

CYCLES IN NATURE

CKLA- DOMAIN 6

Vocabulary Word Icons used in these slides are from: <https://thenounproject.com/>
These slides were adapted from work by Joshua Blackburn, Tristan Kirkland, and Stephanie Walley

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LESSON 1

Video

THE CYCLE OF DAYTIME

AND NIGHTTIME

LESSON OBJECTIVES

5

Students will:

- Explain that a cycle is a sequence of events that repeats itself again and again
- Recognize that the rotation of the Earth causes daytime and nighttime
- Explain that it takes 24 hours for Earth to rotate once on its axis
- Recognize that living things have a life cycle

LESSON VOCABULARY

6

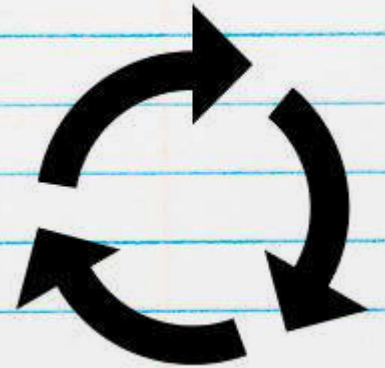
- **Axis** - a real or imaginary central line around which an object spins



LESSON VOCABULARY

7

- **Cycle** - the period of time it takes to complete a sequence of events



LESSON VOCABULARY

8

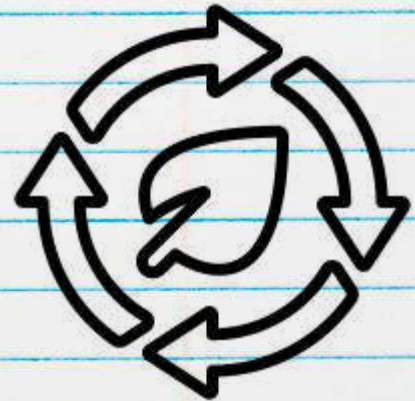
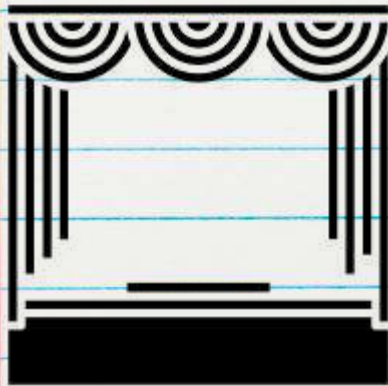
- **Rotating** - turning around a central or main point



LESSON VOCABULARY

9

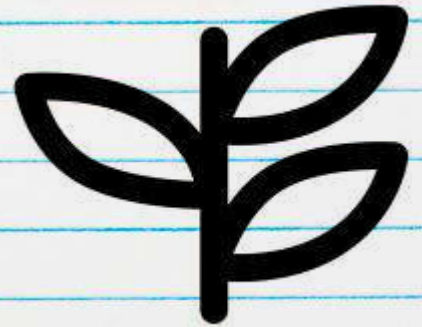
- **stage** - a particular time in the growth of something



LESSON VOCABULARY

10

- **Thrive** - when a living thing grows and develops well.

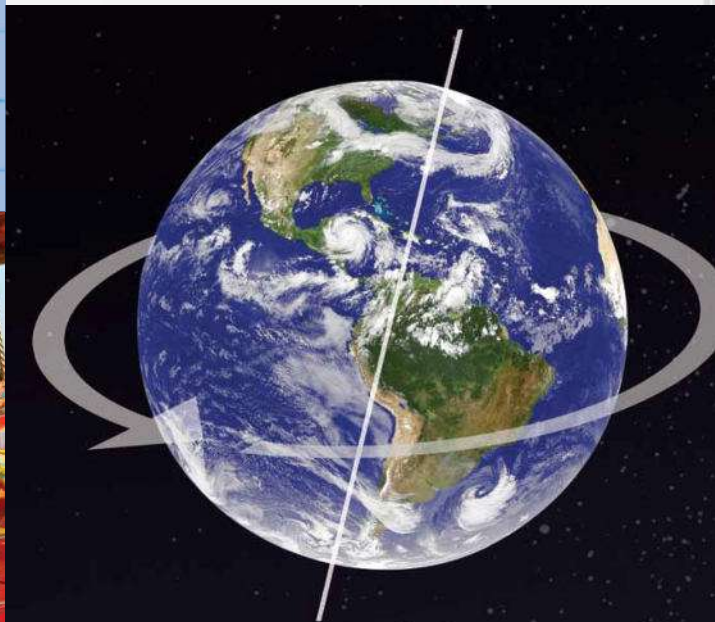
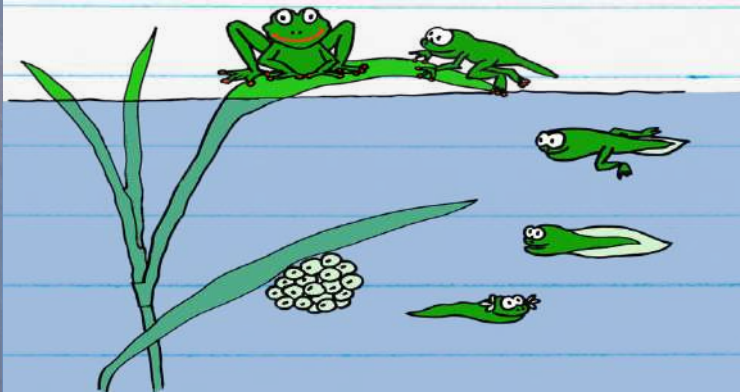


Cycles in Nature

Lesson 1

Video

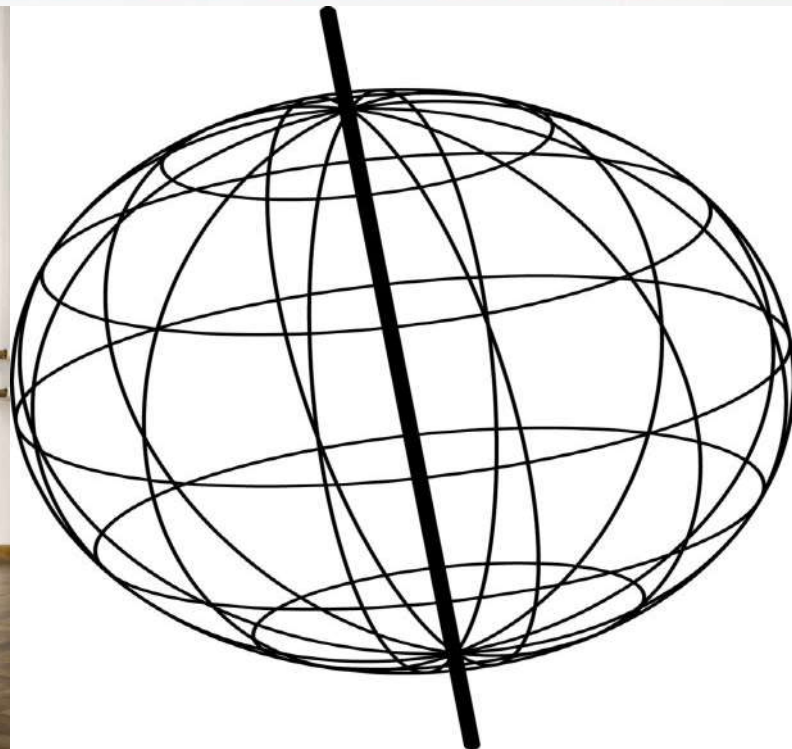
THINGS THAT GO ROUND AND ROUND



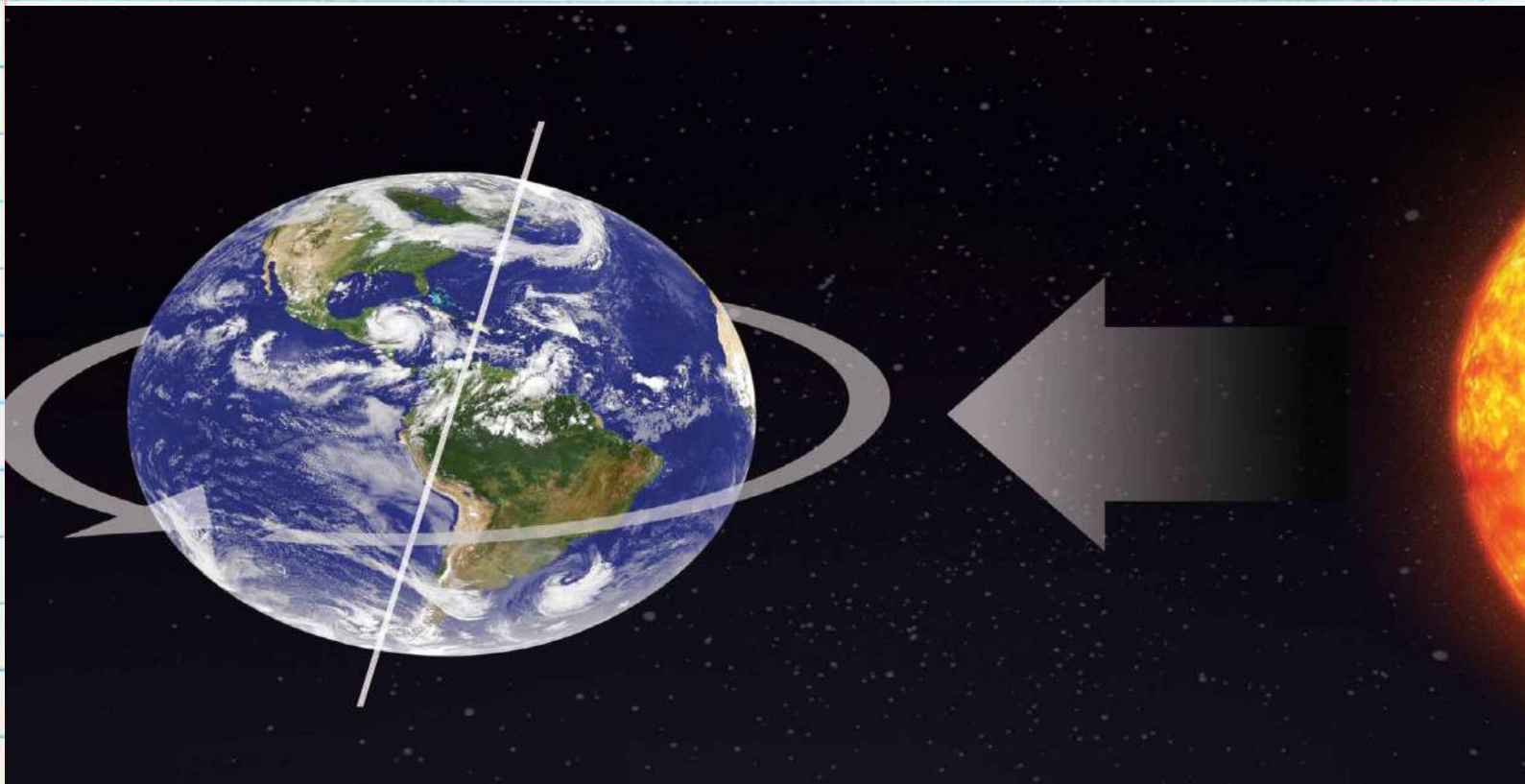
LIVING THINGS AND THEIR YOUNG



SPINNING



EARTH ROTATING ON ITS AXIS



SUNRISE



SUNSET



SLEEPING AND WAKING UP



COMPREHENSION QUESTIONS

19

- What is the main idea of today's text?
- What is a cycle?
- What causes daytime and nighttime?
- How does the rotation of Earth cause daytime and nighttime?
- What is the difference between daytime and nighttime? What about the light?

THINK-PAIR-SHARE

20

How would life on Earth be different if Earth did not rotate?

WORD WORK- STAGE

21

Say the word stage

Stage means a particular time in the growth of something

One stage in the life cycle of a butterfly is the chrysalis

Can you think of the stages of growth of humans?

back
down
off
on
up

stage

*"time in
life,
platform,
theater"*

coach

es

craft
ed

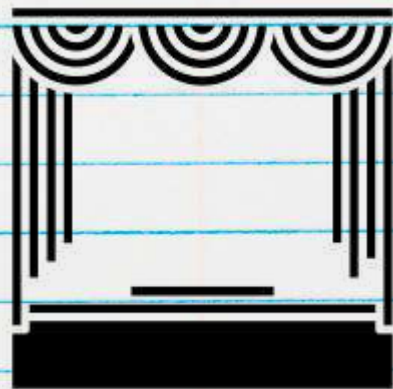
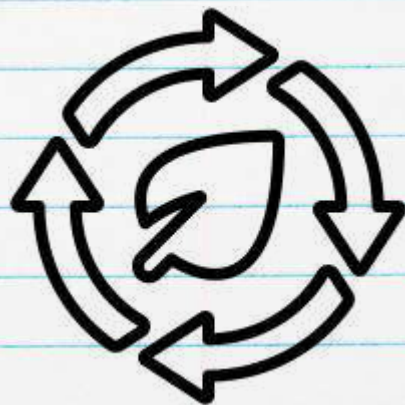
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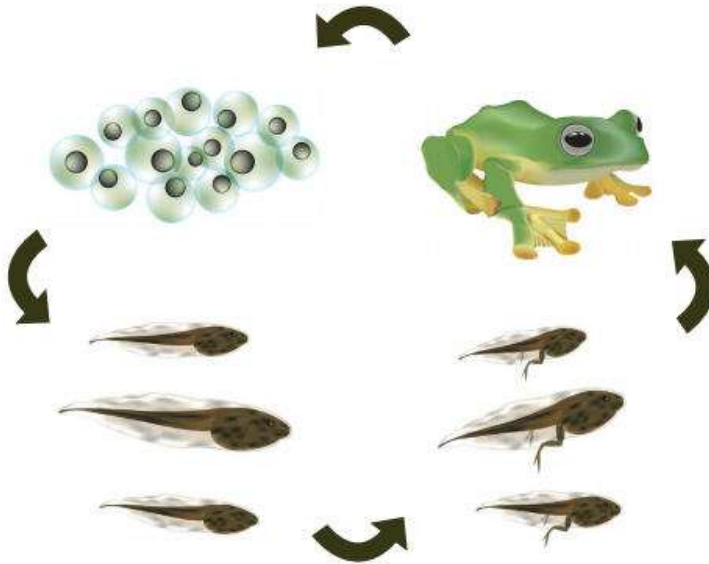
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WORD WORK- STAGE

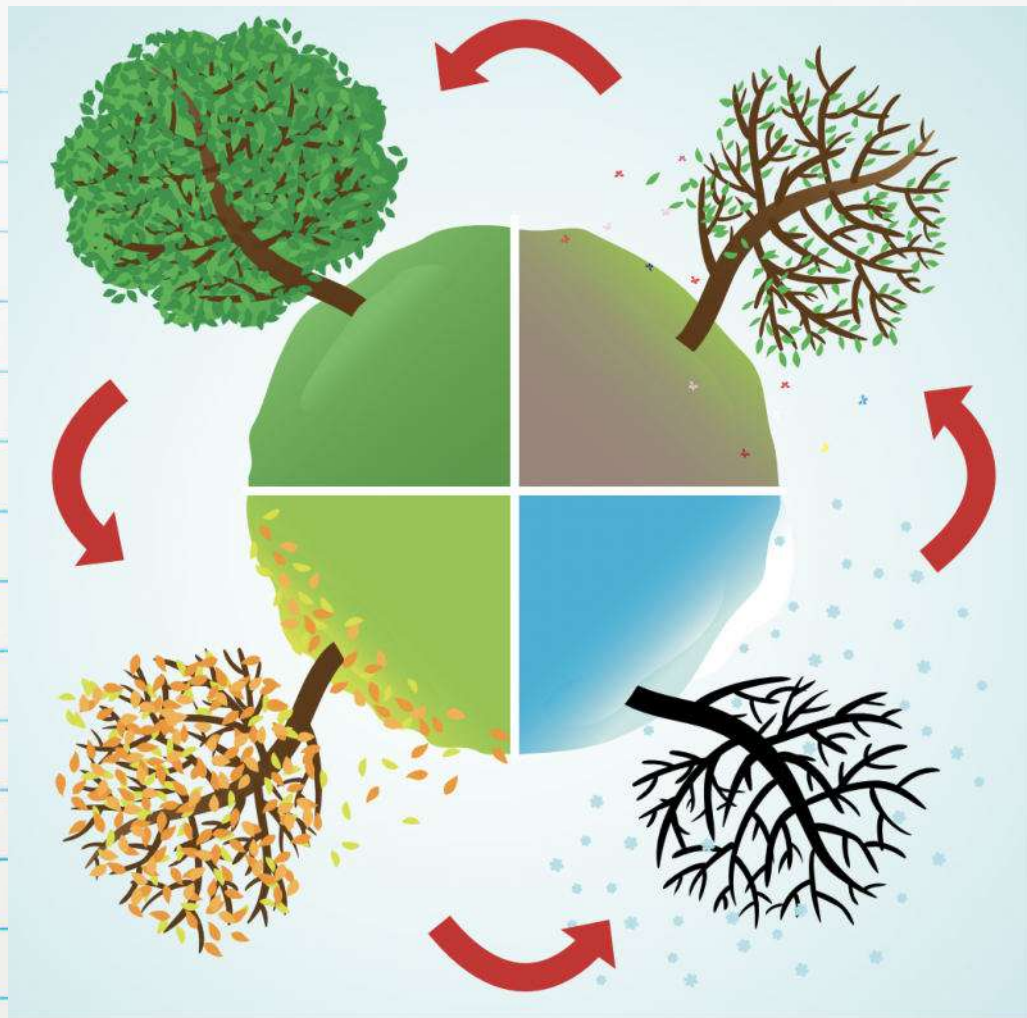
23

1



2





BRAINPOP JR.

25

Sun Video

<https://jr.brainpop.com/science/space/sun/>

NAME: _____

DATE: _____

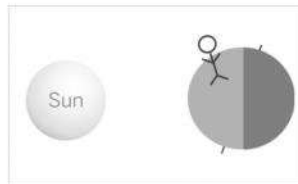
1.1

Activity Page

26

1. When it is daytime for me, my town is facing

Toward the Sun

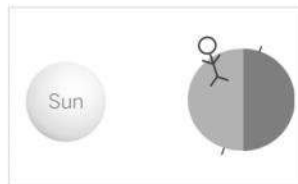


Away from the Sun



2. When it is nighttime for me, my town is facing

Toward the Sun



Away from the Sun



Directions: Listen to your teacher's instructions and circle the correct answer.

TAKE-HOME

27

NAME: _____

DATE: _____

1.2

Take-Home

Dear Family Member,

During the next several days, your child will learn about cycles and explore some of the different types of cycles that occur in nature. Your child will be introduced to the reasons why we have daytime and nighttime and the four seasons on planet Earth, and to the different seasonal changes that affect the life cycles of plants and trees. Below are some suggestions for activities that you may do at home to reinforce what your child is learning about cycles in nature.

1. Personal Connections

Share with your child your favorite season and the different experiences from your own childhood connected with seasonal changes. Emphasize the changes observed in plants and animals. Ask your child what favorite memories s/he has of a particular season shared with you and your family.

2. Draw and Write

Have your child draw and/or write what s/he has learned about seasonal cycles and the life cycles of plants. Ask questions to help your child use the vocabulary learned at school.

3. Words to Use

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

- *revolve*—It takes one year for Earth to revolve around the sun.
- *hibernation*—Some animals have longer periods of winter hibernation than others.
- *cycles*—Planet Earth has many cycles, such as day and night, the seasons, and life cycles of plants and animals.

4. Read Aloud Each Day

Set aside time to read aloud to your child every day. The local library has many books on cycles in nature. Find a short list of books relevant to this topic below.

Recommended Resources

Red Leaf, Yellow Leaf, by Lois Ehlert (Harcourt, Inc., 1991) ISBN 978-0152661977

Sunflower House, by Eve Bunting (HMH Books for Young Readers, 1999) ISBN 978-0152019525

The Snowflake: A Water Cycle Story, by Neil Waldman (Milbrook Press, 2003) ISBN 978-0761323471

LESSON 2

Video

THE REASONS FOR THE SEASONS

LESSON OBJECTIVES

29

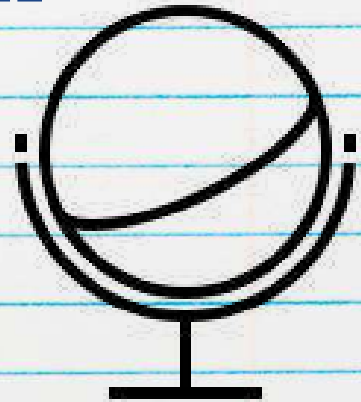
Students will:

- Explain that a cycle is a sequence of events that repeats itself again and again
- Recognize that the rotation of the Earth causes daytime and nighttime
- Explain that it takes 24 hours for Earth to rotate once on its axis
- Recognize that living things have a life cycle
- Recognize the Earth orbits the Sun
- Describe the seasons

LESSON VOCABULARY

30

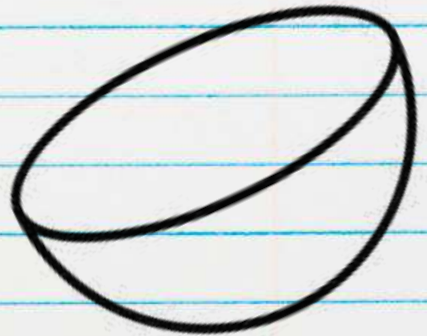
- **Equator** - an imaginary line that divides the Earth into the Northern and Southern Hemispheres



LESSON VOCABULARY

31

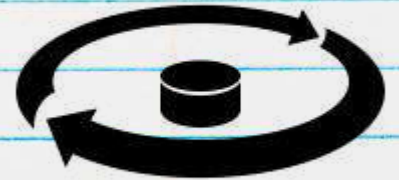
- **hemisphere**- Half of Earth as divided north and south by the equator or east and west by the Prime Meridian



