DRAFT

For Review Purposes Only

These draft materials are intended to provide teachers with insight into the content and structure of the Listening & Learning strand of Core Knowledge Language Arts materials.

Revised materials produced specifically for NYSED, including materials from the Skills Strand, will be posted on this site in 2013. These new materials will include explicit alignment with Common Core State Standards, additional support for English Language Learners, and images and texts compliant with Creative Commons Licensing.

For more information on how to explore these materials, please see the Getting Started resources posted alongside these files on EnagageNY.org.

Core Knowledge®

The Core Knowledge Language Arts Program

Listening & Learning Strand

Tell It Again! Read-Aloud Anthology

Plants

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TABLE OF CONTENTS

The Core Knowledge Language Arts Program

Plants

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 twelve 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. The entire lesson will require a total of fifty minutes.

We have included two Pausing Points in this domain, one after Lesson 4 and another after Lesson 9. You may wish to pause and spend one to two days reviewing, reinforcing, or extending the material taught prior to each of the two Pausing Points. You should spend no more than sixteen days total on this domain.

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! Workbook* for Plants

You will find the Instructional Objectives and Core Vocabulary for this domain below. The lessons that include Student Choice/ Domain-Related Trade Book Extensions, Image Cards, Parent Letters, Instructional Masters, and Assessments are also listed in the information below.

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 in almost every part of the earth. By listening to the read-alouds in this domain, your 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.

Instructional Objectives for Plants

The following chart contains all of the Core Content Objectives and Language Arts Objectives for this domain, broken down by lesson.

Plants Overview												
Objectives	**Lessons**											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Core Content												
Understand that there are many different kinds and sizes of plants	✓							✓	✓	✓		
Understand that different kinds of plants grow in different environments	✓									✓		
Understand that plants are living things	✓		✓									
Describe what plants need to live and grow: food, water, air, and sunlight	✓			✓								
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 the leaves		✓										
Explain that seeds are the beginning of new plants			✓	✓		✓	✓	✓				
Describe how bees collect nectar and pollen					✓							
Understand how bees make and use honey					✓							
Describe the important role bees play in plant pollination					✓							
Understand that some plants produce fruit to hold seeds						✓						

Objectives	Lessons											
	1	2	3	4	5	6	7	8	9	10	11	12
Core Content												
Demonstrate familiarity with the tall tale "Johnny Appleseed"							✓					
Compare and contrast fruits and seeds of different plants						✓						
Understand the basic life cycle of plants			✓									
Identify the part of specific plants that are eaten by people						✓	✓			✓		
Compare and contrast deciduous and evergreen plants								✓	✓			
Identify things that plants provide us: oxygen, food, and important products								✓	✓		✓	
Understand the life and scientific achievements of George Washington Carver												✓
Language Arts												
Use agreed-upon rules for group discussions . . . (L.K.1)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Learn and use appropriately common sayings and phrases such as "Great oaks from little acorns grow" (L.K.7)			✓									✓
Prior to listening to a read-aloud, identify what they know and have learned that may be related . . . (L.K.10)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Listen to and understand a variety of texts . . . (L.K.11)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Make predictions prior to and during a read-aloud . . . (L.K.12)				✓				✓				
Describe illustrations (L.K.13)						✓				✓		
Use pictures accompanying the read-aloud to check and support understanding . . . (L.K.14)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud . . . (L.K.15)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Answer questions that require making interpretations, judgments, or giving opinions . . . (L.K.17)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Compare and contrast similarities and differences . . . (L.K.18)	✓							✓	✓			✓
Make personal connections . . . (L.K.19)		✓				✓	✓	✓		✓		✓
Draw pictures and/or dictate ideas to represent details or information from a read-aloud (L.K.21)			✓					✓	✓			
Evaluate and select read-alouds, books, or poems on the basis of personal choice for rereading (L.K.23)										✓		✓
Learn new words from read-alouds and discussions (L.K.24)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sequence four to six pictures illustrating events from a nonfiction read-aloud (L.K.31)				✓								

Core Vocabulary for Plants

The following list contains all of the boldfaced words in Plants in the forms in which they appear in the text. The inclusion of the words on this list *does not* mean that students are expected to immediately 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

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

hero
hollow
mills
orchards
twig

Lesson 8

bare
deciduous
dormant
habitat
sheds

Lesson 9

cones
conifers
evergreen
needles
sap

Lesson 10

awe-inspiring
carnivorous
groves
lure
rare

Lesson 11

bouquet
lumberjack
medicines
oxygen
provide

Lesson 12

botanist
botany
canvas
crops
kidnapped

Student Choice and Domain-Related Trade Book Extensions

In the *Tell It Again! Read-Aloud Anthology* for Plants, Student Choice activities are suggested in both Pausing Points and in Lessons 10B and 12B. The Domain-Related Trade Book activities are suggested in both Pausing Points and in Lesson 12B. A list of recommended titles is included at the end of this introduction, or you may select another title of your choice.

Plants Image Cards

There are nineteen Image Cards for Plants. The Image Cards include illustrations that can be used to enhance students' understanding of plant parts as well as to compare and contrast various fruits and seeds. Also included are Image Cards of deciduous and evergreen trees so that students can examine their characteristics. In the *Tell It Again! Read-Aloud Anthology* for Plants, Image Cards are referenced in both Pausing Points and in Lessons 5, 6, and 10.

Instructional Masters and Parent Take-Home Letters

Blackline Instructional Masters and Parent Take-Home Letters are included in the *Tell It Again! Workbook*.

In the *Tell It Again! Read-Aloud Anthology* for Plants, Instructional Masters are referenced in the Domain Assessment and in Lessons 2B, 3B, 4B, 8B, and 11B. The Parent Letters are referenced in Lessons 1B and 10B.

Assessments

In the *Tell It Again! Read-Aloud Anthology* for Plants, Instructional Masters 2B-1, 3B-1, 4B-1, DA-1, DA-2, and DA-3 are used for this purpose. Use the following *Tens Conversion Chart* to convert a raw score on each assessment into a Tens score.

Tens Conversion Chart

Number of Questions	Number Correct																														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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	5	6	6	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										
21	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10									
22	0	0	1	1	2	2	3	3	4	4	5	5	5	6	6	7	7	8	8	9	9	10	10								
23	0	0	1	1	2	2	3	3	3	4	4	5	5	6	6	7	7	7	8	8	9	9	10	10							
24	0	0	1	1	2	2	3	3	3	4	4	5	5	5	6	6	7	7	8	8	8	9	9	10	10						
25	0	0	1	1	2	2	2	3	3	4	4	4	5	5	6	6	6	7	7	8	8	8	9	9	10	10					
26	0	0	1	1	2	2	2	3	3	3	4	4	5	5	5	6	6	7	7	7	8	8	8	9	9	10	10				
27	0	0	1	1	1	2	2	3	3	3	4	4	4	5	5	6	6	6	7	7	7	8	8	9	9	9	10	10			
28	0	0	1	1	1	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	8	8	8	9	9	9	10	10		
29	0	0	1	1	1	2	2	2	3	3	3	4	4	4	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	
30	0	0	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	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 30, into a Tens score. You may choose to use the Tens Recording Chart which is at the end of the appendix.

Recommended Trade Books for Plants

If you recommend that parents 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.

1. *The Carrot Seed,* by Ruth Krauss and Crockett Johnson (HarperTrophy, 2004) ISBN 0064432106
2. *Eating the Alphabet: Fruits and Vegetables from A to Z,* by Lois Ehlert (Voyager Books, 1993) ISBN 0152244360
3. *Flower Garden,* by Eve Bunting and Kathryn Hewitt (Voyager Books, 2000) ISBN 0152023720
4. *From Bud to Blossom (Apples),* by Gail Saunders-Smith (Capstone Press, 2000) ISBN 1560659513
5. *Growing Vegetable Soup,* by Lois Ehlert (Voyager Books, 1990) ISBN 0152325808
6. *The Honey Makers,* by Gail Gibbons (HarperTrophy, 2000) ISBN 0688175317
7. *How a Seed Grows (Let's-Read-and-Find-Out Science 1),* by Helene J. Jordan and Loretta Krupinski (HarperTrophy, 1992) ISBN 0064451070
8. *I Am a Leaf (Hello Reader! Science, Level 1),* by Jean Marzollo and Judith Moffatt (Cartwheel, 1999) ISBN 0590641204
9. *I Am an Apple (Hello Reader! Science, Level 1),* by Jean Marzollo and Judith Moffatt (Scholastic, 1997) ISBN 0590372238
10. *I'm a Seed (Hello Reader! Science, Level 1),* by Jean Marzollo and Judith Moffatt (Cartwheel, 1996) ISBN 0590265865
11. *Jack's Garden,* by Henry Cole (HarperTrophy, 1997) ISBN 068815283X
12. *Johnny Appleseed (Rookie Biographies),* by Christin Ditchfield (Children's Press, 2003) ISBN 0516278169
13. *Johnny Appleseed,* by Reeve Lindbergh and Kathy Jakobsen Hallquist (Little, Brown Young Readers, 1993) ISBN 0316526347

14. *The Life and Times of a Peanut,* by Charles Micucci (Houghton Mifflin, 2000) ISBN 0618033149
15. *The Life and Times of the Honeybee,* by Charles Micucci (Houghton Mifflin, 1997) ISBN 039586139X*
16. *Maple Syrup (Harvest to Home),* by Lynne M. Stone (Rourke, 2001) ISBN 1589521285
17. *Maple Syrup Season,* by Ann Purmell and Jill Weber (Holiday House, 2008) ISBN 082341891X
18. *Plant Blossoms (Look Once, Look Again Science Series),* by David M. Schwartz (Creative Teaching Press, 1998) ISBN 1574713299
19. *Planting a Rainbow,* by Lois Ehlert (Voyager Books, 1992) ISBN 0152626107
20. *The Reason for a Flower (Ruth Heller's World of Nature),* by Ruth Heller (Topeka Bindery, 1999) ISBN 0833590006
21. *The Seasons of Arnold's Apple Tree,* by Gail Gibbons (Voyager Books, 1984) ISBN 0152712457
22. *The Tiny Seed,* by Eric Carle (Aladdin, 2001) ISBN 0689842449
23. *Why Do Leaves Change Color?,* by Betsy Maestro (HarperCollins, 1994) ISBN 0064451267

* This book is more appropriate for individualized reading.

1 Introduction to Plants

Lesson Objectives

Core Content Objectives

Students will:

- Understand that plants are living things
- Understand that plants need nutrients, water, air, and light
- Understand that there are many different kinds and sizes of plants
- Understand that different kinds of plants grow in different environments

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)

- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Compare and contrast similarities and differences within a single read-aloud or between two or more read-alouds (L.K.18)
- Learn new words from read-alouds and discussions (L.K.24)

Core Vocabulary

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 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	**Essential Background Information or Terms**		10
	Domain Introduction	chart paper, chalkboard, or whiteboard	
	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	**Nature Walk**	chart paper, markers	15
Take-Home Material	**Parent Letter**	Instructional Master 1B-1	

1A Introduction to Plants

Introducing the Read-Aloud

***10** minutes*

Essential Background Information or Terms

Tell students that you want them to think about some things that are living and nonliving. How do they know if something is living or nonliving?

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. Both people and animals reproduce or make babies that are like themselves. Tell students that plants are also living things and have the same needs as people and animals—food, water, and air—and that plants also reproduce. Have students name specific examples of things that are living; then have them name things that are nonliving. 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 not. If what you name is alive, the students should say, "living." If what you name is not alive, the students should say, "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 (living)
- tree (living)
- rock (nonliving)
- cat (living)
- chalkboard (nonliving)
- crayons (nonliving)

- person (living)
- table (nonliving)
- flower (living)

Domain Introduction

Explain to students that, as they just learned, plants are living things that need food, water, and air, but in addition to those three things, plants also need light. So, plants need four things to survive: food, water, air, and light.

Ask students what they already know about plants, and use the board or chart paper to record this information. If students need a prompt, ask some of the following questions:

- What are some plants you know or have seen? (flowers, trees, grass, etc.)
- Where do plants grow? (ground, garden, pots, etc.)
- Why do people grow plants? (because they are pretty; to eat; etc.)
- What colors do you associate with plants? (green, yellow, etc.)
- What else do you already know about plants? (Answers may vary.)

Purpose for Listening

Tell students to listen to find out more about plants: where they live, what they look like, and other attributes of plants.

Presenting the Read-Aloud — *10 minutes*

Introduction to Plants

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

1 What do you see in this picture?

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

2 How do you think plants and animals are different?

Show image 1A-2: Dandelion in the sidewalk

Plants need a few 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 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 its new roots to take hold. [3] The roots take up things the plant needs: water and **nutrients.** [4] This dandelion gets plenty of sun here in the sidewalk, and it also gets plenty of air. As long the plant does not get pulled up by a person or eaten by an animal, it will live in this crack until it dies.

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

4 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 smallest shrub. Animals that live in the forest depend on these plants for food and for their homes.

Show image 1A-4: Pine forest

This is another type of forest. If you compare it to the last picture, you should be able to notice some major differences between the colors and shapes of the leaves on these trees.

Show image 1A-5: Desert cactus

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. Most plants on earth could not survive in this place. Plants that grow here, like this cactus, have adapted to a life beneath the blazing hot sun with very little rainfall and sandy soil. That tough little dandelion and the trees you saw earlier would wither and die if you tried to **plant** them here.[5] And the cactus in this desert would not be able to live in either the sidewalk crack or the forest!

