Four Seasons in One Year 3A

Note: Introducing the Read-Aloud may have activity options which exceed the time allocated for this part of the lesson. To remain within the time periods allocated for this portion of the lesson, you will need to make conscious choices about which activities to include based on the needs of your students.

Introducing the Read-Aloud *10 minutes*

What Have We Already Learned?

Review with students the cycles that take place because of Earth's two movements, rotation and revolution. Have students demonstrate rotation, the movement of Earth that causes daytime and nighttime. For this activity, one student should stand in the center and be the sun. You may wish to create a "sun hat" for this student to wear! The other students can be little Earths. For rotation, have students stand up and turn themselves around in a circle. When students face the sun, they should say, "Daytime!" When their backs are to the sun, they should say, "Nighttime!" Ask students how long it takes Earth to make one rotation.

The second way that Earth moves is called revolution. Revolution is the action of moving around something in a path that is similar to a circle. Earth makes one revolution around the sun about every 365 days, or every year. Have students demonstrate the revolution of Earth around the sun. Have another student stand in the center and be the sun. The other students can be little Earths, stand up, and walk around the sun. Students should tilt their heads to one side as they walk around the sun to demonstrate the earth's tilt that causes seasons. Ask students how long it takes the earth to make one revolution.

Have students identify the names and characteristics of the four seasons. Use the Seasons Chart from the previous lesson to review. Now, review with students that a hemisphere is a half of the earth, and that they live in the Northern Hemisphere.

Vocabulary Preview — 10 *minutes*

Tropical/Polar/Temperate Regions

1. In today's read-aloud you will hear about three regions on Earth: the *tropical*, *polar*, and *temperate regions*.
2. [Show an image of each region as students repeat the name of the region with you.]

   Say *tropical region* with me three times.

   Say *polar region* with me three times.

   Say *temperate region* with me three times.
3. A region is an area of land that is different from other areas of land.
4. [Show each region on a globe as you talk about it.]
   The United States is located in a temperate region on Earth.

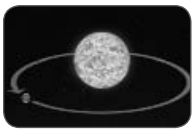
   The North Pole is located in a polar region on Earth.

   Central America is located in a tropical region on Earth.
5. [Show different images of each region, and ask which type of region the image represents. Invite partner pairs to describe what the weather might be like in each region.]

Purpose for Listening

Tell students to listen carefully to find out the main topic of today's read-aloud: the causes of the seasons and the characteristics of each season. In particular, pay attention to the effect that intense sunlight has on all living things.

Presenting the Read-Aloud — **15** *minutes*



Four Seasons in One Year

Show image 3A-1: Earth revolving around the sun[1]

Do you know why many plants grow more rapidly during the summer and more slowly, or not at all, during the winter? Or why some animals migrate, whereas others hibernate during the winter?[2]

Only certain parts of our planet have four different seasons. This is because of the shape and tilt of Earth. The region around the equator receives the greatest amount of direct, intense sunlight. This region of Earth is called a tropical region because it is almost always hot and humid.[3] The North and South Poles receive the least amount of direct sunlight. They are the polar regions of Earth. Generally, they remain cold and dry. In recent years, however, as Earth's overall climate has changed and has become warmer, the polar regions are warming up too, and some of the ice caps in this region have been melting.[4] The region between the poles, on either side of the equator, is called the temperate region. In this region of the world, where we live, most places experience all four seasons of the year.[5]

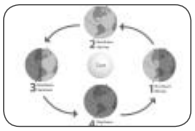
1 [Refer students to the image.] How long does it take for the earth to complete one full orbit around the sun? (It takes the earth 365¼ days, or one year, to complete one full orbit around the sun.)

2 When an animal migrates, it leaves to spend winter in a warmer place. When an animal hibernates, it finds a special place to rest until spring.

3 [Locate the equator and tropical regions on the globe for students.]

4 [Locate the North Pole, South Pole, and polar regions on the globe for students.]

5 [Locate the temperate regions and the United States on the globe for students.]



