle of a turnip plant, using their pictures as a guide.

Pausing Point

PP

Note to Teacher

You should pause here and spend one day reviewing, reinforcing, or extending the material taught thus far.

You may have students do any combination of the activities listed below, but it is highly recommended that you use the Mid-Domain Student Performance Task Assessment to assess students' knowledge of plants, their parts, and their life cycles. The other activities may be done in any order. You may also choose to do an activity with the whole class or with a small group of students who would benefit from the particular activity.

Core Content Objectives Up to This Pausing Point

Students will:

- ✓ Explain that different kinds of plants grow in different environments
- ✓ Explain that plants are living things
- ✓ Describe what plants need to live and grow: food, water, air, and light
- ✓ Identify the root, stem, leaf, flower, and seed of a plant
- ✓ Explain that roots anchor the plant and take in water and nutrients
- ✓ Explain that stems support the plant and carry water and nutrients to the various parts of the plant
- ✓ Explain that the plant makes its food in its leaves
- ✓ Explain that seeds are the beginnings of new plants
- ✓ Explain the basic life cycle of plants
- ✓ Identify the parts of specific plants that are eaten by people

Student Performance Task Assessment

⑩ Plant Parts (Instructional Master PP-1)

Using Instructional Master PP-1, have students add to the drawing of the plant stem. Check to ensure they include roots, leaves, and flowers. Walk around and talk with students about each plant part as they complete the worksheet.

Activities

Image Review

Show the images from any read-aloud again, and have students retell the read-aloud using the images.

Image Card Review

Materials: Image Cards 15–19

In your hand, hold Image Cards 15–19 fanned out like a deck of cards. Ask a student to choose a card but to not show it to anyone else in the class. The student must then perform an action or give a clue about the picture s/he is holding. For example, for the seeds, a student may give the clue, "These are what plants grow from." The rest of the class will guess what is being described. Proceed to another card when the correct answer has been given.

Plant Parts Review

Materials: Various plants; drawing paper, drawing tools

Bring in different plants and ask students to identify the parts. After talking about plants, have students design and illustrate their own plant on a piece of paper, instructing them to include all parts of a plant (root, stem, leaf, etc.). Instruct students to share their drawings and identify the parts of their plant while sharing. Their classmates may also want to guess where the parts of that particular plant are located on the drawing.

Above and Beyond: Humans vs. Plants

Compare and contrast human beings and plants. What do we need to keep our bodies healthy that plants also need to stay healthy? Record student answers on a Venn diagram.

"See-Through" Planter

Using a sealed package of bean seeds and paper towels, create a "see-through" planter. Wet the paper towels and "plant" beans in them. Place the paper towels and bean seeds in sealed, clear, plastic bags. Observe the roots as they form during the next few days.

Class Book: Plants

Materials: Drawing paper, drawing tools

Tell the class or a group of students that they are going to make a class book to help them remember what they have learned thus far in this domain. Have students brainstorm important information about plants, plant parts, and the life cycle of plants. Have each student choose one idea to draw a picture of and then have him or her write a caption for the picture. Bind the pages to make a book to put in the class library for students to read again and again. You may choose to add more pages upon completion of the entire domain before binding the book.

Domain-Related Trade Book or Student Choice

Materials: Trade book

Read an additional trade book to review a particular concept; refer to the books listed in the Introduction. You may also choose to have students select a read-aloud to be heard again.

Nature Walk

Note: This activity requires additional adult support. If you are not able to take your students outside, you may wish to bring some different plants into the classroom for students to observe.

Go on a nature walk to observe plants. Divide the class into three groups. The first group should take note of the specific places plants live. The second group should take note of the different

sizes of the plants. (You may wish to give these students a nonstandard unit of measurement, like Unifix cubes, to help them differentiate among the sizes of the plants.) The third group should take note of the different colors of the plants.

Back in the classroom, record students' observations on a chart with three columns, one for each group (places, sizes, colors).

Explain to students that you are going to write down what they say, but that they are not expected to be able to read what you write because they are still learning all the rules for decoding. Emphasize that you are writing what they say so that you don't forget, and also tell them that you will read the words to them.

Plant Dramatization

Have students crouch down and pretend that they are a seed. Have students use their bodies to stretch upward and "grow" into a plant. Make sure that students talk about what they are doing as they are doing it. Encourage students to use key words like *seed, seedling, roots, flowers, leaves,* and *stems.* Ensure that as students become full-grown plants, they use their body parts to identify each part of the plant.

Plant Experiment

Materials: Four packets of seeds; four containers; soil; water; sunlight

Plant seeds in four different containers. With the first group of seeds, provide no water or sun. With the second group of seeds, provide water but no sunlight. With the third group of seeds, provide sunlight, but no water. With the fourth group of seeds, provide water and sun. Be sure to explain to students what you are doing.

Have students make predictions about which of the seeds will sprout and grow the best. Observe each of the containers every couple of days. Discuss with your class the changes that have occurred, if any. After a week or two, revisit the predictions and discuss with students whether their predictions were correct, and why or why not.

Note: If students completed this experiment at home with their families, ask them to share the results.

Polly the Honeybee's Flower Tour

5

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Identify the petals on a flower
- ✓ Describe how bees collect nectar and pollen
- ✓ Describe how bees make and use honey
- ✓ Describe the important role bees play in plant pollination

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ Describe the connection between plant parts and their functions (RI.K.3)
- ✓ Define and use new words, such as *pollination,* from the read-aloud and the discussion about "Polly the Honeybee's Flower Tour" (RI.K.4)
- ✓ Describe an image of Polly and a flower to identify the flower's petals in "Polly the Honeybee's Flower Tour," using the image to check and support comprehension of the read-aloud (RI.K.7)
- ✓ Actively engage in the nonfiction/informational read-aloud "Polly the Honeybee's Flower Tour" (RI.K.10)
- ✓ Listen to a variety of texts, including informational text such as "Polly the Honeybee's Flower Tour"

✓ Prior to listening to "Polly the Honeybee's Flower Tour," identify orally what they know about flowers

Core Vocabulary

honey, *n.* A sweet, sticky food made by bees from the nectar of flowers
Example: Elana often puts honey in her tea to make it taste sweeter.
Variation(s): none

nectar, *n.* A sweet liquid found in flowers that bees and some birds collect
Example: The bee collected the nectar from the lilac flower.
Variation(s): nectars

petals, *n.* The colored, outer parts of a flower that are not usually green
Example: Some roses have red petals.
Variation(s): petal

pollen, *n.* A fine, usually yellowish powder found in the center of flowers
Example: Bees keep pollen in special pouches on their legs.
Variation(s): none

pollination, *n.* When pollen from one flower lands on another flower and the second flower makes seeds
Example: Bees help with pollination by carrying pollen from one flower to another.
Variation(s): none

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Have We Already Learned?**	different kinds of flowers	10
	Purpose for Listening		
Presenting the Read-Aloud	**Polly the Honeybee's Flower Tour**		10
Discussing the Read-Aloud	**Comprehension Questions**	Image Card 1	10
	Word Work: Pollination		5
	Complete Remainder of the Lesson Later in the Day		
Extensions	**Pollination Simulation**	scraps of paper, cotton balls, or other small objects [This exercise requires advance preparation.]	15

Polly the Honeybee's Flower Tour

5A

Introducing the Read-Aloud — *10 minutes*

What Have We Already Learned?

Remind students that plants have many different parts. Review with students the names of the important parts of a plant (roots, stems, branches, leaves, flowers, and seeds). Explain that today the students are going to learn more about flowers. If possible, show students examples of different kinds of flowers, and help them name each kind.

Tell students that many animals like flowers, just like people do. Today they will get a chance to listen to a special guest, Polly the Honeybee. Polly loves flowers! Tell students that today they will hear about how Polly and her honeybee friends help flowers.

Purpose for Listening

Tell students to listen carefully to learn about how Polly and her honeybee friends help flowers.

Presenting the Read-Aloud — **10** *minutes*

Polly the Honeybee's Flower Tour

Show image 5A-1: Polly in meadow

Hello, my name is Polly and I'm a honeybee. I live in a beehive in a meadow not too far from here.[1] Your teacher asked me to come here today to tell you more about flowers, my favorite part of plants. As you have learned, flowers contain seeds and seeds can grow into new plants.

1 A meadow is a flat area of land that is usually covered with grass and flowers.

I am delighted to come and tell you about flowers, because flowers are one of my favorite things in the whole world. The meadow near my beehive is full of all different kinds of flowers that come in many different colors.

Show image 5A-2: Polly and yellow flower

Earlier today, I visited a particularly delicious yellow flower. Come along, and I'll show it to you.[2]

2 Why might Polly describe a flower as delicious?

Here's the flower I was telling you about. Do you see this ring of bright yellow parts around the flower? Those are called **petals.**[3] The petals look like brightly colored leaves. The petals are the parts of the flower that grab my attention when I am out buzzing around. Once I see a pretty flower, my favorite thing to do is crawl inside the petals, into the center of the flower.

3 [Point to the petals in the picture.]

Show image 5A-3: Polly and interior of flower

What's it like to crawl inside a flower like this?[4] Imagine for a minute that you are crawling under the bright yellow blankets of a very comfortable bed. Bright yellow is all around you. Now imagine that you stay under the blankets drinking the world's tastiest drink through a straw. You are so happy that you wriggle around and get covered with a yellow powder that smells great and feels good against your skin. That's what it's like for me when I visit a flower.[5]

4 [Have students close their eyes and imagine what is described.]

5 How does Polly feel when she visits a flower?

As far as I'm concerned, the world's tastiest drink is called **nectar,** which is a sweet juice that plants make, and the yellow

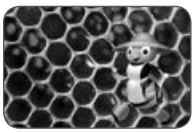
powder that I like to rub up against is called **pollen.**[6] I find both nectar and pollen inside flowers, and, frankly, I'm not sure which one I like better!

6 [Have students repeat the words *nectar* and *pollen* after you.]

I visit more than fifty flowers in one outing—sometimes as many as a hundred. I visit these flowers because we bees get our food from flowers. My job is to fly around and find nectar and pollen, which I gather up and take back to my hive. I have a special pouch inside my body that holds nectar, and there are special hairs on my back legs that form a little basket that I brush pollen into. When it's time to go back to my hive, sometimes my load of pollen and nectar weighs half as much as I do![7]

7 Do you think it is easy or difficult for a bee to take nectar and pollen to its hive? Why? [Pause for students' responses.]

When I get back to the hive, I turn the nectar and pollen over to the worker bees in the hive. They mix the pollen with a little bit of nectar and feed it to the baby bees. Then they fan the rest of the nectar with their wings until most of the water is gone. Nectar with most of the water gone turns into something that both bees and people love.



Show image 5A-4: Polly with honey in hive

Nectar with most of the water removed is called **honey.** Here's the honey in my hive. People use honey to sweeten their food, but we bees use honey for food. We keep it in a bunch of little cubbies that we call the honeycomb.

Show image 5A-5: Polly and cornfield

I visit flowers to get food, and that's reason enough for me. But it turns out that I am also doing something else besides finding food for myself and the other bees. I am helping the plants reproduce, or make more plants! In order to make a seed that can develop into a new plant, most plants need to mix pollen from their own flowers with pollen from other plants that are like them.[8] For example, a corn plant needs pollen from another corn plant to allow it to make seeds. When pollen from one corn plant lands on another corn plant, something called **pollination** takes place.[9] Pollination is really important because, if it doesn't happen, the

8 Remember, pollen is the yellow powder bees find inside flowers.

9 Pollination is when pollen from one flower mixes with the pollen of another flower so that the plant can make seeds.

plant won't be able to make any seeds. If there are no seeds, then there will be no new plants.

Show image 5A-6: Polly and pollen

How do plants get pollen from other plants? Plants can't walk around like human beings. And they can't flap their wings and fly like us bees, either. Luckily, the pollen grains themselves are very small. They can be blown from one plant to another by the wind. [10] So the wind helps pollinate plants so they can make new plants.

10 [Imitate the wind for your students by blowing something small and light off of a desk.]

But bees, like me, also help pollinate plants! How do my trips from one plant to another help pollinate plants? When I visit a flower and roll around inside, I pick up a lot of pollen. When I fly on to the next flower, I carry some pollen from other flowers with me, and some of it rubs off on the next flower I visit. That's why I am an excellent pollinator of plants, and that is why they call me Polly the Pollinator! [11]

11 Take a guess: Which do you think pollinates more plants—the wind or bees? [Pause for students' responses.]

I don't like to brag, but we bees are the most important pollinators in the world! Oh, sure, the wind helps pollinate, and some other insects also carry grains of pollen from one plant to another as they feed. Butterflies do it. So do moths, beetles, and wasps. Some birds, like hummingbirds, are also good pollinators. Bats are good pollinators, too! But no other creature pollinates as many flowers as bees do. [12]

12 So, do bees or the wind pollinate more plants?

Discussing the Read-Aloud **15** *minutes*

Comprehension Questions **10** *minutes*

If students have difficulty responding to questions, reread pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding students' responses using richer and more complex language. Ask students to answer in complete sentences by having them restate the question in their responses.

1. *Literal* [Show Image Card 1 (Polly and the flower) or image 5A-3.] Where are the petals in this picture? [Students should identify the petals on the flower.]
2. *Inferential* Why do bees visit flowers? (Bees visit flowers because they use nectar and pollen from flowers for food.)
3. *Literal* What is nectar? (Nectar is a sweet juice made by plants.)
4. *Literal* What is pollen? (Pollen is a yellow powder made by plants.)
5. *Inferential* How do bees collect nectar and pollen? (Bees store the nectar in a special pouch on their belly. Bees brush the pollen into a little basket made by the hairs on the back of their legs.)
6. *Inferential* How do bees help a plant pollinate, or mix its pollen with the pollen of another plant? (When bees visit another plant, some of the pollen bees carry from the first plant rubs off onto the second plant.)
7. *Inferential* Why is pollination important? (Pollination is important because plants need pollen from other plants in order to make seeds.)

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will have several of you share what you discussed with your partner.

8. *Evaluative* ***Think Pair Share:*** Why is pollination important? What would happen if pollination did not occur? (Sharing pollen is important so flowers can make seeds. If there are no new seeds, then no new plants can grow.)

9. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Pollination *5 minutes*

1. In the read-aloud you heard, "When pollen from one corn plant lands on another corn plant, something called *pollination* takes place."
2. Say the word *pollination* with me.
3. Pollination happens when the pollen from two flowers mix and seeds are made.
4. Honey bees help a lot with the pollination of plants.
5. What other ways could pollination happen? [Answers could include the wind, moths, beetles, wasps, butterflies, birds, and bats, among others.] Try to use the word *pollination* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase students' responses: "Pollination could also happen when _____ . . ."]
6. What's the word we've been talking about?

Use a *Discussion* activity for follow-up. Directions: What are the different ways that pollination can happen? [Answers could include the wind, moths, beetles, wasps, butterflies, birds, and bats, among others.] Be sure to begin your responses with "Pollination can happen when . . ."

Complete Remainder of the Lesson Later in the Day

Polly the Honeybee's Flower Tour

5B

Extensions

***15** minutes*

Pollination Simulation

Have several students stand in a circle and pretend to be flowers—holding scraps of paper or cotton balls representing pollen in their hands. Have other students pretend to be bees, drinking nectar and picking up a few scraps of paper or cotton balls from each flower. Then, those students should give a few scraps of paper or cotton balls to another "flower," simulating pollination. Repeat this exercise so that every student can be involved.

Above and Beyond: Have a student narrate the pollination simulation. This student should explain the process of pollination as other students act out pollination. The student should use words such as *pollen*, *nectar*, *flower*, and *pollination* in his or her explanation.