LESSON VOCABULARY

32

- **revolves**- moves in a circular path or orbit around an object



LESSON VOCABULARY

33

- **tilt-** to slant or place at an angle



Cycles in Nature

Lesson 2

Video

EARTH ROTATING ON ITS AXIS

35

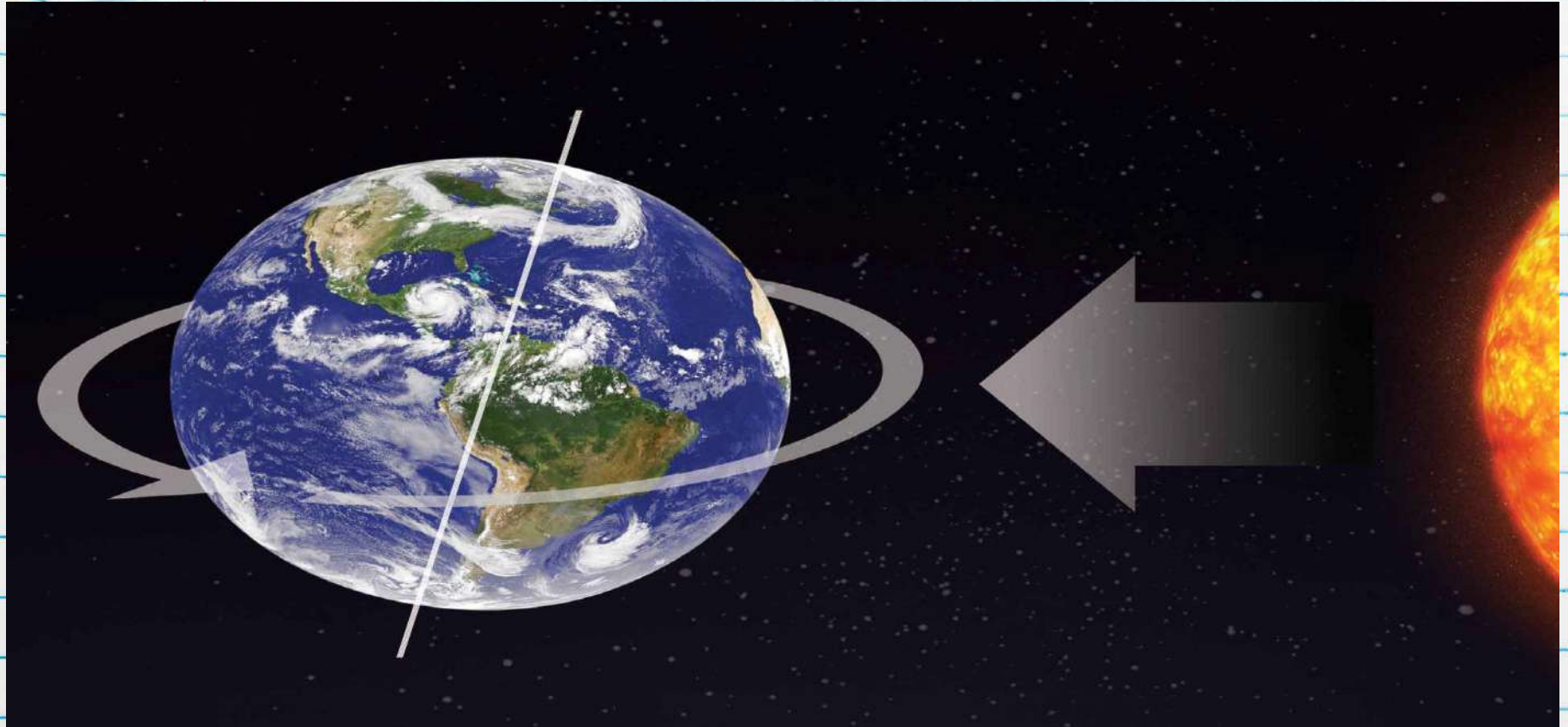
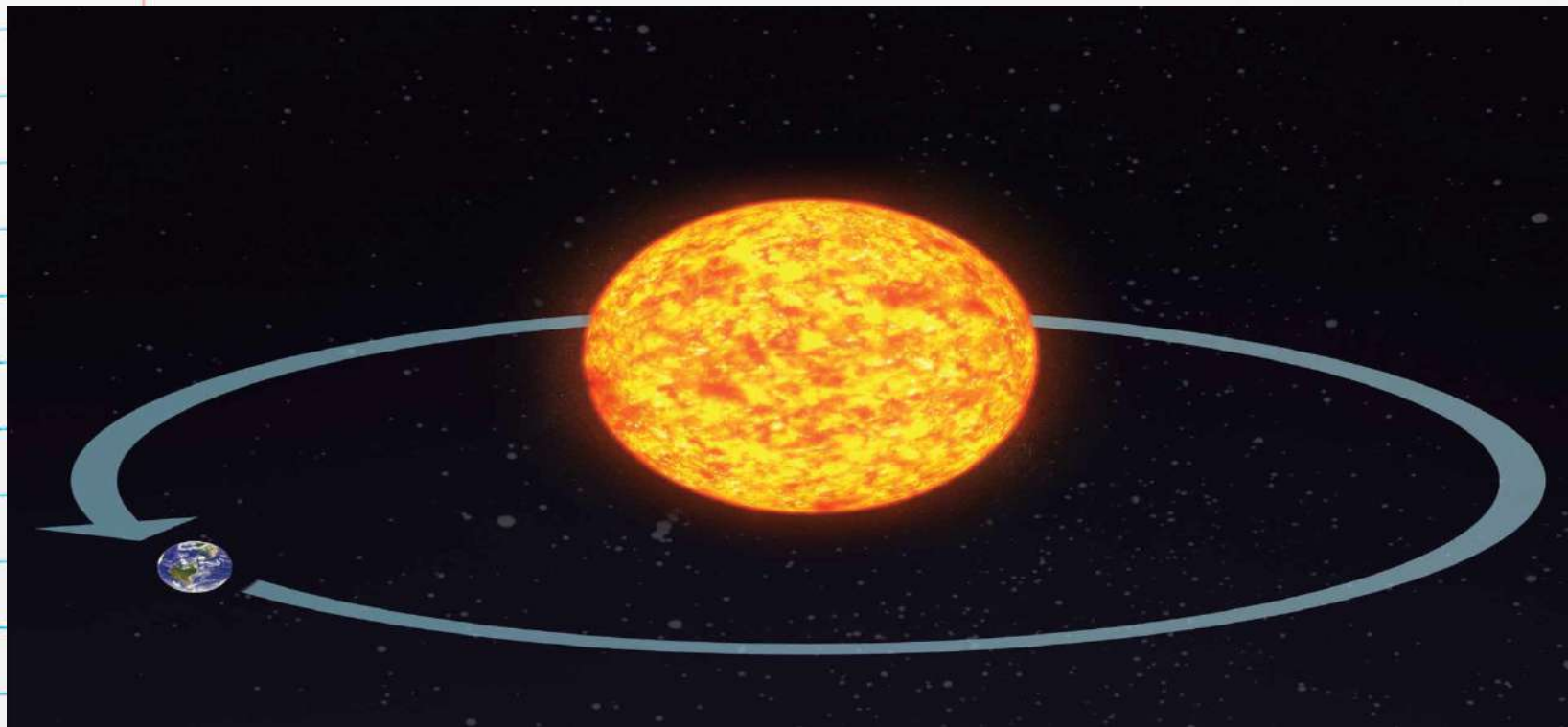
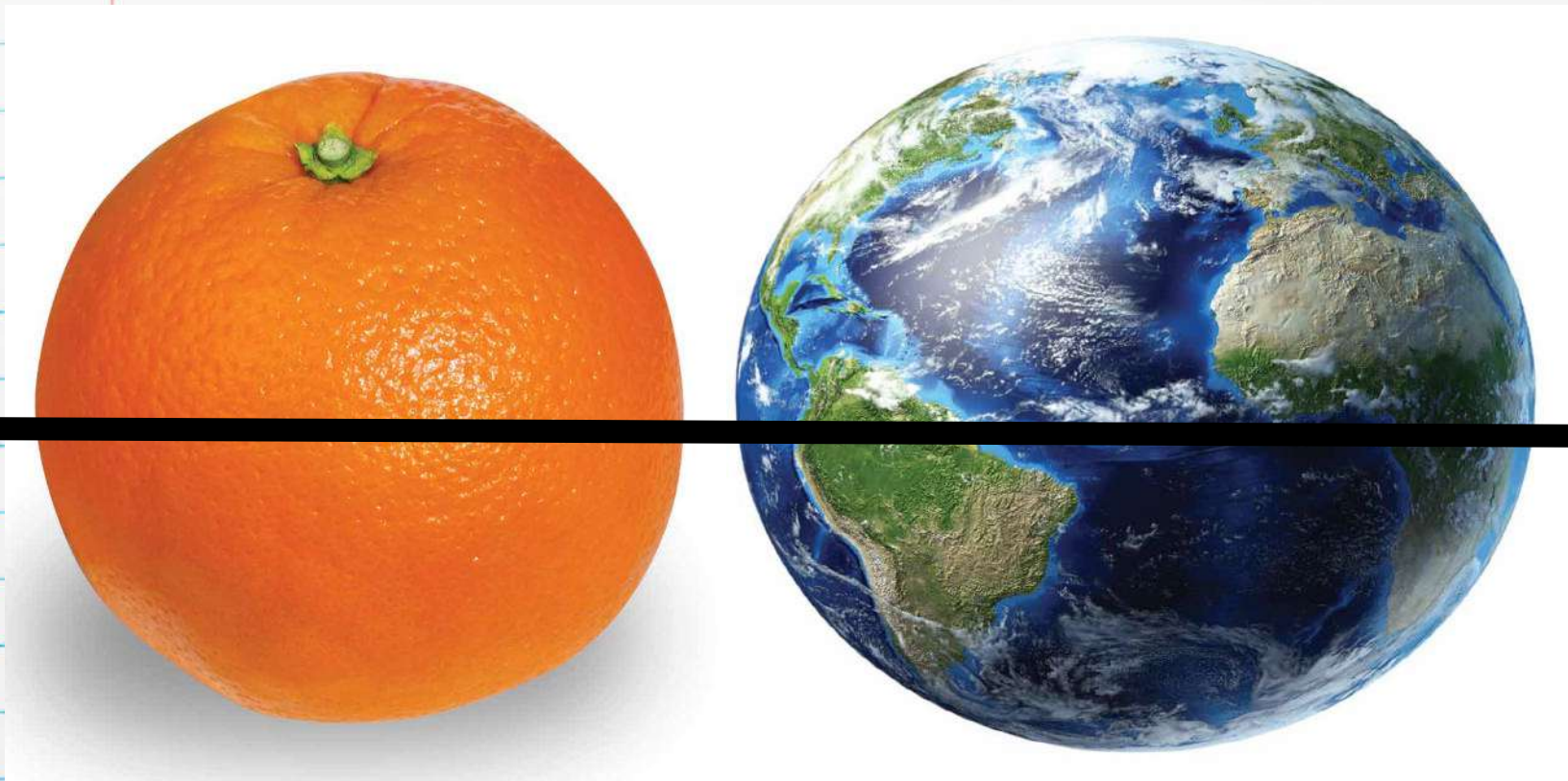


DIAGRAM OF EARTH REVOLVING AROUND THE SUN



HEMISPHERES

37



NORTHERN SUMMER



NORTHERN WINTER

39



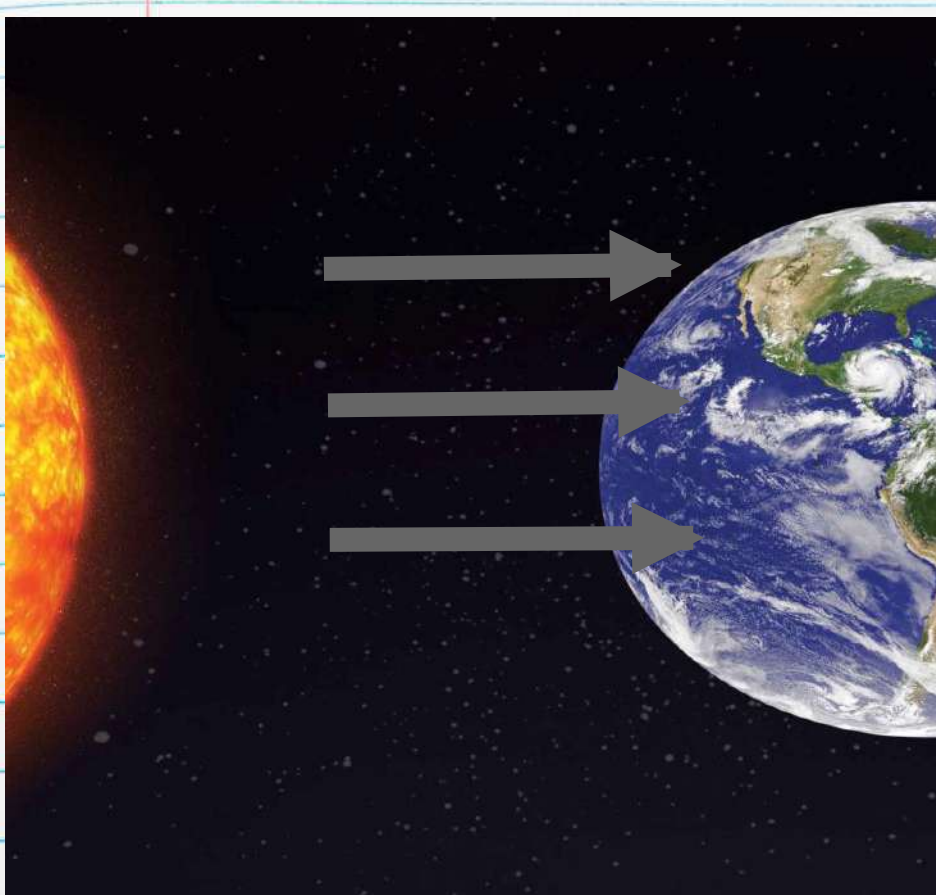
NORTHERN SPRING AND FALL

40



LIGHT HITTING EARTH

41



FOUR SEASONS



COMPREHENSION QUESTIONS

43

- What is the main idea of today's text?
- Name the four seasons in order.
- How long does it take Earth to orbit or revolve around the Sun?
- In what hemisphere do you live?
- The first day of summer is called the summer solstice. What is special about this day? What is the winter solstice?

COMPREHENSION QUESTIONS

44

- What do the first day of spring and the first day of autumn have in common?
- How are plants and animals affected by the seasonal cycle?
- Does the part of Earth near the equator experience seasons?
- Do the North and South poles experience seasons?

tilt

"slant"

ed
ing
s

Word Work

Tilt



WORD WORK - TILT

46

What does the word **tilt** mean?

When is a time we might **tilt** our head?



THINK-PAIR-SHARE

47

How does the **tilt** of the earth affect the seasons you experience living in the Northern Hemisphere?



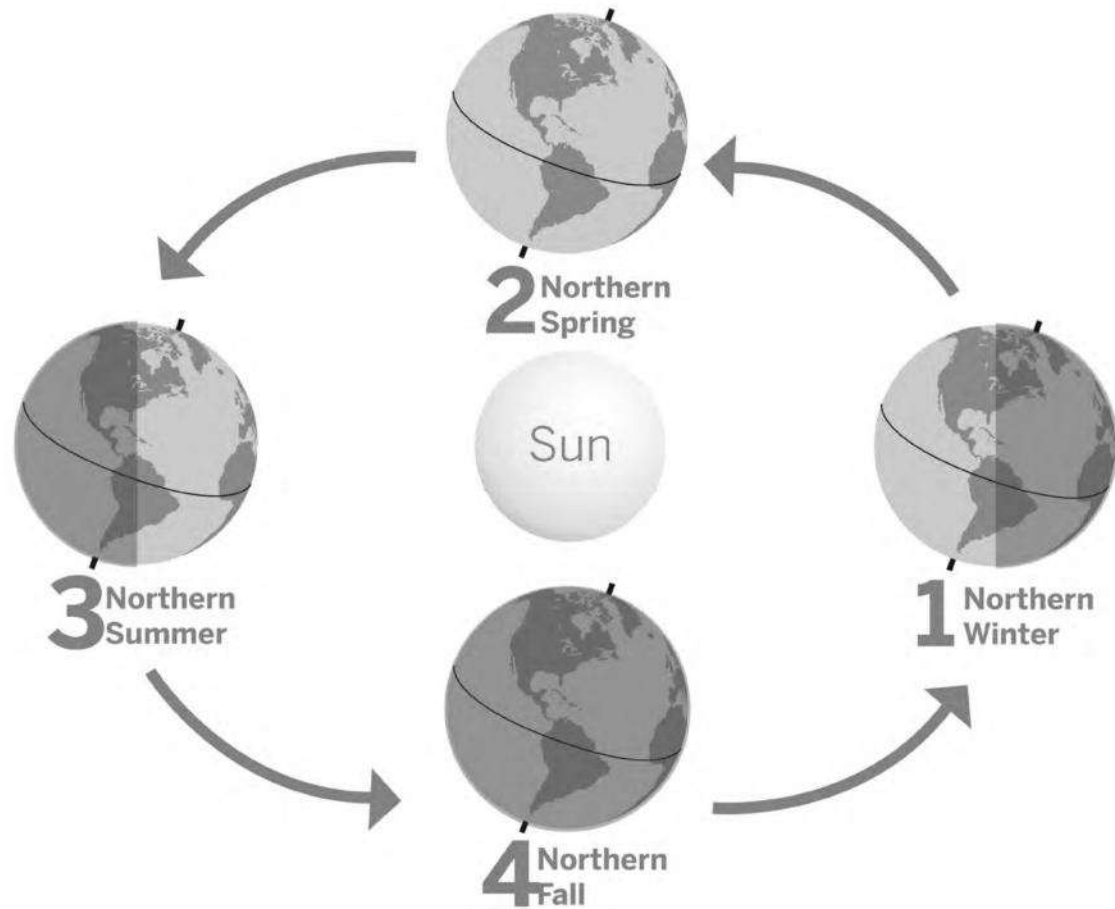
BRAINPOPJR.

48

Seasons Video

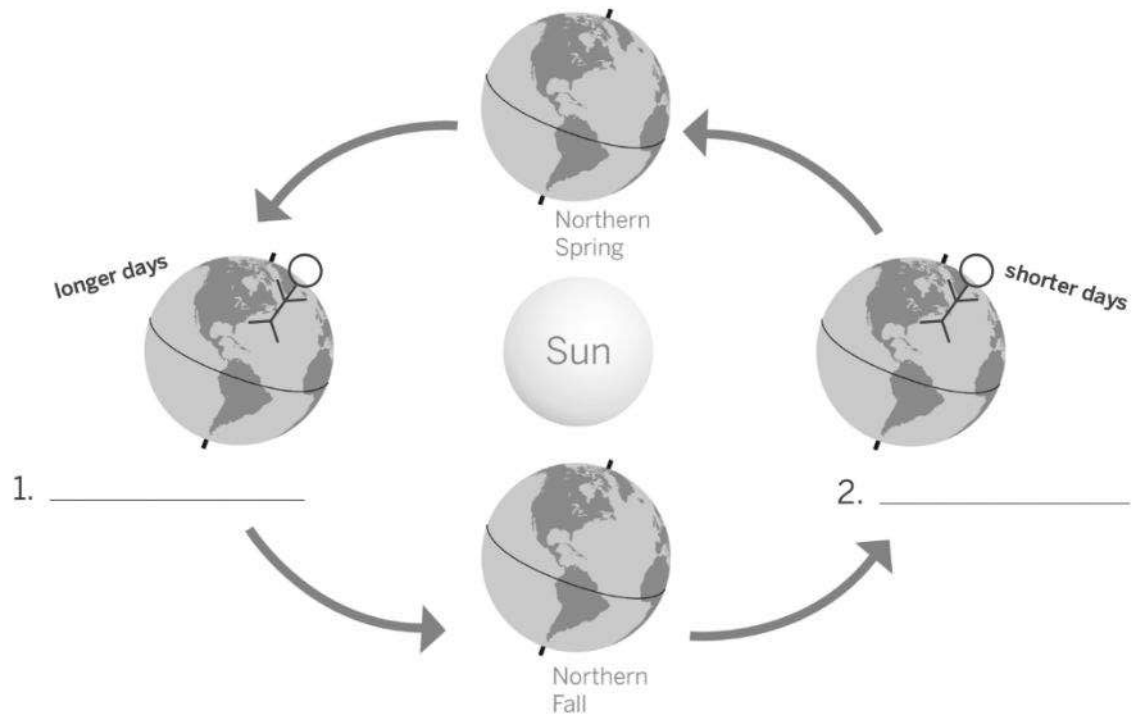
<https://jr.brainpop.com/science/weather/seasons/>





Directions: Listen to your teacher's instructions and identify winter and summer in the diagram.

Knowledge 6 Cycles in Nature



NAME: _____
DATE: _____

2.1 Activity Pa

Bed in Summer

by Robert Louis Stevenson

In winter I get up at night
And dress by yellow candle-light.
In summer, quite the other way,
I have to go to bed by day.
I have to go to bed and see
The birds still hopping on the tree,
Or hear the grown-ups people's feet
Still going past me in the street.
And does it not seem hard to you,
When all the sky is clear and blue,
And I should like so much to play,
To have to go to bed by day?



"BED IN SUMMER" QUESTIONS

53

- How does the poet use rhyming words in the poem?
- How does this poem relate to the tilt of the earth?
- Do we get more sunlight in the summer or in the winter?
- Why does Robert Louis Stevenson say, "In winter I get up at night"?
- Why does he say, "In summer, quite the other way, I have to go to bed by day"?
- How does the poet feel about going to bed in summer?