Show image 3A-2: Four seasons in Northern Hemisphere

Remember, during the time of year when the Northern Hemisphere is tilted toward the sun, this part of our world receives more daylight and more intense sunlight. This means it is summertime in the Northern Hemisphere. At the same time, the Southern Hemisphere is tilted away from the sun, so it is winter there.[6] That's why, as Earth revolves around the sun, and is tilted on an axis, the seasons change. Now let's discover more information about each specific season.

As each year passes in the temperate region of the world, changes occur in the weather. These weather cycles have been divided up into what we call the seasons. Each season brings with it incredible changes in the world around us.

6 [Have students locate the Northern Hemisphere and Southern Hemisphere on the globe. Remind them that we live in the Northern Hemisphere.]

Show image 3A-3: Spring

In spring, daylight hours increase and the sunlight becomes much stronger. With warmer weather, more rain begins to fall. With increased light, warmth, and rain, plants begin to grow again. Seeds resting in the soil begin to take root. The warmth from the sun and the rainfall enables plant seeds to germinate, or begin to grow into plants.

You have probably heard the saying "April showers bring May flowers."[7] New plants emerge, and plants that have been inactive for the winter become active and start growing again. As buds and leaves form, water **absorbed,** or taken in, by the plant travels up the stem to the leaves.[8] Plants use water and sunlight to make their own food, as well as oxygen for us to breathe. This process is called **photosynthesis.** It is during springtime that this great burst of life and energy occurs.[9]

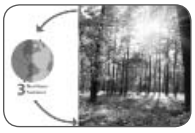
7 We learned this saying in the *Seasons and Weather* domain in Kindergarten.

8 Here, the word *buds* means small parts that grow on trees and develop into flowers. The word *buds* also means friends.

9 Name some flowers that we typically see in spring.

Springtime also sees the return of animals that had migrated, or moved to warmer places during the wintertime. It is also the time when some animals wake up from their winter hibernation. Spring is when many animals give birth to their young. Animals give birth either by bearing live young or by laying eggs. Animals that give birth to live young have nourished their young inside their bodies.[10] Animals that hatch from eggs have been nourished by a yolk within the egg.

10 What do we call animals that give birth to live young? (Animals that give birth to live young are called *mammals*.)



Show image 3A-4: Summer

Because the Northern Hemisphere receives more intense sunlight from the sun at a more direct angle in the summer, temperatures are usually at their highest during these months. With the increase of light and heat in the summer, plants grow big and strong. Young animals are born and grow strong during this fruitful time, as well.[11]

11 What kinds of baby animals do we often see in spring and summer?

Show image 3A-5: Autumn

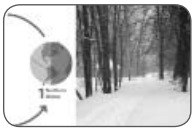
As the earth revolves, and summer turns to autumn, both the temperature and the environment begin to change again. In autumn, while it is still warm, light from the sun is not as intense, and the growth and development of plants and animals begins to slow down.

In many places in the Northern Hemisphere, autumn is a time to harvest the crops that have grown and ripened beneath the summer sun. Grass crops are harvested, and grapes are picked from the vines. Fruits such as apples, pears, and pumpkins are ready to be eaten. As the amount of daylight lessens, and the temperature continues to drop, the leaves of many trees change color. During this time in many parts of the Northern Hemisphere, a world of copper, bronze, red, and orange leaves is a sight to behold.

Leaves change color in autumn because deciduous trees receive less sunshine than they need to produce food, and photosynthesis stops. When photosynthesis stops, these leaves begin to die and fall off. [12] Therefore, deciduous trees are trees that have leaves that change color and fall off. [13]

12 The word *deciduous* comes from the Latin word *decidere,* meaning to fall down, or fall off.

13 What other kinds of trees are there? (evergreen)



Show image 3A-6: Northern winter

When winter arrives, it means that this part of Earth is now tilted away from the sun and temperatures and sunlight are at a **minimum**. [14] It also means that summer has arrived in the Southern Hemisphere. Because conditions are less favorable for living things in winter, growth and development slows down, and even stops.

14 Minimum is the smallest amount possible.

During winter, deciduous trees rely on the food they previously produced and converted into energy. This food supply is stored in their roots. During winter, deciduous trees, as well as many other plants, enter a dormant state.