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

Show image 1A-6: Underwater plants

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 have roots, and they need the same things other plants need, including food, water, air, and light.[6]

6 Have you ever seen underwater plants?

Show image 1A-7: City park

Most plants grow in the wild without any help from people. However, it is possible to gather seeds and plant 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 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 the students' responses using richer and more complex language. It is highly recommended that you ask students to answer in complete sentences by asking them to restate the question in their responses.

1. Plants need four things to live. What four things do they need? (food, water, air, and light)

Show image 1A-5: Desert cactus

Show image1A-8: House plant

2. How are these plants the same and how are they different? (Both need food, water, air, and light to survive. The cactus and the house plant live in different environments, etc.)
3. Name some different places where plants live? (desert, underwater, in gardens, etc.)
4. Are plants living or nonliving? (living) What did you learn about plants in this read-aloud that makes you think they are living things? (They produce young like other living things, and they need food, water, air, and light.)
5. Why do people plant plants? (The plants make people's yards and houses look nice; they grow vegetables for food; etc.)
6. What do you think would happen if plants didn't have food, water, air, and light? (They would die.)
7. What did you learn about plants that you didn't already know? (Answers may vary.)

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

8. *Think Pair Share:* Name one way that plants and animals are the same and one way that they are different. (Answers may vary.)

Word Work: Soil (5 minutes)

1. In the story today we heard that a tiny dandelion seed floated through the air and landed in this crack, where there was just enough *soil* for its new roots to take hold.
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 their answers: I would plant _____ in the soil.)
6. What's the word we've been talking about?

As a follow-up, have the rest of the class describe what they would plant in the soil. Make sure they use the word *soil* when they talk about it.

Complete Remainder of the Lesson Later in the Day

1B Introduction to Plants

Extensions

***15** minutes*

Nature Walk

Note: 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 between 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.

Parent Letter

Send home Instructional Master 1B-1.

2 Plant Parts

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

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)

- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds (L.K.19)
- Learn new words from read-alouds and discussions (L.K.24)

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 the 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 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, drawing tools	5
 **Complete Remainder of the Lesson Later in the Day**			
Extensions	**Plant Parts**	Instructional Master 2B-1 drawing paper, scissors, glue	15
	"See-Through" Planter	package of bean seeds, towels, plastic bags	
	Stem Activity	cups, red and blue food coloring, carnations or stalks of celery	

2A Plant Parts

Introducing the Read-Aloud

***10** minutes*

What Have We Already Learned?

Ask the students how they know that plants are alive. Remind students you can tell when something is living because it needs food, water, and air. 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, the students should say, "living." If what you name is not alive, the students should say, "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 (nonliving)
- tree (living)
- pencil (nonliving)
- rosebush (living)
- mouse (living)
- paper (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 the students to listen carefully to the read-aloud to learn the different parts of plants and how these different parts use 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, water, air, and light. And most plants also have similar basic parts—**roots, stems, leaves, flowers,** and **seeds.** [1]

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

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 plant 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 importantly, 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 green parts of a plant that are attached to and grow out from the stem.

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.

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 [2]

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 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. [3] Do you see the apple blossoms and the leaves? There are many, many leaves attached to the branches on this apple tree.

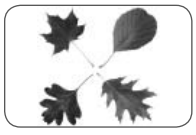
2 What do you see in this picture?

3 (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. [4]

4 What do you think this bark feels like?



Show image 2A-5: Leaves [5]

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. [6]

5 (Point to the leaves as you name them.)

6 This means the leaves are especially important to making sure 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.[7] From there, food is taken to the rest of the plant where it is needed.

7 (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, and 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 the students' responses using richer and more complex language. It is highly recommended that you ask students to answer in complete sentences by asking them to restate the question in their responses.

Show image 2A-1: Sunflower

1. [Have different students point to the different parts of the plant.] Point to the roots, stem, flower, leaves, and seeds.
2. What part of the plant keeps it in the ground and takes up nutrients and water for the plant? (roots)
3. What part of the plant supports the plant and moves water and nutrients to the rest of the plant? (stem)
4. What part of the plant does the plant use to make its food? (leaves)
5. What would happen if the plant didn't have roots? (If the plant didn't have roots, it wouldn't be able to take up nutrients and water.)
6. 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. What would happen if a plant didn't have leaves? (If the plant didn't have leaves, it might not be able to make food for itself.)
8. [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.]

9. [Using image 2A-1, ask another student volunteer to complete the following task.] Trace the downward path that the food takes that is made by the leaves during photosynthesis as it travels to the rest of the plant. [As the student traces the path, help him or her use the core vocabulary to describe the plant parts.]

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.

10. *Think Pair Share:* Talk about what happens during photosynthesis, the process that plants use to make their own food. Talk about the part of the plant where photosynthesis takes place and what the plant uses to make food. (During photosynthesis, water, nutrients, air, and light come together in the plant's leaves. This is how plants make food for themselves.)

Word Work: Survival (5 minutes)

1. During the read-aloud today we learned that 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. Many things are important to a plant's survival.
5. What kinds of things are 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."
6. What's the word we've been talking about?

As a follow-up, have the students draw a picture of the things that are important to a plant's survival. Have students talk about their pictures and encourage them to use the word *survival* in their responses.

Complete Remainder of the Lesson Later in the Day

2B Plant Parts

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 plant parts. Walk around and talk with students as they complete the worksheet.

"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.

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 the students talk about what happens to the flower or stalk of celery. Explain to the 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.

3 The Life Cycle of a Plant

Lesson Objectives

Core Content Objectives

Students will:

- Understand that plants are living things
- Explain that seeds are the beginning of new plants
- Understand the basic life cycle of plants

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)
- Learn and use appropriately common sayings and phrases such as "Great oaks from little acorns grow" (L.K.7)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)

- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Draw pictures and/or dictate ideas to represent details or information from a read-aloud (L.K.21)
- Learn new words from read-alouds and discussions (L.K.24)

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 which 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**		10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Germinate		5
 **Complete Remainder of the Lesson Later in the Day**			
Extensions	**Plant Parts**	Instructional Master 3B-1 drawing tools	10
	Sayings and Phrases: Great Oaks from Little Acorns Grow		5

3A The Life Cycle of a Plant

Introducing the Read-Aloud

***10** minutes*

What Have We Already Learned?

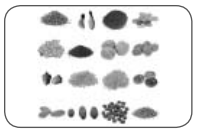
Show image 3A-1: Sunflower

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

Purpose for Listening

Explain to students that when a plant first starts to grow, it doesn't have all of the parts they have learned about. Tell the students to listen to find 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. 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. Each seed is a plant waiting to sprout. 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 What do you see in this picture?

Show image 3A-3: Phases of germination [1]

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, warmth from the sun, and nutrients from the soil.

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.

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 warmth from the sun, water, and nutrients, causing 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 the new plant is just starting to grow its first root. The next several pictures show the same plant several days later. As the plant 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 plant 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![2]

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

Show image 3A-5: Acorn and oak

Here's a picture of a special plant part that contains the seed of another tree known as an oak tree. Who knows what this is called? You may have seen acorns before, lying outside next to full-grown trees or being carried away in the mouths of squirrels.[3]

3 (Point to the acorn.)

Show image 3A-6: Squirrel eating an acorn

Squirrels spend all day running around looking for food. They also spend a lot of time hiding food. They will have nothing to eat in the winter if they do not hide extra food ahead of time. 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.[4] 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.

4 What does *germinate* mean?

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.** This tree will still be called a sapling for several years to come.

Show image 3A-8: Mature oak

Oak trees take a long time to **mature.**[5] In fact, it takes about fifty years for the average oak tree to mature to the point that it can produce lots of acorns. The oak will produce tens of thousands of acorns over the course of its lifetime, but only a few of those acorns will germinate and grow into new oak trees.

5 or grow into an adult or full-grown tree

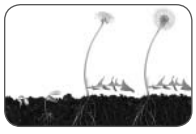
Show image 3A-9: Dead tree

Eventually, like all living things, the oak tree will die, though it might take two hundred or more years for this to happen. Unless it gets a disease or encounters some other problem—like being hit by lightning—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.

Over time, as with all dead plants, the tree will fully decay and fall apart, but it will never disappear entirely. Instead, all of the nutrients in the wood will rot and become part of the soil once again. Soil, after all, is largely made up of decayed or rotten plants, and 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 dandelion

The more you learn, the more you will understand that many of the things in nature occur in cycles. When something is part of a cycle, it means that certain events are recurring—the same things happen again and again in a predictable way.

Plants are living things, and like all living things, plants live according to a **life cycle.**[6] This diagram shows you the life cycle of a dandelion. A new plant begins when the dandelion 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 grow to adulthood and make more seeds from which new plants will grow.

6 A life cycle includes the stages and changes that happen in living things.

And as you learned, when the dandelion dies and decays, the old plant enriches the soil so that it is more likely that seeds will germinate and grow into new 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 the students' responses using richer and more complex language. It is highly recommended that you ask students to answer in complete sentences by asking them to restate the question in their responses.

1. A plant's life cycle begins with what part of the plant? (seed)
2. What things does a seed need to germinate? (water, warmth, and nutrients)
3. What is a seedling? (a young or baby plant)

Show image 3A-4: Seedling

4. What parts of a plant does a seedling have? (roots, stem, leaves)
5. What kind of plant will grow from grass seed? (grass) from tomato seeds? (tomato plants) from dandelion seeds? (dandelions)
6. What kind of tree does an acorn grow into? (oak)
7. Which happens first—the seed germinates or the sapling grows? (seed germinates)

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. *Think Pair Share:* Which is taller: a seedling or a sapling? Why? (A sapling is taller. A seedling of a tree grows to become a sapling.)

Word Work: Germinate (5 minutes)

1. In the read-aloud today, we learned that seeds need water, warmth, and nutrients from the soil to *germinate*.
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?

As a follow-up, have students pretend that they are a seed. Have them demonstrate what happens when a seed germinates and starts to grow. As they demonstrate, have them talk about what is happening. Make sure they use the word *germinate*.

Complete Remainder of the Lesson Later in the Day

3B The Life Cycle of a Plant

Extensions

15 minutes

10 Plant Parts (Instructional Master 3B-1)

Using Instructional Master 3B-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 as they complete the worksheet.

Sayings and Phrases: Great Oaks from Little Acorns Grow (5 minutes)

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. While 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 your 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 firelight. His family was very poor. 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 pineseeds grow" or "Juicy peaches from hard pits grow."

4 The Gigantic Turnip

Lesson Objectives

Core Content Objectives

Students will:

- Understand that seeds are the beginning of new turnip plants
- Explain that turnips grow when they have water and light, and can grow to be different sizes
- Identify the root of a turnip, and understand that the turnip's roots and leaves are eaten by people

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Make predictions prior to and during a read-aloud, based on the title, pictures, and/or text heard thus far and then compare the actual outcomes to predictions (L.K.12)

- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)
- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Learn new words from read-alouds and discussions (L.K.24)
- Sequence four to six pictures illustrating events in a story (L.K.26)

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

4A The Gigantic Turnip

Introducing the Read-Aloud

***10** minutes*

What Do We Know?

Show image 4A-1: Turnip

Tell the students they are about to hear a story called "The Gigantic Turnip." Ask students if they know what a turnip is. 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 people grow in gardens? Why might people plant gardens?

Explain that one reason people have gardens is to have food, such as turnips, to eat. Tell students that one 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]

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

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

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 little old man shouted for his wife to come and help.

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

2 (Point to the top of the turnip.)

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

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 the students' responses using richer and more complex language. It is highly recommended that you ask students to answer in complete sentences by asking them to restate the question in their responses.

1. Who are the characters in this story? (old man, old woman, granddaughter, grandson, dog, cat, mouse)
2. What does the old man plant? (turnip seed)
3. What grows out of the turnip seed? (turnip)
4. Why does the old man need so much help pulling the turnip out of the ground? (It is gigantic, too large for him to pull out alone.)
5. Are all turnips as large as the turnip in the story? (no)
6. Why do you think the turnip grew so big? (water, nutrients, air, etc.)

7. 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.")

I am going to ask you 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. *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.)

Word Work: Gigantic (5 minutes)

1. In the story today, we heard that the farmer grows 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 as a follow-up. Directions: I am going to name some things. If something I name is gigantic, say, "That is gigantic!" If something I name is not gigantic, say, "That is not gigantic."

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

Complete Remainder of the Lesson Later in the Day

4B The Gigantic Turnip

Extensions

***15** minutes*

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

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

PP1 *Pausing Point 1*

Note to Teacher

This is the end of the read-alouds about the parts of plants and the life cycle of plants. You may choose to pause here and spend one to two days reviewing, reinforcing, or extending the material taught thus far.

If you do pause, you may have students do any combination of the activities listed below. The activities may be done in any order. You may wish to do one activity on successive days. 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:

- Understand that there are many different kinds and sizes of plants
- Understand that different kinds of plants grow in different environments
- Understand that plants are living things
- Describe what plants need to live and grow: food, water, air, and sunlight
- Identify the root, stem, leaf, flower, and seed of a plant
- Explain that stems support the plant and take in 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
- Understand the basic life cycle of plants

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 seed, a student may give the clue "This is 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.

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 domain introduction. You may also choose to have the students select a read-aloud to be heard again.

Plant Dramatization

Have students pretend that they are a seed. Have students use their bodies to grow into a plant. Be 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 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, branch, and leaf). 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.

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.

Plants and Their Environments

Materials: Images of various plants in various environments

Show students pictures of ten plants in different environments (for example, a cactus in a desert or a palm tree on a beach). Ask, "Why do you think 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.

Plant Experiment

Materials: Four packets of seeds, four containers

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.

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 the 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.