WINTER SOLSTICE

13 FASCINATING WINTER SOLSTICES

SUMMER SOLSTICE

TOP 8 SUMMER SOLSTICES

LESSON 3

Video

FOUR SEASONS IN

ONE YEAR

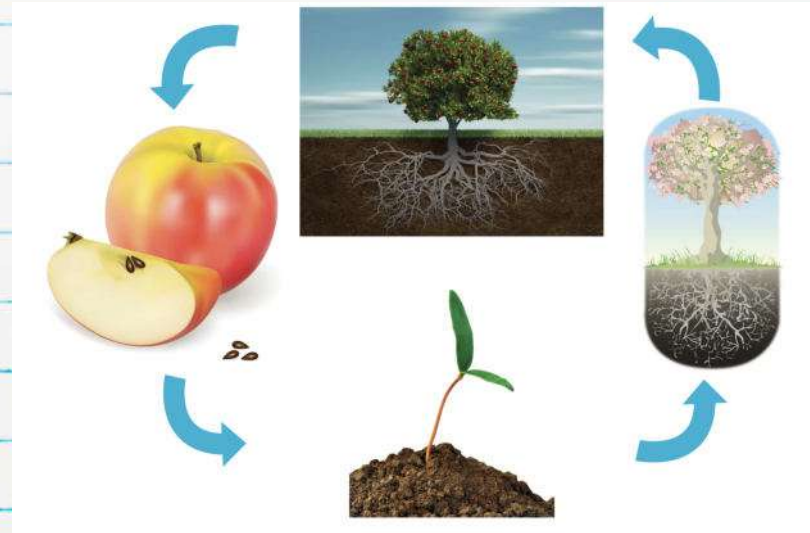
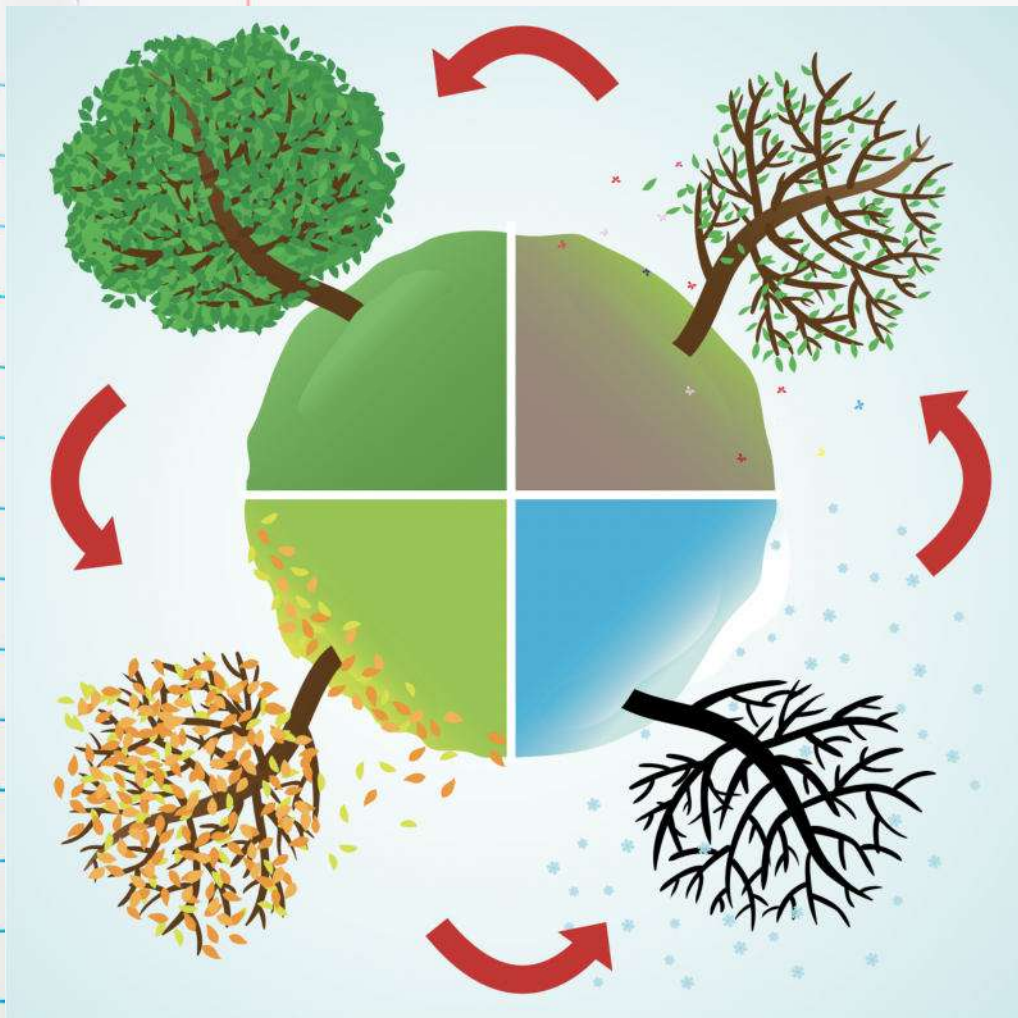
LESSON OBJECTIVES

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Students will:

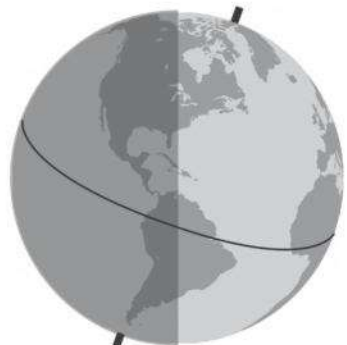
- Explain that a cycle is a sequence of events that repeats itself again and again
- Recognize that living things have a life cycle
- Describe the seasonal cycle: spring, summer, autumn, winter
- Identify the title of the Earth's axis in relation to the sun causes seasons
- Explain effects of seasonal changes on plants and animals
- Describe animal processes during each season



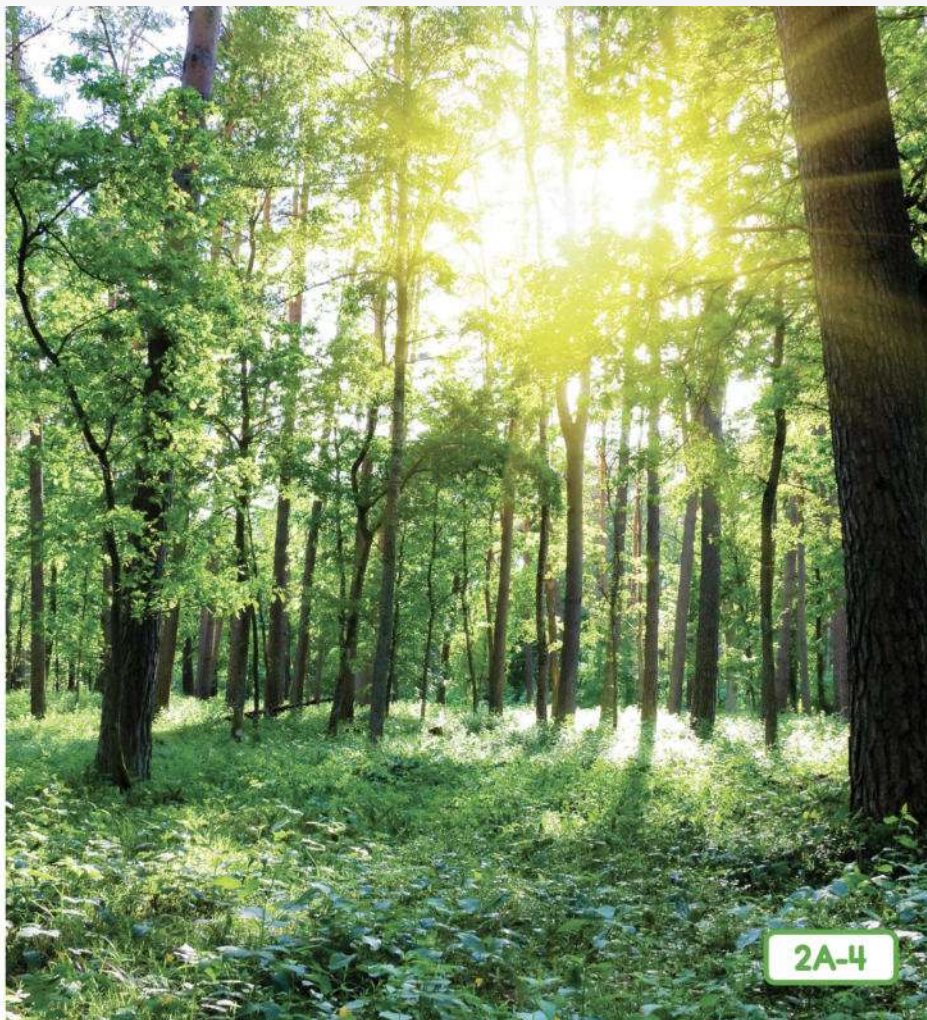


Northern Seasons Chart				
	Spring	Summer	Autumn/Fall	Winter
Date Season Begins				
Amount of Sunshine				
Temperature				
Plants				
Animals				
Activities/Clothing				

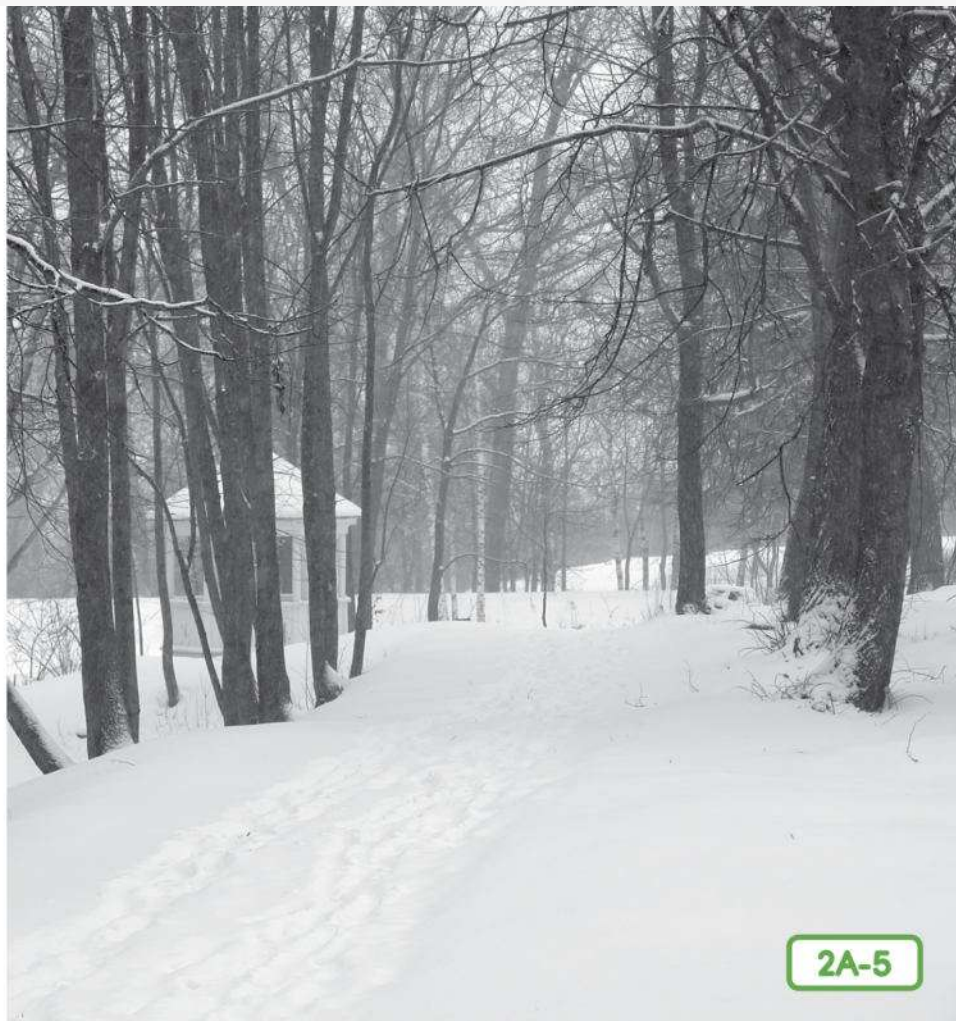
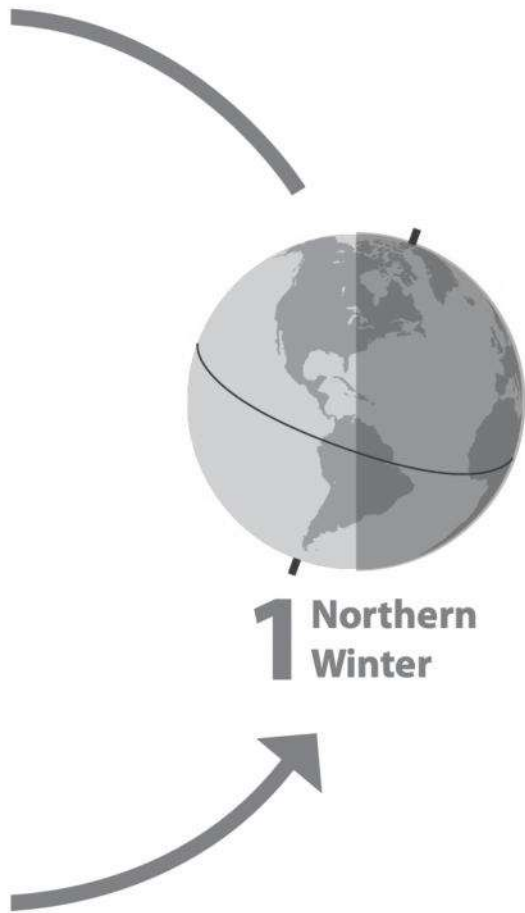
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Amount of Sunshine	Roughly the same number of daylight and dark hours	More daylight hours than dark hours; it stays light out later	Roughly the same number of daylight and dark hours	Fewer daylight hours than dark hours; it gets dark earlier
Temperature	Warmer	Hotter	Cooler	Colder
Plants				
Animals				
Activities/Clothing				

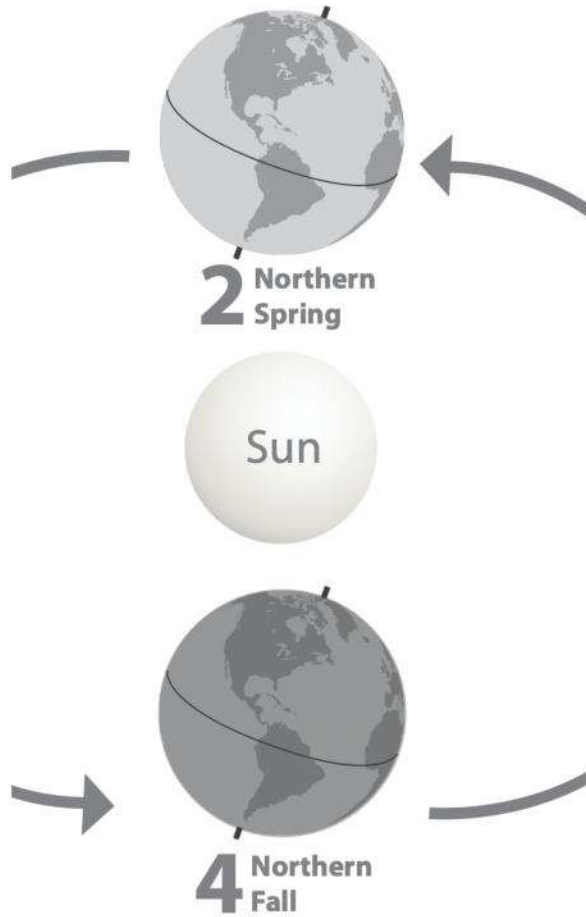


3 Northern
Summer



2A-4



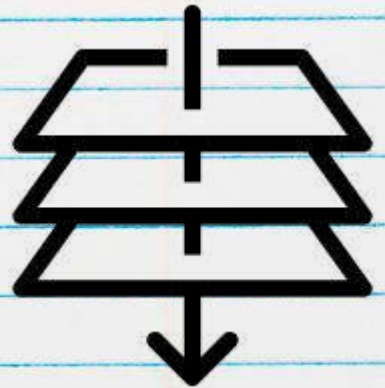


2A-6

LESSON VOCABULARY

64

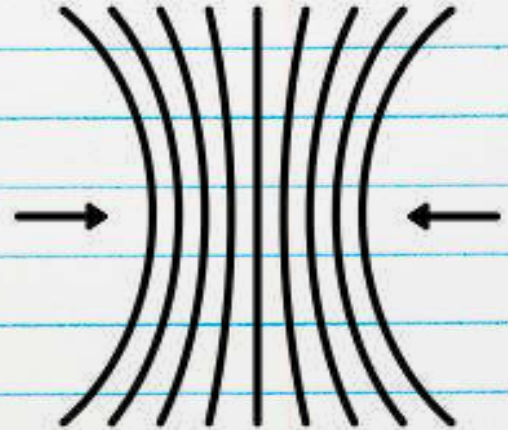
- **absorbed** - took in or soaked up



LESSON VOCABULARY

65

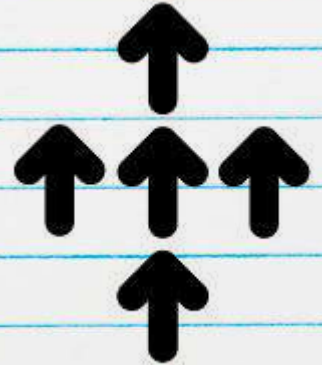
- **adapt-** to adjust or change to better suit one's environment



LESSON VOCABULARY

66

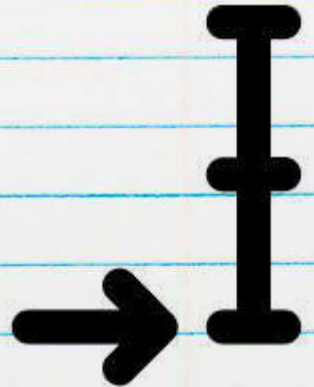
- **migrate**- to move from one place to another



LESSON VOCABULARY

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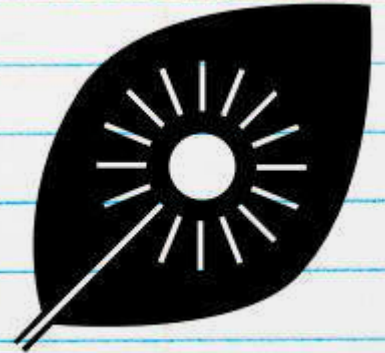
- **minimum**- the least amount possible



LESSON VOCABULARY

68

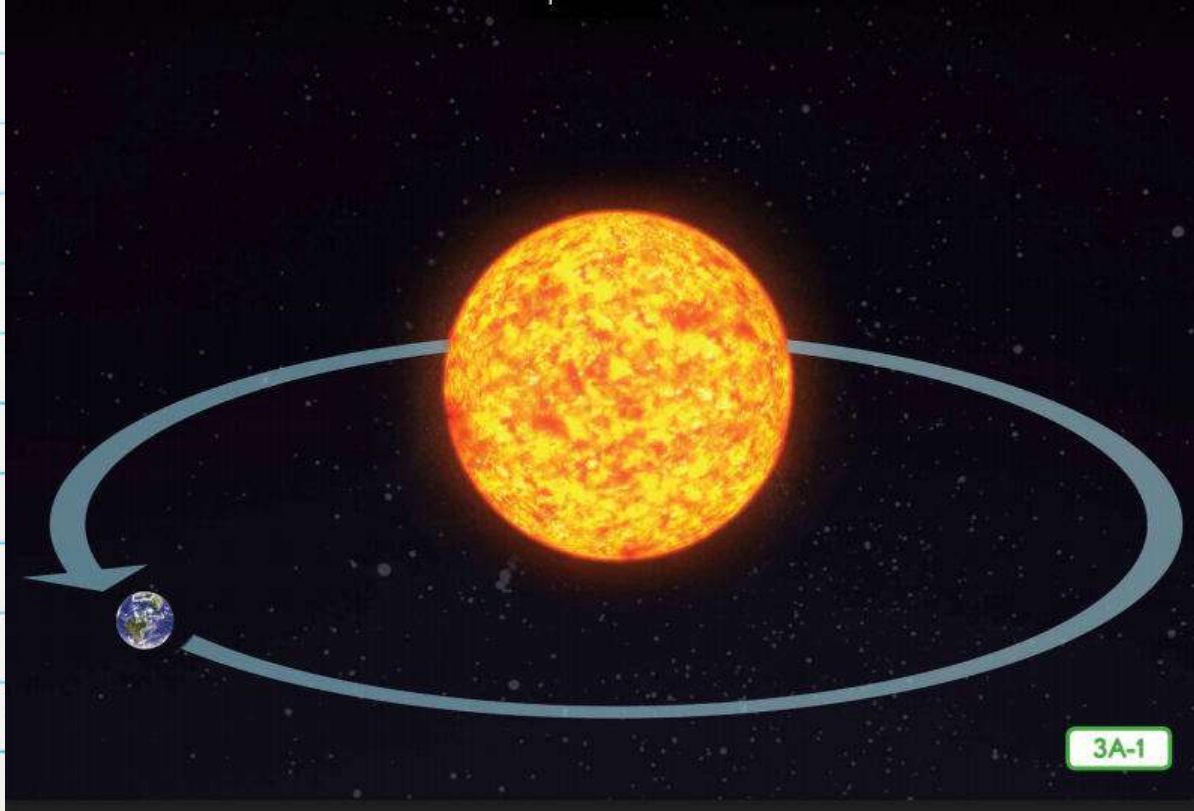
- **photosynthesis**- when plants use sunlight to turn water and air into food