The Fruits of Polly's Labor 6

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Explain that seeds are the beginning of new plants
- ✓ Explain that some plants produce fruit to hold seeds
- ✓ Compare and contrast fruits and seeds of different plants
- ✓ Identify the parts of specific plants that are eaten by people

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ Define and use new words, such as *fruit,* from the read-aloud and the discussion about "The Fruits of Polly's Labor" (RI.K.4)
- ✓ Describe images of fruits and their seeds in "The Fruits of Polly's Labor," using the images to check and support comprehension of the read-aloud (RI.K.7)
- ✓ Actively engage in the nonfiction/informational read-aloud "The Fruits of Polly's Labor" (RI.K.10)
- ✓ Identify multiple meanings of *pit* and use them in appropriate contexts (L.K.4a)
- ✓ Listen to a variety of texts, including informational text such as "The Fruits of Polly's Labor"
- ✓ Discuss personal responses to favorite foods and fruits they eat and connect those to the fruits discussed in "The Fruits of Polly's Labor"

Core Vocabulary

blossoms, *n.* The flowers on a plant or tree
Example: The blossoms on the apple tree were beautiful and white.
Variation(s): blossom

core, *n.* The center or middle part of something
Example: Juan ate his apple all the way to the core.
Variation(s): cores

fruit, *n.* The part of the plant that contains the seed
Example: Apples are Abigail's favorite fruit.
Variation(s): fruits

produce, *v.* To make
Example: Apple trees produce apples.
Variation(s): produces, produced, producing

scrumptious, *adj.* Something that tastes very good
Example: Dinner last night was so scrumptious that I wish we could eat it every night.
Variation(s): none

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Have We Already Learned?**	different kinds of fruit	10
	Purpose for Listening		
Presenting the Read-Aloud	**The Fruits of Polly's Labor**	an apple, cut in half to show the seeds	10
Discussing the Read-Aloud	**Comprehension Questions**	Image Cards 2–4	10
	Word Work: Fruit		5
	Complete Remainder of the Lesson Later in the Day		
Extensions	**Fruits and Seeds**	Image Cards 5–12; various fruits; chart paper, chalkboard, or whiteboard [This exercise requires advance preparation.]	15
	Multiple Meaning Word Activity: Pit	Poster 3M: Pit	
Take-Home Material	**Family Letter**	Instructional Master 6B-1	*

The Fruits of Polly's Labor 6A

Introducing the Read-Aloud *10 minutes*

What Have We Already Learned?

Remind students that plants have different parts. Review with students the names of the important parts of plants (roots, stems, branches, leaves, flowers, and seeds). Explain that today students are going to learn more about another plant part, the fruit. If possible, show examples of different kinds of fruit, and help students name each kind.

Review with students that the pollination process helps plants make seeds. The fruit is the part of the plant that contains the seed.

Purpose for Listening

Tell students that the title of today's read-aloud is "The Fruits of Polly's Labor." Explain to students that the fruits of someone's labor are the results of, or what happened because of, someone's hard work. Tell students to listen carefully to find out more about the fruits of Polly's labor and this delicious plant part.

Presenting the Read-Aloud — **10** *minutes*

The Fruits of Polly's Labor

Buzz, buzz! It's Polly the Honeybee again. Last time I told you that I visit flowers to collect nectar and pollen for food. I also told you that I help to pollinate flowers by carrying pollen from one flower to another.[1] Today I want to show you some of the results of my hard work. You see, after I pollinate a flower, the plant begins to **produce** seeds.[2] Lots of plants also produce a special part to hold the seeds called the **fruit.**

1 What else carries pollen from one flower to another? [The wind, other insects, birds, and some animals can all carry pollen from one flower to another.]

2 To produce means to make.

Come along and I will show you some different kinds of fruit that I helped create.

Show image 6A-1: Apple tree

Here's an apple tree. Earlier this year, this tree put out **blossoms,** which is another word for flowers. Apple blossoms are full of delicious nectar, which makes me especially love to buzz over and roll around in those blossoms. The nectar was **scrumptious!**[3]

3 *Scrumptious* is another word for delicious.

But, look! It was good for the tree, too. Remember that when bees visit the flowers of plants, they carry pollen from one flower to another.[4] This apple tree is now full of apples because my honeybee friends and I did such a good job pollinating the blossoms. The apples are fruit, and inside each apple are seeds that can grow into new apple trees.[5]

4 Remember, this is called pollination.

5 [Show students an apple cut in half to display the seeds.]

The apples took weeks to grow. They were small at first, but then they got bigger and bigger. Now they are almost ripe. When the apples are ripe, they will drop off the tree so the seeds can fall to the ground and start growing into a new apple tree. Or, a person may come and pick the apple and eat it.

Show image 6A-2: Sliced apple[6]

6 This is an image of an apple that has been sliced, or cut, in half.

Here's an image of an apple that has been picked off the tree and sliced open. You can see the seeds. The seeds are the dark brown things in the center part, called the **core.** Some people like

to cut the seeds out of the apple before they eat it. Some people also cut off the peel on the outside of the apple.

Show image 6A-3: Cherry tree branch with cherries

Here's another tree I pollinated. It's called a cherry tree. Some time ago, this tree produced lovely pink blossoms, or flowers. Let me tell you—there's almost nothing more beautiful than a cherry tree in full bloom. My bee buddies and I spent a lot of time visiting this tree when the blossoms were out, and look what's happened since then! The flowers are all gone now, but that's okay because they did what they were supposed to do. Now the tree has begun to make seeds and fruit.

Show image 6A-4: Cherries

Have you ever bitten into a fresh cherry? If you have, your teeth have probably bumped into a cherry seed. Inside a cherry is a big hard thing called a cherry pit.[7] The seed of the cherry is actually inside the cherry pit. The tasty part of the cherry that people eat is the soft fruit around the pit. To people, that seems like the important part of a cherry. But, to the plant, the most important part is the seed that can grow into a new plant.[8]

7 Here, the word *pit* means the hard part in the middle of some fruits that contains the seed. The word *pit* can have other meanings. The word *pit* also means a hole.

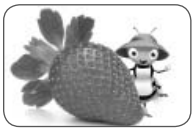
8 Why do you think the seed is the most important part of the plant?

Show image 6A-5: Strawberry plant

Now here's a different kind of plant. This is a strawberry plant. It put out flowers a while ago, and my honey-making pals and I visited those flowers as well.[9] Now you can see that the plant is making seeds and fruit. We must have pollinated it! The fruits on this plant are called strawberries. You saw how the seeds of the apple and the cherry tree grow inside the fruit. With the strawberry it's the other way around.[10]

9 Who are Polly's honey-making pals?

10 "The other way around" means the opposite. What is the opposite of inside the fruit? [Outside the fruit!]



Show image 6A-6: Strawberry

Look at this ripe strawberry. You can see the seeds all over the outside of the strawberry. The seeds on this strawberry are so small that people can eat them along with the fruit.

Show image 6A-7: Watermelon

Here's one last plant. It's a watermelon plant. This watermelon plant bloomed a few weeks ago. I visited its flowers and found the nectar to be quite delicious. I brought some back to my hive, where the worker bees made it into honey. But, look! The watermelon plant has been busy making something, too! This big green thing is the fruit of the watermelon plant. It's called a watermelon.

Show image 6A-8: Watermelon slice

The green part on the outside of the watermelon is called the rind. The seeds of the watermelon are on the inside of the rind, along with some red, juicy fruit that people like to eat. Here's a watermelon that's been sliced open. Can you see the black and white seeds inside? People spit out the seeds when they are eating the red, squishy part of the watermelon.

Well, that about concludes my little tour. I'm very proud of the pollinating work I did this year, and hope you will think of me as you are munching on the fruits of my labor! [11]

11 Delicious fruit is truly the result of Polly's hard work carrying pollen from flower to flower!

Discussing the Read-Aloud **15** *minutes*

Comprehension Questions **10** *minutes*

1. *Literal* What do we call the special part of a plant that holds seeds? (The fruit is the special part of a plant that holds seeds.)
2. *Literal* What is another word for *blossom*? (Another word for blossom is *flower*.)

3. *Literal* What are some of the fruits that Polly mentioned? (Some of the fruits that Polly mentioned include apples, cherries, strawberries, and watermelons.) Do people eat these fruits? (Yes, people eat these fruits.) Can you describe the seeds of each of these fruits? (The seeds of apples are small and dark brown inside the core. The seeds of cherries are hard, light-brown pits inside the cherry. The seeds of strawberries are teeny-tiny seeds on the outside. The seeds of watermelons are black and sometimes white and are inside the watermelon.)

4. *Inferential* Why are the seeds important? (The seeds are important because they are the beginning of new plants.)

5. *Evaluative* [Show Image Cards 3 (apple/apple seeds) and 4 (cherry/cherry pits).] How are cherries and their seeds the same as or different from apples and their seeds? (Cherry seeds are inside cherry pits, while apple seeds are in the center, or the core, of the apple. Both cherries and apples have seeds that are inside the fruit.)

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

6. *Evaluative* *Think Pair Share:* [Show Image Cards 2 (strawberry/strawberry seeds) and 3 (apple/apple seeds).] How are strawberry seeds different from apple seeds? (Strawberry seeds are smaller and lighter in color than apple seeds. Strawberry seeds are on the outside of the fruit, and apple seeds are on the inside of the fruit.)

7. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Fruit *5 minutes*

1. In the read-aloud you heard, "Lots of plants also produce a special part to hold the seeds called the *fruit*."
2. Say the word *fruit* with me.
3. Fruit is the part of the plant that holds the seeds.
4. My favorite fruit is the apple because it is delicious in pies.
5. Tell about your favorite fruit, and then say why it is your favorite fruit. Try to use the word *fruit* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "My favorite fruit is _____ because . . ."]
6. What's the word we've been talking about?

Use a *Making Choices* activity for follow-up. Directions: I am going to name some foods. If I name a fruit, say, "That is a fruit." If I name something that is not a fruit, say, "That is not a fruit." Remember to answer in complete sentences.

1. a banana (A banana is a fruit.)
2. pizza (Pizza is not a fruit.)
3. a lemon (A lemon is a fruit.)
4. a grape (A grape is a fruit.)
5. a hot dog (A hot dog is not a fruit.)

Complete Remainder of the Lesson Later in the Day

The Fruits of Polly's Labor 6B

Extensions — *15 minutes*

Fruits and Seeds

Play a guessing game using Image Cards 5–12 (various fruits and seeds). Have students try and guess which seed goes with which fruit. Record their answers on chart paper, a chalkboard, or whiteboard, and then show students which fruits go with which seeds. See how many they get right!

If possible, also bring in a few different kinds of fruit, and show students the seeds of the fruits.

Multiple Meaning Word Activity

Definition Detective: Pit

1. In the read-aloud you heard, "Inside a cherry is a big hard thing called a cherry *pit*."
2. With your neighbor, think of as many meanings for *pit* or ways you can use the word *pit*.
3. [Show Poster 3M: Pit.] Which picture on the poster shows how the word *pit* is used in the lesson? [Have students hold up one, two, or three fingers to indicate which image on the poster shows this meaning.]
4. *Pit* can also mean other things. *Pit* can mean a hole in the ground. [Have students hold up one, two, or three fingers to indicate which image on the poster shows this meaning.]
5. *Pit* can also mean to compete against each other, like in a race. [Have students hold up one, two, or three fingers to indicate which image on the poster shows this meaning.]
6. Now quiz your neighbor on the different meanings of *pit*. For example you could say, "I ate my peach all the way down to the pit." Your neighbor should hold up one finger to show you that you meant that kind of pit.

Take-Home Material

Family Letter

Send home Instructional Master 6B-1.

Johnny Appleseed

7

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Identify the parts of specific plants that are eaten by people
- ✓ Explain that seeds are the beginning of new plants
- ✓ Demonstrate familiarity with the tall tale "Johnny Appleseed"

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ Recall facts from "Johnny Appleseed" and accurately answer questions such as *who, what, where, when* (RL.K.1)
- ✓ Interpret information to answer questions and express opinions about "Johnny Appleseed," including answering *why* questions that require recognizing cause/effect relationships (RL.K.1)
- ✓ Sequence and describe seven pictures illustrating events in "Johnny Appleseed" (RL.K.2)
- ✓ With prompting and support, use narrative language to describe characters and events in "Johnny Appleseed" (RL.K.3)
- ✓ Define and use new words, such as *hero,* from the read-aloud and the discussion about "Johnny Appleseed" (RL.K.4)
- ✓ Listen to a variety of texts, including fictional stories such as the tall tale "Johnny Appleseed" (RL.K.5)
- ✓ Actively engage in fiction read-alouds (RL.K.10)

- ✓ Prior to listening to "Johnny Appleseed," identify orally what they know about seeds, flowers, and fruit from the previous read-alouds
- ✓ Use temporal language to express story events in sequential order

Core Vocabulary

eventually, *adv.* At some later time; in the end
Example: After weeks of practice, the boy eventually mastered his piano piece.
Variation(s): none

hero, *n.* A very brave person
Example: The fireman who saved the cat stuck in the tree was a hero.
Variation(s): heroes

orchards, *n.* Areas of land where fruit trees are grown
Example: They were picking apples in the orchards.
Variation(s): orchard

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Have We Already Learned?**		10
	Purpose for Listening		
Presenting the Read-Aloud	**Johnny Appleseed**	map or globe	10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Hero		5
	Complete Remainder of the Lesson Later in the Day		
Extensions	**Image Review**	chart paper, chalkboard, or whiteboard	15

Johnny Appleseed

7A

Introducing the Read-Aloud *10 minutes*

What Have We Already Learned?

Discuss with students what they remember about seeds, blossoms or flowers, and fruits. You may wish to prompt them with the following questions:

- The life cycle of a plant begins with what part of the plant? (seed)
- What is another word for blossom? (flower)
- What do we call the special plant part that holds seeds? (the fruit)
- What are some of the fruits that Polly talked about? (apples, cherries, strawberries, and watermelons)

Tell students they are about to hear a tall tale about a famous man named Johnny Appleseed, who lived long ago. A tall tale is a humorous story that stretches the truth. Ask students if they can guess, from his name, what Johnny Appleseed's favorite fruit was.

Purpose for Listening

Tell students to listen carefully to find out about the special things Johnny Appleseed did that make us remember him today.

Presenting the Read-Aloud — **10** *minutes*

Johnny Appleseed

Show image 7A-1: Johnny Appleseed

A long time ago in the rolling hills, there lived a man called Johnny Appleseed. Johnny Appleseed did not have a home, but instead wandered across the country from Massachusetts to Pennsylvania to Ohio to Indiana to Illinois.[1] Johnny wasn't born with the name Johnny Appleseed, but he got that name as he moved from one small town to the next. Listen to hear how Johnny got that name and why he became a **hero** to many people.[2]

1 *Wander* means to travel from place to place without knowing exactly where you are going next. [Trace the path Johnny Appleseed wandered on a map.]

2 A hero is a very brave person.

Show image 7A-2: Johnny Appleseed in the woods

Johnny was born in Massachusetts with the name John Chapman. When Johnny grew up, he decided to travel across the country. People could tell from Johnny's clothing that he was really very poor. His clothes were shabby, and he walked around barefoot—even in the winter.[3] His hat was so threadbare that you could see his hair beneath it. But despite his loneliness and poverty, Johnny had a brave heart.[4] He believed in the power of love. He loved all the people and all the animals he met along the way. In fact, Johnny often thought to himself that he loved all the people and all the animals in the world even though he had never met them.

3 When something is shabby, it is very old and torn. To walk around barefoot means to walk around wearing nothing on your feet.

4 Even though Johnny was usually alone and very poor, he was happy and brave.

Show image 7A-3: Johnny Appleseed playing violin

The people Johnny met along the way enjoyed his company. They would often invite him to share in a simple meal. Johnny would accept the invitation with a smile. After the meal he would take out the one possession he owned that was worth anything—his violin.[5] Then he would play for the people who had been kind to him. Sometimes his music was happy, and sometimes it was sad. People loved to hear Johnny play. Whether his music was happy or sad, they said it soothed their soul and made them feel happier.