5 Polly the Honeybee's Flower Tour

Lesson Objectives

Core Content Objectives

Students will:

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

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)
- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)

- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Learn new words from read-alouds and discussions (L.K.24)

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 plants make that attracts bees and some birds to flowers to collect it
Example: The bee collected the nectar from the lilac.
Variation(s): nectars

petals, *n.* The colored, outer parts of a flower that are not usually green
Example: 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.
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	**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	15

5A Polly the Honeybee's Flower Tour

Introducing the Read-Aloud

***10** minutes*

What Have We Already Learned?

Remind students that plants have many different parts. Ask the students to name 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. Ask the students to name some different kinds of flowers. Ask what else they know about flowers. What animals do they sometimes see on or near flowers? Remember to 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.

Tell students that today they will get a chance to listen to a special guest, Polly the Honeybee.

Purpose for Listening

Tell students to listen carefully to find out how Polly helps pollinate plants.

Presenting the Read-Aloud — *10 minutes*

Polly the Honeybee's Flower Tour

Show image 5A-1: Polly in meadow [1]

1 (Point to the meadow in the picture.)

Hello, my name is Polly and I'm a honeybee. I live in a beehive not too far from here. Your teacher asked me to come here today to tell you about flowers. I hear that you have been learning all about plants and that you already know a lot about them. I also hear that you know that flowers make seeds and that seeds can grow into new plants.

Well, 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. There are red flowers and orange flowers and yellow flowers.

Show image 5A-2: Polly and yellow flower

2 Do you have any ideas why Polly might describe a flower as delicious?

3 (Point to the petals in the picture.)

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

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 leaves, except that they are brightly colored. The petals are the parts of the flower that grab my attention when I am out buzzing around, but my favorite thing to do is crawl inside the petals, into the center of the flower.

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

What's it like to crawl inside a flower like this? Imagine for a minute that you are crawling into a narrow tent made of bright yellow cloth. Bright yellow is all around you. Now imagine that you are way inside the tent drinking the world's tastiest drink through a straw, and that 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. 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.** I find both nectar and pollen inside flowers, and, frankly, I'm not sure which one I like better!

I don't just visit one flower. 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![4]

4 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. Can you guess what nectar turns into when most of the water is gone?

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. 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.[5] 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.[6] Pollination is really important because, if it doesn't happen, the plant won't be able to make any seeds, and if there are no seeds, then there will be no new plants.

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

6 Pollination is when pollen from one flower has been mixed with the pollen of a plant that is like it.

Show image 5A-6: Polly and pollen

Of course, a corn plant can't walk over to another corn plant and hand it some pollen. Plants can't walk around like you human beings. And they can't flap their wings and fly like us bees, either. But the pollen grains themselves are very small. They can be blown here and there by the wind. When the wind blows, it can blow pollen from one corn plant to another, or from one pretty yellow flower to another. So the wind helps pollinate plants so they can make new plants.

But *I* also help pollinate plants! Can you think how my trips from one plant to another might 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! [7]

7 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. And, believe it or not, so are bats! But nothing pollinates as many flowers as bees do. [8]

8 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 the students' responses using richer and more complex language. It is highly recommended that you ask students to answer in complete sentences by asking them to restate the question in their responses.

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

I am going to ask you 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. *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.)

Word Work: Pollination (5 minutes)

1. In the read-aloud today, we heard *pollination* happens when pollen from one flower lands on another flower and the second flower makes seeds.
2. Say the word *pollination* with me.
3. Pollination happens when the pollen of 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? Try to use the word *pollination* when you tell about it. (Ask two or three students. If necessary, guide and/or rephrase the students' responses: "Pollination could also happen when _____.")
6. What's the word we've been talking about?

As a follow-up, have the rest of the class talk about different ways that pollination could happen. Make sure they use the word *pollination.*

Complete Remainder of the Lesson Later in the Day

5B Polly the Honeybee's Flower Tour

Extensions

15 minutes

Pollination Simulation

Have a couple of students stand in a circle and pretend to be flowers—holding scraps of paper or cotton balls representing pollen in their hands. Have a couple of other students pretend to be bees, drinking nectar and picking up a few scraps of paper or cotton balls from each flower. Then, they 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.

6 The Fruits of Polly's Labor

Lesson Objectives

Core Content Objectives

Students will:

- Explain that seeds are the beginning of new plants
- Understand that some plants produce fruit to hold seeds
- Compare and contrast fruits and seeds of different plants
- Recognize that people eat some fruits

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Describe illustrations (L.K.13)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)
- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)

- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds (L.K.19)
- Learn new words from read-alouds and discussions (L.K.24)

Core Vocabulary

blossoms, *n.* The flowers on a plant or tree
Example: The blossoms on the apple tree were beautiful and brightly colored.
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 tasting very good
Example: The dinner that 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	**Personal Connections**		10
	Purpose for Listening		
Presenting the Read-Aloud	**The Fruits of Polly's Labor**		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	15

6A The Fruits of Polly's Labor

Introducing the Read-Aloud

***10** minutes*

Personal Connections

Tell students that there are many different types of foods—meat, like hamburger or chicken; vegetables, like green beans or peas; and fruit, like apples or oranges. Ask students to name other fruits they have eaten or seen. What fruits do they like best? Are there any parts of fruit that a person can't eat? What are some of the different colors and shapes of fruits?

Tell students that they are about to hear more from Polly the Honeybee.

Purpose for Listening

Tell the students to listen carefully to find out about the different kinds of fruit Polly describes.

Presenting the Read-Aloud — *10 minutes*

The Fruits of Polly's Labor

Buzz, buzz! It's Polly the Honeybee again. Your teacher asked me to come back to tell you a little more about flowers and plants. Last time I told you why I visit flowers. I told you that I visit them to collect nectar and pollen. But I also told you that I help to pollinate flowers by carrying pollen from one flower to another. 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.[1] Lots of plants also produce a special package to hold the seeds. The package that holds the seeds is called the **fruit.**

1 To *produce* means to make.

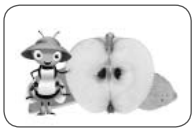
Come along and I will show you some different kinds of fruit that I helped create.

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, so I didn't need too much convincing to buzz over and roll around in those blossoms. And the blossoms didn't disappoint me, either. The nectar was **scrumptious.**[2] So, that was good for me. But, look! It was good for the tree, too. 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.

2 *Scrumptious* is another word for *delicious*.

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, one of you people may come and pick the apple and eat it.



Show image 6A-2: Sliced apple[3]

Here's an apple that's been picked off the tree and sliced open. You can see the seeds. The seeds are the black things in the

3 This is an apple that has been sliced, or cut, in half.

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

Here's another tree I pollinated. It's called a cherry tree. Some time ago this tree produced lovely pink blossoms. 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

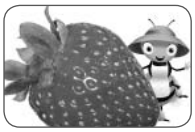
Have you ever bitten into a fresh cherry? If you have, your teeth have probably bumped into a cherry seed. Inside a cherry is a big hard thing called a cherry pit. The seed of the cherry is actually inside the cherry pit. The tasty part of the cherry that people eat is the soft fruit around the pit. 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. [4]

4 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. [5] 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.

5 Who are Polly's honey-making pals?



Show image 6A-6: Strawberry

Look at this ripe strawberry. You can see the seeds all over the outside of the strawberry. The seeds in 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 hauled 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 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!

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

Comprehension Questions (10 minutes)

1. What do we call the special package or part of a plant that holds seeds? (the fruit)
2. Why is the seed so important? (It is the beginning of a new plant.)
3. What is another word for *blossom*? (flower)
4. What are some of the fruits that Polly talked about? (apples, cherries, strawberries, and watermelons) Can you describe the seeds of each of those fruits? (apples—small and dark brown inside the core; cherries—hard, white pits inside the cherry; strawberries—teeny-tiny black seeds on the outside; watermelon—black and sometimes white seeds inside the watermelon)

5. What could happen to a ripe apple that falls off a tree? (It could be eaten or it could grow into a new apple tree.)
6. Which parts of apples, cherries, strawberries, and watermelons do people eat? Which parts don't they eat? (Answers may vary.)
7. [Show Image Cards 3 (apples/apple seeds) and 4 (cherries/cherry pits).] How are cherries the same as or different from apples? (Cherries are smaller than apples, but both have seeds, and both can be red.)
8. *Think Pair Share:* [Show Image Cards 2 (strawberries/strawberry seeds) and 3 (apples/apple seeds).] How are strawberry seeds the same as or 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.)

Word Work: Fruit (5 minutes)

1. In the read-aloud today, we heard that lots of plants produce a special package to hold seeds called *fruit.*
2. Say the word *fruit* with me.
3. On some plants, the part that holds the seeds is called the fruit.
4. My favorite fruit is the apple.
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 _____."
6. What's the word we've been talking about?

As a follow-up, have the rest of the class share what their favorite fruits are.

Complete Remainder of the Lesson Later in the Day

6B The Fruits of Polly's Labor

Extensions

***15** minutes*

Fruits and Seeds

Play a guessing game using Image Cards 5–12 (various fruits and seeds). Have the students try and guess which seed goes with which fruit. Record their answers on chart paper, chalkboard, or whiteboard, and then show the 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 the students the seeds of the fruits.

7 Johnny Appleseed

Lesson Objectives

Core Content Objectives

Students will:

- Understand that people eat the fruit of apple trees
- Explain that seeds are the beginning of new plants, and specifically that apple seeds are found inside the core of the apple
- Demonstrate familiarity with the tall tale "Johnny Appleseed"

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Describe illustrations (L.K.13)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)

- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds (L.K.19)
- Learn new words from read-alouds and discussions (L.K.24)

Core Vocabulary

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

hollow, *adj.* With a space inside; empty
Example: The mouse ran through the hollow pipe.
Variation(s): hollower, hollowest

mills, *n.* Buildings with machinery for grinding or crushing different food crops into other forms of food
Example: The apples were shipped to many mills to be pressed and made into apple cider.
Variation(s): mill

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

twig, *n.* A small branch of a tree
Example: Taren found a green twig to roast her marshmallow over the bonfire.
Variation(s): twigs

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**		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	15

7A Johnny Appleseed

Introducing the Read-Aloud *10 minutes*

What Have We Already Learned?

Ask 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 package or plant part that holds seeds ? (the fruit)
- What are some of the fruits that Polly talked about? (apples, cherries, strawberries, and watermelons)
- What is your favorite fruit? (Answers may vary.)

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. If your students have already listened to the read-alouds in *Colonial Towns and Townspeople,* explain that Johnny Appleseed was born around this time period. Ask if they can guess, from his name, what his favorite fruit was. (apple)

Purpose for Listening

Tell students to listen to find out about the things that Johnny Appleseed did because he loved apples.

Presenting the Read-Aloud — *10 minutes*

Johnny Appleseed

Show image 7A-1: Johnny Appleseed

This is the story of John Chapman, better known as Johnny Appleseed. He lived in this country a long time ago, when America was still growing. There weren't many towns or cities, and there was a lot of wide-open land.

Now, Johnny was an unusual kind of **hero.**[1] He didn't lead any soldiers in a war, and he didn't become the President, and he didn't sail ships across the oceans, and he didn't kill dragons or rescue princesses. But still, he was a real hero. And what he did best was—well, you'll see.

1 A hero is a very brave person.

Show image 7A-2: Baby Johnny

People say that when Johnny was a baby, he'd fuss and cry and keep the family awake until they put a **twig** with apple blossoms in his little hand.[2] Then he wouldn't bang the petals off, or eat them, like other babies would. Instead, he'd just lie there in his crib, looking at those apple blossoms, sniffing at them now and then, as happy as an angel full of ice cream.

2 A twig is a small branch of a tree.

Show image 7A-3: Johnny and his mother

When Johnny was a little boy, his mother would wander with him in the woods and show him plants and squirrels and such. He loved the birds and animals almost as much as he loved apples and apple trees. He was never happier than when he was lugging around some little animal or other, even if it was a skunk. And whenever an animal in the neighborhood was sick or had a broken leg, people would say, "Just take it over to Johnny Chapman. He'll fix the little critter right up."[3]

3 What do you think a critter is?

When Johnny grew up, he got an idea in his head, and he couldn't get it out. His idea was that there ought to be more apple trees, lots more, and that he was just the fellow to plant them. But he couldn't carry trees all over the country! What he needed was seeds, and plenty of 'em.[4]

4 Where do you think Johnny might get apple seeds?

Show image 7A-4: Johnny getting seeds

Near where Johnny lived there were **mills** where folks made apple cider. They pressed the juice out of the apples and had no use for the seeds. But Johnny could use them. He took the seeds, washed them off, and let them dry in the sun. When he finished, he had sacks and sacks full of seeds.

So Johnny set off westward, carrying his apple seeds. He carried so many seeds that he couldn't bring much of anything else. He found a place for his two favorite books, the Bible and *Aesop's Fables,* and he needed a cooking pan, so he wore that on his head.

Show image 7A-5: Johnny's journey

Johnny walked all over the country, sleeping out in the open, eating whatever was handy, tramping though the mud and snow. He walked and walked, stopping here and there to plant the seeds all along rivers, in meadows, wherever people would let him. Whenever he met a family moving west (which a lot of families were doing in those days), he'd give them a little pouch of seeds so that they could grow their own apple trees. And that's how folks came to know him as "Johnny Appleseed."

Show image 7A-6: Johnny giving away seeds

Some people thought Johnny was foolish because he gave away his seeds for free—and these people thought that it only made sense to do something if you were going to make money doing it. But Johnny Appleseed would just say, "Money?" And he would snap his fingers. "What do you do with money? Just spend it for clothes or houses or food." Then, without taking a cent from anyone, he'd be on his way.

When anybody brought up the subject of animals, Johnny Appleseed was likely to go through that finger-snapping business again. "Leave animals alone," he'd say, "and they'll do the same by you. They're your brothers and sisters, sort of, only they don't borrow clothes, and they don't argue with you the way human brothers and sisters do."