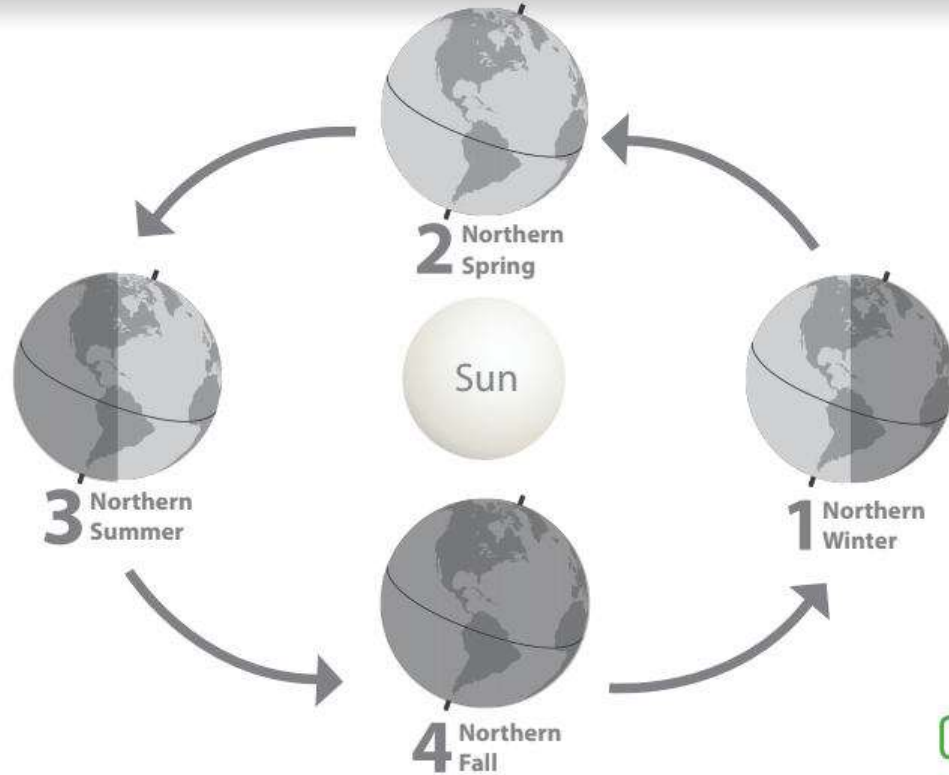


Cycles in Nature

Lesson 3

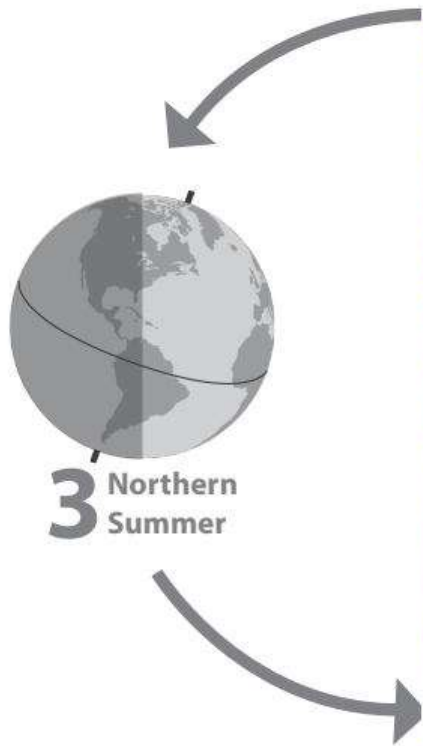
Video



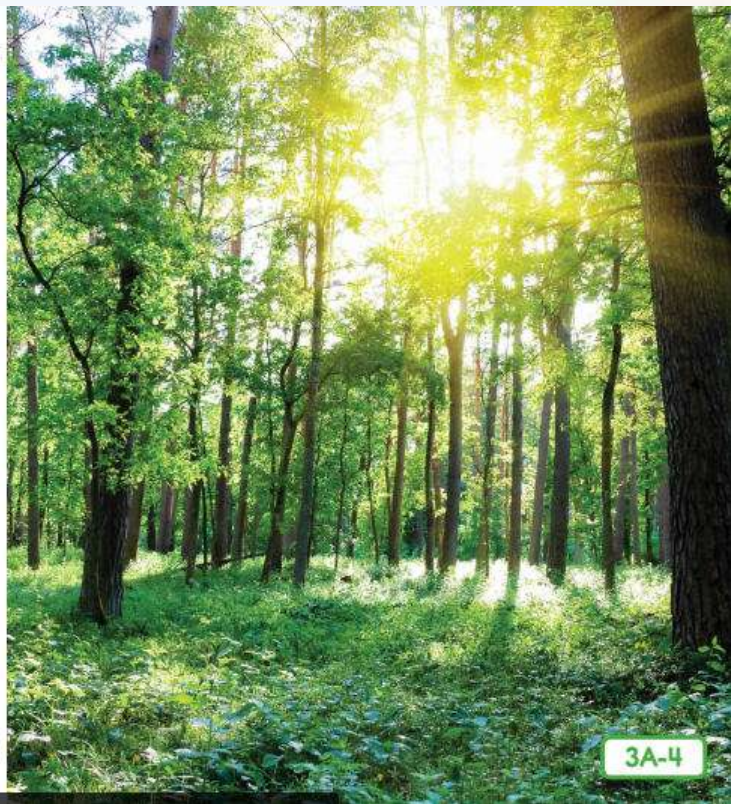


3A-2





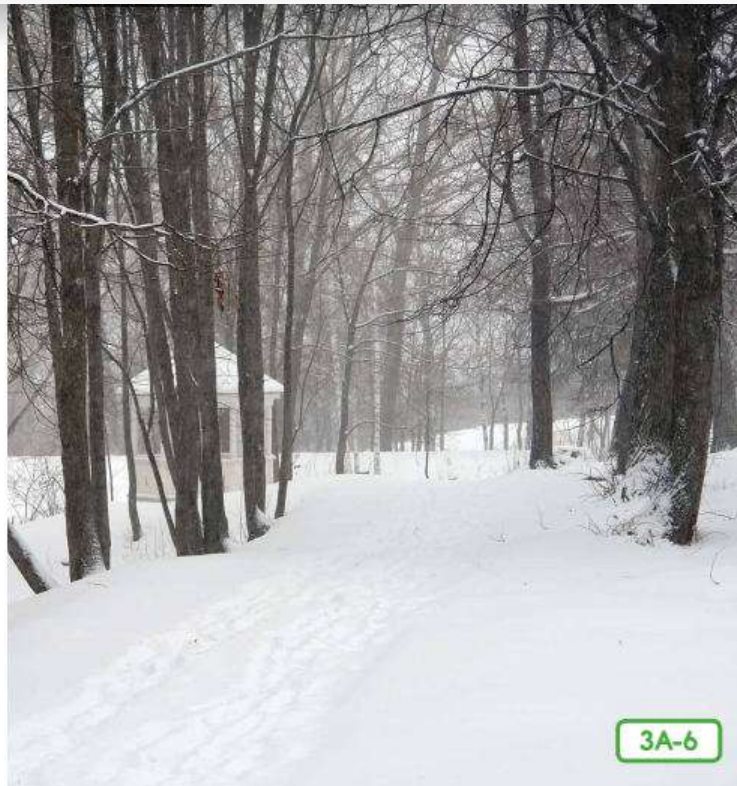
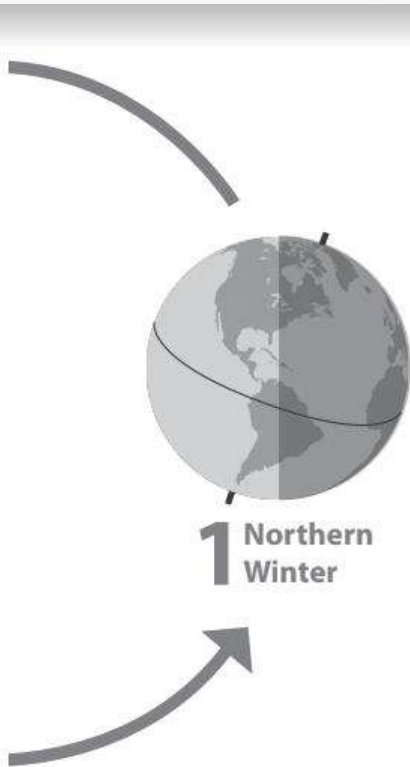
3 Northern
Summer



3A-4



3A-5







COMPREHENSION QUESTIONS

78

- What is the main topic of today's read aloud?
- What causes the yearly seasons on earth?
- If it is summer in the Northern Hemisphere, what season is it in the Southern Hemisphere?

COMPREHENSION QUESTIONS

79

- How do the seasons affect plants?
- Why do plants grow more rapidly during the summertime than during other seasons?
- Why do some trees shed their leaves?
- How do the seasons affect animals?

COMPREHENSION QUESTIONS

80

- Why do some animals migrate south in the fall and return north in the spring?
- In which season do most animals give birth to their young?
- In which season are many crops harvested?

adapt

*"change or
adjust"*

ability

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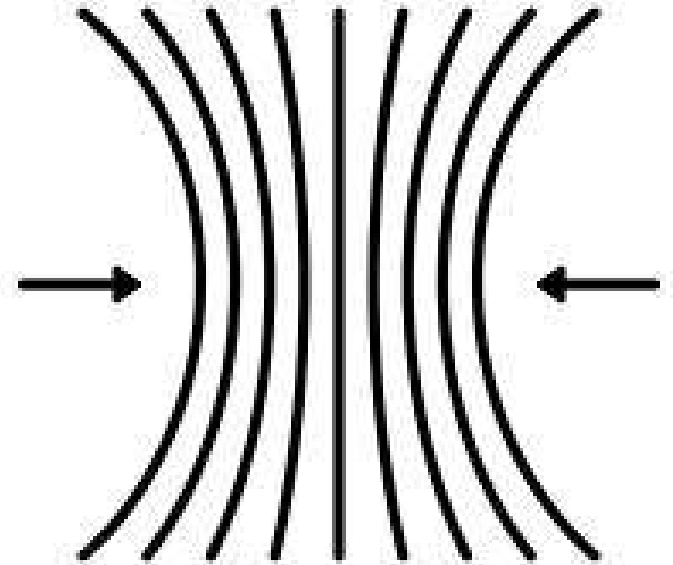
s

er

ion

or

s



WORD WORK - ADAPT

82

What does **adapt** mean?

How do people **adapt** to winter and summer?

Foxes have learned to **adapt** to a suburban (city) environment.

Can you think of other things in nature that **adapt**?

BRAINPOP JR.

83

Spring Video

<https://jr.brainpop.com/science/weather/spring/>

Summer Video

<https://jr.brainpop.com/science/weather/summer/>

Fall Video

<https://jr.brainpop.com/science/weather/fall/>

Winter Video

<https://jr.brainpop.com/science/weather/winter/>

COMPOUND WORDS

84

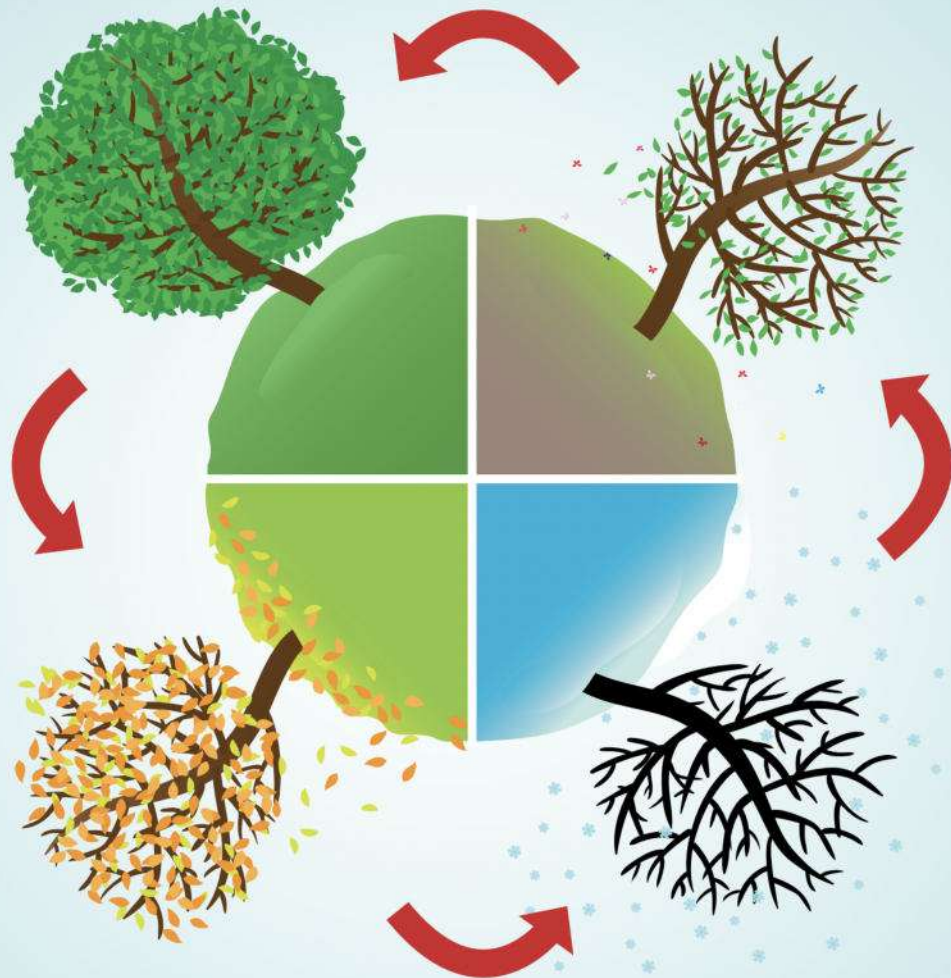
Two words can be added together to form a new word.

Bedtime= bed+time (time to go to bed)

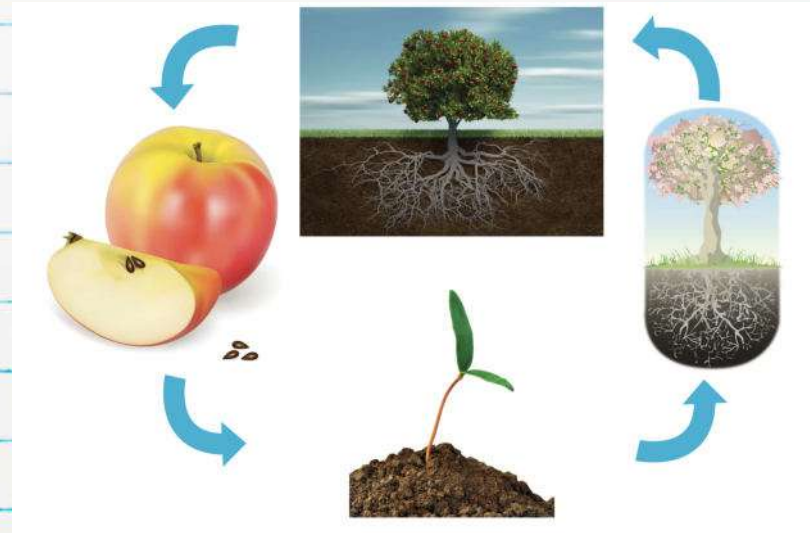
Notebook= note+book (a book in which you write notes)

Bathroom= bath+room (a room where you take a bath)





[To Table of Contents](#)



Northern Seasons Chart				
	Spring	Summer	Autumn/Fall	Winter
Date Season Begins	Spring equinox; a round March 21	Summer solstice; around Sept. 21	Autumn equinox; around Sept. 21	Winter solstice; around Dec. 21
Amount of Sunshine	Roughly the same number of daylight and dark hours	More daylight hours than dark hours; it stays light out later	Roughly the same number of daylight and dark hours	Fewer daylight hours than dark hours; it gets dark earlier
Temperature	Warmer	Hotter	Cooler	Colder
Plants				
Animals				
Activities/Clothing				

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Temperature	Warmer	Hotter	Cooler	Colder
Plants	Trees grow new leaves; flowers start to bloom; crops are planted	Plants and crops grow as they absorb more sunlight	Leaves change color and begin to fall; farmers harvest crops	Leaves have fallen from deciduous trees; many plants die
Animals	Birds return and animals wake up; many animals have babies	Animals raise their babies	Many birds migrate; many animals prepare for winter by collecting food	Many animals hibernate or migrate; there are not as many birds
Activities/Clothing	Starting a garden; flying kites	More time outdoors; lighter clothing; swimming; picnics	Back to school; harvesting crops	More time indoors; heavier clothing; ice skating; skiing

LESSON 4

Video

THE LIFE CYCLE OF A PLANT

LESSON OBJECTIVES

90

Students will:

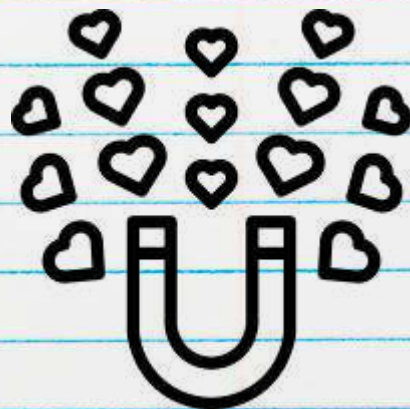
- Explain that a cycle is a sequence of events that repeats itself again and again
- Describe the seasonal cycle: spring, summer, autumn, winter
- Explain effects of seasonal changes on plants and animals
- Define the term **life cycle**
- Identify the stages of the life cycle of a flowering plant (seed to seed)



LESSON VOCABULARY

92

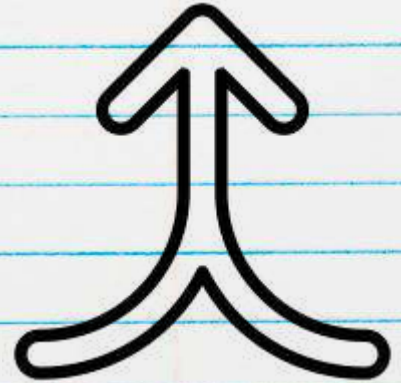
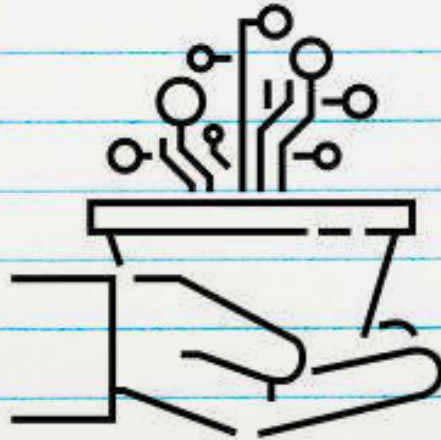
- **attracted** - made someone or something interested in someone or something else



LESSON VOCABULARY

93

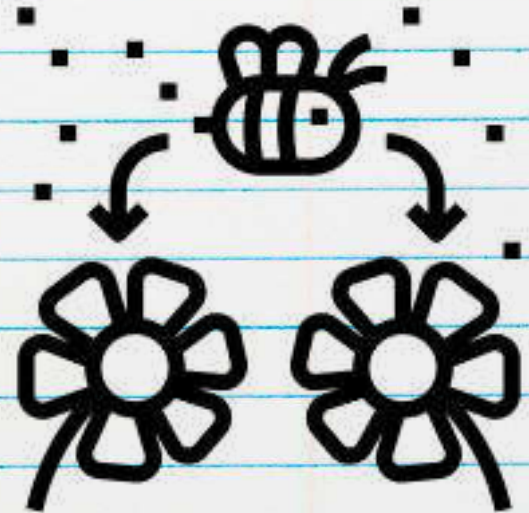
- **emerge**- to come out into view;
to become visible



LESSON VOCABULARY

94

- **pollinators**- animals that carry pollen to and from plants



LESSON VOCABULARY

95

- **protective-** helpful at keeping someone or something safe



LESSON VOCABULARY

96

- **reproduce**- to make new animals or plants



Cycles in Nature

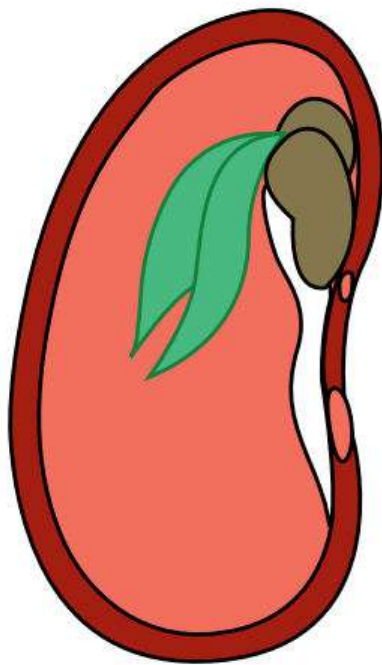
Lesson 4

Video





4A-2



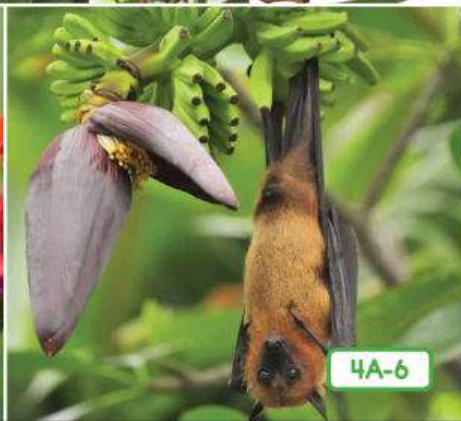
4A-3



4A-4

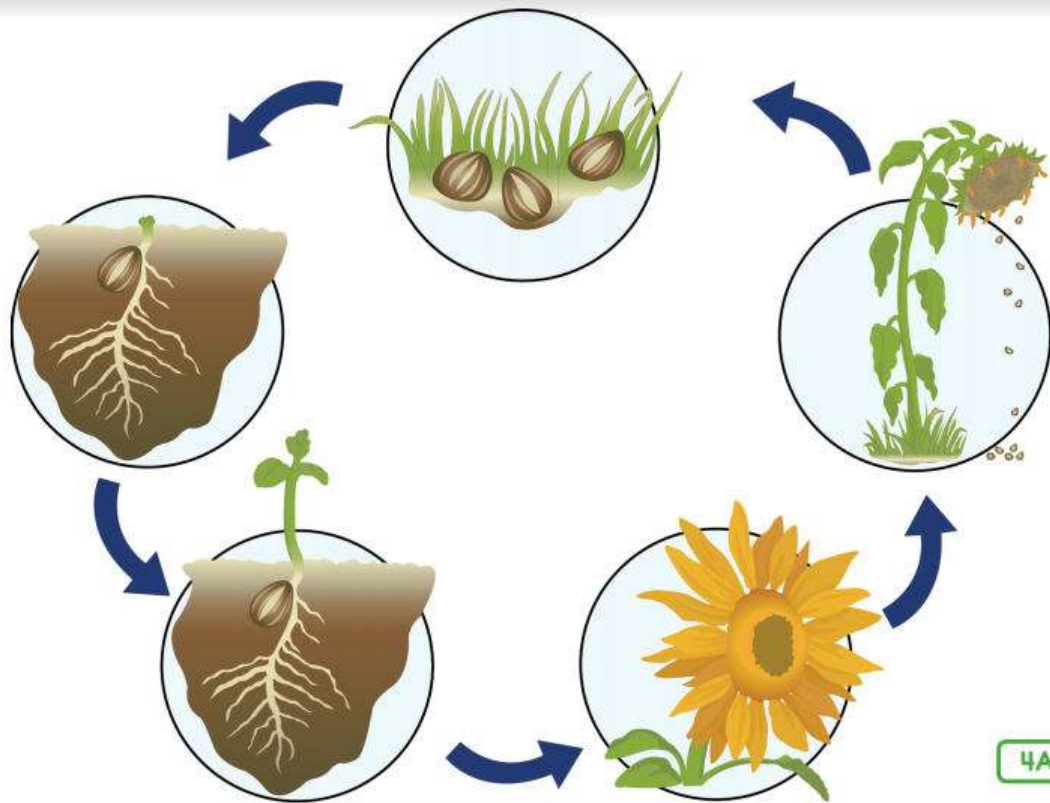


4A-5

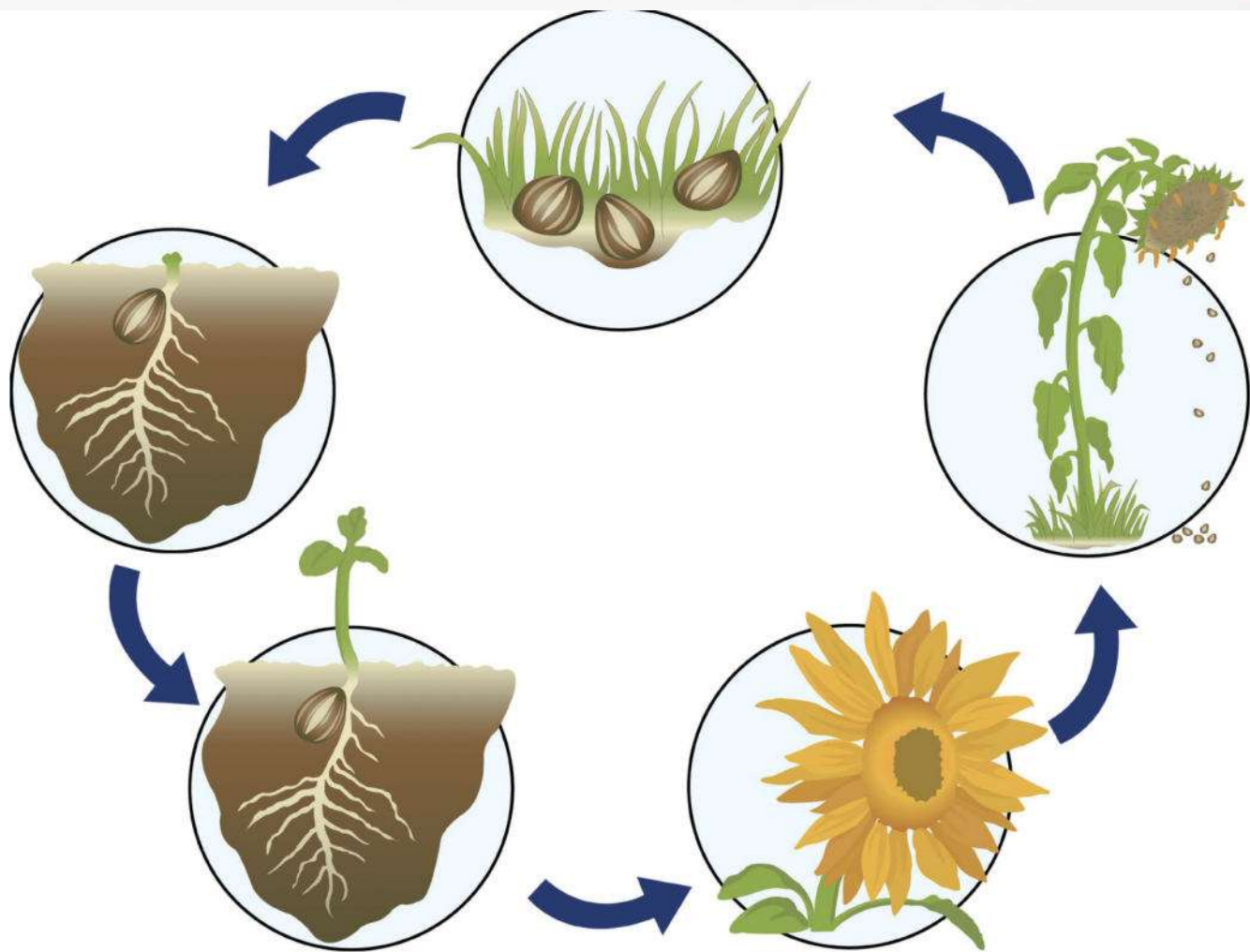


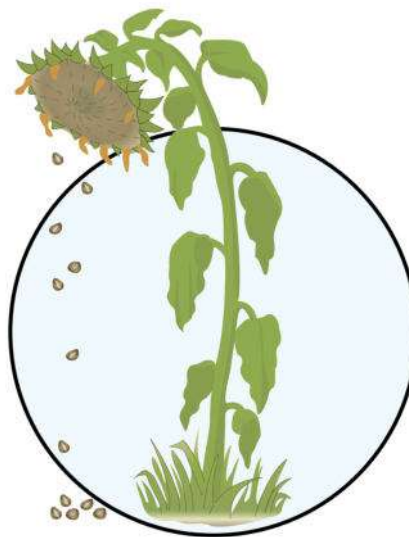
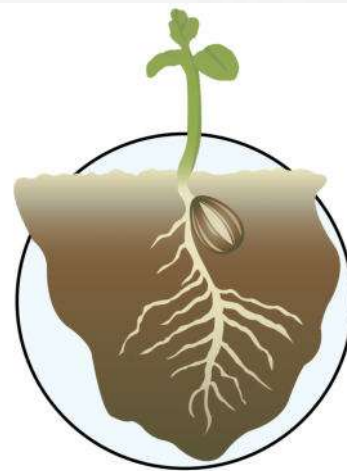
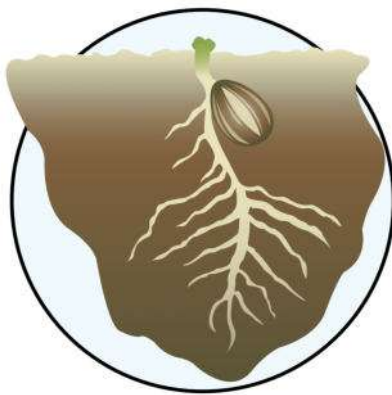
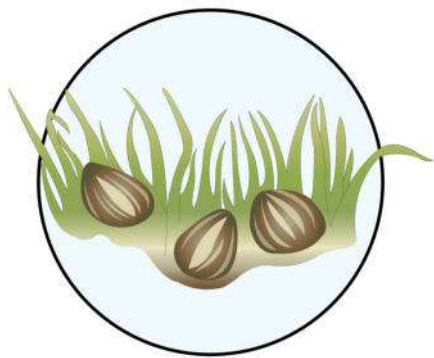
4A-6





4A-8





COMPREHENSION QUESTIONS

108

- What is the main topic of today's read aloud?
- Which one of the four seasons is the best time for planting seeds? Why?
- What is pollination?
- Why is pollination important in the life cycle of a plant?
- How does pollination happen?