5 [Point to the violin in the image.]

Show image 7A-4: Johnny Appleseed planting apple seeds

Johnny lived most of his adult life this way. He wandered from place to place and survived as best he could. You might think that Johnny left no mark upon the land, or no great memory of his existence once he had passed away.[6] After all, how could he have, as he was just a poor old man who wandered from place to place? But Johnny did indeed leave something of himself behind: something quite extraordinary[7] and something that would give him the name Johnny Appleseed.

You see, as he traveled across the country from town to town, and from farm to farm, he collected apple seeds. The apple seeds came from the apples kind strangers gave him to eat along the way. Johnny saved the seeds and planted them in the rich earth. He planted them here, there, and everywhere.[8]

6 This means that you might think Johnny was not an important person and that people might forget about him.

7 or amazing

8 What happens when you plant seeds?

Show image 7A-5: Apple trees dotting the landscape

When wintertime came, and the earth was frozen, he saved the seeds in his pockets as if they were precious diamonds. Then, when springtime came again, he planted the seeds as he moved from place to place. Johnny hoped that one day **orchards,** or places where fruit trees grow, would **eventually** grow up from the rich soil and feed all the people and animals he loved so much.[9]

Johnny did this until his tired old body could plant no more.

However, what Johnny hoped for came to pass. The apple seeds took root and young saplings began to grow. As the years went by, beautiful apple trees dotted the landscape. Apple orchards appeared like an oasis on the wide-open prairies.[10]

9 When something happens eventually, it does not happen quickly, but happens after some time has passed.

10 An oasis is a nice and comfortable place to be. The apple trees made the land look very good and pleasant to live in.

Show image 7A-6: Farmhouses dotting the landscape

Eventually, more and more people began to move West. Wagons full of hopeful people rolled across the land. Later, the railroad brought even more hopeful people. All of these people were searching for new places to make a home.

Incredibly, many people chose to build their homes near the apple trees and orchards that Johnny had planted. The sight of the

trees gave people hope of a fruitful and prosperous future.[11] Farm houses, and then towns, were built near the trees that Johnny had planted. He became a hero to all those who loved the apple trees as much as Johnny did, and they began to call John Chapman Johnny Appleseed.[12]

11 *Prosperous* means successful.

12 Why might people call Johnny a hero? How did planting apple seeds help people?

Show image 7A-7: Kids playing around an apple tree

As the years went by, people harvested the apples from the trees Johnny had planted, and stored them away for the winter months. They made pies, apple butter, and jam. Children played beneath the branches of the apple trees or sat in the cooling shade. These things happened because Johnny Appleseed had cared about all the people of the world, whether he knew them or not.

Discussing the Read-Aloud — *15 minutes*

Comprehension Questions — 10 *minutes*

1. *Literal* Who is the main character in this story? (Johnny Appleseed is the main character in this story.)
2. *Literal* Where did Johnny Appleseed get apple seeds for planting? (The apple seeds came from the apples kind people gave him to eat.)
3. *Inferential* How did John Chapman get the nickname Johnny Appleseed? (John Chapman was called Johnny Appleseed because he loved apple trees and planted apple seeds.)
4. *Literal* What was the beginning of the life cycle of the trees planted by Johnny Appleseed? (The beginning of the life cycle of the trees planted by Johnny Appleseed is the apple seed.)
5. *Inferential* Why did people decide to build their homes near the apple trees that Johnny had planted? (The people liked the way the apple trees looked. The apple trees gave them hope for a fruitful and prosperous future.)

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will have several of you share what you discussed with your partner.

6. *Evaluative* ***Think Pair Share:*** How did the apple seeds that Johnny planted help people? (Answers may vary.)

7. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Hero

***5** minutes*

1. In the read-aloud you heard, "Listen to hear how Johnny got [his] name and why he became a *hero* to many people."
2. Say the word *hero* with me.
3. A hero is a very brave person who has done important things.
4. A person may be considered a hero to a small group of people like your family, or to a larger group of people such as the people in our country or the people around the world. George Washington is considered a hero because he was very brave and became our first president.
5. Think about some of the people that you know or have heard about that have been very brave and done important things. Try to use the word *hero* when you tell about them. [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "My grandma is my hero because . . ."]
6. What's the word we've been talking about?

Use a *Sharing* activity for follow-up. Directions: Who do you consider a hero? You may choose people in the school or community, or people you have studied or read about in the classroom. Be sure to begin your responses with "I think _____ is a hero because . . ."

Complete Remainder of the Lesson Later in the Day

Johnny Appleseed

7B

Extensions

***15** minutes*

Image Review

Show images 7A-1 through 7A-7. Ask students to explain what is happening in each picture. Help them to create a continuous retelling of the narrative that follows the life and adventures of Johnny Appleseed. As students discuss each image, remember to repeat and expand upon each response using richer and more complex language, including, if possible, any read-aloud vocabulary. Also encourage the use of temporal vocabulary to help in introducing and sequencing events and ideas: *first, then, next, later, finally,* etc. You may want to record the students' story on chart paper, a chalkboard, or a whiteboard, so that you can reread their version to them.

Deciduous Trees

8

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Explain that deciduous trees are one type of plant that loses its leaves in the fall and becomes dormant in the winter
- ✓ Compare and contrast deciduous and evergreen trees
- ✓ Identify how deciduous trees are important to people and nature

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ With prompting and support, identify the main topic and retell key details from "Deciduous Trees" (RI.K.2)
- ✓ Define and use new words, such as *bare,* from the read-aloud and the discussion about "Deciduous Trees" (RI.K.4)
- ✓ Describe an image of a forest full of deciduous and evergreen trees in "Deciduous Trees," using the image to check and support comprehension of the read-aloud (RI.K.7)
- ✓ Actively engage in the nonfiction/informational read-aloud "Deciduous Trees" (RI.K.10)
- ✓ Color a picture of deciduous trees to show the colors of the seasons: spring, summer, fall, and winter (W.K.2)
- ✓ Create a drawing with sufficient detail of deciduous trees in spring, summer, fall, and winter (SL.K.5)

- ✓ Listen to a variety of texts, including informational text such as "Deciduous Trees"
- ✓ Prior to listening to "Deciduous Trees," identify orally that Johnny Appleseed loved apple trees because they provide food for many people
- ✓ Prior to listening to "Deciduous Trees," orally predict whether apple trees are deciduous or evergreen trees based on the title, pictures, and/or text heard thus far, and then compare the actual outcome to the prediction

Core Vocabulary

bare, *adj.* Without any covering
Example: He walked around the house in bare feet.
Variation(s): barer, barest

deciduous, *adj.* Losing leaves every year
Example: A deciduous tree starts losing its leaves in autumn.
Variation(s): none

dormant, *adj.* Not active; asleep
Example: The tree was dormant during the long winter.
Variation(s): none

habitat, *n.* A place where an animal or plant lives that has food, water, and shelter
Example: A plant that needs a lot of water lives in a habitat where there is a lot of rain.
Variation(s): habitats

sheds, *v.* Drops, loses, or separates from something
Example: Our dog sheds hair from his coat wherever he lies.
Variation(s): shed, shedding

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Do We Know?**		10
	Purpose for Listening		
Presenting the Read-Aloud	**Deciduous Trees**		10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Bare		5
	**Complete Remainder of the Lesson Later in the Day**		
Extensions	**Drawing the Read-Aloud**	Instructional Master 8B-1; drawing tools	15
	Vocabulary Instructional Activity: Year	drawing paper, drawing tools	

Deciduous Trees

8A

Introducing the Read-Aloud

***10** minutes*

What Do We Know?

Show image 8A-1: Winter forest

Ask students to describe what they see in the picture. Tell students that this is a picture of a forest. Forests are made up of many trees and other plants. Ask students to describe the trees in the picture. You may wish to prompt discussion with the following questions:

- What time of year is it?
- What living things do you see?
- How are these trees different from one another?

Explain that there are two types of trees in this picture: deciduous (dih-*SIJ*-oo-uhs) and evergreen. Point to each type of tree as you describe it. Tell students that the evergreen trees in this picture still have their leaves, even in the winter. A good way to remember these trees is by the word *ever* in their name. *Ever* means always. So an *ever*green tree is *always* green. Ask students if they can see the green in the picture.

Explain that deciduous trees do not keep their leaves in the winter. *Deciduous* means that the trees lose, or shed, their leaves in the fall and grow them again in the spring. Have one volunteer point to a deciduous tree and one volunteer point to an evergreen tree in the picture.

Purpose for Listening

Tell students that the main topic, or main idea, of today's lesson is deciduous trees. Tell them to listen carefully to find out what happens to deciduous trees throughout the year.

Presenting the Read-Aloud — **10** *minutes*

Deciduous Trees

Show image 8A-1: Winter forest

There are many different kinds of plants in the world. Although each is unique and special in its own way, most plants found on land are either **deciduous** or evergreen.[1] Remember, a deciduous plant is one that loses its leaves; an evergreen plant is one that does not lose its leaves and is always green.

1 [Point again to each type of tree in the picture.]

Show image 8A-2: Apple tree in winter

This is a picture of an apple tree in the winter. An apple tree sheds, or loses, its leaves every year, so it is a deciduous tree.[2] Deciduous is a tricky word to say because it has four parts. Let's say the word together.[3] The four parts of the word *deciduous* can actually help you remember that deciduous trees change in each of the four seasons. Seasons happen in a cycle, or circle, over and over again: spring, summer, fall, and winter. Let's start with spring, when new things start growing.

2 Here, the word *sheds* means loses. The word *sheds* can have other meanings. The word *sheds* also means small buildings used to store things.

3 [Clap out the four syllables of dih-*SIJ*-oo-uhs as you say them. Have students clap as they say the word with you.]

Show image 8A-3: Apple tree in spring

In the spring, the apple tree produces new leaves and apple blossoms, or flowers. Remember Polly the Honeybee? This is the time of year when she starts taking nectar from the inside of flowers. When she flies from flower to flower, she helps spread the pollen that is going to help the apples grow.[4]

4 Who remembers what this is called? [Pollination.]

Show image 8A-4: Apple tree in summer

In the summer, the apple tree grows many more green leaves. Apples begin to grow out of the blossoms.

Show image 8A-5: Apple tree in fall

In the fall, the apples of the apple tree are fully grown and ready to pick. The leaves on the apple tree start to change to red and yellow, and then they fall off onto the ground. Over time, the leaves on the ground will break down into tiny pieces and become nutrients in the soil.[5]

5 Who remembers what nutrients are?

Show image 8A-6: Apple tree in winter

Here is the apple tree again in winter. Remember, the seasons repeat in a cycle, or circle, over and over again, every year. This apple tree has **bare** branches again, meaning they are empty and without covering or leaves. That is because plants do not get as much sunlight during the winter as they do during the spring and summer. In the apple tree's **habitat,** the weather becomes cold, and there is less light from the sun.[6] With less light from the sun, the tree's leaves cannot make food through photosynthesis. Because the apple tree cannot make food during the winter, it must conserve, or save, its energy. It does this by becoming **dormant.**[7] When the apple tree goes dormant, it stops making leaves, blossoms, and apples, and its branches become bare.

6 A habitat is a place where an animal or plant lives.

7 To become dormant means to be asleep and not active. [Have students act like they are sleeping. Explain that when they sleep, they are not able to do anything.]

Show image 8A-7: Apple tree in the four seasons[8]

This image shows an apple tree in all four seasons. Remember, the apple tree is a deciduous tree because it loses its leaves every year. In the spring, an apple tree is nice to look at with its white blossoms. In the summer, you can climb its branches, sit under the shade of its large green leaves, and admire the apples as they grow out of the blossoms. In the fall, you can pick the apple tree's fruit and watch its leaves change colors before falling off. In the winter, you can play in the snow under its bare branches.

Although trees are special to us in many ways, it is important to remember that trees are also very important in nature. Trees—more than any other plants—help keep the air clean and safe to breathe, which you will learn more about later. They also provide food and homes for countless animals. So, next time you see a big deciduous tree, wrap your arms around it and give it a big hug, just to show you understand how important it is.

8 [Point to each season as you review.]

Discussing the Read-Aloud **15** *minutes*

Comprehension Questions **10** *minutes*

1. *Inferential* What is the main topic, or main idea, of today's read-aloud? (The main topic of today's read-aloud is deciduous plants.)
2. *Literal* What are deciduous plants? (Deciduous plants are plants that lose their leaves.)
3. *Literal* When do deciduous plants start to lose their leaves? (Deciduous plants start to lose their leaves in the fall.)
4. *Inferential* Why are deciduous plants bare in the winter? (Deciduous leaves are bare in the winter because they do not get enough sunlight to make food.)
5. *Inferential* Which kind of plant is the apple tree? (An apple tree is a deciduous plant.) How do you know? (Apple trees lose their leaves in the fall.)

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will have several of you share what you discussed with your partner.

6. *Evaluative* *Think Pair Share:* How can people enjoy apple trees during the different seasons? (Answers may vary, but should reflect an understanding of the different seasons of the apple tree.)
7. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Bare *5 minutes*

1. In the read-aloud you heard, "This apple tree has *bare* branches again, meaning that they are empty and without covering or leaves."
2. Say the word *bare* with me.
3. If something is bare, it is not covered.
4. We might talk about parts of our body being bare, such as going barefoot. Or we might talk about objects being bare, such as cupboards that don't have anything in them.
5. Can you think of some things that you might describe as being bare? Try to use the word *bare* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "The _____ is bare."]
6. What's the word we've been talking about?

Use a *Making Choices* activity for follow-up. Directions: I am going to read some sentences. If I say something that is bare, say, "_____ is bare." If I say something that is not bare, say, "_____ is not bare." Remember to answer in complete sentences.

1. The branches of the tree are covered with leaves. (The branches of the tree are not bare.)
2. My hands are cold because they are not covered. (My hands are bare.)
3. There is nothing on my desk. (My desk is bare.)
4. The ground is covered with acorns. (The ground is not bare.)
5. My grandfather has no hat on his head. (My grandfather's head is bare.)

Complete Remainder of the Lesson Later in the Day

Deciduous Trees

8B

Extensions — *15 minutes*

Drawing the Read-Aloud (Instructional Master 8B-1)

Ask students to think about how a deciduous apple tree looks in each season: spring, summer, fall, and winter. Ask students to think about how they can show this in a picture with the parts of the tree and with different colors.

Give each student a copy of Instructional Master 8B-1, and have them color the trees and backgrounds to show the seasons.

Vocabulary Instructional Activity

Word Work: Year

1. In the read-aloud you heard, "An apple tree sheds, or loses, its leaves every *year*, so it is a deciduous tree."
2. Say the word *year* with me.
3. A year is one way we measure time. There are four seasons in a year: spring, summer, fall, and winter.
4. On my birthday, I am one year older. This year, I will turn six years old.
5. What is something you do every year? Try to use the word *year* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "Every year, I . . ."]
6. What's the word we've been talking about?

Use a *Drawing* activity for follow-up. Directions: Draw a picture of what has happened to you so far this school year. Then talk to your partner about what you drew. Be sure to begin your responses with "So far this school year, I have . . ."