Show image 7A-7: Johnny and the bear

Once, on a cold winter's day, Johnny was slushing through the snow, and night came. He looked around for some big **hollow** log to sleep in.[5] He found a dandy log, built a fire nearby, cooked his mush, ate it up, and started to crawl into the hollow log.

5 *Hollow* means there is open space on the inside.

When he'd got in about to his hip, he heard a groaning grunt.[6] Peeking in, he saw a big bear lying in there with his paws crossed on his chest, enjoying his winter snooze. Johnny backed out, inch by inch, slow as a snail, being quiet so as not to disturb the bear's sleep. "Beg your pardon, Brother Bear," he whispered. Then he yawned, stretched out, and curled up in the snow.

6 What do you think is making that groaning grunt?

Show image 7A-8: Johnny's legacy

Johnny Appleseed had something he believed in, and he went to a lot of trouble to bring it about. He wanted to see a nation of apple **orchards,** with apple trees in bloom in the spring,[7] and the men and women and children everywhere strong and good and healthy, like Johnny himself.

7 Orchards are places where fruit trees are grown.

Johnny lived a long, long time ago, but people say that, even today, if you go to a certain part of Ohio in apple blossom time, and get up before sunrise, and go to a certain old apple tree, you'll see the smoke from Johnny's fire as it dies out. Maybe you'll even catch a glimpse of Johnny's spirit as it moves along westward with the spring, waking up the blossoms and tending the orchards.[8]

8 Do you think this last part of the read-aloud is fact or fiction? Do you think you can really see the smoke from Johnny Appleseed's fire now?

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

Comprehension Questions **(10** minutes**)**

1. What did Johnny Appleseed do because he loved apples? (He planted apple seeds so that apple trees would grow, and he gave seeds to families moving westward so that they could plant apple seeds, too.)
2. How did John Chapman get the nickname Johnny Appleseed? (by planting apple seeds and also giving the seeds to others)
3. Where did Johnny Appleseed get apple seeds for planting? (apple cider mills)
4. How did Johnny feel about getting money for the work that he did? (Money didn't seem to be important to him.)
5. Why was it important to Johnny Appleseed to plant apple seeds to grow apple trees? (for their beauty, for their fruit)
6. The read-aloud said that Johnny Appleseed was a hero. Do you agree? Why or why not? (Answers may vary.)
7. If you were traveling across the country planting seeds, what kind of seeds would you plant? Why? (Answers may vary.)
8. *Think Pair Share:* How are you like Johnny Appleseed? How are you different? (Answers may vary.)

Word Work: Hero **(5** minutes**)**

1. The read-aloud said, "Now, Johnny was an unusual kind of *hero.*"
2. Say the word *hero* with me.
3. A hero is a very brave person who has done important things. The word *hero* is used for boys or men, and the word *heroine* is used for girls or women.
4. A person may be considered a hero or heroine to a small group of people like your family, or 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* or *heroine* when you tell about them. (Ask two or three students. If necessary, guide and/or rephrase the students' responses: "My dad is my hero because . . . ")
6. What's the word we've been talking about?

For follow-up, ask students why various people they are familiar with might be considered heroes or heroines. You may choose people in the school or community, or people that you have studied or read about in the classroom. Remind the students to use the word *hero* or *heroine* when talking about each person.

Complete Remainder of the Lesson Later in the Day

7B Johnny Appleseed

Extensions

***15** minutes*

Image Review

Show images 7A-2 through 7A-8. Ask students to explain what is happening in each picture. Help them to create a continuous narrative which follows the life and adventures of Johnny Appleseed. As the 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, so that you can reread their version to them.

8 Deciduous Trees

Lesson Objectives

Core Content Objectives

Students will:

- Understand 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
- Understand that an apple tree is a deciduous tree
- Understand that seeds are the beginning of new plants
- Identify how deciduous trees are important to people and nature

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to partner's comments, with either an adult or another child of the same age (L.K.3)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Make predictions prior to and during a read-aloud, based on the title, pictures, and/or text heard thus far and then compare the actual outcomes to predictions (L.K.12)

- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)
- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Compare and contrast similarities and differences within a single read-aloud or between two or more read-alouds (L.K.18)
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds (L.K.19)
- Draw pictures and/or dictate ideas to represent details or information from a read-aloud (L.K.21)
- Learn new words from read-alouds and discussions (L.K.24)

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 lays.
Variation(s): shed, shedding

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Have We Already Learned?**		10
	Essential Background Information or Terms		
	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

8A Deciduous Trees

Introducing the Read-Aloud

***10** minutes*

What Have We Already Learned?

Ask the students what kind of tree Johnny Appleseed wanted to see growing across the country and why these trees were important to him.

Show image 7A-8: Johnny's legacy

Remind students that Johnny Appleseed loved apple trees because they could provide food for many people. Prompt discussion using the image and the following questions:

- What parts does an apple tree have?
- What things does an apple tree need in order to live and grow?
- Why do people plant apple trees?

Remember to repeat and expand upon students' responses using richer and more complex language, including, if possible, any read-aloud vocabulary.

Essential Background Information or Terms

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?

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 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, "Can you see the green in this 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

Ask students if they think apple trees are deciduous trees or evergreen trees. Tell them to listen carefully to the read-aloud to find out if their predictions are correct.

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

Deciduous Trees

Show image 8A-1: Winter forest

There are many different kinds of plants in the world. While 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 to each type of tree again 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 have four seasons, or times of the year, when they change. [4] 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 Were your predictions correct?

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.)

4 Can anyone tell me the four seasons of the year?

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 inside of the flowers. When she flies from flower to flower, she helps to spread the pollen that is going to help the apples grow. [5]

5 Who remembers what this is called?

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. Inside the apples are apple seeds which can be planted in the soil. In a year or so, if the seed gets enough nutrients, water,

air and light, a seedling will emerge from the ground. The seedling may grow into a sapling—a baby tree—and in as few as four years may become an apple tree with apples of its own!

Also, 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.[6]

6 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 the water in the ground can freeze.[7] With less light from the sun, the tree's leaves cannot perform photosynthesis. Remember, photosynthesis is the plant's way of using light to make its own food. So, because the apple tree cannot make food during the winter, it must conserve, or save, its energy. It does this by becoming **dormant.** This means the tree goes to sleep for the winter, sort of like a bear. When the apple tree goes dormant, it stops making leaves, blossoms, and apples, and its branches become bare.

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

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

So, let's review. 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 and sit under the shade of its large green leaves. 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.

8 (Point to each season as you review.)

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.

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

Comprehension Questions **(10 minutes)**

1. What are deciduous plants? (plants that lose their leaves)
2. What are evergreen plants? (plants that keep their leaves and are always green)
3. Which kind of plant is the apple tree? (deciduous)
4. When do deciduous plants start to lose their leaves? (in the fall)
5. Why are deciduous plants bare in the winter? (They become dormant; they don't get enough sunlight to make food.)
6. *Think Pair Share:* What are some ways apple trees help people and animals all year around? (Answers should reflect an understanding of the different seasons of the apple tree and should include answers such as food, shelter, oxygen, climbing, etc.)

Word Work: Bare **(5 minutes)**

1. The read-aloud said that the apple tree has *bare* branches in the winter.
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, "bare." If I say something that is not bare, say, "not bare."

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

Complete Remainder of the Lesson Later in the Day

8B Deciduous Trees

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, winter, and fall. 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.

9 Evergreen Trees

Lesson Objectives

Core Content Objectives

Students will:

- Understand that evergreen plants are one type of plant that stays green all year and does not become dormant
- Understand that a pine is a type of evergreen tree
- Compare and contrast deciduous and evergreen trees
- Identify how evergreen trees are important to people and nature

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to partner's comments, with either an adult or another child of the same age (L.K.3)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)

- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Compare and contrast similarities and differences within a single read-aloud or between two or more read-alouds (L.K.18)
- Draw pictures and/or dictate ideas to represent details or information from a read-aloud (L.K.21)
- Learn new words from read-alouds and discussions (L.K.24)

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

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

sap, *n.* The liquid that carries food and nutrients to different parts of the plant
Example: The sap moved through the tree.
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	**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, drawing tools	15

9A Evergreen Trees

Introducing the Read-Aloud

***10** minutes*

What Have We Already Learned?

Show image 9A-1: Winter forest

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

- What are the two main types of trees? How are they different?
- What happens to the leaves of deciduous trees in the fall or autumn?
- Why do deciduous trees lose their leaves in the fall?
- When do deciduous trees begin to grow new leaves?

Purpose for Listening

Tell students that today they will learn more about the second type of tree, the evergreen tree. Tell the 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 in some ways to the deciduous trees you learned about earlier. But there are also several differences.

We use the word *evergreen* to describe plants that stay leafy and green all 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

Perhaps your family or people in your neighborhood decorate evergreen trees at Christmas or other holidays. People decorate evergreens because they are the most colorful things in nature during the winter months in many parts of our country. One type of evergreen tree people often choose 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. Pine trees are very common throughout the world. Wherever you find pine trees, you are likely to find lots of sharp, brown pine needles covering the ground.

2 Needles are very thin leaves.

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 like in deciduous trees.

3 Can you remember what photosynthesis is?

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. Evergreen trees *do* lose their needles and grow new ones, but not all at once like deciduous trees.

Show image 9A-5: Pine cones on ground

Wherever you find pine trees or other types of 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. Do you know what these are called? [4]

4 (Pause for students to respond.)

Most evergreen trees are called **conifers.** [5] Conifers make **cones.** The cones in this picture are called pine cones. Unlike deciduous trees, conifer trees do not have flowers and they do not have fruit. Instead, the seeds grow inside their cones, like these pine cones. When a cone opens on the ground, the seeds fall out and are spread by the wind. [6]

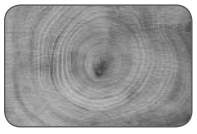
5 or trees that have needle-like leaves

6 Why are the seeds important?

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.

7 (Point to the pine sapling in the picture.)



Show image 9A-7: Tree rings

Here's something very interesting you may not know about trees. Each year, a tree adds a new layer of wood. 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, and both are very important to people and nature. 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. How are evergreen trees different from deciduous trees? (Deciduous trees lose their leaves in the fall, but evergreen trees stay green all year.)
2. What are the leaves of an evergreen called? (needles)
3. Why are the needles of an evergreen important? (This is where the plant's food is made during photosynthesis.)
4. What important part of a plant is found in cones? (seeds)
5. How can you tell how old a tree is? (Count the growth rings; each ring equals one year.)
6. 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 fall to the ground in the autumn, while evergreen trees have thin needles that do not fall to the ground all at the same time.)
7. *Think Pair Share:* Which type of tree is your favorite: deciduous or evergreen? Why? (Answers may vary.)

Word Work: Deciduous and Evergreen (5 minutes)

1. The read-aloud said, "*Evergreen* trees are similar in some ways to . . . *deciduous* trees . . . "
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 it. (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 it describes a deciduous tree, say, "deciduous." If it describes an evergreen tree, say, "evergreen."

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

Complete Remainder of the Lesson Later in the Day

9B Evergreen Trees

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 green needles and cones. Remind them that although evergreen trees are always green, they can look different depending on the season or weather. Encourage them to draw a background to help show these differences. They may even want to decorate their evergreen tree for the holidays. Remember to repeat and expand upon students' responses using richer and more complex language, including, if possible, any read-aloud vocabulary.

PP2 *Pausing Point 2*

Note to Teacher

This is the end of the read-alouds about pollination and deciduous and evergreen plants. You may choose to pause here and spend one to two days reviewing, reinforcing, or extending the material taught thus far.

If you do pause, you may have students do any combination of the activities listed below. The activities may be done in any order. You may wish to do one activity on successive days. 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 seeds are the beginnings of new plants
- Understand that some plants produce fruit to hold seeds
- Compare and contrast fruits and seeds of different plants
- Understand the basic life cycle of plants
- Identify the petals on a flower
- Describe how bees collect nectar and pollen
- Understand how bees make and use pollen
- Describe the important role bees play in plant pollination
- Demonstrate familiarity with the tall tale “Johnny Appleseed”
- Identify the parts of specific plants that are eaten by people
- Explain that apple seeds are found inside the core of the apple
- Compare and contrast deciduous and evergreen plants

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.

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 domain introduction. You may also choose to have the students select a read-aloud to be heard again.

Key Vocabulary Brainstorming

Materials: Chart paper

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

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 is that they learned about Johnny Appleseed. Divide the class into groups and have students

take turns acting out their drawings. Make sure students talk about what they are doing and encourage them to use key vocabulary words like *seed* or *fruit.*

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 the students brainstorm important information about pollination, and deciduous and evergreen 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.

10 Interesting Plants and Plant Facts

Lesson Objectives

Core Content Objectives

Students will:

- Understand that there are many different kinds and sizes of plants
- Understand that different kinds of plants grow in different environments
- Identify the parts of specific plants that are eaten by people

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Describe illustrations (L.K.13)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)

- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds (L.K.19)
- Evaluate and select read-alouds, books, or poems on the basis of personal choice for rereading (L.K.23)
- Learn new words from read-alouds and discussions (L.K.24)

Core Vocabulary

awe-inspiring, *adj.* Spectacular or amazing
Example: Seeing a rainbow can be awe-inspiring.
Variation(s): none

carnivorous, *adj.* An animal that eats other animals or meat
Example: The tiger is a carnivorous animal.
Variation(s): none

groves, *n.* Groups of trees
Example: There were many groves of maple trees in the area.
Variation(s): grove

lure, *v.* To attract something
Example: Ben used a dog treat to lure his dog back into its cage.
Variation(s): lures, lured, luring

rare, *adj.* Unusual
Example: Lots of rain in the desert would be rare.
Variation(s): rarer, rarest

At a Glance	Exercise	Materials	Minutes
Introducing the Read-Aloud	**What Have We Already Learned?**	Image Cards 13–19	10
	Purpose for Listening		
Presenting the Read-Aloud	**Interesting Plants and Plant Facts**		10
Discussing the Read-Aloud	**Comprehension Questions**		10
	Word Work: Rare		5
 **Complete Remainder of the Lesson Later in the Day**			
Extensions	**Student Choice**		15
Take-Home Material	**Parent Letter**	Instructional Master 10B-1	

10A Interesting Plants and Plant Facts

Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

Show students Image Card 13 (deciduous tree). Ask students what type of tree this is. Review with students the characteristics of deciduous trees. Then show students Image Card 14 (evergreen tree). Ask students what type of tree this is. Review with students the characteristics of evergreen trees.