COMPREHENSION QUESTIONS

109

- How do flowering plants attract pollinators?
- What is seed dispersal and why is it important to the life cycle of a plant?
- Name three kinds of seed dispersal, or ways seeds are spread in different directions.
- What might happen if there were no more honeybees to pollinate flower?

WORD WORK - PROTECTIVE

110

“Some seeds contained within a **protective** casing can attach themselves to the fur of passing animals.”



WORD WORK - PROTECTIVE

111

- **protective**- helpful at keeping someone or something safe



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WORD WORK - PROTECTIVE

113

What does **protective** mean?

An umbrella is a **protective** cover or shelter from the rain.

Can you think of other items that are designed to be **protective** or provide a means of protection?



WORD WORK - PROTECTIVE

114

Is this action something we would describe as **protective**? Yes or No?

1. Using bug spray to keep mosquitoes away
2. Wearing a helmet when you ride your bike
3. Eating pizza
4. Using an umbrella when it rains
5. Climbing a tree
6. Wearing shin pads when you play soccer



NAME: _____

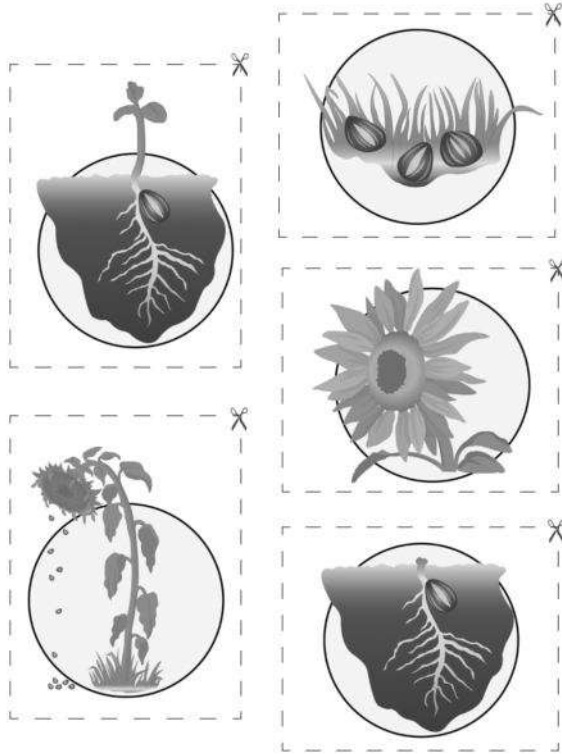
DATE: _____

4.1

Activity Page

115

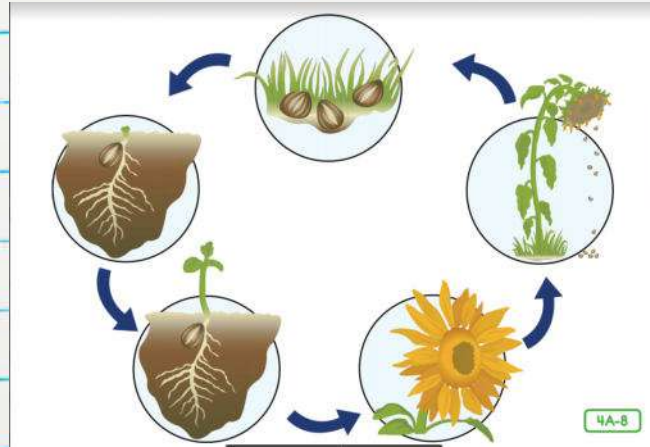
Directions: Cut out the pictures of the plant at various stages. Sequence the pictures, starting with the beginning of the plant life cycle. Then, glue or tape the pictures in the correct order onto a separate sheet of paper.



QUICK WRITE

116

Describe the life cycle of a plant using the following sequence words: First, Next, Then, Last



Plant Life Cycle Video

<https://jr.brainpop.com/science/plants/plantlifecycle/>

LESSON 5

Video

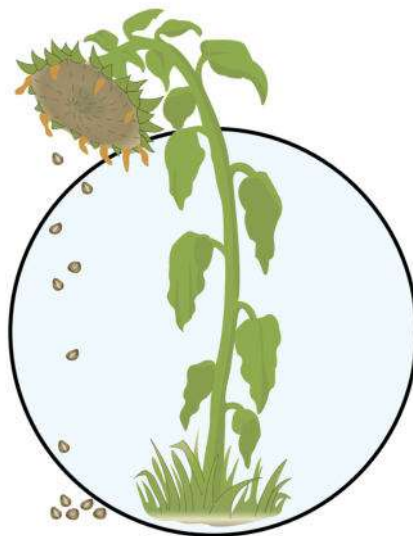
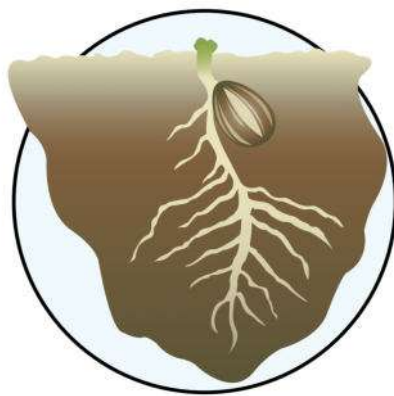
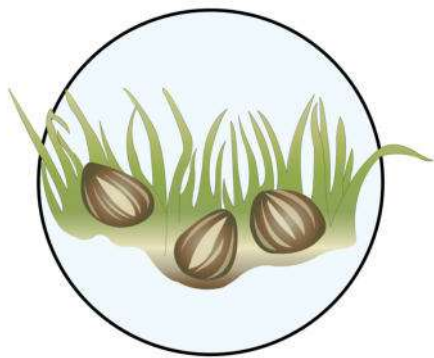
THE LIFE CYCLE OF A TREE

LESSON OBJECTIVES

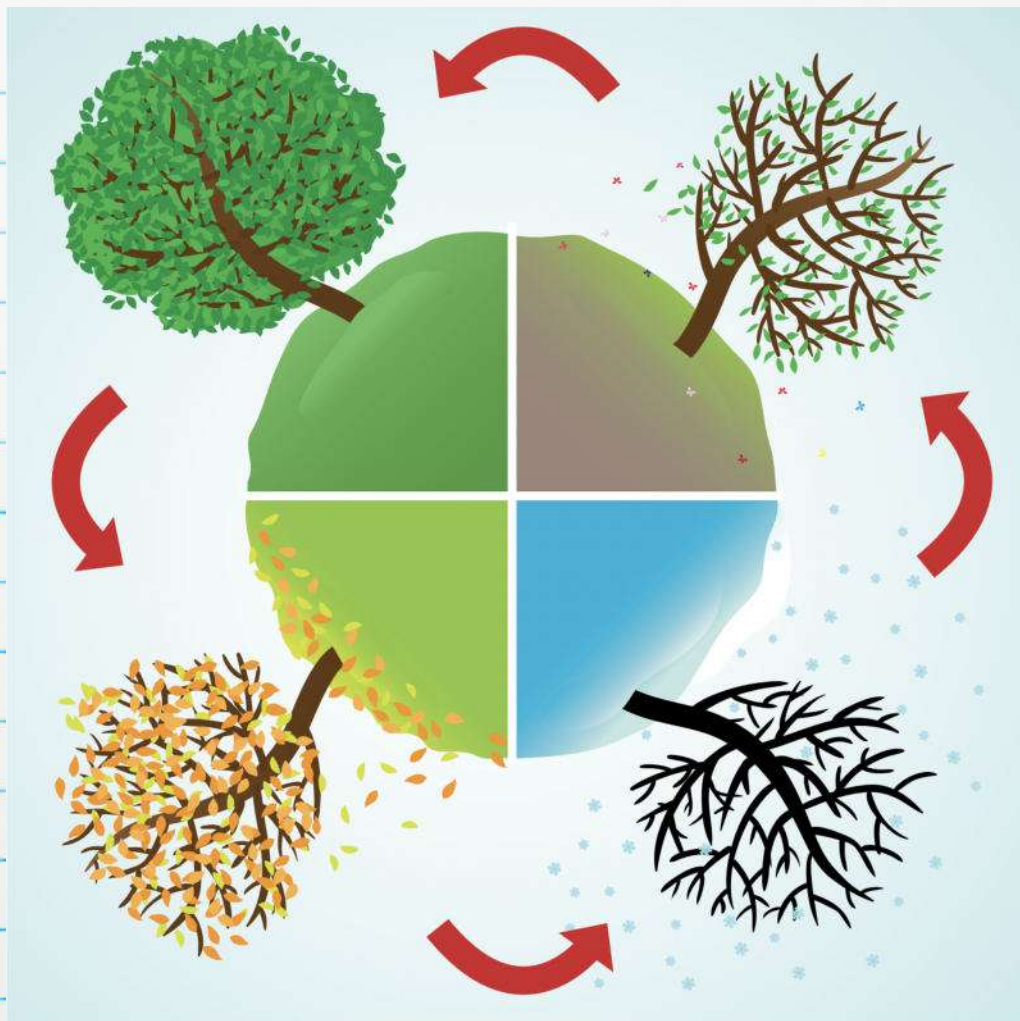
119

Students will:

- Explain that a cycle is a sequence of events that repeats itself again and again
- Describe the seasonal cycle: spring, summer, autumn, winter
- Explain effects of seasonal changes on plants and animals
- Define the term **life cycle**
- Identify the stages of the life cycle of a tree (seed to seed)



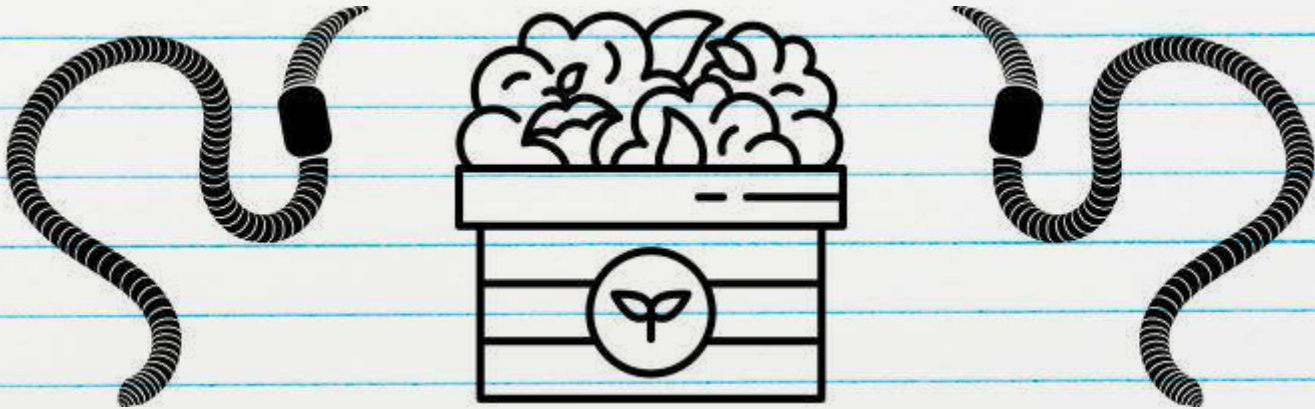
Northern Seasons Chart				
	Spring	Summer	Autumn/Fall	Winter
Date Season Begins	Spring equinox; a round March 21	Summer solstice; around June 21	Autumn equinox; around Sept. 21	Winter solstice; around Dec. 21
Amount of Sunshine	Roughly the same number of daylight and dark hours	More daylight hours than dark hours; it stays light out later	Roughly the same number of daylight and dark hours	Fewer daylight hours than dark hours; it gets dark earlier
Temperature	Warmer	Hotter	Cooler	Colder
Plants	Trees grow new leaves; flowers start to bloom; crops are planted	Plants and crops grow as they absorb more sunlight	Leaves change color and begin to fall; farmers harvest crops	Leaves have fallen from deciduous trees; many plants die
Animals	Birds return and animals wake up; many animals have babies	Animals raise their babies	Many birds migrate; many animals prepare for winter by collecting food	Many animals hibernate or migrate; there are not as many birds
Activities/Clothing	Starting a garden; flying kites	More time outdoors; lighter clothing; swimming; picnics	Back to school; harvesting crops	More time indoors; heavier clothing; ice skating; skiing



LESSON VOCABULARY

123

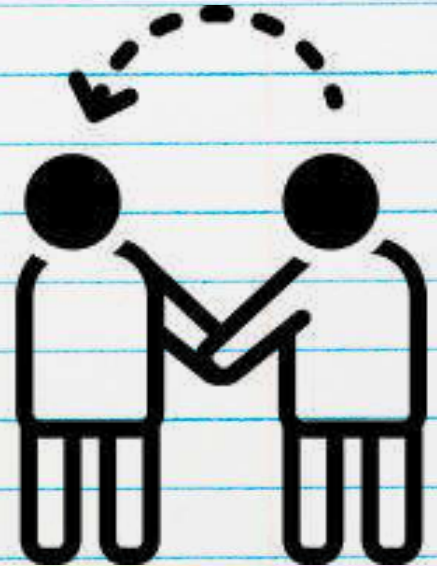
- **decomposers** - living things that help break down dead matter



LESSON VOCABULARY

124

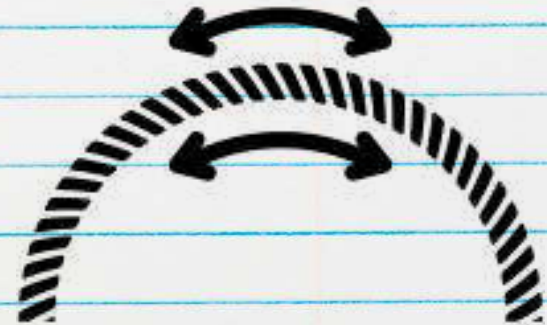
- **dependent-** requiring support or help



LESSON VOCABULARY

125

- **flexible**- able to bend and move easily



LESSON VOCABULARY

126

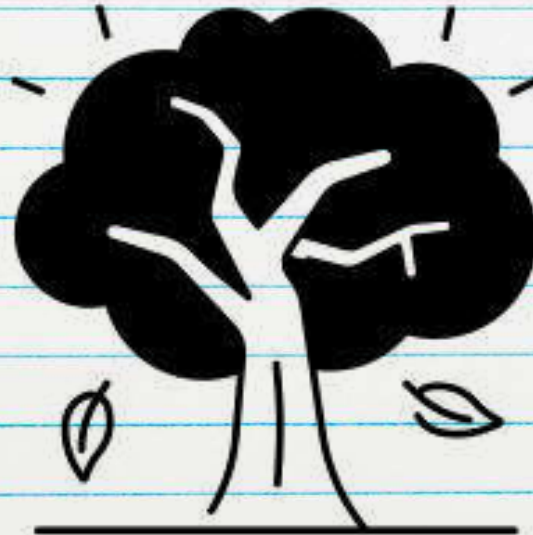
- **germination**- the process in which a seed begins to grow into a plant



LESSON VOCABULARY

127

- **mature- fully grown**



Cycles in Nature

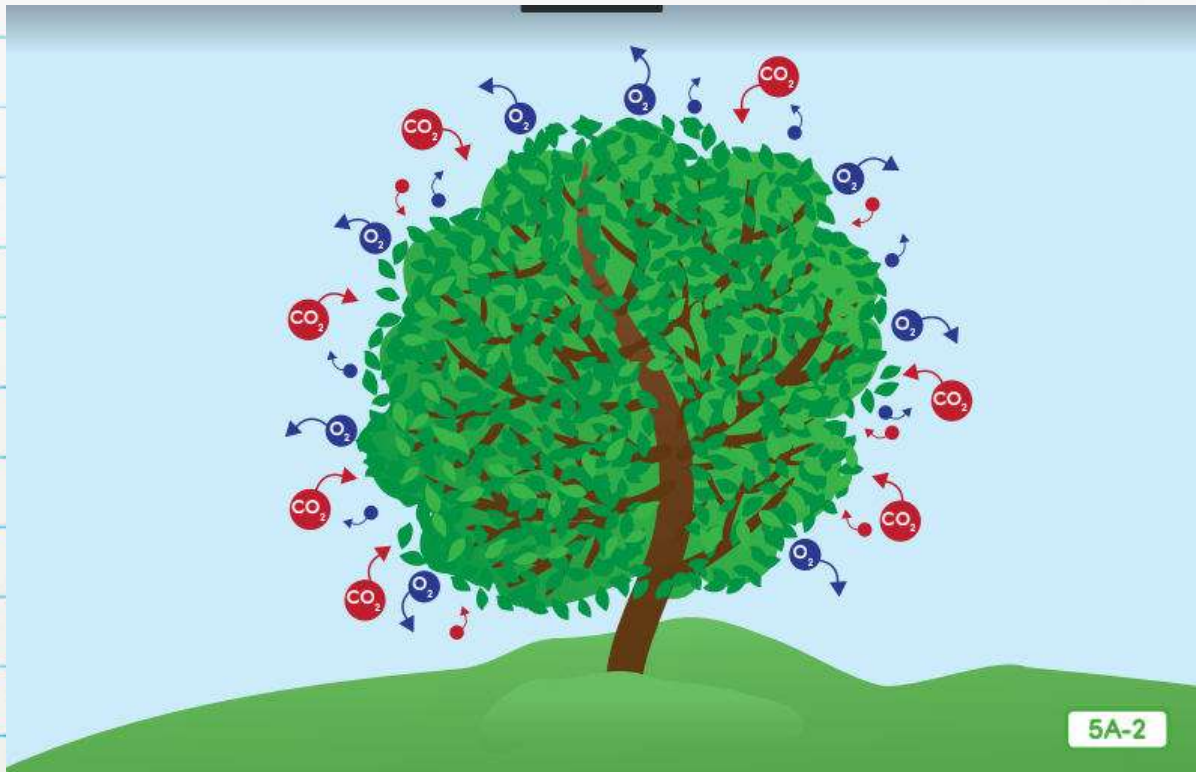
Lesson 5

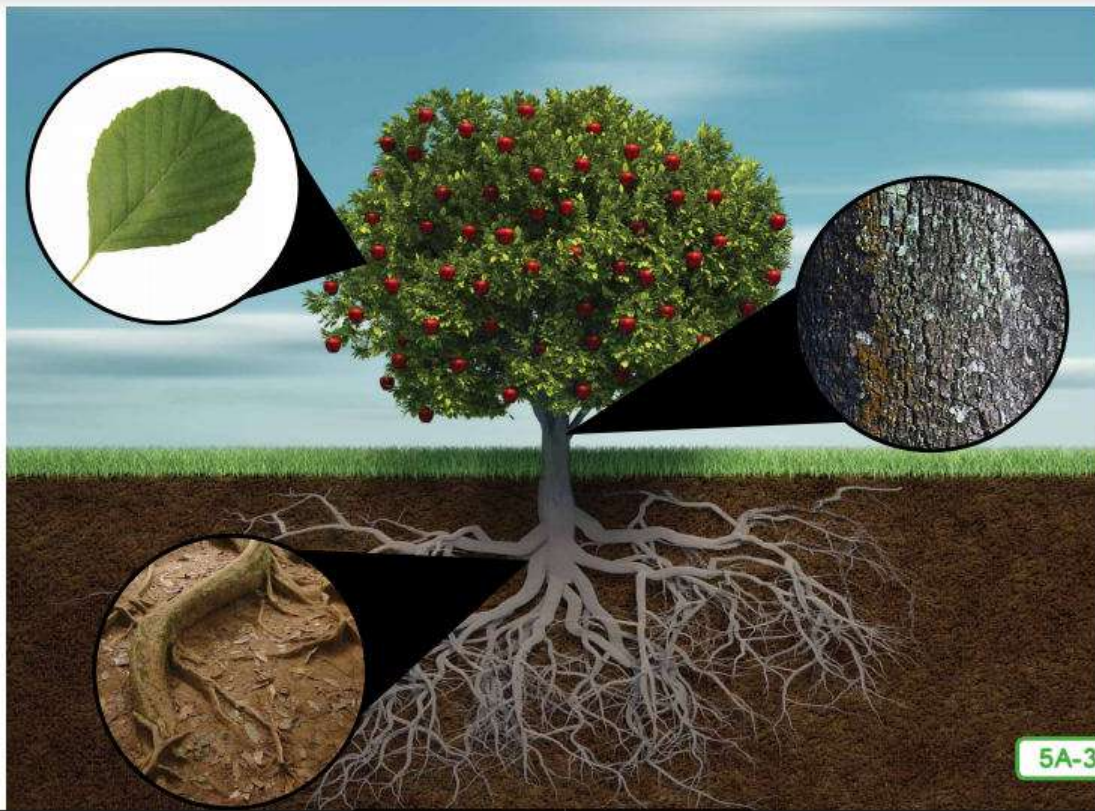
Video



5A-1

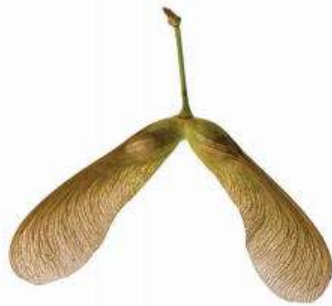
1
2
9





5A-3

1
3
1



5A-4

1
3
2



5A-5



5A-6

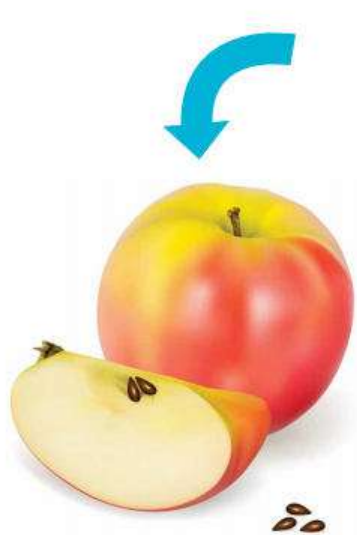
1
3
4





5A-8

7
3
6



5A-9

COMPREHENSION QUESTIONS

138

- What is the main topic of today's read aloud?
- Why are trees important to life on earth?
- What is the difference between deciduous trees and evergreen trees?
- Would it be easier for you to observe the complete life cycle of a sunflower plant or a tree?