Evergreen Trees

9

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Explain that evergreen trees are one type of plant that stays green all year and does not become dormant in the winter
- ✓ Compare and contrast deciduous and evergreen trees

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ With prompting and support, identify the main topic and retell key details from "Evergreen Trees" (RI.K.2)
- ✓ Define and use new words, such as *evergreen,* from the read-aloud and the discussion about "Evergreen Trees" (RI.K.4)
- ✓ Describe an image of a forest of deciduous and evergreen trees in "Evergreen Trees," using the image to check and support comprehension of the read-aloud (RI.K.7)
- ✓ Orally compare and contrast deciduous trees (from the previous read-aloud) and evergreen trees (from this read-aloud) (RI.K.9)
- ✓ Actively engage in the nonfiction/informational read-aloud "Evergreen Trees" (RI.K.10)

- ✓ Draw an evergreen tree that includes cones and green needles and that reflects different seasons or weather, (e.g., snow-covered in winter) (W.K.2)
- ✓ Create a drawing with sufficient detail of an evergreen tree (SL.K.5)
- ✓ Listen to a variety of texts, including informational text such as "Evergreen Trees"
- ✓ Prior to listening to "Evergreen Trees," identify orally what they learned about deciduous trees in the previous read-aloud

Core Vocabulary

cones, *n.* The parts of some evergreen plants that contain the seeds
Example: Evan picked up the cones from under the evergreen tree.
Variation(s): cone

conifers, *n.* Evergreen trees that have needle-like leaves
Example: Evelyn tried not to prick her finger on the sharp needles of the conifers.
Variation(s): conifer

deciduous, *adj.* Losing leaves every year
Example: A deciduous tree starts losing its leaves in autumn.
Variation(s): none

evergreen, *adj.* Having green leaves all year round
Example: The evergreen tree still looked green in the winter.
Variation(s): none

needles, *n.* Very thin leaves
Example: The needles on the pine tree were prickly.
Variation(s): needle

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Have We Already Learned?**		10
	Purpose for Listening		
Presenting the Read-Aloud	**Evergreen Trees**		10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Deciduous and Evergreen		5
	Complete Remainder of the Lesson Later in the Day		
Extensions	**Drawing the Read-Aloud**	drawing paper and drawing tools	15

Evergreen Trees

9A

Introducing the Read-Aloud

***10** minutes*

What Have We Already Learned?

Show image 9A-1: Winter forest

Review with students what they have learned about deciduous trees. Prompt discussion with the image and the following questions:

- What are the two main types of trees? (evergreen and deciduous) How are they different? (Evergreen trees stay green all year; deciduous trees lose their leaves in the fall.)
- What happens to the leaves of deciduous trees in the fall or autumn? (The leaves of deciduous trees are shed in autumn.)
- Why do deciduous trees lose their leaves in the fall? (Deciduous trees lose their leaves because they become dormant and stop making leaves to conserve energy during the winter.)
- When do deciduous trees begin to grow new leaves? (Deciduous trees grow new leaves in the spring.)

Purpose for Listening

Tell students that the main topic, or main idea, of today's lesson is evergreen trees. Tell students to listen carefully to learn about evergreen trees and to find out how they are different from deciduous trees.

Presenting the Read-Aloud **10** *minutes*

Evergreen Trees

Show image 9A-2: Evergreen trees

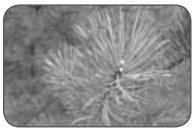
The trees in this picture are all **evergreen** trees. Evergreen trees are similar and different to the deciduous trees you learned about earlier.

We use the word *evergreen* to describe plants that have leaves and stay green year-round. Evergreens come in a variety of shapes and sizes, but they all have at least one obvious thing in common: they are always green.[1] Are there any evergreen trees like these near your home?

1 Do you remember what word is inside the word *evergreen* that helps us to know they are always green?

Show image 9A-3: Christmas tree

One type of evergreen tree is called a pine tree. Pine trees have a pleasant smell, which many people like to have in their homes during the winter months.



Show image 9A-4: Pine needles

The leaves of most evergreen trees are called **needles.**[2] This picture shows the needles of a pine tree. Evergreen trees, like deciduous trees, make food through photosynthesis, which occurs in these tiny, needle leaves.[3] Photosynthesis slows down during the winter in evergreen trees, but it does not stop altogether as it does in deciduous trees. Because the needles of an evergreen tree are much smaller than the leaves of a deciduous tree, it is easier for the evergreen tree to make enough food to keep most of its leaves alive and on the tree all year long.

2 Needles are very thin leaves.

3 Do you remember what photosynthesis is? [Photosynthesis is how plants use light to turn water and air into food.]

Show image 9A-5: Pine cones on ground

Wherever you find evergreen trees, you are also likely to find these things scattered around on the ground. If you look up while standing under an evergreen tree, you might see some of these growing on the tree's branches. They are called **cones**.[4]

4 Here, the word *cones* means the parts of some evergreen trees that contain the seeds. The word *cones* can have other meanings. The word *cones* also means shapes like ice-cream cones.

Most evergreen trees are called **conifers,** which is another word for trees that have needle-like leaves and make cones. The cones in this picture are called pine cones. Unlike deciduous trees, which have flowers and fruit, conifer trees do not have flowers and they do not grow fruit. Instead, conifer trees make cones, and seeds grow inside their cones. When a cone opens on the ground, the seeds fall out and are spread by the wind.[5] If a seed falls into the soil and has the right amount of food, water, air, and light, it might grow into a seedling and then a sapling.[6]

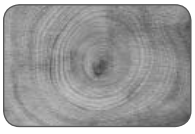
5 Why are the seeds important?

6 Do you remember what a sapling is? [A sapling is a baby tree.]

Show image 9A-6: Pine sapling

The first plants you will notice in this picture are ferns, which are not evergreens or trees. Ferns are short plants that grow in the woods. If you have sharp eyes, though, you can see another type of plant in this picture. There is a little pine sapling—a baby tree—pushing its way through the ferns.[7] If the sapling is tough—as many pine trees are—it will continue growing until it stands high above the ferns. It may grow big enough to produce its own pine cones one day. Remember that the seeds to make new pine trees are inside the cones.

7 [Point to the pine sapling in the picture.]



Show image 9A-7: Tree rings

Did you know that a tree adds a new layer of wood each year? This new layer forms what is called a growth ring. When you cut down a tree, you can see the growth rings. You can tell exactly how old a tree is by counting the rings.[8]

8 How old do you think this tree is?

This tree was a little more than fifty years old, which is actually pretty young for a tree. If it hadn't been cut down, this tree might have lived to have a hundred or more growth rings!

Show image 9A-8: Pine branch and oak branch

Remember, evergreen trees and deciduous trees are the two main types of trees found in the world. Next time you see a tree, try to figure out whether it is an evergreen or a deciduous tree. The leaves may give you your first clue.

Discussing the Read-Aloud **15** *minutes*

Comprehension Questions **10** *minutes*

1. *Inferential* What is the main topic, or main idea, of today's read-aloud? (The main topic of today's read-aloud is evergreen trees.)
2. *Literal* What is an evergreen tree? (An evergreen tree is a tree that stays green year-round.)
3. *Literal* What important part of a plant is found in cones? (Seeds are found in cones.)
4. *Inferential* What are the leaves of an evergreen called? (The leaves of an evergreen are called needles.) Why are the needles of an evergreen important? (The needles of an evergreen are important because that is where the plant's food is made during photosynthesis.)
5. *Inferential* How can you tell how old a tree is? (You can tell how old a tree is by counting the growth rings. Each ring equals one year.)

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your partner and discuss the question. Finally, I will have several of you share what you discussed with your partner.

6. *Evaluative* *Think Pair Share:* How are deciduous trees and evergreen trees alike? How are they different? (They both need the same things and have some of the same parts. Deciduous trees have broad leaves that all fall to the ground in the autumn, while evergreen trees have thin needles that do not all fall to the ground at the same time.)
7. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Deciduous and Evergreen *5 minutes*

1. In the read-aloud you heard, "*Evergreen* trees are similar and different to the *deciduous* trees you learned about earlier."
2. Say the word *deciduous* with me. Now, say the word *evergreen.*
3. If a plant is deciduous*,* it loses all of its leaves in the fall. If a plant is evergreen*,* it keeps some green leaves or needles all year long.
4. We can look at most trees and identify them as deciduous or evergreen.
5. Have you ever seen deciduous trees or evergreen trees? Try to use the words *deciduous* and/or *evergreen* when you tell about them and what they look like. [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "I saw a deciduous tree . . . and an evergreen tree . . ."]
6. What are the words we've been talking about?

Use a *Making Choices* activity for follow-up. Directions: I am going to read a sentence. If the sentence I read describes a deciduous tree, say, "The sentence describes a deciduous tree." If the sentence I read describes an evergreen tree, say, "The sentence describes an evergreen tree." Remember to answer in complete sentences.

1. The trees in the forest are beautiful in the autumn with their red and yellow leaves. (The sentence describes deciduous trees.)
2. The ground is covered with pine cones that have fallen from the tree. (The sentence describes an evergreen tree.)
3. In winter, the branches of the tree are bare. (The sentence describes a deciduous tree.)
4. The trees in our backyard stay green all year long. (The sentence describes evergreen trees.)
5. The tree makes its food in the thin leaves called needles. (The sentence describes an evergreen tree.)

Complete Remainder of the Lesson Later in the Day

Evergreen Trees

9B

Extensions

***15** minutes*

Drawing the Read-Aloud

Give each student a piece of paper, and have them draw an evergreen tree. Remind them to include cones and green needles. Remind them that although evergreen trees are always green, they can look different depending on the season or weather. Encourage students to draw a background to help show these differences. Remember to repeat and expand upon students' responses using richer and more complex language, including, if possible, any read-aloud vocabulary.

Plants and People

10

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Identify things that plants provide to people: oxygen, food, and important products

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ With prompting and support, describe the connection between the read-aloud on fruits and what parts of plants people eat, and the ways plants are important to people (RI.K.3)
- ✓ Define and use new words, such as *bouquet,* from the read-aloud and the discussion about "Plants and People" (RI.K.4)
- ✓ Describe an image of fruits and vegetables in "Plants and People," using the image to check and support comprehension of the read-aloud (RI.K.7)
- ✓ Actively engage in the nonfiction/informational read-aloud "Plants and People" (RI.K.10)
- ✓ Listen to a variety of texts, including informational text such as "Plants and People"
- ✓ Prior to listening to "Plants and People," identify orally what they learned about fruit and what parts of fruit people eat

Core Vocabulary

bouquet, *n.* A bunch of flowers that has been arranged and wrapped
Example: I gave my mom a bouquet of roses on Mother's Day.
Variation(s): bouquets

lumberjack, *n.* A person who cuts down trees; a logger
Example: The lumberjack carefully cut down the huge oak tree.
Variation(s): lumberjacks

medicines, *n.* Substances given to a sick person to help them feel better
Example: The doctor gave Javier two different medicines to help him feel better.
Variation(s): medicine

oxygen, *n.* A gas found in air and water
Example: We breathe in oxygen and breathe out carbon dioxide.
Variation(s): none

provide, *v.* To supply or give something
Example: Your teacher will provide the paper, but you must bring a pencil.
Variation(s): provides, provided, providing

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Have We Already Learned?**		10
	Purpose for Listening		
Presenting the Read-Aloud	**Plants and People**		10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Bouquet		5
	Complete Remainder of the Lesson Later in the Day		
Extensions	**Plant Parts We Use**	Instructional Master 10B-1	15

Plants and People

10A

Introducing the Read-Aloud — *10 minutes*

What Have We Already Learned?

Remind students that they have already learned several different ways that people make use of different parts of plants. Guide them as needed in remembering the different fruits and the parts of those fruits that people eat. Ask students to name a couple of the fruits that they have learned about. Remind students about the gigantic turnip they heard about, and review with them the parts of a turnip that people eat (both the tops, or greens, and the roots).

Tell students that in today's lesson, they will learn that plants provide two very important things for animals and humans to survive: oxygen and food. Have students take a deep breath. Tell students that when you breathe in, oxygen goes into your body. Just like we must eat everyday, we must also breathe oxygen in order to survive.

Purpose for Listening

Tell students that eating and breathing are only two of the many ways that people use plants. Tell students to listen carefully to find out how plants provide oxygen as well as some other ways people use plants.

Presenting the Read-Aloud — **10** *minutes*

Plants and People

➧ **Show image 10A-1: Woman eating lettuce**

Where would we be without plants? The truth is that life for animals, insects, and human beings would be impossible if it weren't for plants.

The most obvious reason plants are important is that they **provide** food.[1] People, including you, eat plants or parts of plants every day. What does the woman in this picture have in her mouth? It's lettuce! Of course, you don't see too many people chomping on lettuce in this way, but you will find lettuce in salads and on sandwiches. Lettuce is good for you. It is a healthy vegetable that comes from a plant.

1 *Provide* means to give or supply something.

➧ **Show image 10A-2: Fruits and vegetables collage**[2]

Just like fruit, all vegetables are parts of plants, including potatoes, beans, peas, carrots, peppers, cucumbers, and squash. Each comes from different plants—and from different parts of plants—but they all come from plants nonetheless.[3] Many fruits and vegetables are healthy and tasty, so you should try to eat some every day.

2 What fruits and vegetables do you see in this picture?

3 [Briefly review the different parts of the plant.]

➧ **Show image 10A-3: Corn**

This is a picture of an ear of corn and a cornfield. Believe it or not, corn comes from a special type of grass. Do you like to eat corn on the cob?

➧ **Show image 10A-4: Wheat and wheat products**

Have you eaten any bread lately? It is likely, then, that you have eaten wheat. Wheat also comes from a type of grass. Its seeds are ground up and used to make wheat flour, and wheat flour is used in many kinds of breads, cereals, and cakes.

Show image 10A-5: Rice

This is a picture of a bowl of rice and a rice paddy, or field. People all over the world eat rice. It is used to feed billions of people every day!

You have just learned about three important grains: corn, wheat, and rice. Grains are seeds that come from different types of grasses.

Show image 10A-6: Cotton crop

Plants and plant products can also be used to make fabric, or cloth. Fabrics are used to make clothing, blankets, and other everyday things. This picture shows cotton plants. Fluffy, white cotton is often dyed, or colored, to make colorful clothing and blankets.

Show image 10A-7: Flowers

When people are feeling sick or sad, it is nice to give them a **bouquet** of flowers.[4] Flowers can cheer people up and let them know they are loved. Have you ever received or given flowers?

4 A bouquet is a bunch of flowers arranged together.

Show image 10A-8: Rubber tree and tire

There are many things that you would not guess have anything at all to do with plants, such as the tires on a car, which are made of rubber. In fact, much of the rubber we use—for everything from tires to rubber bands to basketballs—comes from the sap of rubber trees.[5]

5 [Explain to students that the white liquid coming out of this rubber tree is sap, which is turned into rubber.]

Show image 10A-9: Sap of a maple tree[6]

Another type of sap we use comes from maple trees. This type of sap is clear and gives us something much better-tasting than rubber: maple syrup! In early spring, people drill small holes into the trunks of maple trees and insert spouts, which allow the sap to drip out into buckets or holding tanks. When the sap is boiled, it turns into maple syrup. Don't worry—the holes don't hurt the trees! They heal during the summer and fall, and people pick a different spot on the trunk to drill the next spring.

6 [Point to the different parts as you talk about them.]

Show image 10A-10: Using plants as medicines

Some plants and plant parts can be used to make **medicines** for curing diseases or healing wounds. Using plants to make medicine requires a great deal of knowledge. A person must know how to find the right kind of plant, and he or she must know exactly which part of the plant to use and how to use it. In some parts of the world, knowledge of medicinal plants has been passed down from generation to generation—from parents to their children—for thousands of years.

Show image 10A-11: Aloe vera plant

One very common medicinal plant is the aloe vera plant. Inside its thick green leaves is a clear gel, which many people use to help heal small cuts and to soothe sunburns. Some doctors and scientists think that eating or drinking parts of the aloe plant is good for your stomach, and can help prevent many diseases.

Show image 10A-12: Lumberjack

People use the wood from trees to build houses and to make many other things. This **lumberjack,** a person who cuts down trees, is using a powerful chain saw to cut down a great big pine.[7] After he chops this tree down, the lumberjack will saw off all the branches. The bare trunk will be loaded onto a truck and taken to a lumber mill, where it will be turned into boards.