Show image 3A-7: Animals in winter

In winter, some animals whose food source is affected by the change in climate **migrate,** or leave for warmer places. These animals sense the change in daylight and temperature and begin their annual migration. Migration is part of a yearly cycle of changes. Some birds, for example, travel long distances to their winter homes. They prepare for their migration by eating lots of food they can store as energy to use on their journey. Mammals such as caribou and elk migrate across vast expanses of land, and even fish migrate in winter in search of warmth and food.

Like many plants that lay dormant in winter, there are animals that hibernate. Hibernation is a kind of deep sleep. Like the deciduous trees, animals that hibernate rely on the food they have stored in their bodies to get them through the winter months. [15]

15 Can you name some animals that hibernate and some animals that migrate?

There are also animals that stay in their natural habitat through the colder months and survive as best they can. Animals such as foxes, deer, and rabbits search for food on the frozen land. Some build snug homes to keep out the cold. They have learned to **adapt,** or adjust, to their ever-changing environment. People adapt, too. They prepare for the cold months ahead by wearing warmer clothes and even changing the foods they eat. How do you prepare for autumn and winter?

Show image 3A-8: Spring again

We are all part of this never-ending cycle. When spring returns, the cycle of growth will begin all over again and new life will appear on the earth.

Discussing the Read-Aloud — *15 minutes*

Comprehension Questions — 10 *minutes*

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

1. *Literal* What is the main topic of today's read-aloud? (The main topic of today's read-aloud is the seasonal cycle/cycle of the seasons.)
2. *Inferential* Why do plants grow more rapidly during the summertime than during other seasons? (Plants grow more rapidly in summertime than during other seasons because it is the warmest time of the year and there is more intense sunlight.)

3. *Inferential* Why do only some parts of our planet have four different seasons? (Only some parts of our planet have seasons because of the shape and tilt of the earth. The region around the equator is always hot and humid and does not have four different seasons.)

4. *Literal* If it is summer in the Northern Hemisphere, what season is it in the Southern Hemisphere? (If it is summer in the Northern Hemisphere, it is winter in the Southern Hemisphere.)

5. *Inferential* Why do some animals migrate south in the fall and return north in the spring? (Some animals migrate south in the fall to escape the cold of winter.)

6. *Literal* In which season do most animals give birth to their young? (Most animals give birth to their young in the spring.)

7. *Literal* In which season are many crops harvested? (Many crops are harvested in autumn.)

8. *Inferential* Why do some trees shed their leaves? (Deciduous trees shed their leaves in the autumn and use stored energy during the cold winter months. They go into a dormant, or inactive, state until spring arrives and it becomes warmer.)

9. *Evaluative* How do people adapt to winter and summer? (Answers may vary.)

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

10. *Evaluative* *Why? Pair Share:* Asking questions after a read-aloud is one way to see how much everyone has learned. Think of a question you can ask your neighbor about the read-aloud that starts with the word *why.* For example, you could ask, "Why is there more sunlight in the summer?" Turn to your neighbor and ask your *why* question. Listen to your neighbor's response. Then your neighbor will ask a new *why* question, and you will get a chance to respond. I will call on several of you to share your questions with the class.

11. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you

may wish to allow for individual, group, or class research of the text and/or other resources to answer these questions.]

Word Work: Adapt *5 minutes*

1. In the read-aloud you heard, "[Animals] have learned to *adapt* . . . to their ever-changing environment."
2. Say the word *adapt* with me.
3. The word *adapt* means to adjust or change in different situations or environments.
4. Animals living in cold areas adapt to the weather by growing thicker fur.
5. How else can living things adapt to cold weather? Use the word *adapt* when you tell about it.
   [Ask two or three students. If necessary, guide and/or rephrase the students' responses: " _____ adapts to cold weather by . . ."]
6. What's the word we've been talking about? What part of speech is the word *adapt*? How do you know that it is an action word?