COMPREHENSION QUESTIONS

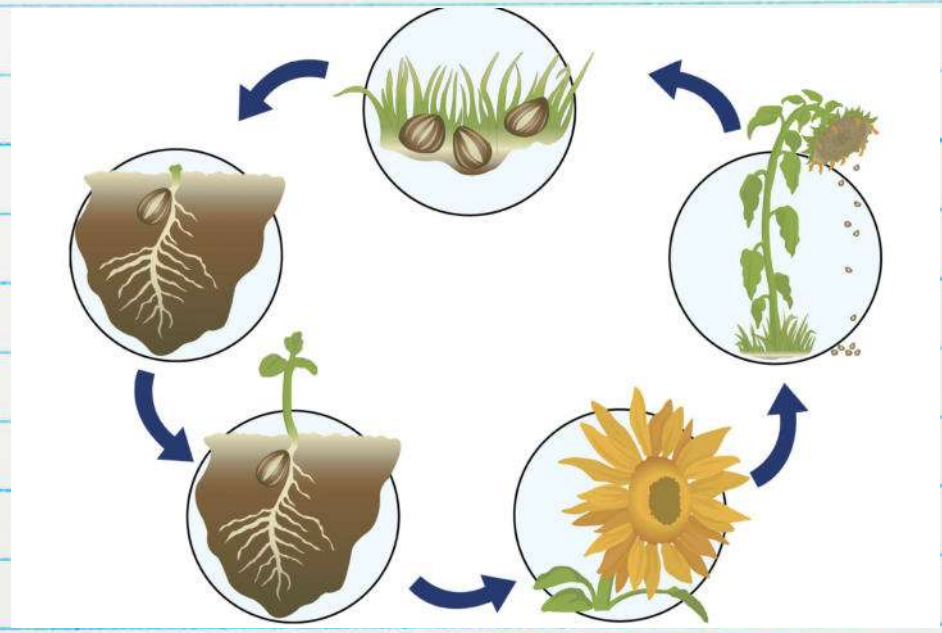
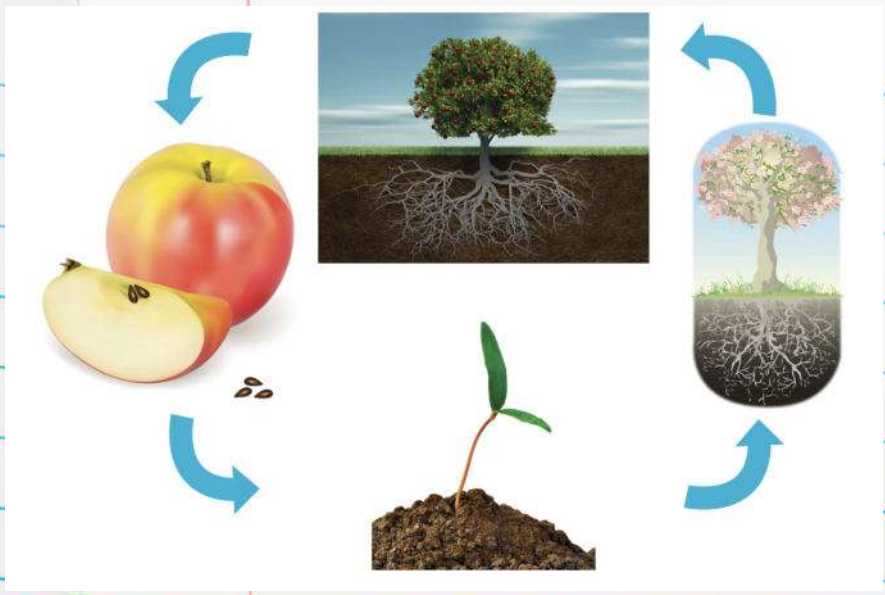
139

- What is the difference between deciduous trees and evergreen trees?
- What are the different ways that seeds are dispersed or spread apart that helps ensure that a tree's life cycle repeats every year?

THINK-PAIR-SHARE

140

Would it be easier for you to observe the complete life cycle of a sunflower plant or a tree? Why?





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sprout"*

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WORD WORK - GERMINATION

143

What does **germination** mean?

Have you ever watched a seed germinate? What happened to the seed? Did it change or grow new parts?

WORD WORK - GERMINATION

144

Choose the correct answer about **germination**.

1. Does **germination** happen to the seed or to the adult plant in the life cycle of a flowering plant?
2. Does seed **germination** happen in the spring or in the winter?
3. Are water and sunlight, or rocks and grass, necessary to the **germination** process?

Tree Life Cycle Video

<https://jr.brainpop.com/science/plants/trees/>



NAME: _____

DATE: _____

5.1

Activity Page

146



I have many parts like _____

When I am young _____

When I get a little bit older _____

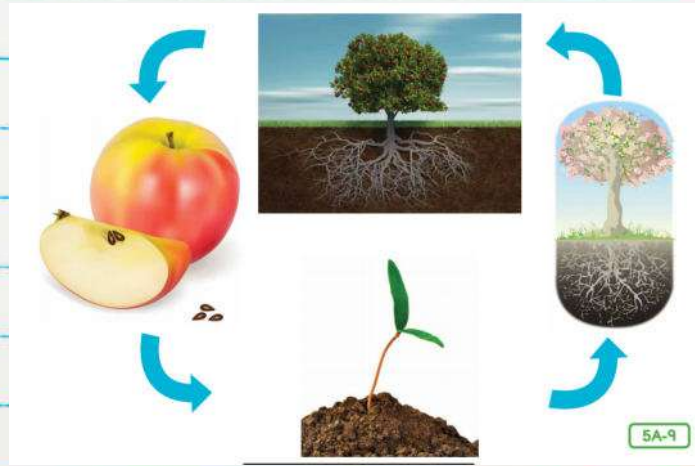
When I am mature _____

Directions: Pretend you are a tree. Complete the following statements from a tree's point of view.

QUICK WRITE

147

Describe the life cycle of a tree using the following sequence words: First, Next, Then, Last



PAUSING POINT

Riddles Slideshow by Stephanie Walley

LESSON 6

Video

WHICH CAME FIRST, THE
CHICKEN OR THE EGG?

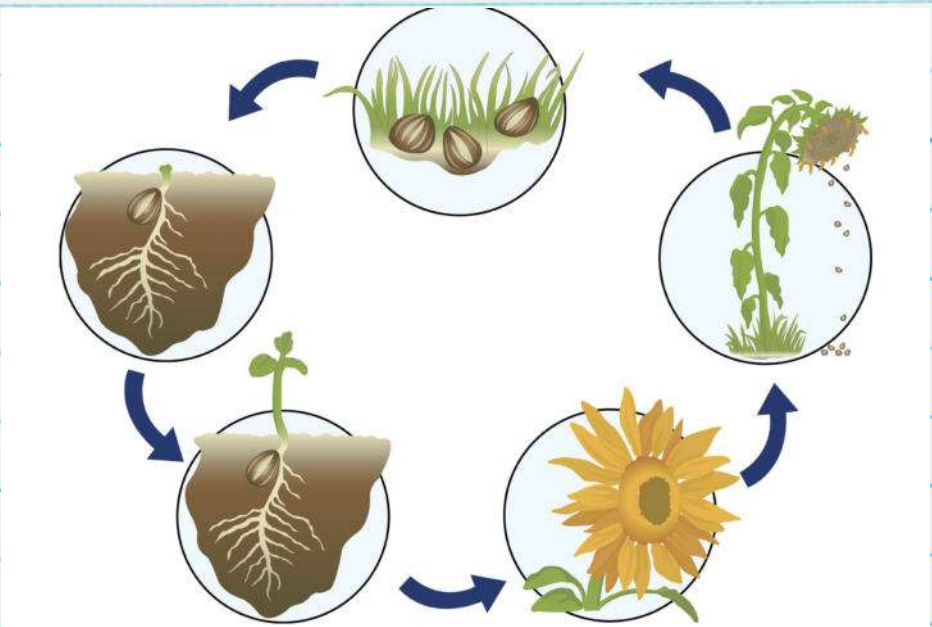
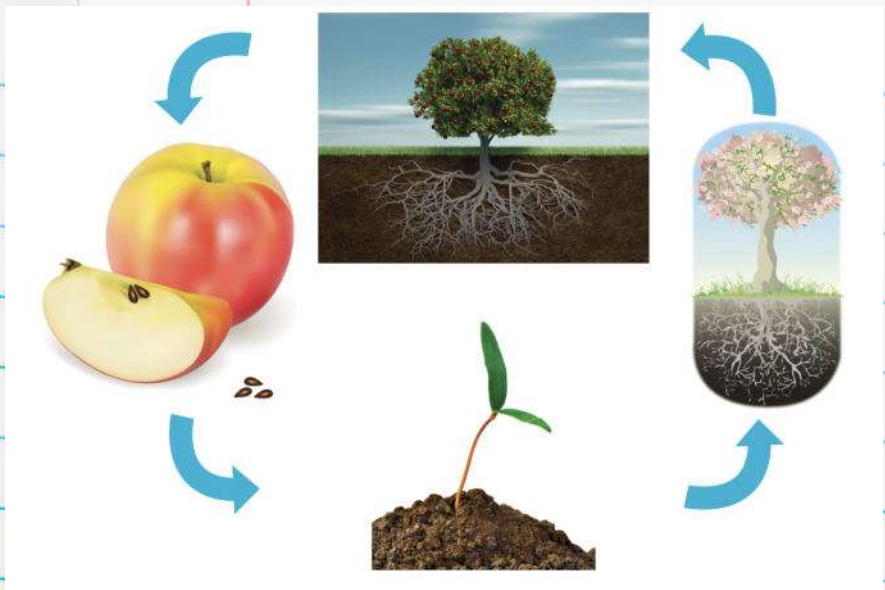
THE CHICKEN LIFE CYCLE

LESSON OBJECTIVES

150

Students will:

- Explain that a cycle is a sequence of events that repeats itself again and again
- Describe the seasonal cycle: spring, summer, autumn, winter
- Explain effects of seasonal changes on plants and animals
- Define the term **life cycle**
- Identify the stages of the life cycle of a chicken (egg to egg)



LESSON VOCABULARY

152

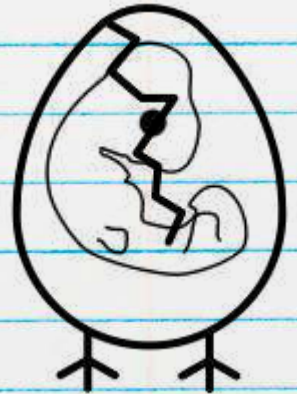
- **albumen** - the clear or white part inside an egg that surrounds the yolk



LESSON VOCABULARY

153

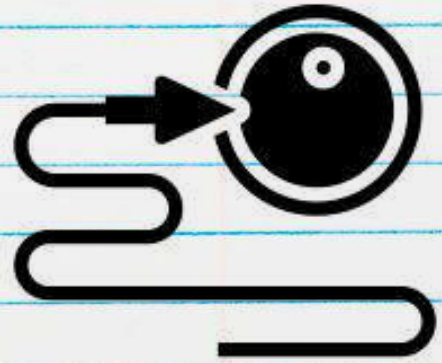
- **embryo**- an unborn or unhatched animal early in its development



LESSON VOCABULARY

154

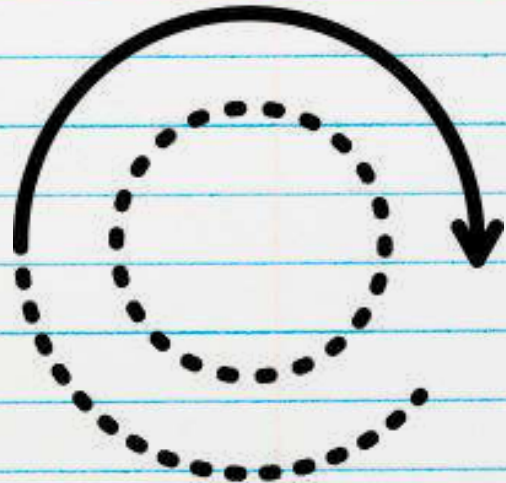
- **fertilize**- to make an egg able to grow and develop into a baby



LESSON VOCABULARY

155

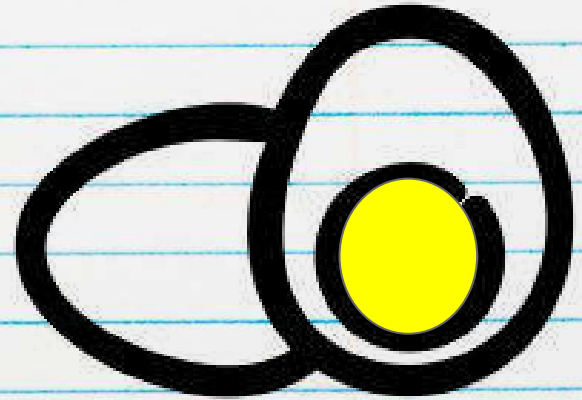
- **replenished**- replaced or refilled



LESSON VOCABULARY

156

- **yolk**- the yellow, internal part of an egg



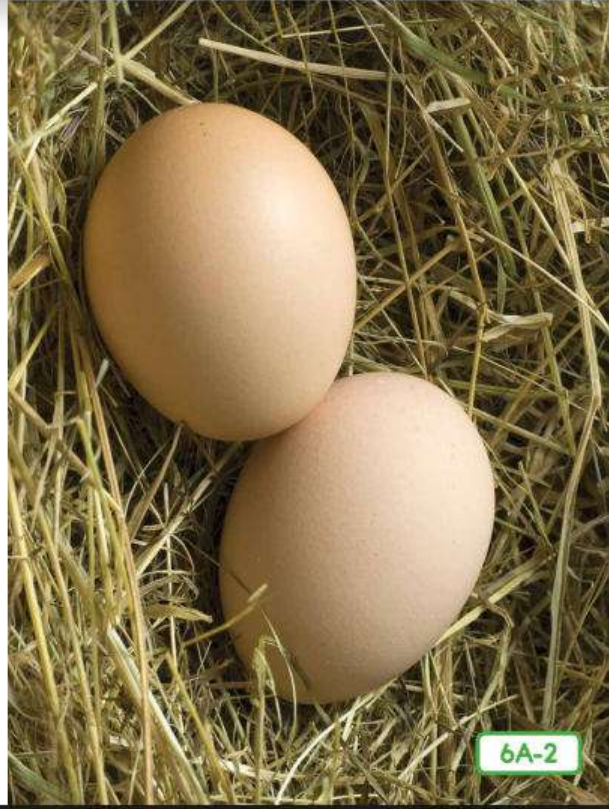
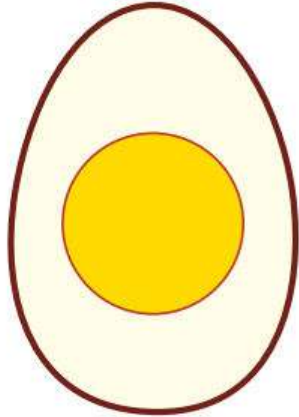
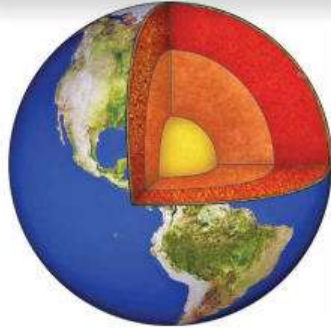
Cycles in Nature

Lesson 6

Video

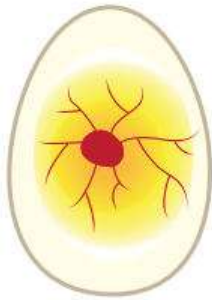


6A-1





6A-3



Day 4



Day 8



Day 13



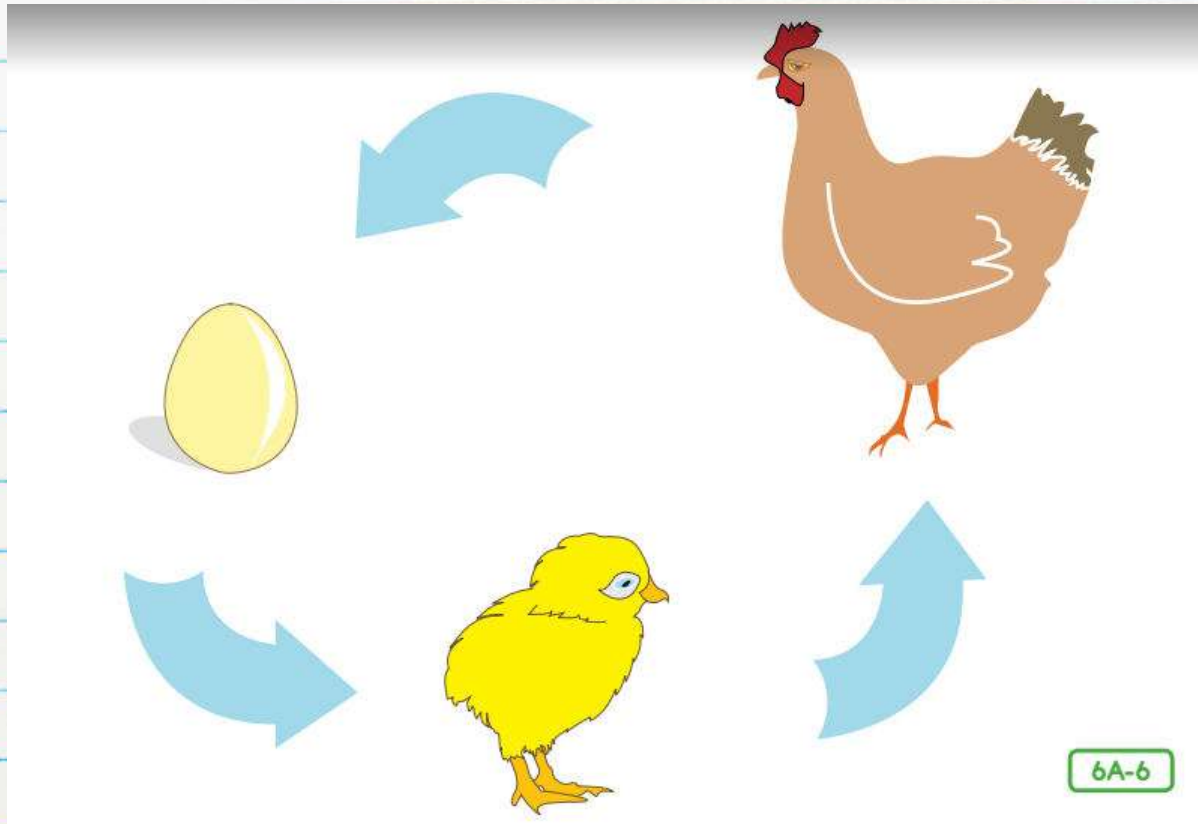
Day 17



Day 20

6A-4





COMPREHENSION QUESTIONS

164

- Were your predictions correct about whether the chicken or the egg comes first?
- What is the main topic of today's read aloud?
- How does the life cycle of a chicken begin?
- What three parts make up an egg?
- Do all eggs develop into baby chicks or go through a complete life cycle?

COMPREHENSION QUESTIONS

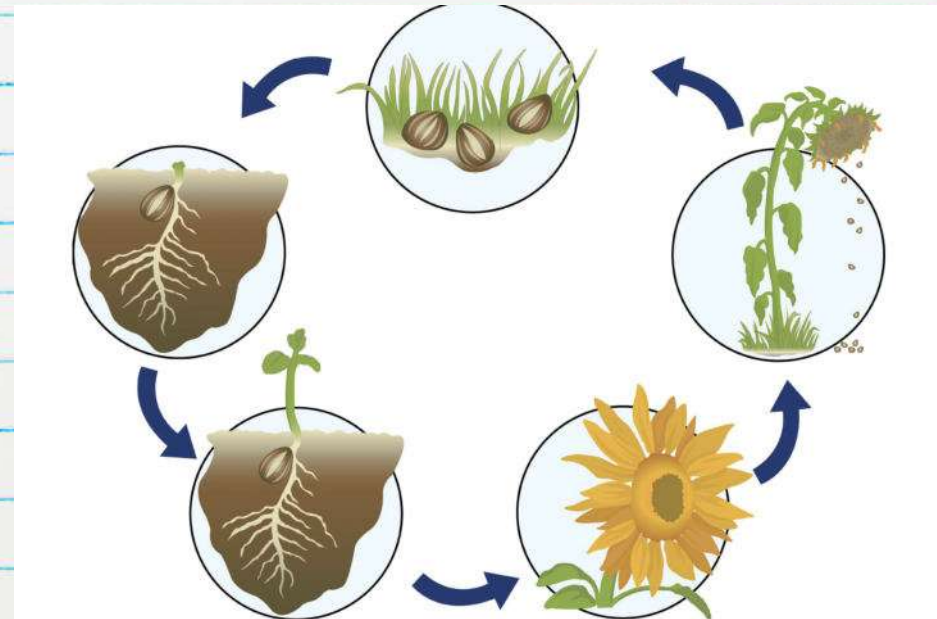
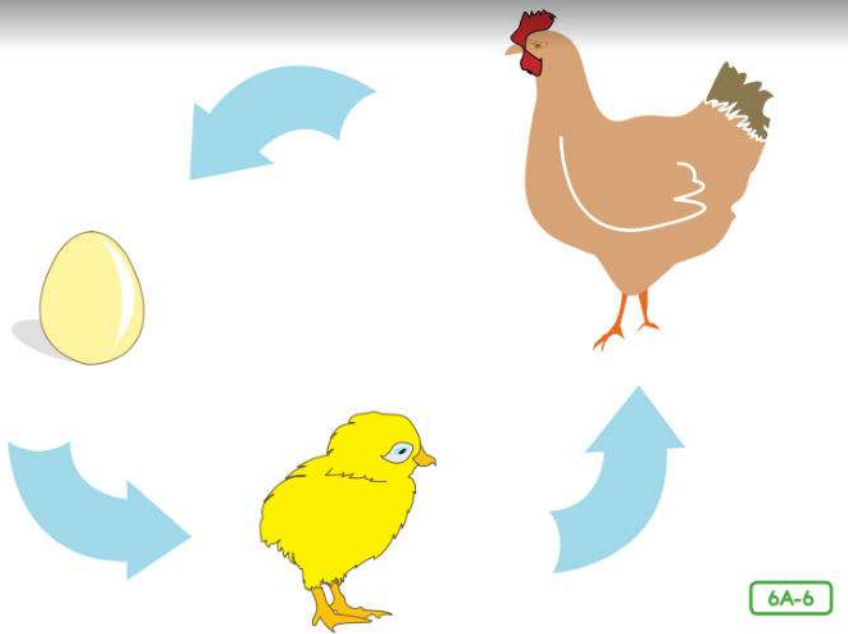
165

- How does the mother hen help her chicks grow inside the eggs?
- What does a growing chick use for food before it hatches?
- What does a baby chick do to break out of its shell when it hatches?
- What are the three stages of the life cycle of a chicken?