7 Why do you think this lumberjack is wearing ear plugs?

Show image 10A-13: Uses for wood

People also use the wood from trees to make fires when it is cold outside. This person is splitting logs to burn in the fireplace. Wood is also used to make tool handles, instruments, and other objects. Baseball bats are often made of wood from the ash tree, one of the strongest trees in the forest. It is very important to plant a new tree for every old tree that is cut down, so that there will be plenty of trees for other people to use in the future.

Show image 10A-14: Child and trees

Here is another important thing to know about plants: they help keep the air clean and fresh. When plants make their own food, they release oxygen into the air.[8] When you breathe in, that same oxygen travels to your lungs. Oxygen keeps you alive; you need oxygen all day, every day.[9]

Did you have any idea how important plants are to people?

8 What is this process called? (Photosynthesis.)

9 Take a deep breath. You just breathed in oxygen.

Discussing the Read-Aloud — *15 minutes*

Comprehension Questions — *10 minutes*

1. *Literal* What are some foods that plants provide? (Plants provide corn, wheat, rice, vegetables, and maple syrup.)

Show image 10A-6: Cotton crop

2. *Literal* What can people make from cotton plants? (People can make clothes and blankets from cotton plants.)
3. *Literal* What kind of plants are car tires, basketballs, and rubber bands made from? (Car tires, basketballs, and rubber bands are made from rubber trees.)
4. *Literal* Many plants are used for medicine. Which plant is used for cuts and burns? (The aloe vera plant is used to heal cuts and burns.)
5. *Literal* What is lumber, or wood from trees, used for? (Lumber is used for building houses and making things, like baseball bats.)
6. *Inferential* How do plants help people breathe? (Plants help people breathe by providing oxygen.)

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will have several of you share what you discussed with your partner.

7. *Evaluative* ***Think Pair Share:*** Which of the ways that people use plants surprised you the most? Why? (Answers may vary.)

8. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Bouquet

5 *minutes*

1. In the read-aloud you heard, "When people are feeling sick or sad, it is nice to give them a *bouquet* of flowers."
2. Say the word *bouquet* with me.
3. A bouquet is a bunch of flowers, sometimes tied together with a string or placed in a vase.
4. Ava gave her mother a bouquet of flowers for her birthday.
5. Tell me who you would like to give a bouquet of flowers to and why. Try to use the word *bouquet* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "I would give a bouquet to _____, because . . . "]
6. What's the word we've been talking about?

Use a *Sharing* activity for follow-up. Directions: Share which favorite flowers you would use to make a bouquet, (e.g., roses, tulips, irises, daisies, etc.). What other kinds of decorations would you add to the bouquet (toys, balloons, etc.)? Whom would you give this bouquet to? Be sure to begin your responses with "I would use _____ to make a bouquet because . . ."

Complete Remainder of the Lesson Later in the Day

Plants and People

10B

Extensions

***15** minutes*

Plant Parts We Use (Instructional Master 10B-1)

With your help, have students match each item on the left with the plant that it comes from on the right. This instructional master is not intended to be used as an assessment; instead, it should be used for informational purposes and to allow for more discussion before the actual assessment. Remember to repeat and expand upon students' responses, using richer and more complex vocabulary, including, if possible, any read-aloud vocabulary.

- Above and Beyond: Have students complete this activity on their own.

George Washington Carver

11

☑ *Lesson Objectives*

Core Content Objectives

Students will:

- ✓ Describe the life and scientific achievements of George Washington Carver

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ Recall information from the read-aloud "Johnny Appleseed," particularly that he loved apple trees, to connect to information in this read-aloud, "George Washington Carver," about a botanist who loved plants (RI.K.3)
- ✓ Define and use new words, such as *crops,* from the read-aloud and the discussion about "George Washington Carver" (RI.K.4)
- ✓ Describe an illustration from "Johnny Appleseed" prior to listening to "George Washington Carver," using the illustration to check and support comprehension of the read-aloud (RI.K.7)
- ✓ Actively engage in the nonfiction/informational read-aloud "George Washington Carver" (RI.K.10)
- ✓ Explain the meaning of "great oaks from little acorns grow" and use in appropriate contexts (L.K.6)
- ✓ Listen to a variety of texts, including a biography such as "George Washington Carver"

- ✓ Prior to listening to "George Washington Carver," identify orally what they have learned about Johnny Appleseed
- ✓ Evaluate and select read-alouds or stories on the basis of personal choice for rereading

Core Vocabulary

botanist, *n.* Someone who studies plants
Example: The botanist studied the strange plants.
Variation(s): botanists

botany, *n.* The study of plants
Example: Jan wants to study botany when she grows up.
Variation(s): none

canvas, *n.* A piece of material on which one can paint
Example: The artist painted a rose on the canvas.
Variation(s): canvases

crops, *n.* Vegetables or plants that are grown on a farm for food
Example: The farmer planted three different crops: corn, soybeans, and wheat.
Variation(s): crop

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Have We Already Learned?**		10
	Purpose for Listening		
Presenting the Read-Aloud	**George Washington Carver**	map or globe	10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Crops		5
	Complete Remainder of the Lesson Later in the Day		
Extensions	**Sayings and Phrases: Great Oaks from Little Acorns Grow**		15
	Domain-Related Trade Book or Student Choice		

George Washington Carver

11A

Introducing the Read-Aloud

***10** minutes*

What Have We Already Learned?

Show image 11A-1: Johnny Appleseed

Have students identify the person in the illustration. Ask students what they remember about Johnny Appleseed. As students respond, repeat and expand upon each response using richer and more complex language, including, if possible, any read-aloud vocabulary. If a student's response includes inaccurate factual information, refer back to earlier read-alouds and/or illustrations to correct any misunderstandings.

Remind students that Johnny Appleseed became famous because he traveled throughout the United States, planting apple seeds wherever he could so that apple trees would grow everywhere.

Purpose for Listening

Explain to students that today they are going to learn about another person who became famous because of his love for plants. Tell students to listen carefully to find out what this person did because he loved plants and how he became famous.

Presenting the Read-Aloud **10** *minutes*

George Washington Carver

Show image 11A-2: George Washington Carver

Today you are going to hear about another man who, like Johnny Appleseed, became famous because of his love for plants.[1] He, too, lived many years ago, though not quite as long ago as Johnny Appleseed. His name was George Washington Carver. He became famous throughout the United States as a **botanist**—which is a scientist who studies plants. George first developed his interest in plants as a young boy.

1 Do you remember what Johnny Appleseed did that made him famous?

Show image 11A-3: Young George

As a child, George used his free time to explore the forests surrounding his home on a farm in Missouri.[2] He spent many hours roaming the woods discovering all sorts of wonderful things. George liked to collect things that caught his eye.

2 [Point to the state you live in, then point to Missouri on a map.]

Show image 11A-4: Young George planting a new plant in his garden

George was especially curious about the different kinds of plants that he noticed during his explorations. He wanted to study these plants further, but he knew that if he pulled them out of the ground and took them back to the cabin, they would die.[3] So when George found an interesting plant, he would carefully dig it up and remove it from the place it was growing, roots and all, so that he could plant it in a special garden close to the cabin.[4]

3 Why would the plants die? What do plants need to survive?

4 Here, the word *garden* means a plot of land where plants are grown. The word *garden* can have other meanings. The word *garden* also means what you do when you put living things in the soil so they can grow.

George moved plant after plant to this special garden, where he looked after each and every plant, watering and caring for them all to make sure that they continued to grow. As an adult, George later wrote, "I literally lived in the woods. I wanted to know every strange stone, flower, insect, bird, or beast. Day after day I spent time in the woods alone in order to collect my floral beauties and put them in my little garden I had hidden in the brush not far from the house . . ."[5]

5 What are floral beauties? What did George do with the floral beauties?

Show image 11A-5: Plant doctor

Fascinated by the plants in his garden, George spent hours tending, observing, and studying them. In time, he came to learn about the special needs of each plant—how much water each needed, whether it grew best in full sunlight or with some shade. George also took a special interest in caring for plants that were not growing well. He became so skillful at caring for these sick plants that people throughout the neighborhood began to call him the "plant doctor."

Show image 11A-6: George painting

George's passion for plants led him to develop another talent, that of an artist. Of course, his favorite subjects to paint were his beloved plants! Though he did not have a proper **canvas** or paints, he improvised with what he could find.[6] George made his first paints from different plant parts. He mashed bark, roots, and wild berries, and used them to paint on old boards or even flat rocks. George continued to paint throughout his entire life.

6 A canvas is something you paint on. When you improvise, you make or do something with whatever you have.

Show image 11A-7: Photo of George as an adult

George was truly a remarkable and talented person. He was an excellent student who learned quickly. He went on to study at college, eventually becoming an expert in **botany,** the study of plants. After he finished college, George became a professor at a famous university in Alabama.[7]

7 [Point to the state you live in, then point to Alabama on a map.]

Show image 11A-8: Collage of products

There, he spent the rest of his life continuing to study plants and experiment with ways to make them grow better. He discovered many ways to help farmers improve how they grew plants and **crops** on their farms.[8] George encouraged farmers to grow crops other than cotton—especially peanuts and sweet potatoes. He also found many ways to use peanuts in all different types of products like dyes, oils, and makeup. He even came up with a number of recipes for foods that used peanuts. George Washington Carver is especially remembered today for these discoveries.

8 Crops are plants that are grown in large numbers to be used by people.

Discussing the Read-Aloud **15** *minutes*

Comprehension Questions **10** *minutes*

1. *Literal* What is a botanist? (A botanist is a scientist who studies plants.)
2. *Literal* Who was the botanist you heard about in the read-aloud? (The botanist we heard about was George Washington Carver.)
3. *Inferential* How did George Washington Carver learn so much about plants? (He learned so much about plants because he took care of plants, made his own garden when he was a child, and studied botany in college.)
4. *Inferential* Why was George Washington Carver called the "Plant Doctor"? (George Washington Carver was called the "Plant Doctor" because he was very good at caring for sick plants.)
5. *Inferential* How did George Washington Carver make his paints? (George Washington Carver made his paints from bark, roots, and mashed berries, which are all parts of plants.)
6. *Inferential* How did George Washington Carver help farmers? (George Washington Carver helped farmers by discovering ways to help farmers improve how they grew crops and encouraging farmers to use other crops.) What two plants did he encourage farmers to plant? (He encouraged farmers to plant peanuts and sweet potatoes.)

[Please continue to model the Think Pair Share process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will have several of you share what you discussed with your partner.

7. *Evaluative* *Think Pair Share:* George Washington Carver was an extraordinary and special person in many ways. Of all the different things that George did or accomplished during his life, which one do you think was the most extraordinary? Why? (Answers may vary.)

8. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these remaining questions.]

Word Work: Crops *5 minutes*

1. In the read-aloud you heard, "[George Washington Carver] discovered many ways to help farmers improve how they grew plants and *crops* on their farms."
2. Say the word *crops* with me.
3. Crops are plants that are grown in large numbers for people to use.
4. The farmer grew wheat and corn crops for people to eat.
5. What other types of plants do you think could be grown as crops? Think about some of the plants that people eat. Try to use the word *crops* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase the students' responses: "_____ could be grown as crops."]
6. What's the word we've been talking about?

Use a *Sharing* activity for follow-up. Directions: Share what types of crops you would like to grow and why you would like to grow them. Be sure to begin your responses with "I would like to grow _____ as crops because . . ."

Complete Remainder of the Lesson Later in the Day

George Washington Carver

11B

Extensions — *15 minutes*

Sayings and Phrases: Great Oaks from Little Acorns Grow — *5 minutes*

Remind students of the saying, "great oaks from little acorns grow." Have students explain the meaning of the saying. If students have trouble, remind them that this saying means that just as a small acorn can grow into a towering oak tree, something that starts out small or not really important can become big or really important.

Ask students if they think George Washington Carver's life was an example of the saying, "great oaks from little acorns grow." Why or why not?

Domain-Related Trade Book or Student Choice

Domain-Related Trade Book

Refer to the list of recommended trade books in the Introduction at the front of this teacher's guide, and choose one to read aloud to the class. As you read, use the same strategies that you have been using when reading the read-aloud selections in this anthology—pause and ask occasional questions, rapidly clarify critical vocabulary within the context of the read-aloud, etc.

After you finish reading the trade book aloud, lead students in a discussion as to how the story or information in this book relates to the read-alouds they have heard in this domain.

Student Choice

Ask students which read-aloud they have heard recently that they would like to hear again. If necessary, reread the titles of recent read-alouds to refresh students' memories and/or show key illustrations from several read-alouds. You may also want to choose one yourself.

Reread the text that is selected. Feel free to pause at different places, and talk about vocabulary and information that you did not discuss previously during the read-aloud.

After the read-aloud, ask students if they noticed anything new or different during the second reading that they did not notice during the first reading. Also, ask them to try to express why they like this read-aloud. Remember to repeat and expand upon each response using richer and more complex language, including, if possible, any read-aloud vocabulary.

Domain Review

DR

Note to Teacher

You should spend one day reviewing and reinforcing the material in this domain. You may have students do any combination of the activities provided, in either whole-group or small-group settings.

Core Content Objectives Addressed in This Domain

Students will:

- ✓ Explain that different kinds of plants grow in different environments
- ✓ Explain that plants are living things
- ✓ Describe what plants need to live and grow: food, water, air, and light
- ✓ Identify the root, stem, branch, leaf, flower, fruit, and seed of a plant
- ✓ Explain that roots anchor the plant and take in water and nutrients
- ✓ Explain that stems support the plant and carry water and nutrients to the various parts of the plant
- ✓ Explain that the plant makes its food in its leaves
- ✓ Explain that seeds are the beginning of new plants
- ✓ Explain the basic life cycle of plants
- ✓ Explain that some plants produce fruit to hold seeds
- ✓ Compare and contrast the fruits and seeds of different plants
- ✓ Identify the parts of specific plants that are eaten by people
- ✓ Identify the petals on a flower
- ✓ Describe how bees collect nectar and pollen
- ✓ Describe how bees make and use honey
- ✓ Describe the important role bees play in plant pollination
- ✓ Demonstrate familiarity with the tall tale “Johnny Appleseed”

- ✓ Compare and contrast deciduous and evergreen trees
- ✓ Explain that deciduous trees are a type of plant that loses its leaves in the fall and becomes dormant in the winter
- ✓ Explain that evergreen trees are a type of plant that stays green all year and does not become dormant in the winter
- ✓ Identify how deciduous trees are important to people and nature
- ✓ Identify things that plants provide to people: oxygen, food, and important products
- ✓ Describe the life and scientific achievements of George Washington Carver

Review Activities

Image Review

Show the images from any read-aloud again, and have students retell the read-aloud using the images.

Image Card Review

Materials: Image Cards 1–14

In your hand, hold Image Cards 1–14 fanned out like a deck of cards. Ask a student to choose a card but to not show it to anyone else in the class. The student must then perform an action or give a clue about the picture s/he is holding. For example, for the evergreen plant, a student may give the clue, "This type of plant stays green all year long." The rest of the class will guess what is being described. Proceed to another card when the correct answer has been given.

Key Vocabulary Brainstorming

Materials: Chart paper, chalkboard, or whiteboard

Give students a key domain concept or vocabulary word such as *fruit.* Have them brainstorm everything that comes to mind when they hear the word examples. Record their responses on chart paper, a chalkboard, or a whiteboard for reference.

Plant Parts Review with Deciduous and Evergreen Trees

Materials: Various plants; drawing paper, drawing tools

Show students images of deciduous and evergreen trees and ask students to identify the parts. After talking about plants, have students design and illustrate a deciduous tree and an evergreen tree on a piece of paper, instructing them to include all parts of a plant (root, stem, branch, and leaf). Instruct students to share their drawings and identify the parts of their trees while sharing. Their classmates may also want to guess where the parts are located on the drawing.

Deciduous vs. Evergreen

Materials: Chart paper, chalkboard, or whiteboard

Compare and contrast deciduous trees and evergreen trees. What do these plants have in common? How are they different? Record student answers on a Venn diagram.