Show students Image Cards 15 (flower), 16 (seed), 17 (stem), 18 (leaf), and 19 (root), and have them name each part of the plant.

Ask students how plants get their food. Make sure they understand that plants make their own food through the process called photosynthesis.

Purpose for Listening

Tell students that today they will be hearing about a number of different plants, each of which has something unusual about it. Tell students to listen to find out how each of these plants is unusual.

Presenting the Read-Aloud — *10 minutes*

Interesting Plants and Plant Facts

Show image 10A-1: Giant sequoia (redwood) [1]

All living things—not just plants—are amazing in their own ways. But some living things are truly **awe-inspiring,** meaning that when people see them for the first time they say, "Wow! That's incredible!" You probably would not say that if you saw a dandelion, but you might say that if you stood at the base of a giant redwood tree like the one in this picture.

1 What do you see in this picture?

Redwood trees are also known as sequoia trees. They are among the largest living things on earth. The one in this picture is famous because someone carved a tunnel through it, but most redwood trees do grow this large.

Show image 10A-2: Map of the U.S. showing redwood range

Redwoods are only found along the northwest coast of North America, where the climate is cool and rainy. There were a lot more redwoods in America a hundred years ago than there are today. But people have chopped many of them down in order to use the wood. Redwood is very valuable, and you can easily get as much wood from a single redwood as you would from twenty oak or pine trees. Fortunately, there are still a few large **groves** of redwood trees where the trees are protected by law, meaning they cannot be cut down, no matter how much money someone wants to pay. [2]

2 A grove is a group of trees growing close together.

Show image 10A-3: Sequoias

Redwoods are evergreens. [3] A redwood tree can reach a height of nearly four hundred feet. That's about the same height as one hundred kindergartners standing on one another's shoulders! Redwoods live an incredible two thousand years or more. That's a long time, in case you were wondering.

3 Who remembers what this means?

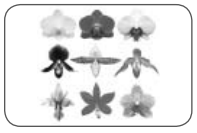
Show image 10A-4: Redwood cones

Here's another amazing fact about redwoods: Their cones are smaller than the cones from an ordinary white pine or other conifer you might find in your backyard. A redwood cone is about an inch in length, and its actual seeds are no larger than your fingernail. One of those fingernail-sized seeds can grow into the largest tree on earth. If that's not amazing, nothing is!

Show image 10A-5: Rafflesia flower

Speaking of big things in the plant kingdom, this **rare** flower is from a Rafflesia (ruh-FLEE-zhuh) plant.[4] This plant produces the largest flower in the world. It can grow to be more than three feet across, or about as big as a young child.

4 When something is rare, it is hard to find.



Show image 10A-6: Orchids

These flowers are called orchids, and they are interesting for two reasons. First, there are more than 22,000 different types of orchids.[5] But there is something more interesting about orchids: They produce the smallest seeds in the world. Orchid seeds are about the size of dust flakes. It takes roughly 30,000 orchid seeds to equal the weight of just one grain of wheat. Isn't it amazing that something so tiny can grow into something so colorful?

5 Is that a lot or a few?

Show image 10A-7: Venus flytrap

You can tell just by looking that there is something strange or unusual about this plant. Do you think you would be tempted to touch this plant if you saw it in the woods?

This plant is called a Venus flytrap. The second word in the name Venus flytrap gives you a hint of what makes this an amazing plant.[6] Venus flytraps are **carnivorous** plants, meaning they eat meat! That is very rare in the plant kingdom.

6 They trap flies to eat them!

Interestingly, Venus flytraps do all the things other plants do: They have roots to gather nutrients from the soil and leaves to perform photosynthesis. However, Venus flytraps tend to grow in very poor soil, so they get extra nutrients by eating insects.

Show image 10A-8: Venus flytrap close-up

Have you ever tried to catch a fly with your hands? It is very difficult. Flies are fast and they usually fly off before you can get close. How does a Venus flytrap do it?

Since it cannot run around and hunt like a person, lion, or other carnivore, the Venus flytrap must **lure**[7] its prey. Flies and other insects are attracted to the leaves' bright red coloring. They land on the leaves and enjoy a taste of the sweet nectar produced by the plant.

7 or attract

As soon as the fly lands, the Venus flytrap springs into action. See the little brown hairs? They are the plant's feelers. If a fly or other bug is unlucky enough to lean against one of those hairs, the leaf will snap shut in as little as a tenth of a second! That's faster than you can say *fly.* Once trapped, the insect is digested, and the plant uses the nutrients from the insect's body.

8 Would you want to keep a Venus flytrap in your home?

Some people grow Venus flytraps in flowerpots. You don't need a flyswatter if you have one of these: This plant will help keep your house bug-free![8]

Show image 10A-9: Cocoa pods and chocolate[9]

9 What do you see in this picture?

Do you like chocolate? Chocolate is made from the seeds of the cocoa tree, which are called cocoa beans. Cocoa beans are produced in the fruit of the tree, called a cocoa pod, which you see in this picture.

Cocoa beans are very bitter to taste, but if you grind them up and add some sugar and milk, you'll have what you need to make a candy bar or a cup of hot chocolate.

This is a tasty place to end this read-aloud about interesting plants, but we could really go on and on, because there seems to be no limit to the number of amazing and fascinating things you can learn and discover about plants in this world.

Discussing the Read-Aloud — *15 minutes*

Comprehension Questions (10 minutes)

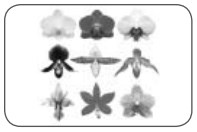
1. What kind of tree is a redwood tree—deciduous or evergreen? (evergreen)
2. Are redwood trees big or small? (big)

Show image 10A-4: Redwood cones

3. You heard that the cones of the redwood are very small. Why is that surprising? (It is surprising because the trees grow to be so big.)

Show image 10A-5: Rafflesia flower

4. What is unusual about a Rafflesia flower? (It is very big.)



Show image 10A-6: Orchids

5. These are orchids. What size is the seed of an orchid? (very small, the size of a dust flake)

Show image 10A-7: Venus flytrap

6. Why does a Venus flytrap eat flies? (The soil it grows in does not have enough nutrients.) How does the Venus flytrap catch a fly? (It attracts the fly with the bright color of its flower, then when the fly lands, it snaps shut.)
7. What do we eat that is made from the beans of a cocoa plant? (chocolate)
8. *Think Pair Share:* Which plant in the read-aloud did you find the most interesting? Why? (Answers may vary.)

Word Work: Rare (5 minutes)

1. In the read-aloud today we heard that the Rafflesia flower is *rare*.
2. Say the word *rare* with me.
3. When something is rare, it does not happen often or is hard to find.
4. The little girl was so excited when she experienced a rare event—seeing a Venus flytrap!
5. Can you think of something that would be rare? Try to use the word *rare* when you tell about it. (Ask two or three students. If necessary, guide and/or rephrase the students' responses: "_____ would be rare.")
6. What's the word we've been talking about?

Use a *Making Choices* activity for follow-up. Directions: I am going to read a list of items. If the item would be rare, say, "That would be rare!" If the item would not be rare, say, "That would not be rare."

1. a green plant (That would not be rare.)
2. a plant that makes its own food (That would not be rare.)
3. a flower as big as a young child (That would be rare!)
4. a plant with roots (That would not be rare.)
5. a plant that eats meat (That would be rare!)

Complete Remainder of the Lesson Later in the Day

10B Interesting Plants and Plant Facts

Extensions

15 minutes

Student Choice

Ask the 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 the 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 in the read-aloud this time 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.

Parent Letter

Send home Instructional Master 10B-1

11 Plants and People

Lesson Objectives

Core Content Objectives

Students will:

- Identify things that plants provide us: oxygen, food, and important products

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)
- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)

- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds (L.K.19)
- Learn new words from read-alouds and discussions (L.K.24)

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 a couple of 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 11B-1	15

11A Plants and People

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 learned about. Remind students about the gigantic turnip they heard about, and ask if they remember what parts of a turnip people eat (both the tops, or greens, and the roots).

As students respond, be sure to 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.

Purpose for Listening

Tell students that eating the fruit or root of a plant or using the wood from trees are only two of the many ways that people use plants. Tell students to listen carefully to find out some other ways people use plants.

Presenting the Read-Aloud — *10 minutes*

Plants and People

Show image 11A-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 11A-2: Fruits and vegetables collage[2]

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.

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

And you already know that fruits like apples come from plants as well. Many fruits are edible, and they are also healthy and tasty, so you should eat them every day.

Show image 11A-3: Corn

This is a picture of one of the most important plants in the world. Believe it or not, corn comes from a special type of grass. Do you like to eat corn on the cob?

Show image 11A-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.

3 Do you like to eat rice?

Show image 11A-5: Rice

Rice is another important food that comes from grass.[3] People in the United States eat rice, but not nearly as much rice as people in many other parts of the world, such as China, Japan, and India. Rice is used to feed billions of people every day!

You have just learned about the three most important food crops in the world: corn, wheat, and rice. They are all grains, or seeds, that come from different types of grasses.

Show image 11A-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.

4 A bouquet is a bunch of flowers arranged together.

Show image 11A-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?

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

Show image 11A-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]

6 (Point to the different parts as you talk about them.)

Show image 11A-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.

Show image 11A-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 11A-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.[7]

7 Have you ever used aloe vera?

Show image 11A-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.[8] 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.

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

Show image 11A-13: Uses for wood

People also use the wood from trees to make fires when it is cold outside. This person is chopping 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.

Show image 11A-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.[9] When you breathe in, that same

9 What is this process called?

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

oxygen travels to your lungs. Oxygen keeps you alive; you need oxygen all day, every day. [10]

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

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

Comprehension Questions (10 minutes)

1. What are some foods that plants provide? (corn, wheat, rice, vegetables, maple syrup, etc.)

Show image 11A-6: Cotton crop

2. How do people use cotton plants? (to make fabric for clothes, blankets, etc.)
3. What kind of plants are car tires, basketballs, and rubber bands made from? (rubber trees)
4. Many plants are used for medicine. Do you remember one plant that is used for cuts and burns? (aloe vera plant)
5. What is lumber, or wood from trees, used for? (building houses, furniture, instruments, baseball bats, etc.)
6. How do plants help people breathe? (They provide oxygen.)
7. *Think Pair Share:* Which of the ways that people use plants surprised you the most? Why? (Answers may vary.)

Word Work: Bouquet (5 minutes)

1. In the read-aloud today we heard that is it nice to give people a *bouquet* of flowers when they are not feeling well.
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?

As a follow-up, have the rest of the students talk about who they would give a bouquet to and why. Ask students what favorite flowers they would use to make a bouquet, i.e., roses, tulips, irises, daisies, etc. Ask them what other kinds of decorations they would add to the bouquet (toys, balloons, etc.).

Complete Remainder of the Lesson Later in the Day

11B Plants and People

Extensions

15 minutes

Plant Parts We Use (Instructional Master 11B-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.

12 George Washington Carver

Lesson Objectives

Core Content Objectives

Students will:

- Understand the life and scientific achievements of George Washington Carver

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc. (L.K.1)
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age (L.K.3)
- Learn and use appropriately common sayings and phrases such as "Great oaks from little acorns grow" (L.K.7)
- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud (L.K.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.K.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.K.14)
- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.K.15)

- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering "why" questions that require recognizing cause/effect relationships (L.K.17)
- Compare and contrast similarities and differences within a single read-aloud or between two or more read-alouds (L.K.18)
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds (L.K.19)
- Evaluate and select read-alouds, books, or poems on the basis of personal choice for rereading (L.K.23)
- Learn new words from read-alouds and discussions (L.K.24)

Core Vocabulary

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

botany, *n.* The study of plants; plant life
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

kidnapped, *v.* Took someone away by force
Example: The boy was kidnapped, but was later returned safely to his parents.
Variation(s): kidnap, kidnaps, kidnapping

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**		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	trade book	

12A George Washington Carver

Introducing the Read-Aloud

***10** minutes*

What Have We Already Learned?

Show image 12A-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 loved apple trees, and that he traveled throughout the United States, planting apple seeds wherever he could so apple trees would grow everywhere.

Purpose for Listening

Explain to students that today they are going to learn about another person that became famous for his love of 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 12A-2: George Washington Carver

Today you are going to hear about another man who became famous because of his love of plants. 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. Like Johnny Appleseed, George first developed his interest in plants as a young boy. [1]

1 Do you like to study plants?

Show image 12A-3: George and Susan

George Washington Carver was born in a small cabin near Diamond, Missouri in 1865. This cabin was owned by a man and woman named Moses and Susan Carver. George, his brother Jim, and his mother Mary lived with the Carver family because his mother was a slave who helped the Carvers take care of their family farm. At the time George was born, many people, particularly in the southern United States, owned slaves who were not free to do what they wanted; they were required to work for their owners with no pay, usually on large farms.