THINK-PAIR-SHARE

166

How is the life cycle of a chick similar to the life cycle of a flowering plant? How is it different?

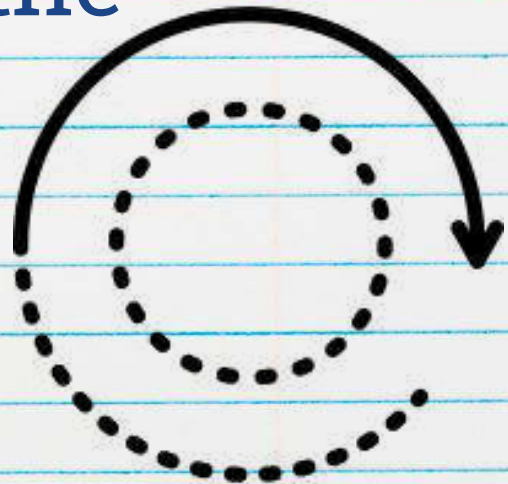


WORD WORK - REPLENISHED

167

“This supply of oxygen is **replenished**, or replaced, as oxygen passes through the shell of the egg.”

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or refilled



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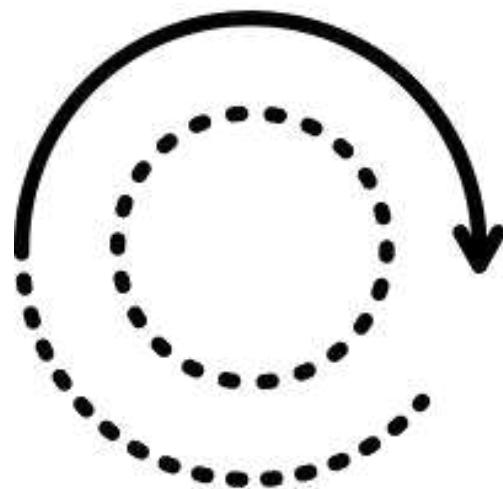
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WORD WORK - REPLENISHED

169

What does **replenished** mean?

Can you think of items that need to be replenished?

WORD WORK - REPLENISHED

170

Does this describe something that can be
replenished?

1. An almost empty glass of water
2. An almost empty gas tank
3. Snacks for school
4. A bubble when it has burst
5. The flavor in a piece of gum after you have chewed it

YOUTUBE

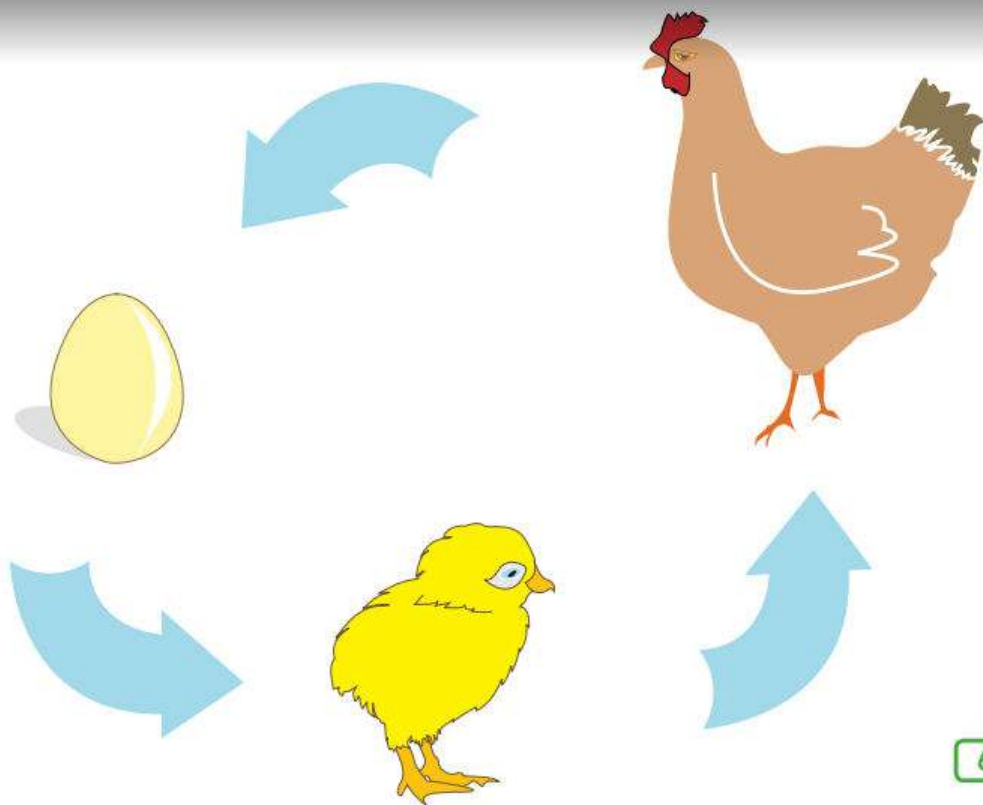
171

CRACKING AN EGG Video

Chicken Life Cycle Video

<https://www.youtube.com/watch?v=PedajVADLGw>





6A-6

TAKE-HOME

NAME: _____

DATE: _____

6.1

Take-Home

Dear Family Member,

During the next several days, your child will learn about cycles and explore some of the different types of cycles that occur in nature. Your child will be introduced to the reasons we have four seasons on planet Earth, and to the different seasonal changes that affect the life cycles of plants and trees. Below are some suggestions for activities that you may do at home to reinforce what your child is learning about cycles in nature.

1. Personal Connections

Share with your child your favorite season and the different experiences from your own childhood connected with seasonal changes. Emphasize the changes observed in plants and animals. Ask your child what favorite memories s/he has of a particular season shared with you and your family.

2. Draw and Write

Have your child draw and/or write what s/he has learned about seasonal cycles and the life cycles of plants. Ask questions to help your child use the vocabulary learned at school.

3. Words to Use

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

- *revolve*—It takes one year for Earth to revolve around the sun.
- *hibernation*—Some animals have longer periods of winter hibernation than others.
- *cycles*—Planet Earth has many cycles, such as day and night, the seasons, and life cycles of plants.

4. Read Aloud Each Day

Set aside time to read aloud to your child every day. The local library has many books on cycles in nature.

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

LESSON 7

THE LIFE CYCLE OF A FROG

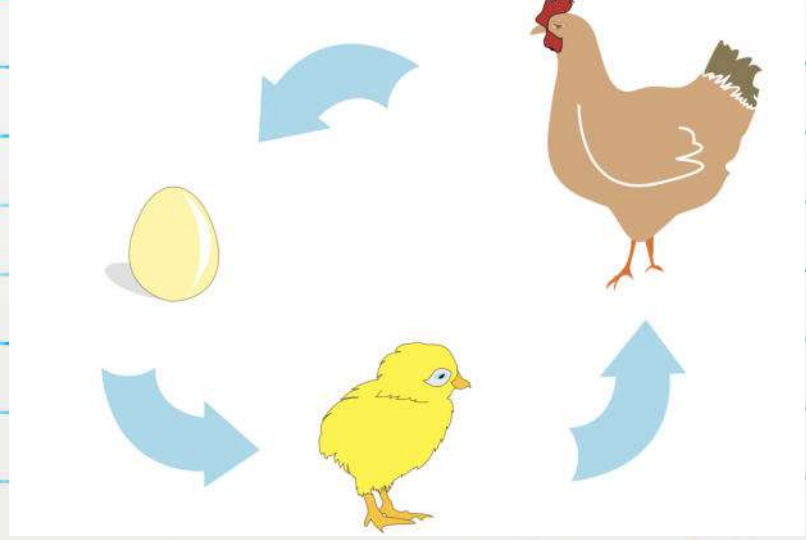
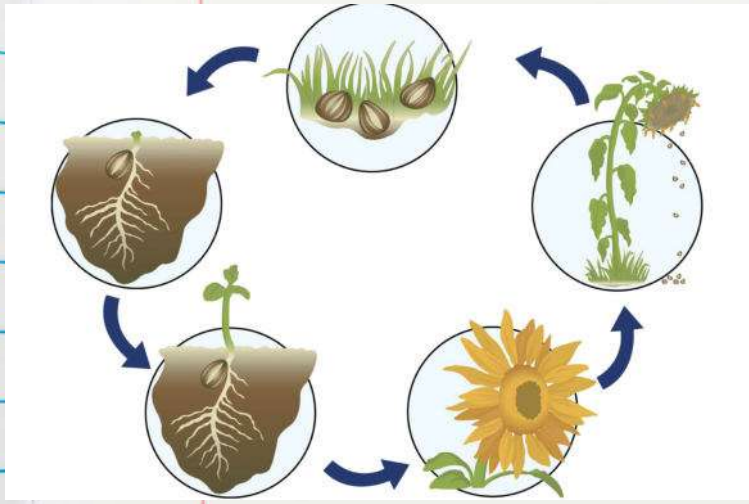
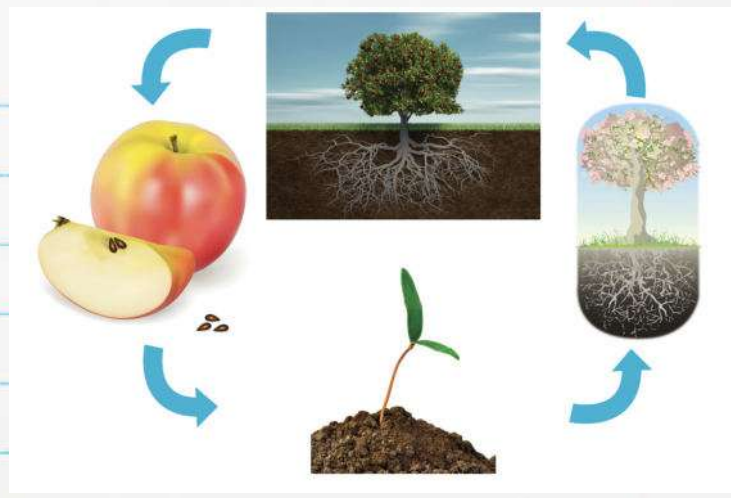
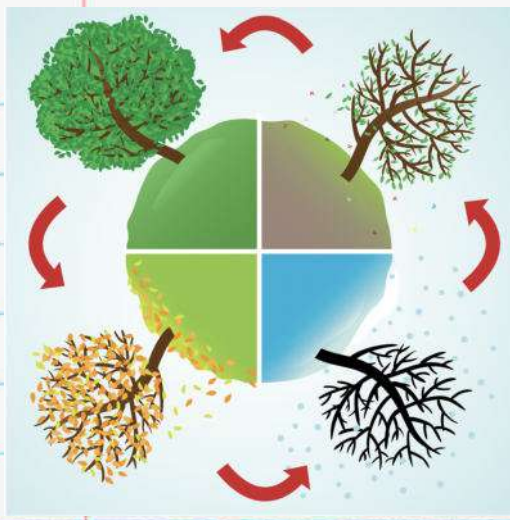
Video

LESSON OBJECTIVES

176

Students will:

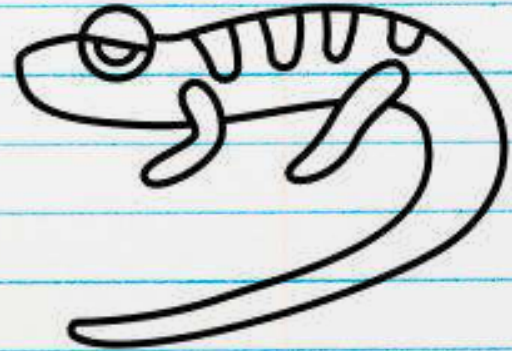
- Explain that a cycle is a sequence of events that repeats itself again and again
- Describe the seasonal cycle: spring, summer, autumn, winter
- Explain effects of seasonal changes on plants and animals
- Define the term **life cycle**
- Identify the stages of the life cycle of a frog (egg to egg)
- Explain **metamorphosis**



LESSON VOCABULARY

178

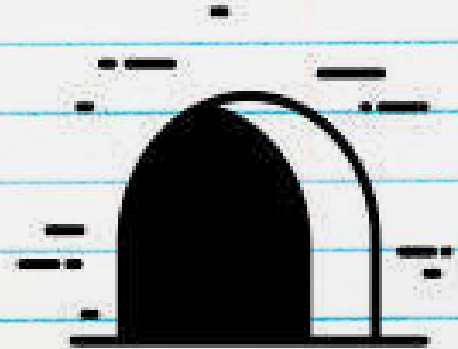
- **amphibian** - an animal that can live on both land and water



LESSON VOCABULARY

179

- **burrow**- to make a hole or passage into or under something



LESSON VOCABULARY

180

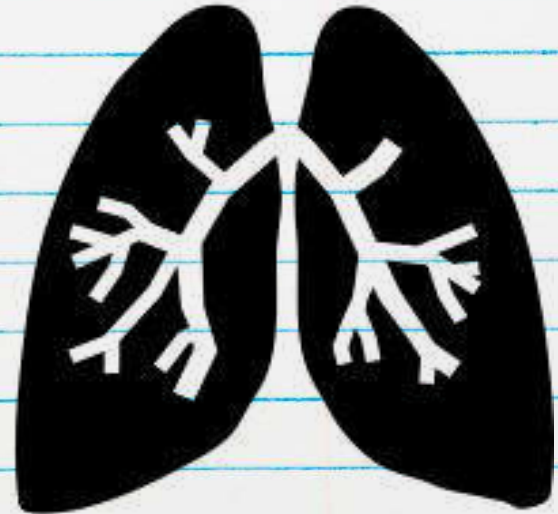
- **gills**- the body parts some aquatic animals use to breathe underwater



LESSON VOCABULARY

181

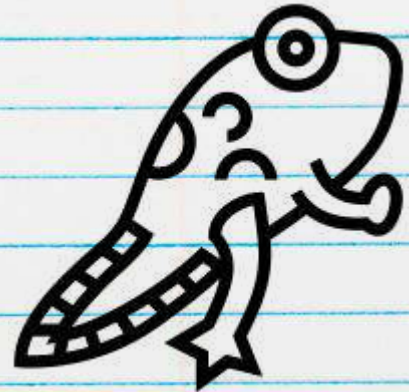
- **lungs**- a pair of organs used to breathe



LESSON VOCABULARY

182

- **metamorphosis**- the process by which some young animals change form as they become adults

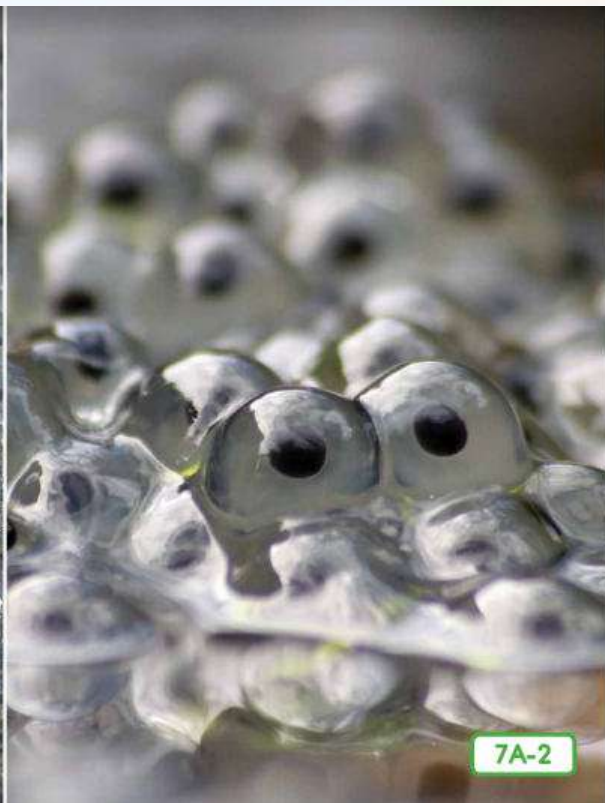


Cycles in Nature

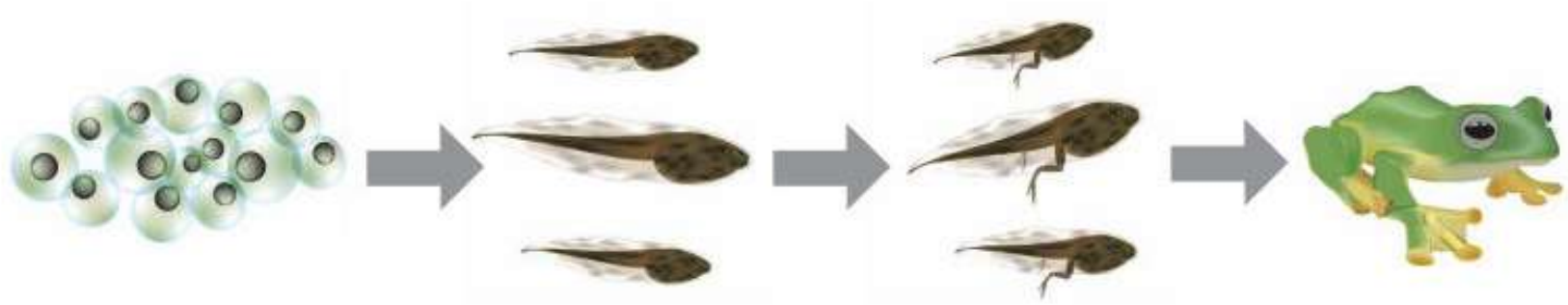
Lesson 7

Video





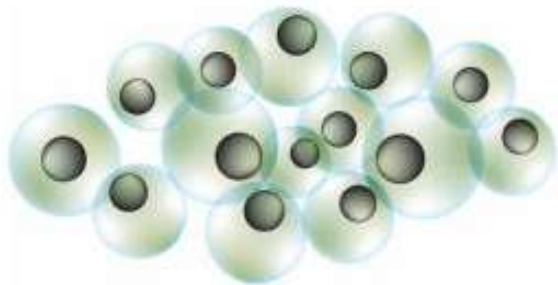






7A-5







COMPREHENSION QUESTIONS

192

- What is the main topic of today's read aloud?
- What is the first stage of a frog's life cycle?
- What hatches from the egg?
- How do tadpoles breathe underwater?
- How do tadpoles prepare for the cold of winter?
- When is a tadpole finally a young frog?

COMPREHENSION QUESTIONS

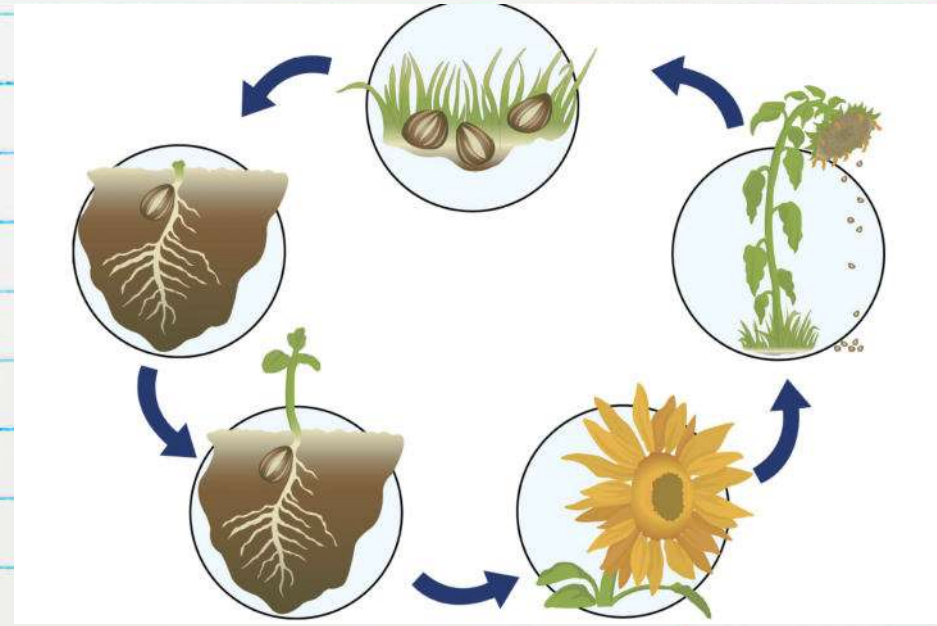
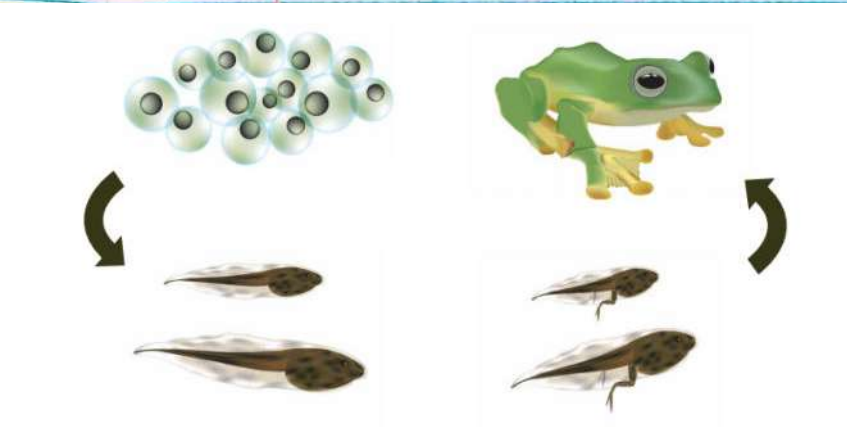
193

- What is it called when a living thing undergoes a huge change in shape and appearance, like the frog does from tadpole to adult frog?
- In which season do adult female frogs lay their eggs so that the life cycle can begin again?
- What are the stages of the frog's life cycle?

THINK-PAIR-SHARE

194

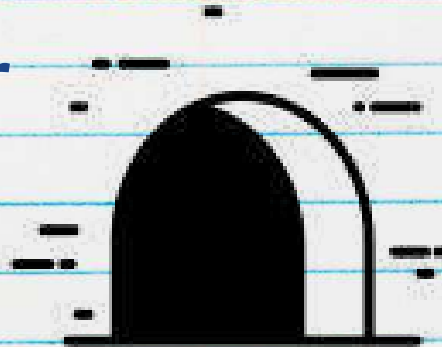
How are the frog's life cycle and a plant's life cycle alike? How are they different?