Teacher Choice

Reread a particular read-aloud to students in order to review important domain concepts.

On Stage: Johnny Appleseed

Materials: Drawing paper, drawing tools

Have students draw a picture of what they think is the most important or most interesting thing that they learned about Johnny Appleseed. Divide the class into groups and have students take turns acting out their drawings. Make sure that students talk about what they are doing and encourage them to use key vocabulary words like *seed* or *fruit.*

Domain Assessment

DA

This domain assessment evaluates each student's retention of domain and academic vocabulary words and the core content targeted in *Plants.* The results should guide review and remediation the following day.

There are four parts to this assessment. You may choose to do the parts in more than one sitting if you feel this is more appropriate for your students. Part I (vocabulary assessment) is divided into two sections: the first assesses domain-related vocabulary and the second assesses academic vocabulary. Parts II, III, and IV of the assessment address the core content targeted in *Plants.*

Part I (Instructional Master DA-1)

Directions: I am going to say a sentence using a word you have heard in the read-alouds and the domain. First I will say the word and then use it in a sentence. If I use the word correctly in my sentence, circle the smiling face. If I do not use the word correctly in my sentence, circle the frowning face. I will say each sentence two times. Let's do number one together.

1. **Plant:** Some people like to plant flowers in their garden. (smiling face)
2. **Soil:** Soil is the part of the ground where plants are planted and grow. (smiling face)
3. **Photosynthesis:** Photosynthesis is how plants make food for themselves. (smiling face)
4. **Pollination:** Sprinkling water over a plant is pollination. (frowning face)
5. **Fruit:** Fruits hold the seeds of plants. (smiling face)
6. **Evergreen:** The leaves of evergreen trees change colors. (frowning face)
7. **Deciduous:** Deciduous trees lose their leaves in the winter. (smiling face)

8. **Roots:** The roots of a plant hold the plant in place in the soil. (smiling face)
9. **Petals:** Plants drink water through their petals. (frowning face)
10. **Crops:** Crops are plants, like wheat and corn, that people eat and use. (smiling face)

Directions: I am going to read more sentences using other words you have heard in the read-alouds. First, I will say the word and then use it in a sentence. If I use the word correctly in my sentence, circle the smiling face. If I do not use the word correctly in my sentence, circle the frowning face. I will say each sentence two times.

11. **Year:** A year is an amount of time we use to measure how old we are. (smiling face)
12. **Survival:** Plants do not need water and light for survival. (frowning face)
13. **Hero:** A hero is someone who gives up and does not help others. (frowning face)
14. **Cycle:** The life cycle of a plant begins with a seed. (smiling face)
15. **Bare:** The branches of deciduous trees become bare when they lose their leaves in the fall. (smiling face)

Part II (Instructional Master DA-2)

Note: You will need crayons for each student in the following colors: dark brown, light brown, dark green, light green, red, blue, and yellow.

Directions: Color the part of the plant I describe with the color I tell you to use.

1. Color dark brown the part of the plant that keeps it in the ground and soaks up nutrients and water. (roots)
2. Color light brown the part of the plant that is sealed in a protective covering and will grow into a new plant. (seed)
3. Color dark green the part of the plant that supports it and carries water and nutrients to the other parts of the plant. (stem)

4. Color light green the part of the plant that makes food during photosynthesis. (leaves)
5. Color red the part of the plant that makes the seeds. (flower)
6. You learned that plants need three things to live. One is food. On the picture of your flower, draw the other two things that plants need. (water, sun)

Part III (Instructional Master DA-3)

Directions: Listen carefully for the following things I would like you to circle.

1. Circle the things that we get from plants. (apple, corn, bouquet)
2. Look at the two pictures of trees on your worksheet. Think about the differences between these trees. Draw a *brown* circle around the tree that is a deciduous tree. Draw a *green* circle around the tree that is an evergreen tree.

Part IV (Instructional Master DA-4)

Directions: I am going to read some sentences to you. If the sentence is correct, circle the smiling face. If the sentence is not correct, circle the frowning face. I will say each sentence two times. Let's do number one together.

1. Plants are all exactly the same. (frowning face)
2. Plants make their own food. (smiling face)
3. Deciduous and evergreen trees both shed, or lose, all of their leaves in the fall. (frowning face)
4. When Polly the Honeybee goes from flower to flower for food, she is also helping with pollination. (smiling face)
5. George Washington Carver was known as the "Plant Doctor." (smiling face)

Culminating Activities

CA

Note to Teacher

Please use this final day to address class results of the Domain Assessment. Based on the results of the Domain Assessment and students' Tens scores, you may wish to use this class time to provide remediation opportunities that target specific areas of weakness for individual students, small groups, or the whole class.

Alternatively, you may also choose to use this class time to extend or enrich students' experience with domain knowledge. A number of enrichment activities are provided below in order to provide students with opportunities to enliven their experiences with domain concepts.

Remediation

You may choose to regroup students according to particular area of weakness, as indicated from Domain Assessment results and students' Tens scores.

Remediation opportunities include:

- targeting Review activities
- revisiting Lesson Extensions
- rereading and discussing select Read-Alouds
- reading the corresponding lesson in the *Supplemental Guide,* if available

Enrichment

Class Book: Plants

Materials: Drawing paper, drawing tools

Tell the class or a group of students that they are going to make a class book to help them remember what they have learned thus

far in this domain. Have students brainstorm important information about pollination, as well as about deciduous and evergreen plants. Have each student choose one idea to draw in a picture. Bind the pages to make a book to put in the class library for students to read again and again.

Above and Beyond: Captions

You may choose to have some students write captions for their class book pictures.

Grow a Potato Plant

Materials: Potato that is starting to sprout eyes; glass of water; toothpicks; potting soil; container

Tell students that the potatoes we eat are used to store nutrients by the potato plant. Explain that you can grow a potato plant from a potato. Place the sprouted end of the potato into a glass of water, supported by toothpicks so that the potato is resting in the water. Place the supported potato in a full glass of water on a warm, sunny windowsill. Make sure the glass stays full of water. The class can watch the potato sprout roots and grow leaves. Once the potato has sprouted leaves, you may wish to transfer the plant into a container filled with potting soil.

Edible Plant Parts Collage

Materials: Baby carrots; celery; spinach; strawberries; sunflower seeds; paper

Note: Please double-check any potential allergies to these materials before proceeding with this activity.

Tell students that they will be using these yummy foods to create an edible plant on their paper. Have students place three baby carrots at the bottom of the paper as the roots. The students should then place the celery as the stem, the spinach as the leaves, and the sunflower seeds as the seeds in the center of the strawberries. Have students talk about each plant part and what it does to help the plant survive before enjoying their creation.

Domain-Related Trade Book or Student Choice

Materials: Trade book

Read a trade book to review a particular concept; refer to the books listed in the Introduction. You may also choose to have students select a read-aloud to be heard again.

On Stage: Johnny Appleseed

Materials: Drawing paper, drawing tools

Have students draw a picture of what they think is the most important or most interesting thing that they learned about Johnny Appleseed. Divide the class into groups and have students take turns acting out their drawings. Make sure that students talk about what they are doing and encourage them to use key vocabulary words like *seed* or *fruit.*

Exploring Student Resources

Materials: Domain-related student websites

Pick appropriate websites from the web for further exploration of stories.

Videos of Plants

Materials: Videos of plants

Carefully peruse the web for short (five-minute) videos related to the plant topics covered in the domain. Prepare some questions related to the videos. Discuss how watching a video is the same as and different from listening to a read-aloud.

For Teacher Reference Only:

Copies of *Tell It Again! Workbook*

1B-1

Dear Family Member,

Over the next several days, your child will be learning about plants and plant parts. In addition, your child will learn that plants are living things and that there are many different kinds of plants.

Below are some suggestions for activities that you may do at home to continue to enjoy learning about plants.

1. Plant Experiment

Plant seeds in four different containers. With the first group of seeds, provide no water or sun. With the second group of seeds, provide water, but no sunlight. With the third group of seeds, provide sunlight, but no water. With the fourth group of seeds, provide sun and water. Be sure to explain to your child what you are doing.

Make predictions with your child about which of the seeds will sprout and grow the best. Observe each of the containers every couple of days. Discuss with your child the changes that have taken place, if any. After a week or two, revisit the predictions and discuss with your child whether the predictions were correct and why or why not.

2. Words to Use

Below is a list of some of the words that your child will use and learn about. Try to use these words as the come up in everyday speech with your child.

- *plants*— What do you think about those plants over there?
- *plant*—I think we should plant some flowers in the garden.
- *flowers*—Look at that beautiful flower.
- *soil*—I used a shovel to dig into the soil to plant my flower.

3. Plants Out and About

Any time you are outside with your child, talk with them about the plants you see around you—their size, shape, color, etc. Have your child identify the different plant parts for you.

4. Read Aloud Each Day

Set aside time to read to your child each day. The local library has many nonfiction books about plants, as well as fictional selections. A list of books and other resources relevant to this topic is attached to this letter.

Be sure to let your child know how much you enjoy hearing about what s/he has been learning about at school.

1B-2

Name _____

Recommended Resources for Plants

Trade Book List

1. *The Boy Who Didn't Believe in Spring,* by Lucille Clifton and illustrated by Brinton Turkle (Puffin, 1992) ISBN 978-0140547399
2. *The Carrot Seed,* by Ruth Krauss and Crockett Johnson (HarperTrophy, 2004) ISBN 978-0064432108
3. *City Green,* by DyAnne DiSalvo-Ryan (HarperCollins, 1994) ISBN 978-0688127862
4. *Daisy (Looking at Life Cycles),* by Victoria Huseby (Smart Apple Media, 2009) ISBN 978-1599201795
5. *Eating the Alphabet: Fruits & Vegetables from A to Z,* by Lois Ehlert (Voyager Books, 1993) ISBN 978-0152244361
6. *The Empty Pot,* by Demi (Henry Holt, 2007) ISBN 978-0805082272
7. *Eyewitness Plant (DK Eyewitness Books),* by David Burnie (DK Publishing, 2011) ISBN 978-0756660352
8. *Flower Garden,* by Eve Bunting and illustrated by Kathryn Hewitt (Voyager Books, 2000) ISBN 978-0152023720
9. *From Bud to Blossom (Apples)*, by Gail Saunders-Smith (Capstone Press, 2006) ISBN 978-1560659518
10. *From Seed to Plant,* by Gail Gibbons (Live Oak Media, 2012) ISBN 978-1430110798
11. *The Great Kapok Tree: A Tale of the Amazon Rainforest,* by Lynne Cherry (Sandpiper, 2000) ISBN 978-0152026141
12. *Growing Vegetable Soup,* by Lois Ehlert (Voyager Books, 1990) ISBN 978-152325800
13. *The Honey Makers,* by Gail Gibbons (HarperTrophy, 2000) ISBN 978-0688175313

14. *How a Seed Grows (Let's-Read-and-Find-Out Science 1),* by Helene J. Jordan and illustrated by Loretta Krupinski (Collins, 1992) ISBN 978-0064451079
15. *I Am a Leaf (Hello Reader! Science, Level 1),* by Jean Marzollo and Judith Moffatt (Cartwheel, 1999) ISBN 978-0590641203
16. *I Am an Apple (Hello Reader! Science, Level 1),* by Jean Marzollo and Judith Moffatt (Scholastic, 1997) ISBN 978-0590372237
17. *I'm a Seed (Hello Reader! Science, Level 1),* by Jean Marzollo and Judith Moffatt (Cartwheel, 1996) ISBN 978-0590265867
18. *Jack's Garden,* by Henry Cole (HarperTrophy, 1997) ISBN 978-0688152833
19. *Johnny Appleseed,* by Reeve Lindbergh and illustrated by Kathy Jakobsen Hallquist (Little, Brown Young Readers, 1993) ISBN 978-0316526340
20. *Johnny Appleseed (Rookie Biographies),* by Christin Ditchfield (Children's Press, 2003) ISBN 978-0516278162
21. *The Life and Times of the Honeybee,* by Charles Micucci (Houghton Mifflin, 1997) ISBN 978-0395861394
22. *The Life and Times of a Peanut,* by Charles Micucci (Houghton Mifflin, 2000) ISBN 978-0618033140
23. *Mama Miti: Wangari Maathai and the Trees of Kenya,* Donna Jo Napoli and illustrated by Kadir Nelson (Simon & Schuster, 2010) ISBN 978-1416935056
24. *Maple Syrup Season,* by Ann Purmell and illustrated by Jill Weber (Holiday House, 2008) ISBN 978-0823418916
25. *Oak Tree (Looking at Life Cycles),* by Victoria Huseby (Smart Apple Media, 2009) ISBN 978-1599201788
26. *OLIVIA Plants a Garden (Olivia Ready-to-Read),* by Emily Sollinger and illustrated by Jared Osterhold (Simon Spotlight, 2011) ISBN 978-1442416758
27. *One Bean,* by Anne Rockwell and pictures by Megan Halsey (Walker Publishing Company, Inc., 1998) ISBN 978-0802775726

28. *Plant a Little Seed,* by Bonnie Christensen (Roaring Brook Press, 2012) ISBN 978-1596435506
29. *Planting a Rainbow,* by Lois Ehlert (Voyager Books, 1992) ISBN 978-0152626105
30. *The Reason for a Flower (Ruth Heller's World of Nature),* by Ruth Heller (Topeka Bindery, 1999) ISBN 978-0833590008
31. *The Seasons of Arnold's Apple Tree,* by Gail Gibbons (Sandpiper, 1988) ISBN 978-0152712457
32. *Seed, Soil, Sun,* by Cris Peterson and photographs by David R. Lundquist (Boyds Mills Press, 2010) ISBN 978-1590787137
33. *Soil Basics/Lo Básico de la Tierra,* by Carol Lindeen (Capstone, 2010) ISBN 978-1429653473
34. *The Tiny Seed (The World of Eric Carle),* by Eric Carle (Aladdin, 2001) ISBN 978-0689842443
35. *Wangari's Trees of Peace: A True Story from Africa,* by Jeanette Winter (Harcourt, 2008) ISBN 978-0152065454
36. *Why Do Leaves Change Color? (Let's-Read-and-Find-Out Science, Stage 2),* by Betsy Maestro and illustrated by Loretta Krupinski (HarperCollins, 1994) ISBN 978-0064451260
    Note: This book is more appropriate for individualized reading.