When George was just a baby, he and his mother were **kidnapped.** [2] Luckily, George was found again by Moses and Susan Carver who decided to raise George and his brother as if they were their own children.

2 George and his mother were taken away against their will.

Show image 12A-4: Young George

As George grew up, he was often sick and not very strong. As a result, George often stayed at home, helping his adoptive mother Susan with simple chores around the cabin, like washing clothes and cooking. George used his free time to explore the forests that were part of the Carver farm. He spent many hours roaming the woods discovering all sorts of wonderful things. George liked to collect things that caught his eye. [3]

3 Do you like to collect things from outside?

Show image 12A-5: 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.[4] 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 Why would the plants die? What do plants need to survive?

George transplanted plant after plant to this special garden where he looked after each and every plant, watering and caring for them all to be sure 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 do you think George means when says he was collecting his floral beauties and planting them in his little garden? What are floral beauties?

Show image 12A-6: 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 12A-7: 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] Like the Native Americans, 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 his entire life.

6 A canvas is something you paint on.

Show image 12A-8: Photo of George as an adult

George was truly a remarkable and talented person. As a young boy, his adoptive mother, Susan, taught him to read and write at home. At the time when George was growing up, most African Americans were not permitted to attend school, as strange and unfair as that may seem. When George turned twelve, he moved away from home so that he could attend a school for African Americans. There were no schools for African-American boys like George near his home with the Carvers. George proved to be 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 for African Americans called the Tuskegee Institute in Alabama.

Show image 12A-9: 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 poor farmers improve how they grew plants and **crops** on their farms.[7] 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 make-up. He even came up with a number of recipes for foods that used peanuts. George Washington Carver is especially remembered today for these discoveries.

7 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. What is a botanist? (a scientist who studies plants)
2. How did George Washington Carver learn so much about plants? (took care of them, observed them, made his own garden when he was a child, studied botany in college)
3. Why was George Washington Carver called the "Plant Doctor"? (He was very good at healing sick plants.)
4. What did George Washington Carver make his paints from? (plant parts)
5. How did George Washington Carver help poor farmers? (discovered ways to help farmers improve how they grew crops; encouraged farmers to use other crops) What two plants did he encourage farmers to plant? (peanuts and sweet potatoes)
6. *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.)

Word Work: Crops (5 minutes)

1. In the read-aloud today we heard that George Washington Carver discovered many ways to help poor 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?

For follow-up, ask students what types of crops they would like to grow and why. Make sure they use the word *crops* in their responses.

Complete Remainder of the Lesson Later in the Day

12B George Washington Carver

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 turn out 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 domain 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 that they have heard in this domain.

Student Choice

Ask the 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 the students' memories. You may also want to choose one yourself.

Reread the selected text. Feel free to pause at different places in the read-aloud this time, 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.

DA Domain Assessment

This domain assessment evaluates each student's retention of the core content targeted in *Plants.*

10 Domain Assessment

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

Part I (Instructional Master DA-1)

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

- Color dark brown the part of the plant that keeps it in the ground and soaks up nutrients and water. (roots)
- Color light brown the part of the plant that is sealed in a protective covering and will grow into a new plant. (seed)
- Color dark green the part of the plant that supports it and carries water and nutrients to the other parts of the plant. (stem)
- Color light green the part of the plant that makes the food during photosynthesis. (leaves)
- Color red the part of the plant that makes the seeds. (flower)
- 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 II (Instructional Master DA-2)

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 III (Instructional Master DA-3)

Directions: I am going to read some sentences to you. If the sentence is true, circle the letter 'T.' If the sentence is false, or not true, circle the letter 'F.'

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

For Teacher Reference Only:

Copies of *Tell It Again! Workbook*

1B-1

Dear Parent or Guardian,

Over the next several days, your child will be learning about plants and plant parts. So far, your child has learned 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 has been using and learning about. Try to use these words as the come up in everyday speech with your child.

- *plant*— What do you think about that plant over there?
- *plant*—I think we should plant some flowers in the garden.
- *flower*—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

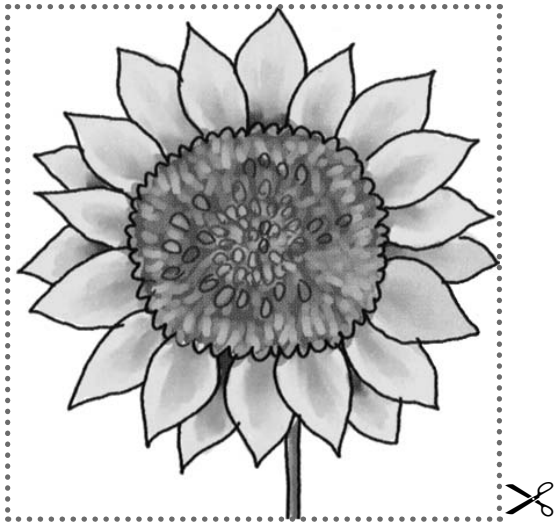
It is very important that you read to your child each day. The local library has many nonfiction books about plants, as well as fictional selections.

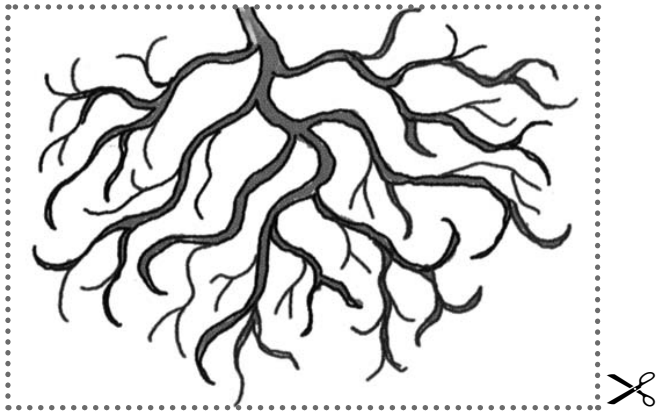
Be sure to praise your child whenever s/he shares what has been learned at school.

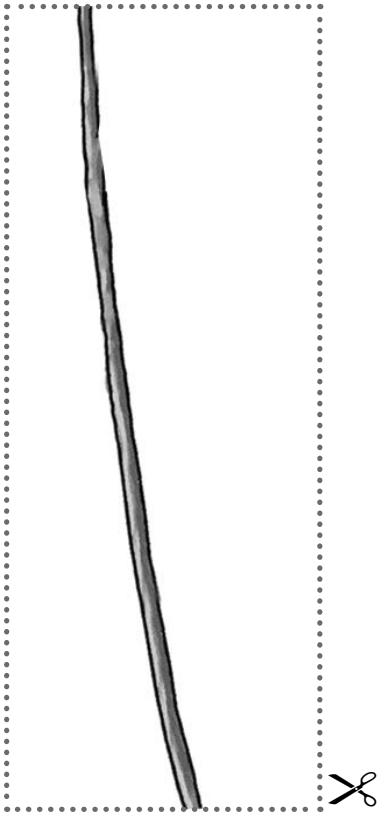
2B-1

Name _____

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



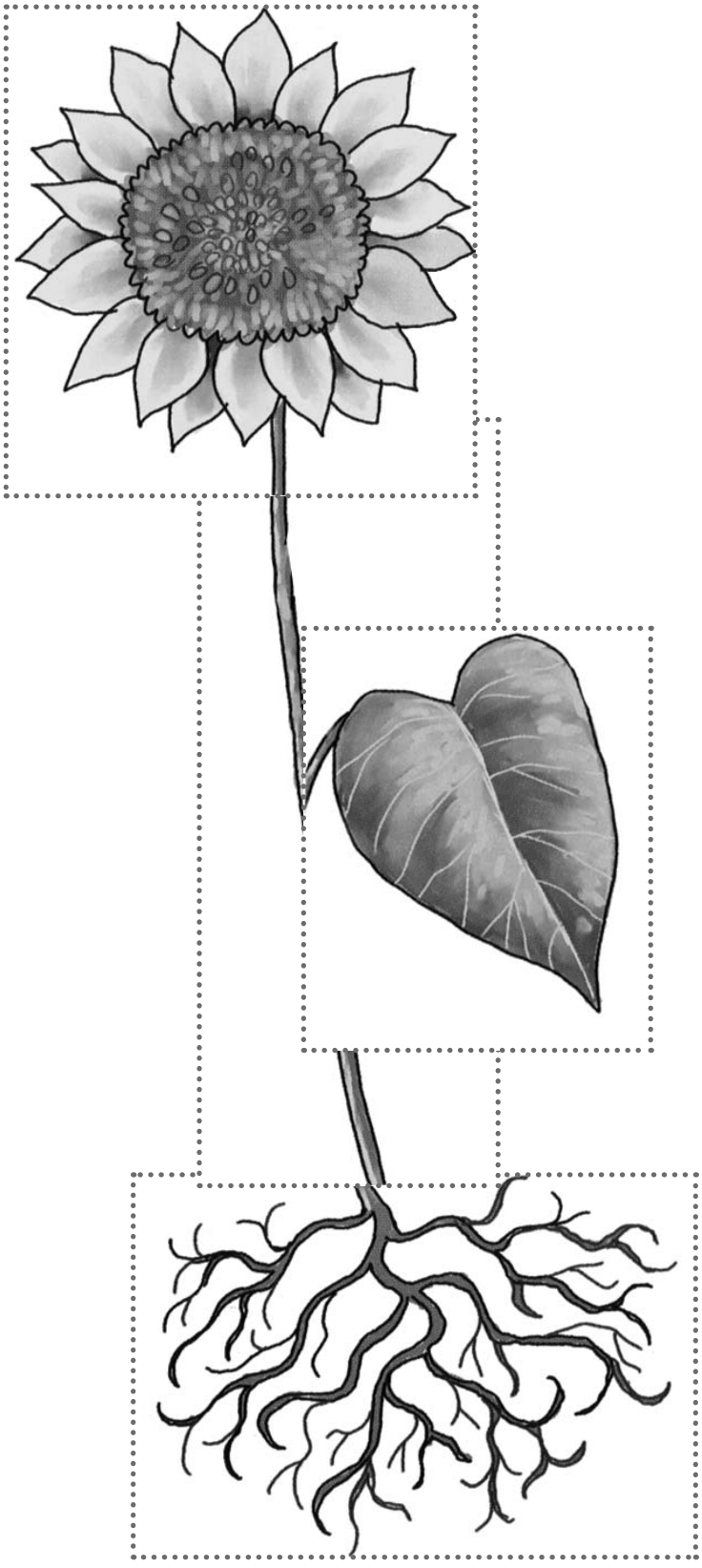




2B-1

Name **Answer Key**

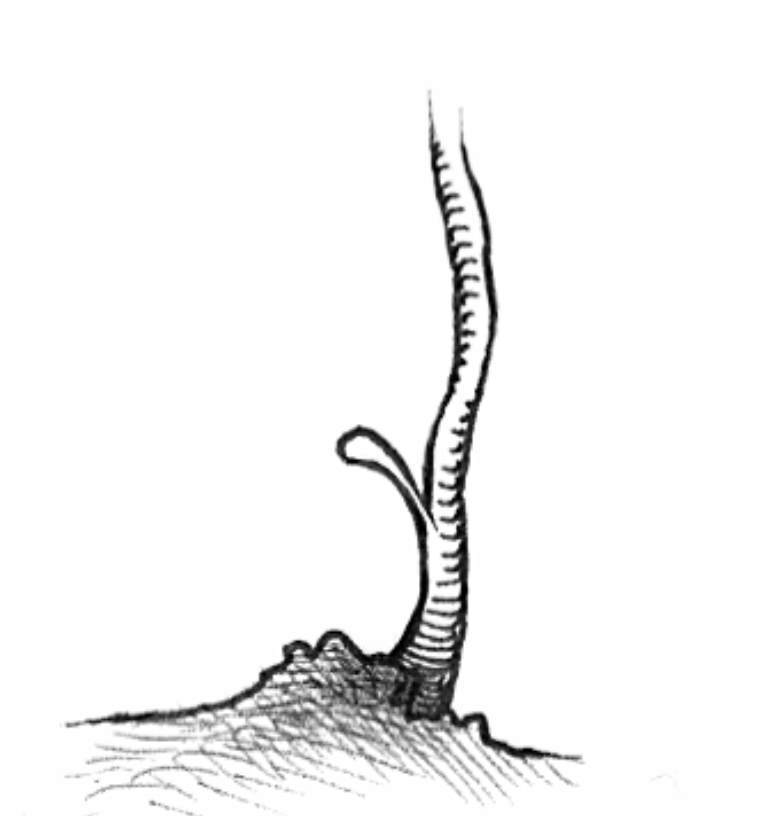
Directions: The worksheet shows the parts of a plant. Cut out and paste the parts to make a whole plant.