Use a *Discussion* activity for follow-up. Directions: Talk to your partner about how you adapt to the different seasons, in particular, the winter and the summer. How do you adapt to the cold winter weather? (wear thicker clothes, turn on the heater, wear extra layers to sleep, cover with extra blankets, stay indoors)
How do you adapt to the hot summer weather? (wear shorts, wear sunglasses, use sunblock, drink extra water, use a fan or air conditioning, stay indoors if it is too hot)

Complete Remainder of the Lesson Later in the Day

Four Seasons in One Year 3B

Note: Extensions may have activity options which exceed the time allocated for this part of the lesson. To remain within the time periods allocated for this portion of the lesson, you will need to make conscious choices about which activities to include based on the needs of your students.

Extensions — *20 minutes*

Multiple Meaning Word Activity — *5 minutes*

Context Clues: Buds

Note: You may choose to have students hold up one, two, or three fingers to indicate which image shows the meaning being described, or have a student walk up to the poster and point to the image being described.

1. [Show Poster 2M (Buds).] In the read-aloud you heard, "As *buds* and leaves form, water absorbed . . . by the plant travels up the stem to the leaves." Here *buds* means parts of a plant that will grow into flowers, leaves, or new branches. Which picture shows this kind of *buds*?
2. *Buds* can also mean something else. *Buds* also means your friends or pals. Which picture shows this kind of *buds*?
3. *Buds* are also the small spots on your tongue that you use to taste. Which picture shows this kind of *buds*?
4. I'm going to say some sentences with the word *buds*. Hold up one finger if my sentence tells about *buds* in picture one; hold up two fingers if my sentence tells about *buds* in picture two; and hold up three fingers if my sentence tells about *buds* in picture three.
   - The taste buds on my tongue are tiny.
   - In early spring, we can see the buds on the tree.

- I wonder if the buds will turn into leaves or flowers?
- I like to play with my buds during recess.
- Taste buds can tell the differences between sweet, salty, sour, and bitter tastes.
- I'm going to invite my buds over to my apartment to play.

Syntactic Awareness Activity

10 *minutes*

Seasonal Compound Words

Teacher Reference Chart			
Winter		**Spring**	
ear	muff	butter	fly
fire	place	grass	hopper
frost	bite	flower	pot
ginger	bread	rain	bow
ice	berg	rain	coat
over	coat	rain	fall
snow	ball	butter	cup
ice	skate	spring	time
snow	flake	blue	bird
snow	man	dragon	fly
Summer		**Autumn**	
base	ball	apple	sauce
fire	fly	corn	stalk
honey	bee	hay	ride
sea	side	scare	crow
sea	shell	foot	ball
sun	burn	school	house
sun	screen	Thanks	giving
water	slide	black	bird
sun	glasses	sun	flower
water	melon	wheel	barrow

Note: The purpose of these syntactic activities is to help students understand the direct connection between grammatical structures and the meaning of text. These syntactic activities should be used in conjunction with the complex text presented in the read-alouds. There may be variations in the sentences created by your class.

Allow for these variations, and restate students' sentences so that they are grammatical. If necessary, have students repeat the sentence after you.

Directions: Today we are going to practice making and using compound words. When two words are added together to form a new word, it is called a compound word. If you know the meaning of the two words, you will most likely be able to tell the meaning of the new compound word.

1. In today's read-aloud we heard several compound words. Listen to my sentences and raise your hand if you hear a compound word. Remember, compound words are two words added together to make a new word. Tell me which two words make a compound word. Then, try to guess the meaning of the compound word based on what you know about the two words that make up the compound word.
    - In spring, *daylight* hours increase, and the *sunlight* becomes much stronger. (day+light = the light shining during the day; sun+light = the light from the sun)
    - *Springtime* sees the return of animals that moved to warmer places during the *wintertime*. (spring+time = the time of year that is spring; winter+time = the time of year that is winter)
2. [Give each student an index card with part of a compound word written on it.] I have given you one half of a compound word. Try to find the match for your word on the board. Make up a sentence using your compound word.
3. [Invite students to come up to the board and put their index card next to a word on the board to create a compound word.] What compound word did you make? What does your compound word mean? Can you use it in a sentence?