Websites and Other Resources

Student Resources

1. Parts of Plant Game
   http://www.softschools.com/science/plants/plant_parts/
2. Plant Games
   http://www.cookie.com/kids/games/grow-plant.html
3. "Groovy Garden" Game
   http://pbskids.org/arthur/games/groovygarden/groovygarden.html

Family Resources

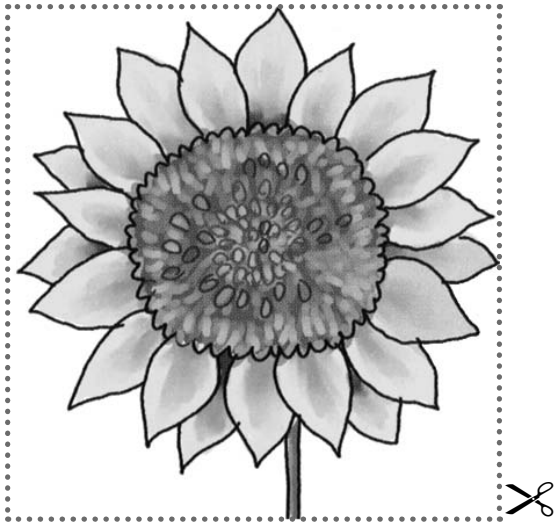
4. George Washington Carver
   http://www.ideafinder.com/history/inventors/carver.htm

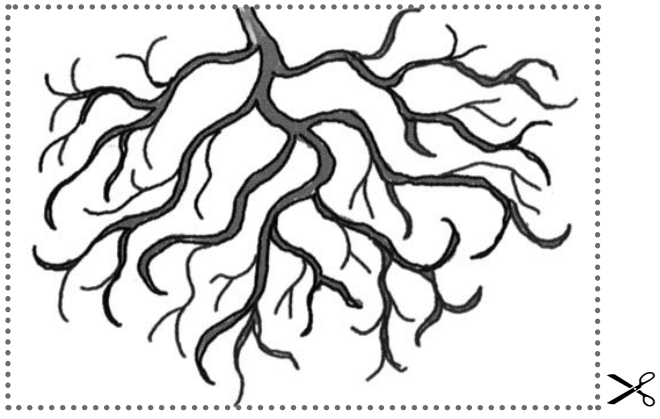
5. "Biology of Plants"
   http://www.mbgnet.net/bioplants/main.html

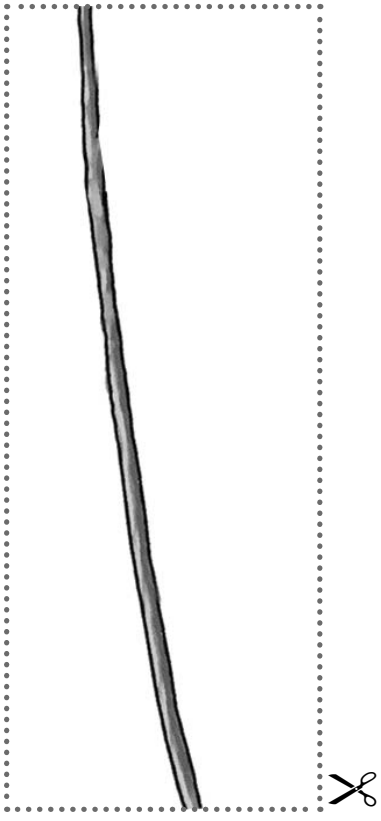
2B-1

Name _____

Directions: The worksheet shows the parts of a plant. Cut out and paste the parts to make a whole plant.



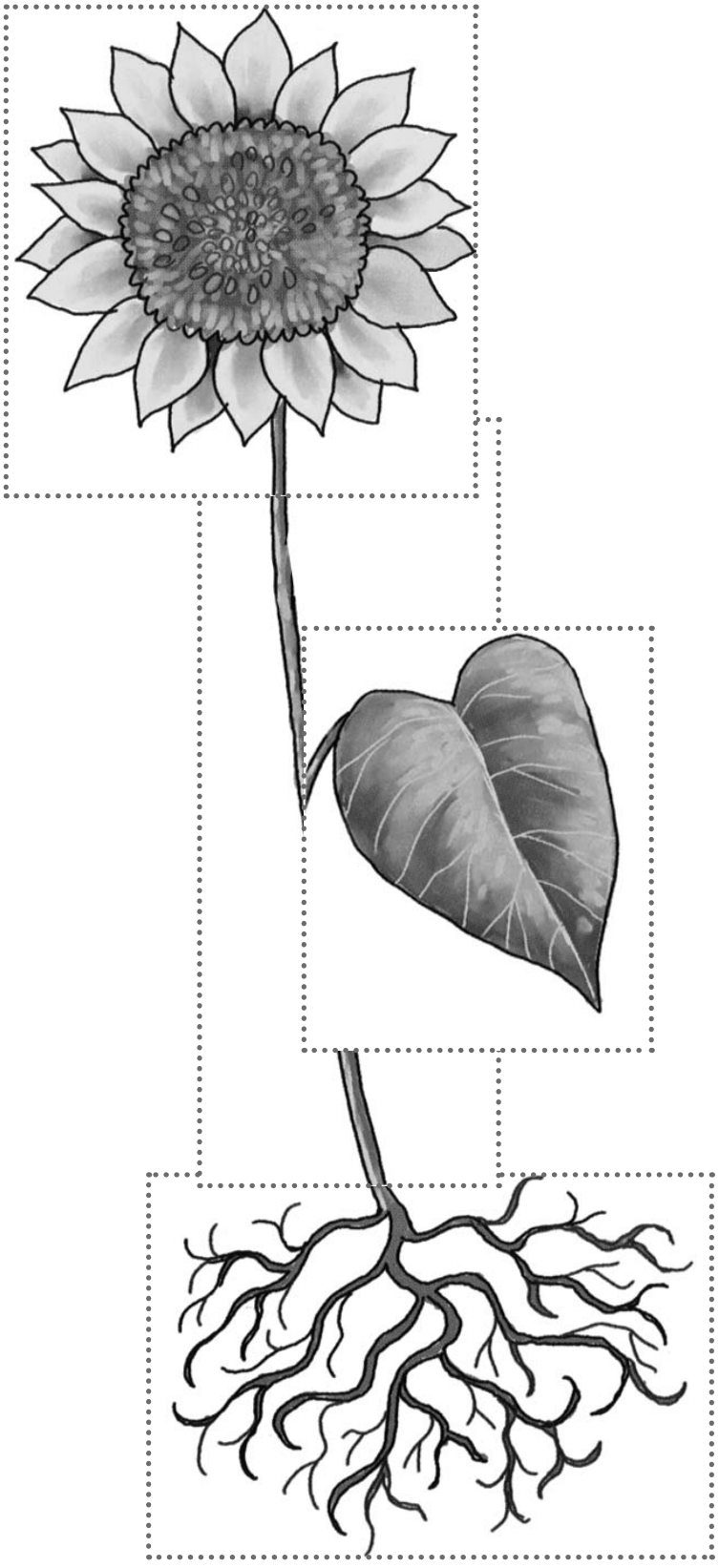




2B-1

Name **Answer Key**

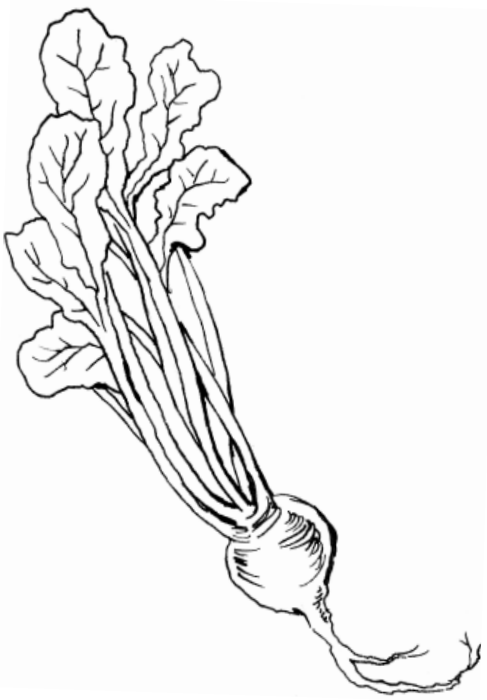
Directions: The worksheet shows the parts of a plant. Cut out and paste the parts to make a whole plant.



4B-1

Name _____

Directions: Color the pictures of the turnip at various stages, then cut them out. Sequence the pictures, starting with the beginning of the turnip's life cycle and finishing with the picture that demonstrates the end of the turnip's life cycle. Last, glue the pictures in the correct order onto a separate sheet of paper.

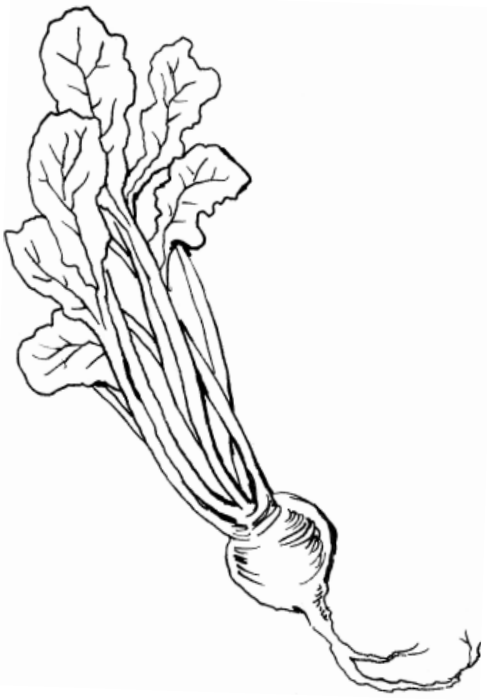


4B-1

Name **Answer Key**

Directions: Color the pictures of the turnip at various stages, then cut them out. Sequence the pictures, starting with the beginning of the turnip's life cycle and finishing with the picture that demonstrates the end of the turnip's life cycle. Last, glue the pictures in the correct order onto a separate sheet of paper.

1



3

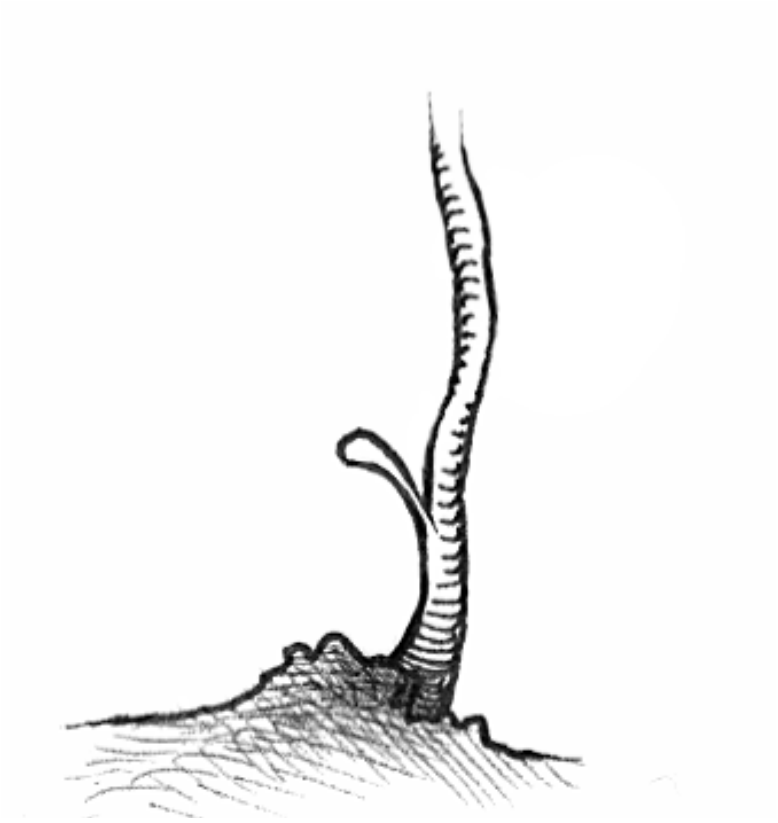
4

2

PP-1

Name _____

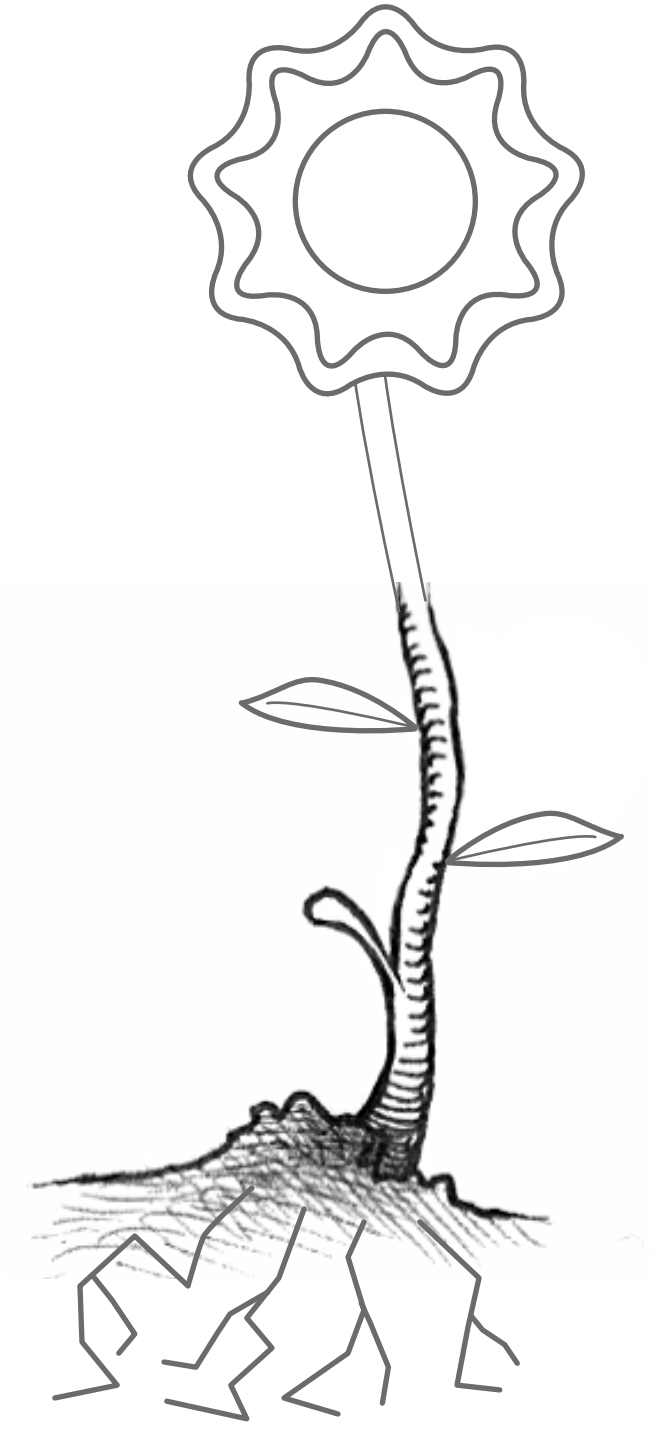
Directions: The worksheet shows the stem of a plant growing out of the earth. Draw in and color the other parts of the plant.



PP-1

Name **Answer Key**

Directions: The worksheet shows the stem of a plant growing out of the earth. Draw in and color the other parts of the plant.



6B-1

Dear Family Member,

Over the past several days, your child has been learning about plants, plant parts, and pollination. Your child will soon learn about germination, the difference between deciduous and evergreen trees, interesting plants, plants and people, and George Washington Carver.

Below are some suggestions for activities that you may do at home to continue to enjoy learning about plants.

1. Leaf Rubbings

If possible, collect a number of different types of leaves. Have your child compare and contrast the different types of leaves—size, color, shape, etc. Have him or her make a rubbing of the leaves by placing a sheet of paper over the leaves and gently rubbing the paper with the side of a pencil or crayon.

2. Words to Use

Below is a list of some of the words that your child will use and learn about. Try to use these words as they come up in everyday speech with your child.

- *fruit*—The apple you are eating is a fruit.
- *deciduous*—That is a deciduous plant; it loses its leaves in the fall.
- *evergreen*—That evergreen tree keeps its leaves all year!
- *bouquet*—Isn't that a pretty bouquet? It is so nice to receive a bunch of flowers!

3. All About Roots

One way to illustrate roots for your child is to buy seedlings and shake away the dirt to reveal the root system.

4. Plants as Food

While eating with your child, explain which parts of the meal come from plants and identify those plants by name. Also, tell your child which part of the plant the food comes from. You may wish to talk about which plants are considered fruits and which plants are considered vegetables. The chart below shows commonly eaten foods and the plant parts they come from:

Roots	Stems	Leaves	Seeds	Flowers	Fruits
potato	celery	lettuce	wheat	cauliflower	apple
carrot	sugar cane	cabbage	corn	broccoli	tomato
beet	asparagus	spinach	rice		orange
radish		parsley	beans		
turnip		basil	oats		
			barley		

5. Read Aloud Each Day

Set aside time to read to your child each day. The local library has many nonfiction books about plants, as well as fictional selections. Please refer to the list of books and other resources sent home with the previous family letter, recommending resources related to plants.