3B-1

Name _____

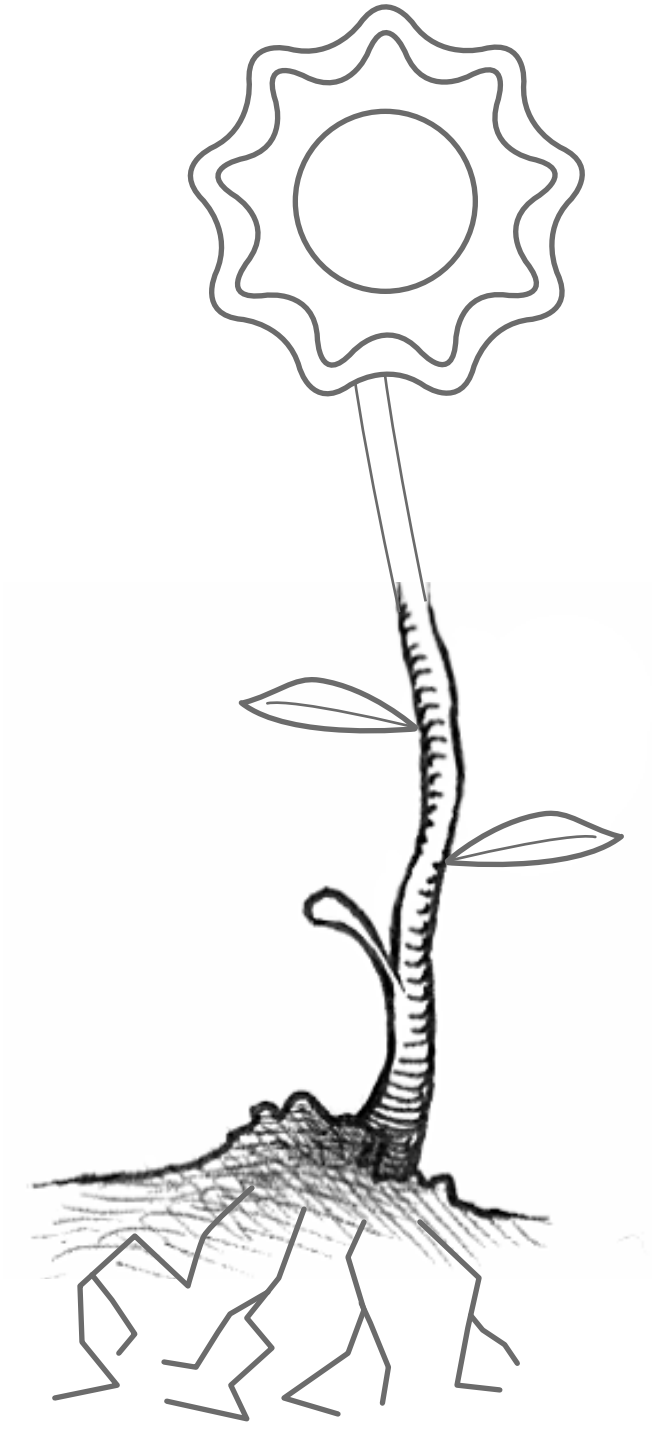
Directions: The worksheet shows the stem of a plant growing out of the earth. Draw in and color the other parts of the plant.



3B-1

Name **Answer Key**

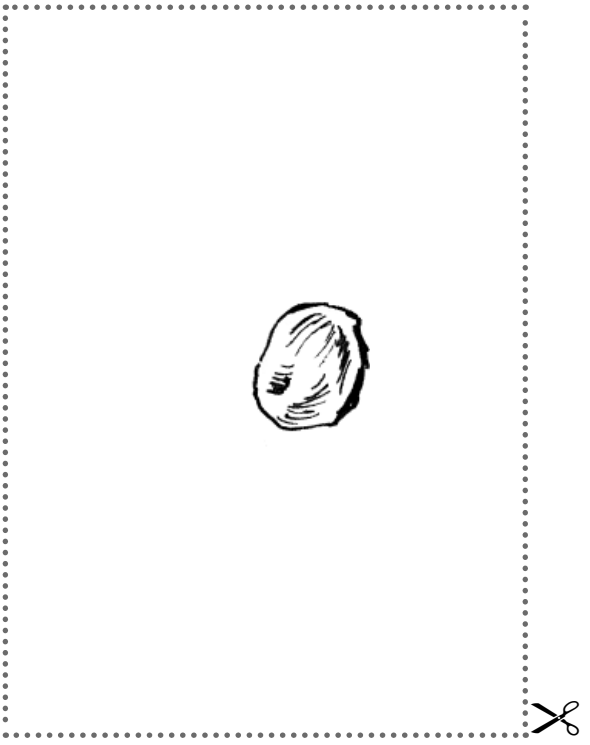
Directions: The worksheet shows the stem of a plant growing out of the earth. Draw in and color the other parts of the plant.

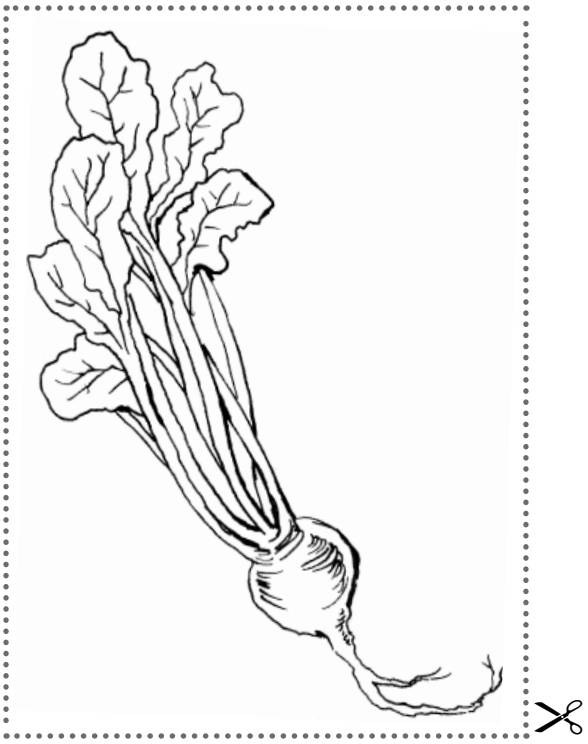


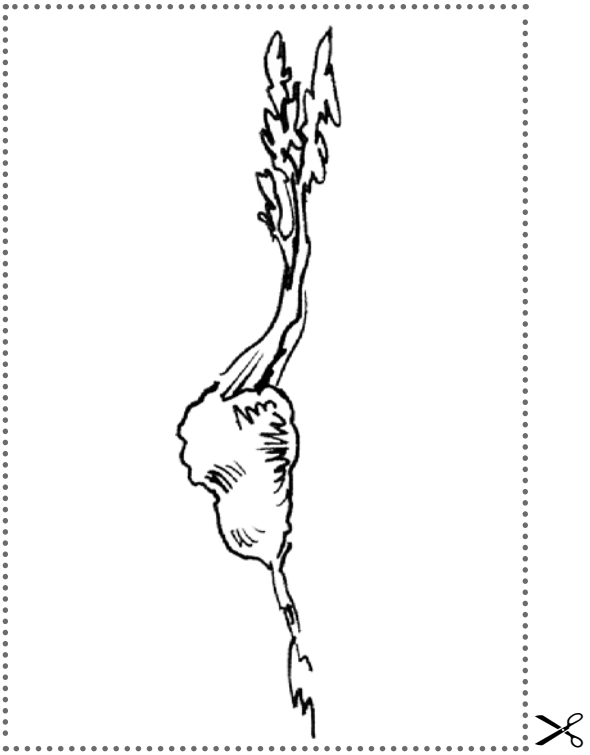
4B-1

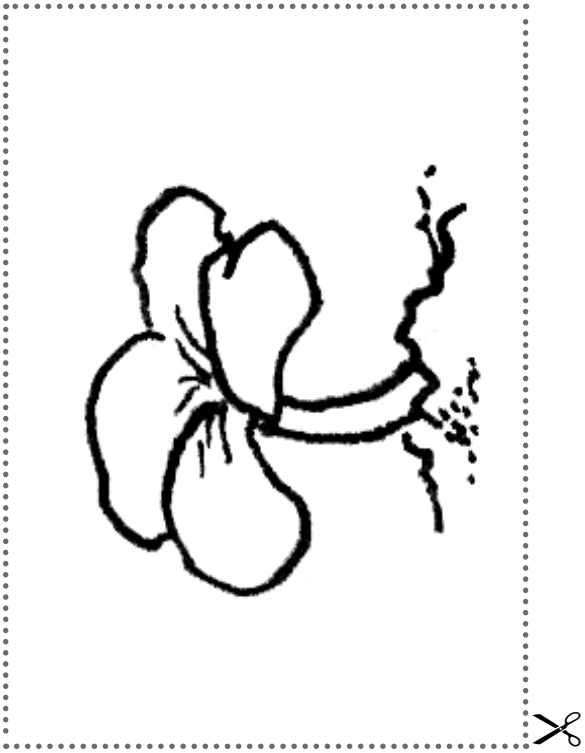
Name _____

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 to 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.









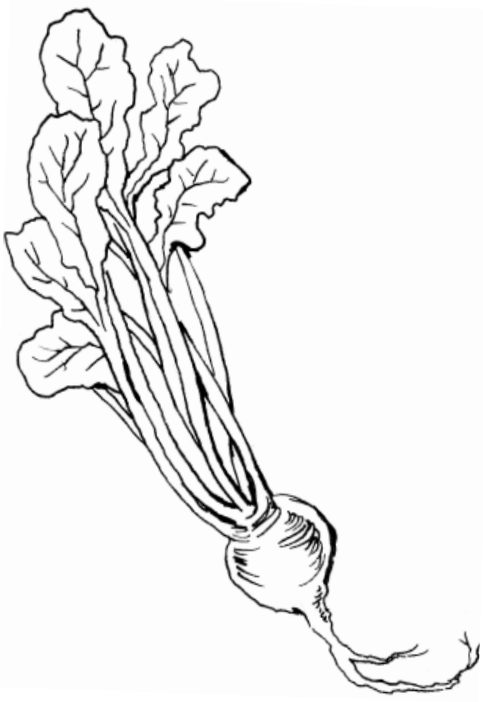
4B-1

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 to 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



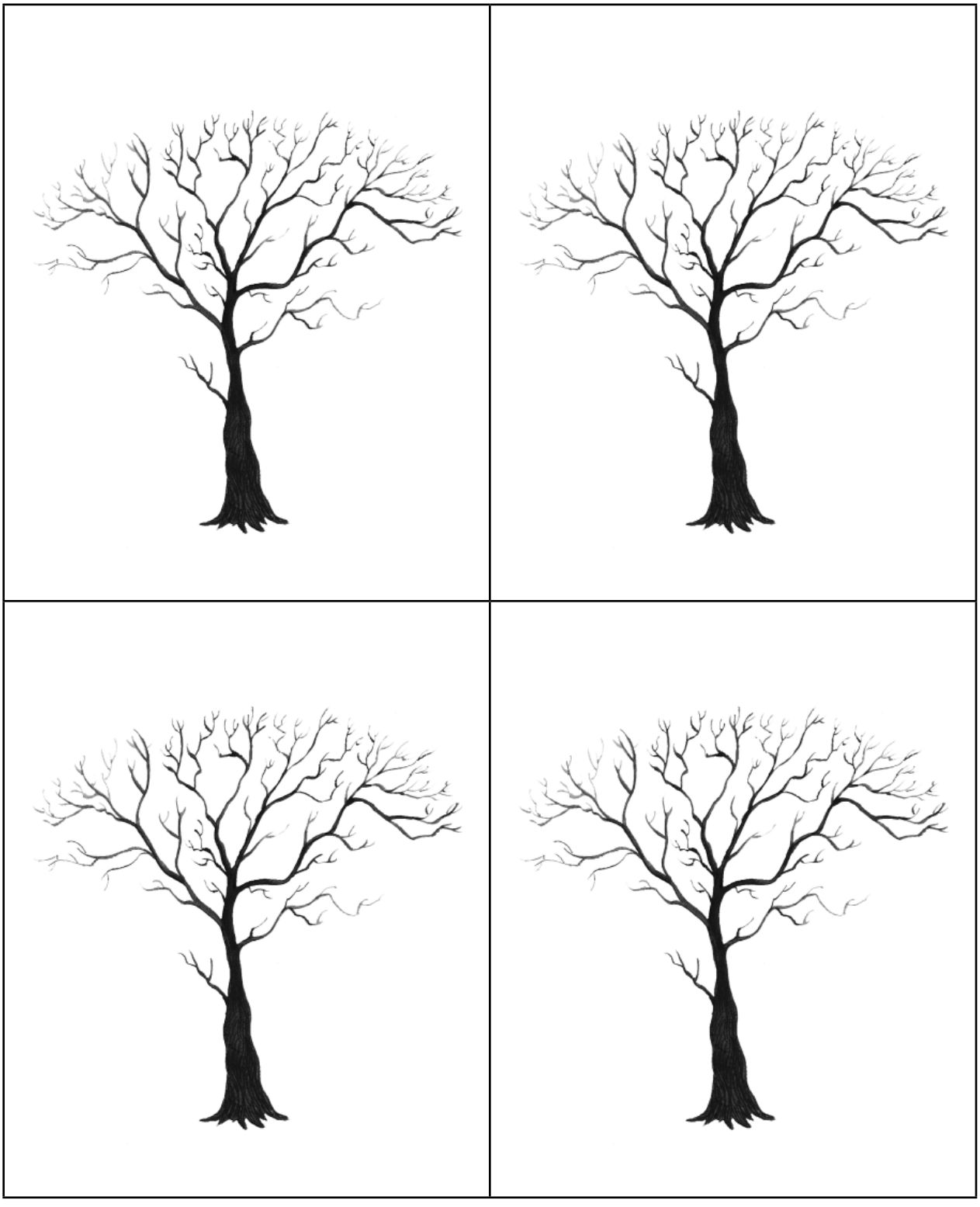
4

2

8B-1

Name _____

Directions: Think about how a deciduous apple tree looks in each season: spring, summer, winter, and fall. 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

Dear Parent or Guardian,

Over the past several days, your child has been learning about plants and plant parts. Your child is now familiar with germination, pollination, and the difference between deciduous and evergreen trees.

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 has been using and learning 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?

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 which plants that food comes from. Also, tell your child which part of the plant the food comes from. You may wish to disclose 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		spinach	rice		orange
radish		parsley	beans		
turnip		basil	oats		
			barley		

5. Read Aloud Each Day

It is very important that you read to your child each day. The local library has many nonfiction books about plants, as well as fictional selections.