Extending the Activity

Ask students whether they notice the seasonal themes with the compound words. Have them group the compound words according to seasonal theme.

Vocabulary Instructional Activity — 5 minutes

Horizontal Word Wall: Intense

1. In the read-aloud you heard, "[W]hen the Northern Hemisphere is tilted toward the sun, [it] receives more daylight and more *intense* sunlight. This means it is summertime in the Northern Hemisphere."
2. Say the word *intense* with me three times.
3. When something is intense it is very strong.
4. We will make a Horizontal Word Wall for *intense*.
5. [Place *weak* to the left and place *strong* to the right. Now hold up *intense.*] Should *intense* be placed closer to *weak* or *strong*?
6. [Hold up the rest of the cards (*fierce*, *powerful*, *great*, *gentle*, *calm*, *low*), and ask where they should be placed on the Horizontal Word Wall.]
7. With your partner, choose two opposite words—or antonyms—and make a sentence for each word.

[Throughout this domain, encourage students to continue thinking about this Horizontal Word Wall, and add additional words to the word wall.]

Seasons Chart — 15 minutes

Finish the class Seasons Chart you started in the previous lesson. Ask students if they can add any new information they learned from the read-aloud about each season in the next three rows. You may wish to use Image Cards 1–4. Finally, have students tell you about their activities and clothing for each season. You may wish to use the following chart as a guide:

	Spring	Summer	Autumn (or Fall)	Winter
Date Season Begins in the Northern Hemisphere	Spring Equinox; on March 21	Summer Solstice; on June 21	Autumn Equinox; on September 21	Winter Solstice; on December 21
Amount of Sunshine	Roughly the same number of daylight and dark hours	Longer daylight; it stays light out later.	Roughly the same number of daylight and dark hours	Shorter daylight; it gets dark earlier.
Temperature in the Northern Hemisphere	Warmer	Hotter	Cooler	Colder
Plants	Plants begin to grow/sprout; seeds are planted	Plants and crops grow	Leaves change color and begin to fall; farmers harvest crops	Leaves shed from deciduous trees; many plants die.
Animals	Animals wake up or return; many animals have babies	Animals grow	Animals prepare for winter	Many animals hibernate or migrate
People Activities/Clothing	[Starting a garden; flying kites; etc.]	[Lighter clothing; swimming; picnics; etc.]	[Back to school; harvesting crops; etc.]	[Heavier clothing; ice skating; skiing; etc.]

⑩ Sequencing the Cycle of the Seasons (Instructional Master 3B-1)

15 *minutes*

- Have students think about what they have learned in the last two read-alouds. If necessary, review specific Flip Book images that show the different seasons).
- Give students Instructional Master 3B-1. Tell them that this is Response Card 2; it shows the cycle of the seasons.
- Have students write the name of each season in its correct space. [Write *winter*, *spring*, *summer*, *autumn* and *fall* on the board.]
- When students have finished filling in the seasons, have them talk about the cycle of the seasons using their Response Cards in small groups or with home-language peers.

"Bee! I'm expecting you!" by Emily Dickinson

15 *minutes*

Show image 3B-1: Bee

Tell students that you are going to read a poem by Emily Dickinson entitled "Bee! I'm expecting you!" Discuss with students the meaning of *expecting*. When you are expecting someone, you are

waiting for them to arrive, or come. Tell students that the following poem is written in the form of a letter. Tell students that the title of the poem tells them that the letter is written to a bee. Review with students that they met a honeybee named Polly in the *Plants* domain in Kindergarten.

Bee! I'm expecting you!
by Emily Dickinson

Bee! I'm expecting you!
Was saying Yesterday
To Somebody you know
That you were due—

The Frogs got Home last Week—
Are settled, and at work—
Birds, mostly back—
The Clover warm and thick—

You'll get my Letter by
The Seventeenth; Reply
Or better, be with me—
Yours, Fly.

Ask students who is speaking in the poem. Ask: "Why is the fly expecting the bee? What season is coming?" (spring) Help students make the connection between the word *expecting* and the repeating aspect of the seasonal cycle.