6. Sayings and Phrases: Great Oaks from Little Acorns Grow

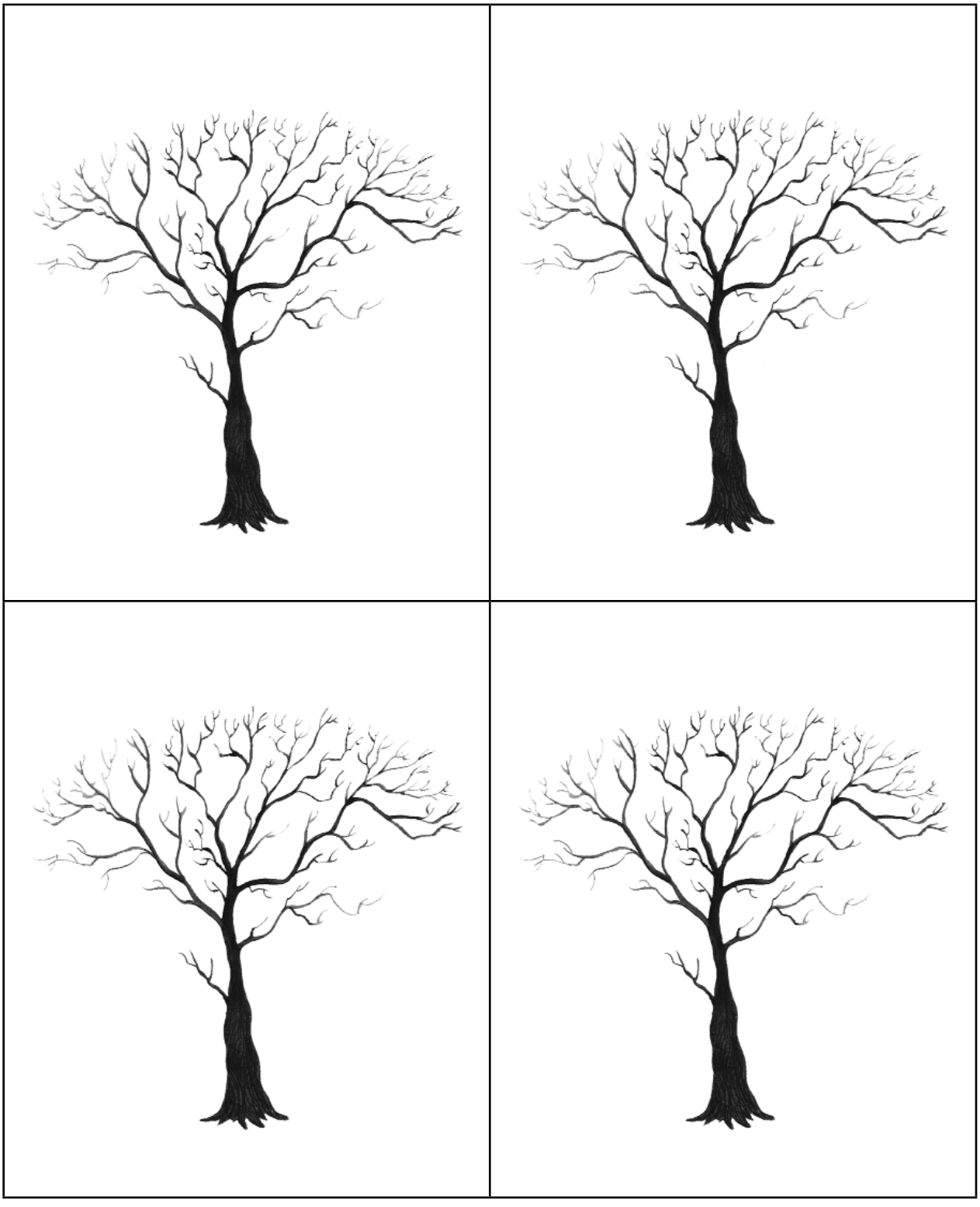
Your child will also learn the well-known saying "great oaks from little acorns grow." Things or people that may seem small and insignificant at first can often turn into something or someone important. You may wish to find opportunities to apply this saying for your child.

Be sure to let your child know how much you enjoy hearing about what s/he has been learning about at school.

8B-1

Name _____

Directions: Think about how a deciduous apple tree looks in each season: spring, summer, fall, and winter. Think about how you can show this in a picture with the parts of the tree and with different colors. Decorate the trees to show the seasons.



10B-1

Name _____

Directions: With your teacher's help, match each item on the left with the plant that it comes from on the right.

1. 

2. 

3. 

4. 

5. 

10B-1

Name **Answer Key**

Directions: With your teacher's help, match each item on the left with the plant that it comes from on the right.

1. 

2. 

3. 

4. 

5. 

DA-1

Name _____

1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Directions: Listen to your teacher's instructions.

11.		
12.		
13.		
14.		
15.		

DA-1

Name **Answer Key**

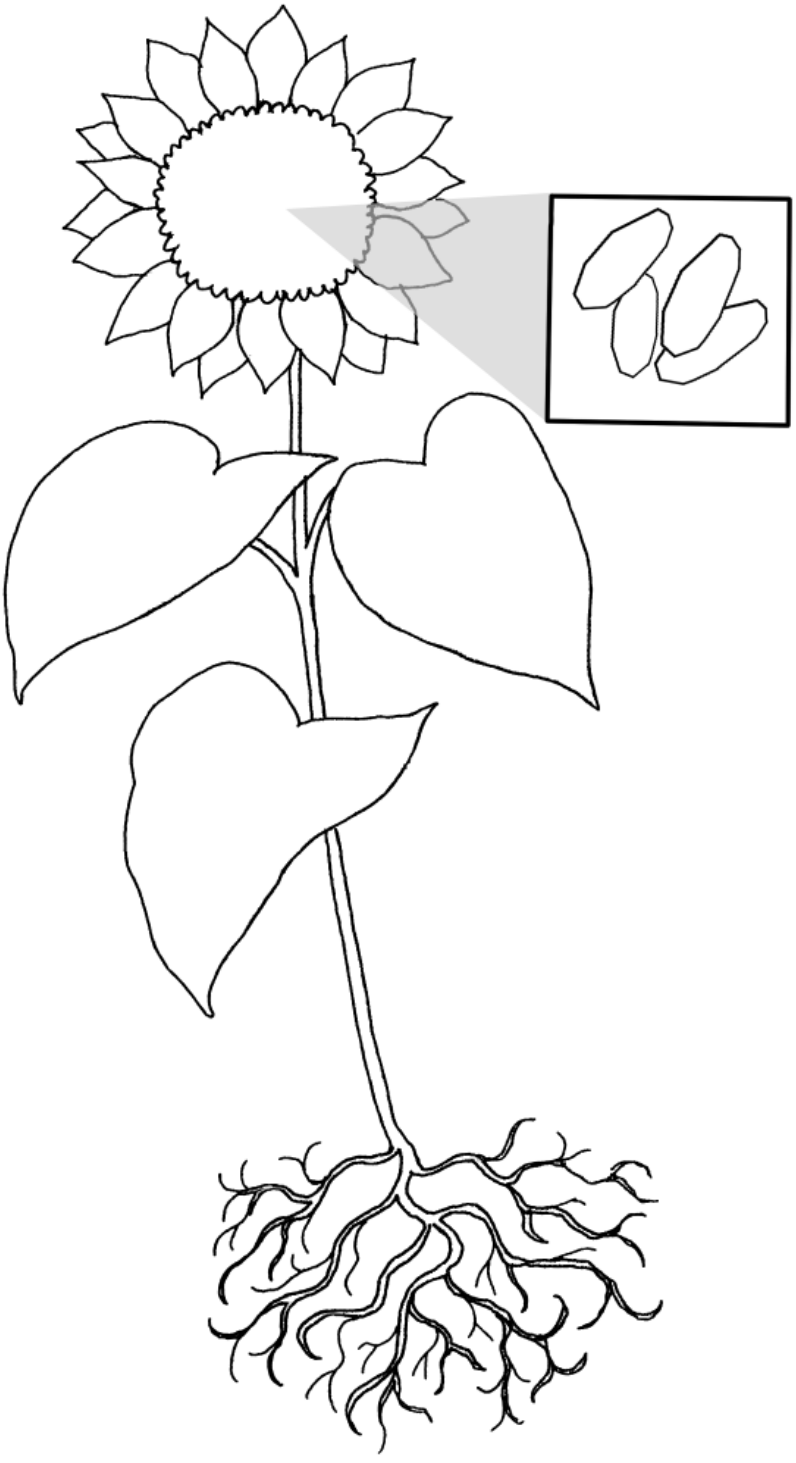
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Directions: Listen to your teacher's instructions.

11.		
12.		
13.		
14.		
15.		

DA-2

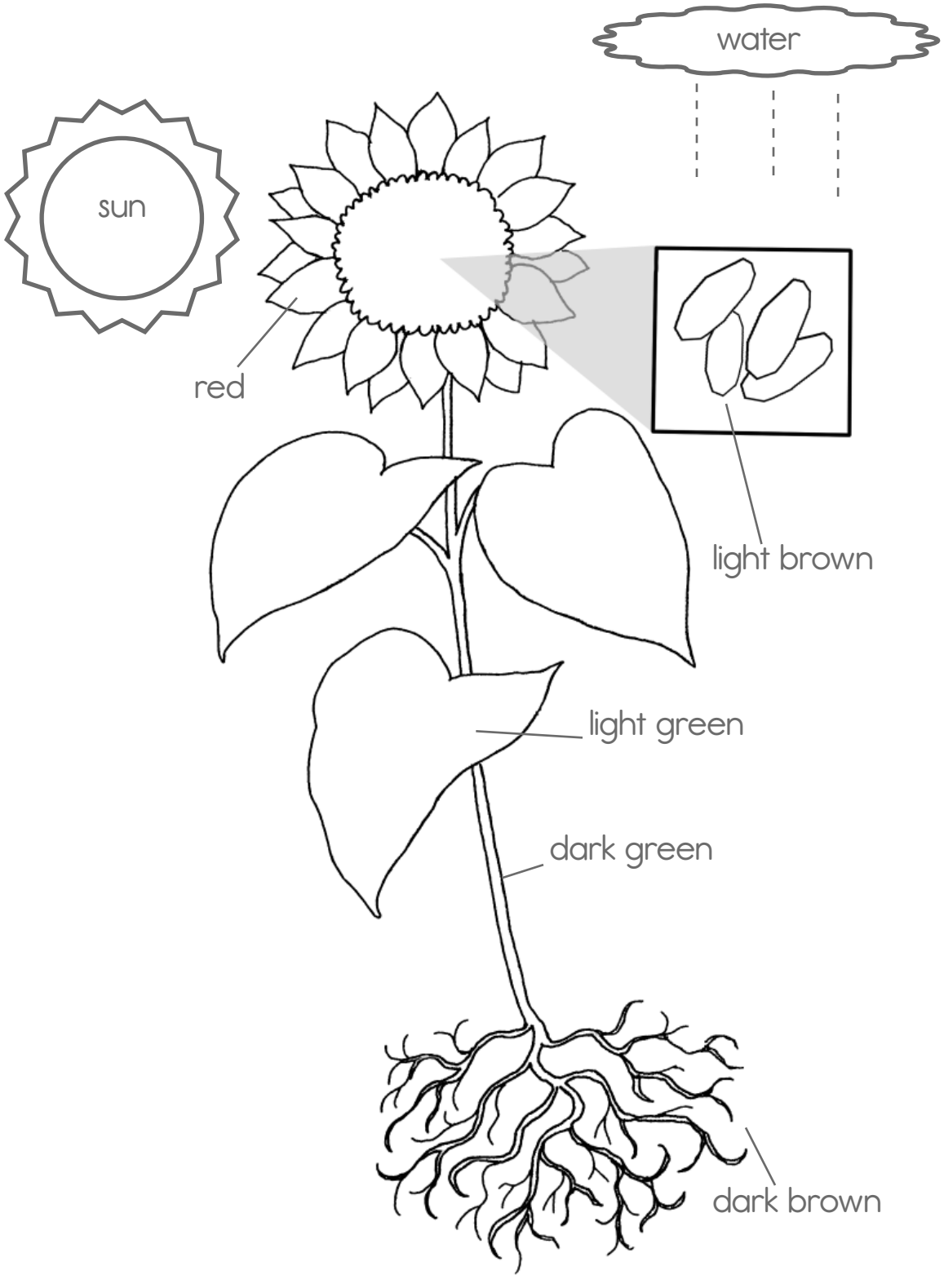
Name _____



Directions: Listen to your teacher's instructions.

DA-2

Name **Answer Key**



Directions: Listen to your teacher's instructions.

DA-3

Name _____

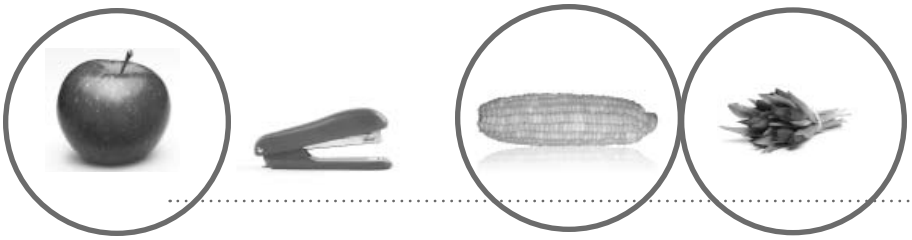
1.     

2.  

Directions: Listen to your teacher's instructions.

DA-3

Name **Answer Key**

1. 

Directions: Listen to your teacher's instructions.

2. 

brown (deciduous)

green (evergreen)

DA-4

Name _____

1.		
2.		
3.		
4.		
5.		

Directions: Listen to your teacher's instrucations.

DA-4

Name **Answer Key**

1.		
2.		
3.		
4.		
5.		

Directions: Listen to your teacher's instrucations.

Tens Recording Chart

Use this grid to record Tens scores. Refer to the Tens Conversion Chart that follows.

Name							

Tens Conversion Chart

Number Correct

Number of Questions	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	10																			
2	0	5	10																		
3	0	3	7	10																	
4	0	3	5	8	10																
5	0	2	4	6	8	10															
6	0	2	3	5	7	8	10														
7	0	1	3	4	6	7	9	10													
8	0	1	3	4	5	6	8	9	10												
9	0	1	2	3	4	6	7	8	9	10											
10	0	1	2	3	4	5	6	7	8	9	10										
11	0	1	2	3	4	5	5	6	7	8	9	10									
12	0	1	2	3	3	4	5	6	7	8	8	9	10								
13	0	1	2	2	3	4	5	5	6	7	8	8	9	10							
14	0	1	1	2	3	4	4	5	6	6	7	8	9	9	10						
15	0	1	1	2	3	3	4	5	5	6	7	7	8	9	9	10					
16	0	1	1	2	3	3	4	4	5	6	6	7	8	8	9	9	10				
17	0	1	1	2	2	3	4	4	5	6	6	7	7	8	8	9	9	10			
18	0	1	1	2	2	3	3	4	4	5	6	6	7	7	8	8	9	9	10		
19	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	
20	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10

Simply find the number of correct answers the student produced along the top of the chart and the number of total questions on the worksheet or activity along the left side. Then find the cell where the column and the row converge. This indicates the Tens score. By using the Tens Conversion Chart, you can easily convert any raw score, from 0 to 20, into a Tens score.

Please note that the Tens Conversion Chart was created to be used with assessments that have a defined number of items (such as written assessments). However, teachers are encouraged to use the Tens system to record informal observations as well. Observational Tens scores are based on your observations during class. It is suggested that you use the following basic rubric for recording observational Tens scores.

9–10	Student appears to have excellent understanding
7–8	Student appears to have good understanding
5–6	Student appears to have basic understanding
3–4	Student appears to be having difficulty understanding
1–2	Student appears to be having great difficulty understanding
0	Student appears to have no understanding/does not participate

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