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

Your child has also learned 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 praise your child whenever he/she shares what has been learned at school.

11B-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. 

11B-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. 

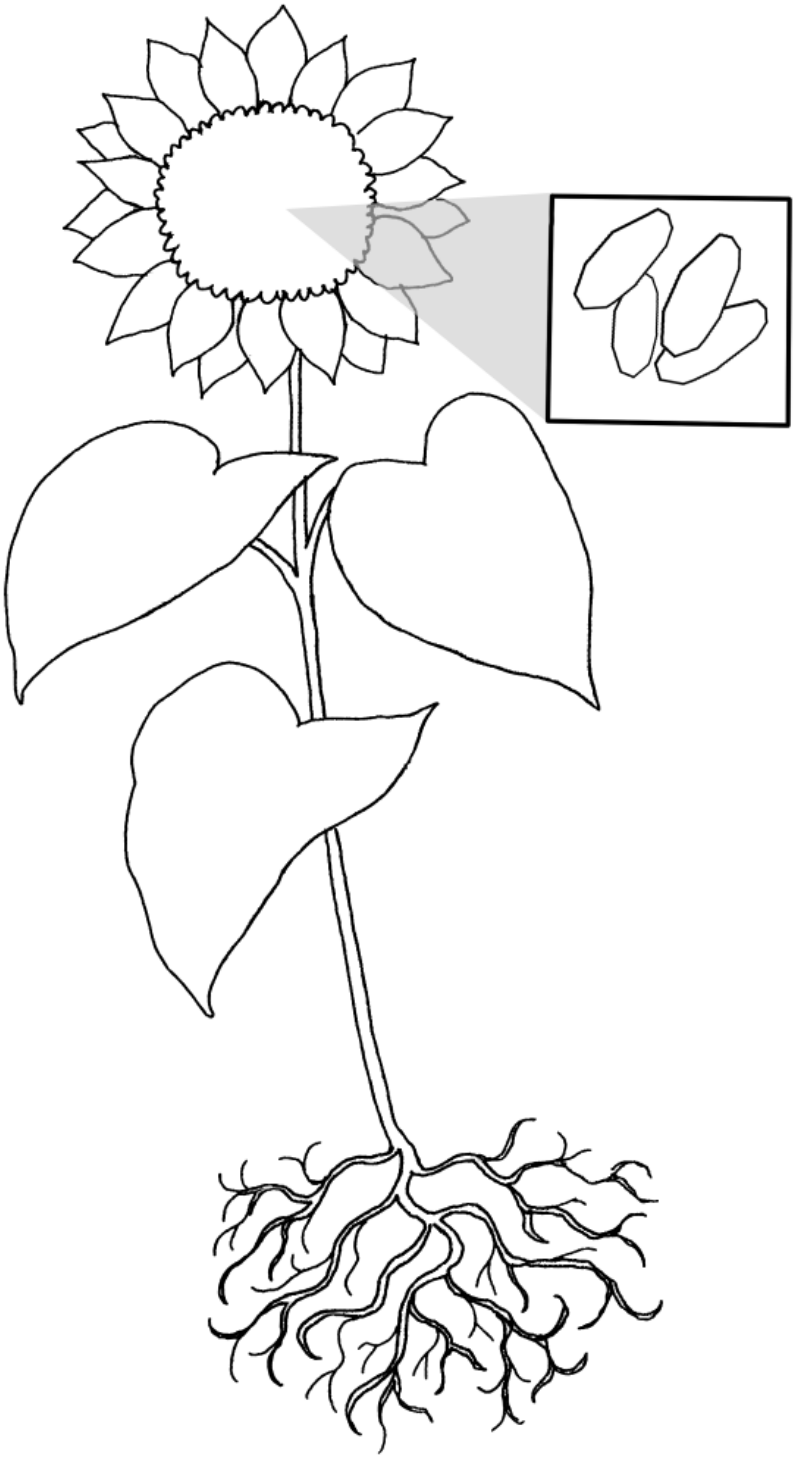
3. 

4. 

5. 

DA-1

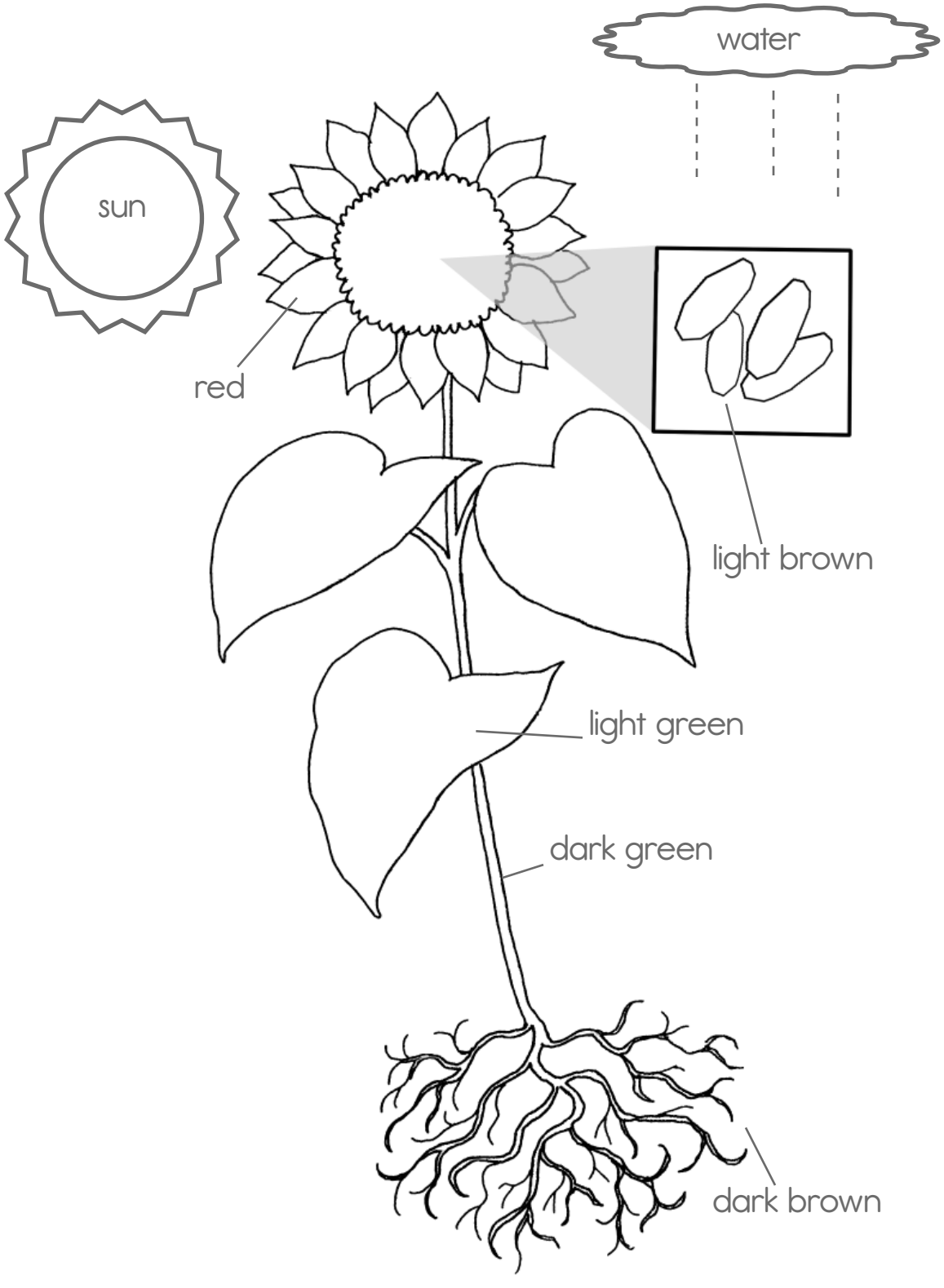
Name _____



Directions: Listen to your teacher's instructions.

DA-1

Name **Answer Key**



Directions: Listen to your teacher's instructions.

DA-2

Name _____

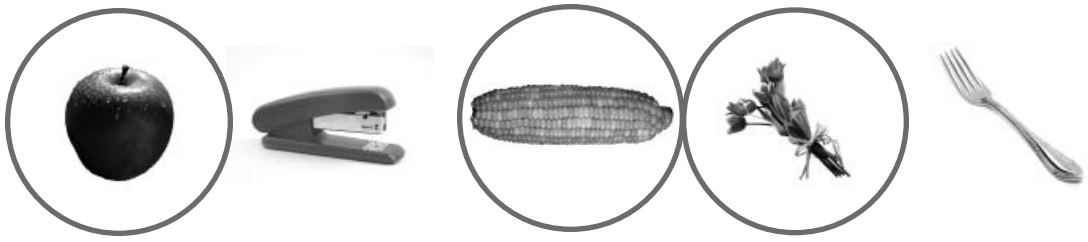
1.     

2.  

Directions: Listen to your teacher's instructions.

DA-2

Name **Answer Key**

1. 

2. 

brown (deciduous)

green (evergeen)

Directions: Listen to your teacher's instructions.

DA-3

Name _____

Directions: Listen to the sentences read by your teacher. If the sentence is true, circle the letter 'T.' If the sentence is false, or not true, circle the letter 'F.'

1.	T	F
2.	T	F
3.	T	F
4.	T	F
5.	T	F

DA-3

Name **Answer Key**

Directions: Listen to the sentences read by your teacher. If the sentence is true, circle the letter 'T.' If the sentence is false, or not true, circle the letter 'F.'

1.	T	(F)
2.	(T)	F
3.	T	(F)
4.	(T)	F
5.	(T)	F

Tens Recording Chart

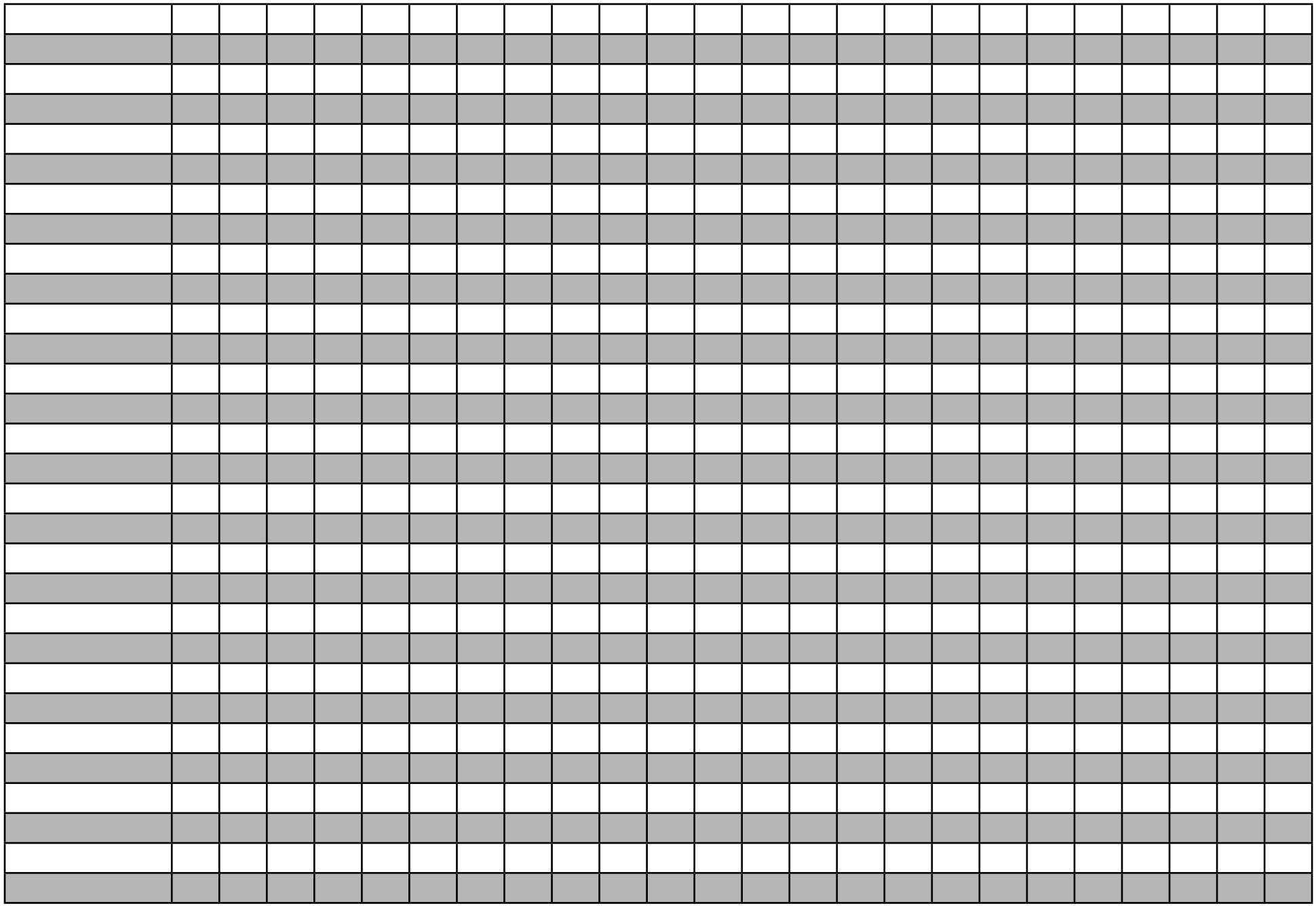
Use the following grid to record your Tens scores. Refer to page ix for the Tens Conversion Chart.

Lesson Number

Student Name

Lesson Number

Student Name



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