WORD WORK - BURROW

195

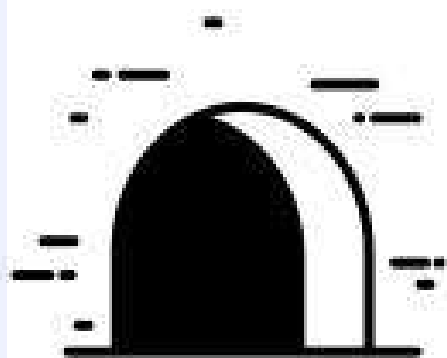
- “In the winter, many frogs hibernate. Often they burrow, or dig a hole in mud at the bottom of ponds.”
- **burrow**- to make a hole or passage into or under something



burrow

"make a hole"

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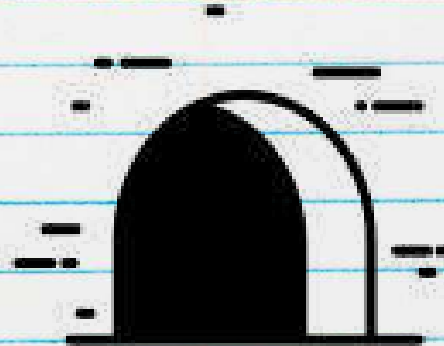
WORD WORK - BURROW

197

What does **burrow** mean?

Some animals use their front legs to push dirt aside so they can **burrow** deeper into the ground.

Has there ever been a time when you tried to **burrow** into something?



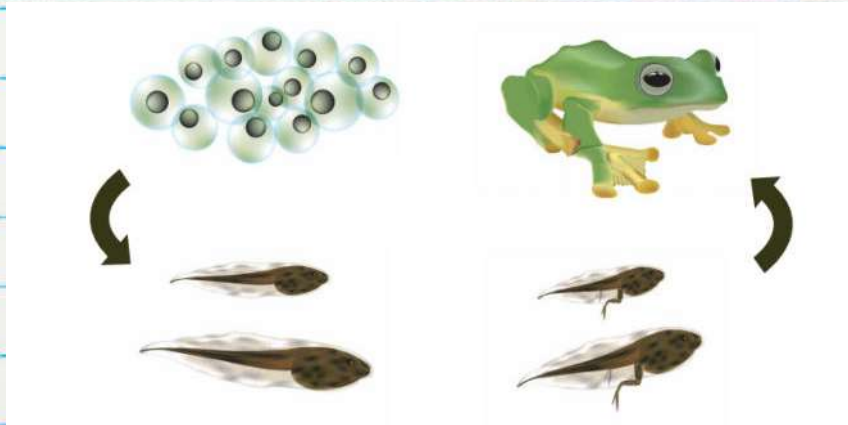
Frog Life Cycle Video

<https://jr.brainpop.com/science/animals/frogs/>

QUICK WRITE

199

Using sequence words, list the steps in the life cycle of a frog.



NAME: _____

DATE: _____

7.1

Activity Page

200

Directions: Write one complete sentence in the first rectangle to introduce your paragraph. Write one complete sentence in the next four rectangles to explain the stages of the life cycle of a frog. Write one complete sentence in the last rectangle to conclude, or finish, your paragraph.

Introductory Sentence:

First ...

Next ...

Then ...

Finally ...

Concluding Sentence:

LESSON 8

Video

THE LIFE CYCLE OF A BUTTERFLY

LESSON OBJECTIVES

202

Students will:

- Explain that a cycle is a sequence of events that repeats itself again and again
- Describe the seasonal cycle: spring, summer, autumn, winter
- Explain effects of seasonal changes on plants and animals
- Define the term **life cycle**
- Identify the stages of the life cycle of a butterfly (egg to egg)
- Explain **metamorphosis**

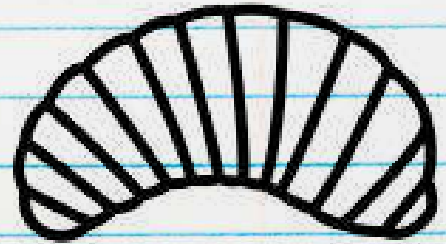
SEQUENCE CARDS

(IMAGE CARDS 10-16)

LESSON VOCABULARY

204

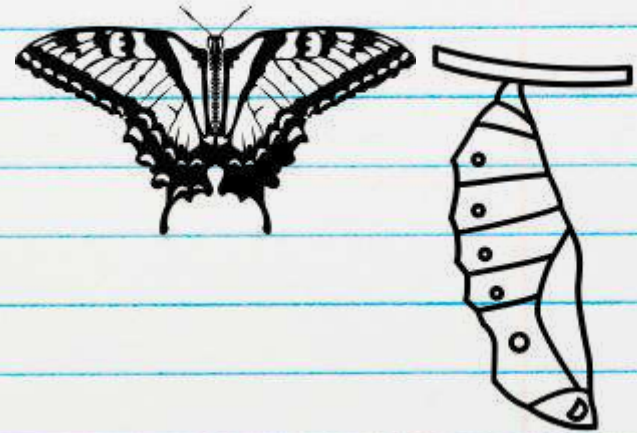
- **larva** - the early form of an insect that is not completely developed



LESSON VOCABULARY

205

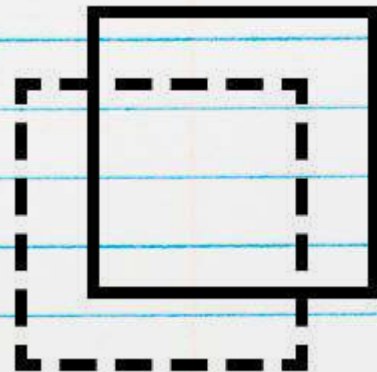
- **molt-** to shed an outer layer



LESSON VOCABULARY

206

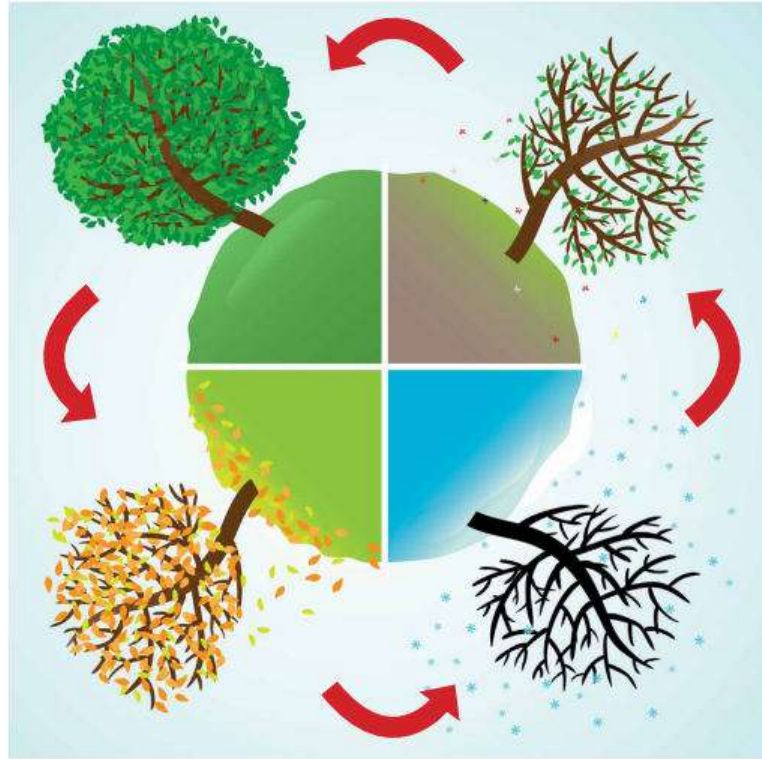
- **transparent**- clear; able to see through



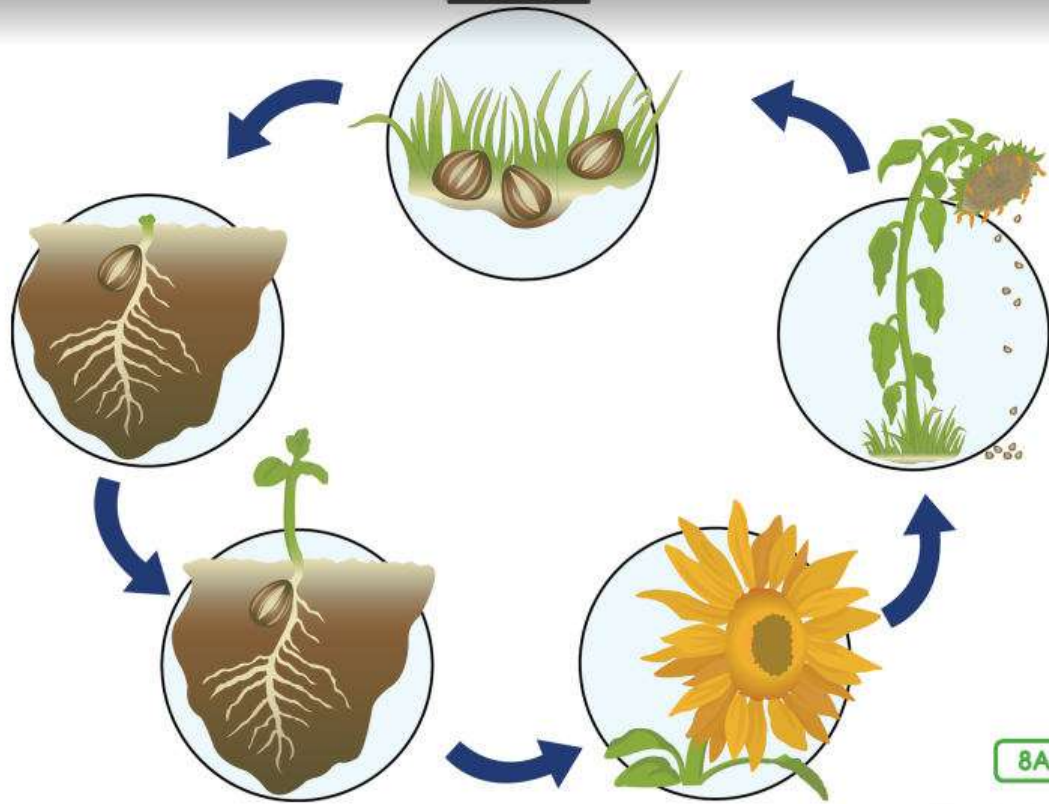
Cycles in Nature

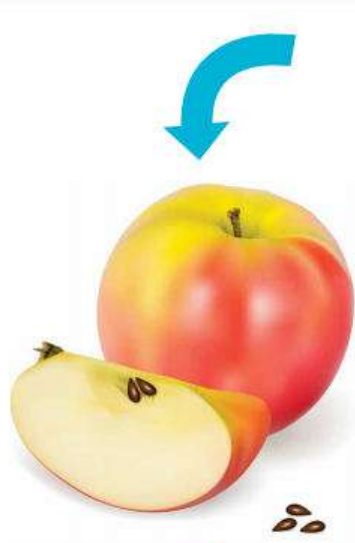
Lesson 8

Video

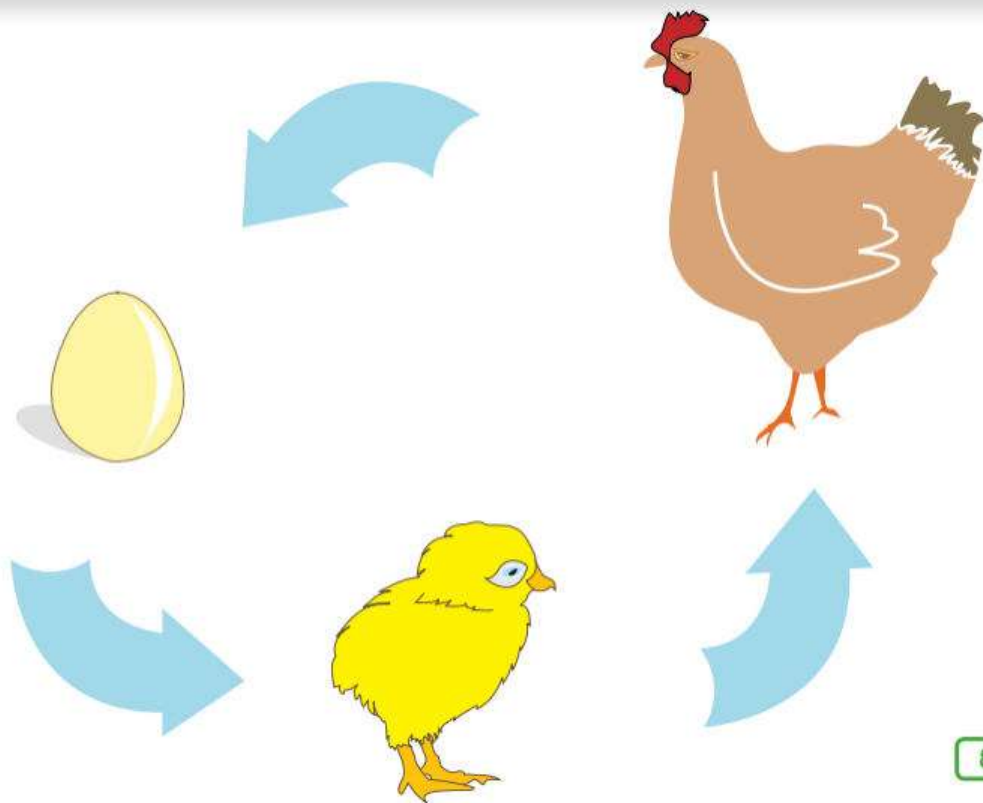


8A-1

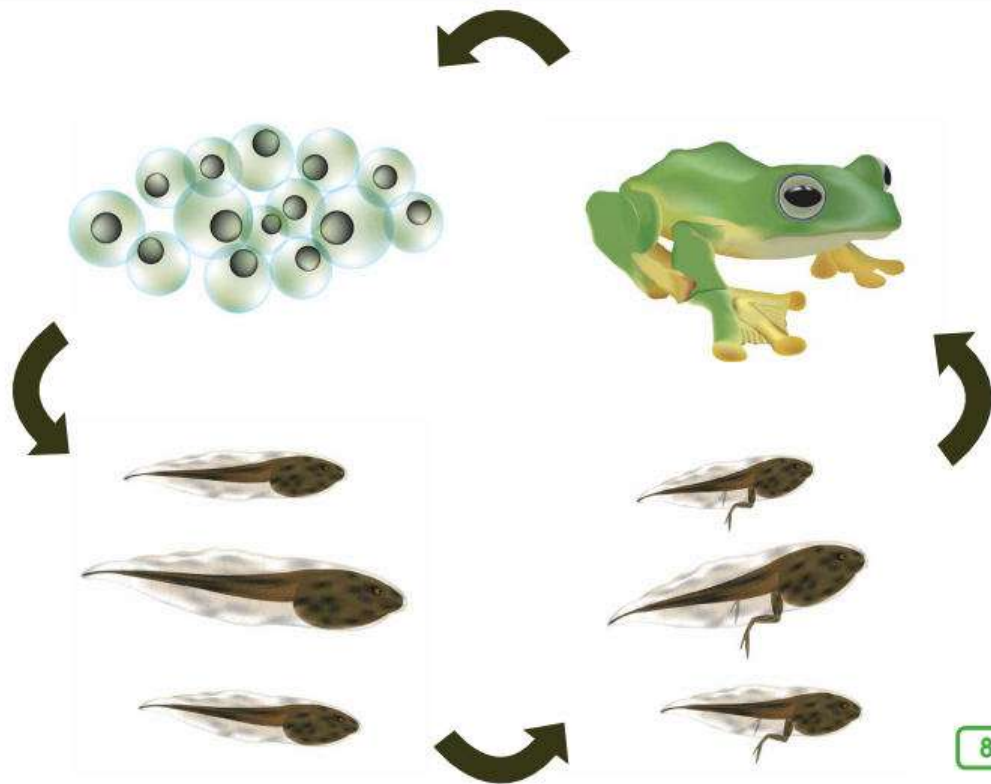




8A-3



8A-4



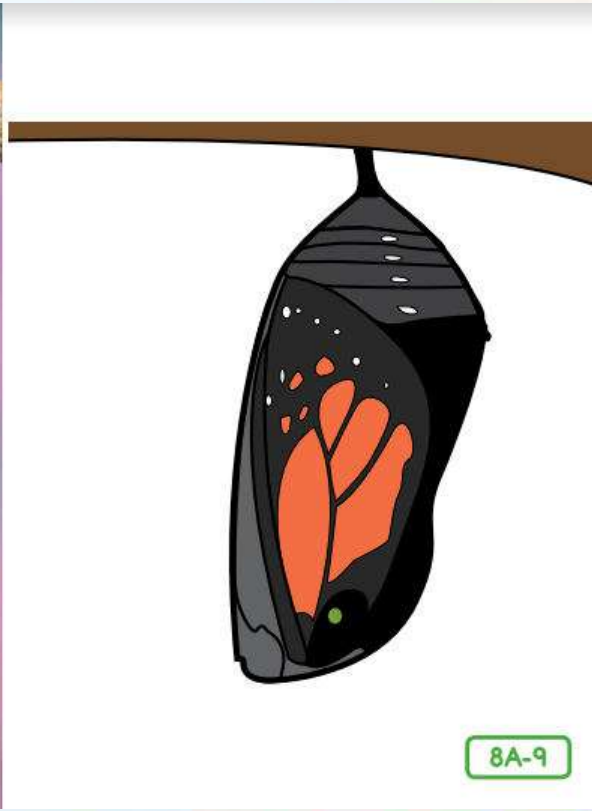
8A-5







8A-8

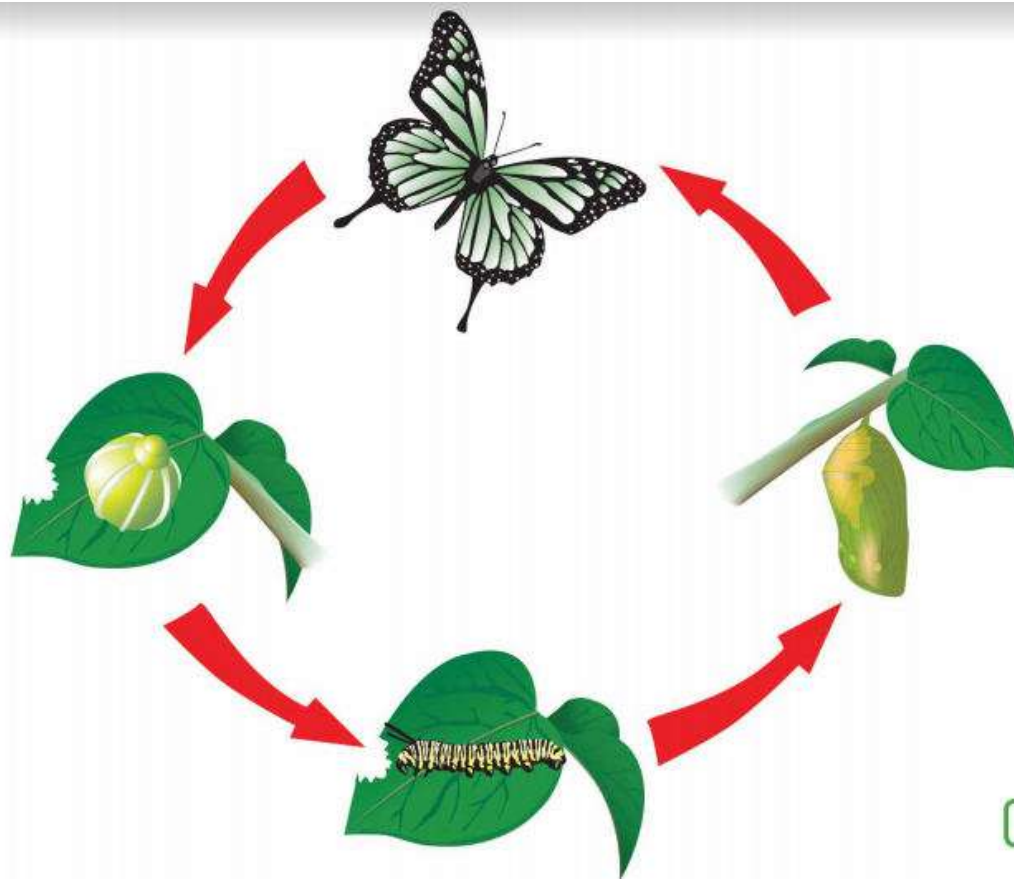








8A-12



8A-13

COMPREHENSION QUESTIONS

221

- What is the main topic of today's read aloud?
- How does a butterfly begin its life?
- What hatches out of the egg?
- Caterpillars grow so quickly that they outgrow their skin. What does a caterpillar do with the skin it outgrows?
- What is the next stage called when the caterpillar forms a protective case?

COMPREHENSION QUESTIONS

222

- What comes out of the chrysalis or pupa?
- What are the four stages in the life cycle of a butterfly?
- After metamorphosis, does the adult look like it did when it was younger?
- Why do some butterflies migrate?

THINK-PAIR-SHARE

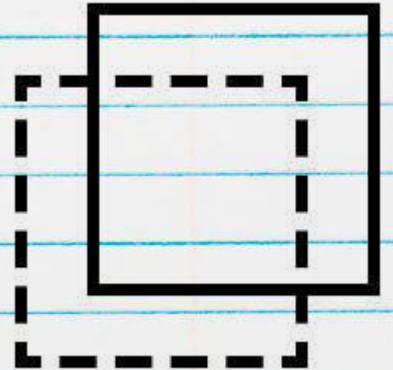
223

The life cycle of a plant could be described as going from seed to seed, and the life cycles of a frog and chicken, from egg to egg. How would you describe the life cycle of a butterfly?

WORD WORK - TRANSPARENT

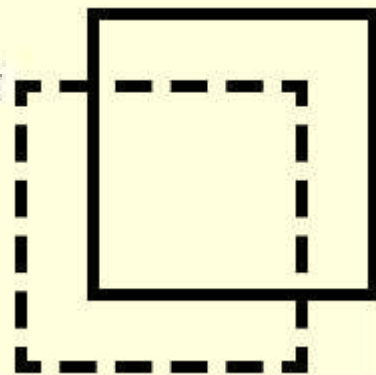
224

- **transparent**- clear; able to see through



transparent

"see through"



ly

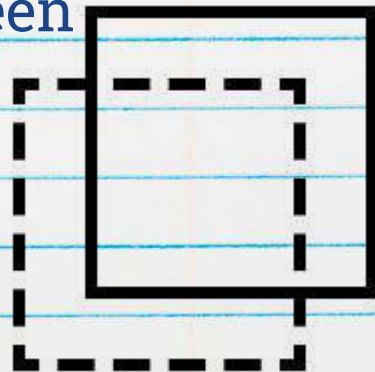
WORD WORK - TRANSPARENT

226

What does **transparent** mean?

Mike's water bottle is **transparent**, so he is able to see how much water is in it.

What are things you have seen that are **transparent**?

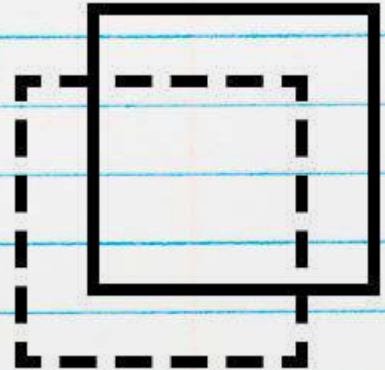


WORD WORK - TRANSPARENT

227

Does this describe something that can be
transparent?

1. A window
2. A brown paper bag
3. An aquarium
4. A book
5. The lenses in someone's glasses
6. Clear plastic wrap



Butterfly Life Cycle Video

<https://jr.brainpop.com/science/animals/butterflies/>

NAME: _____

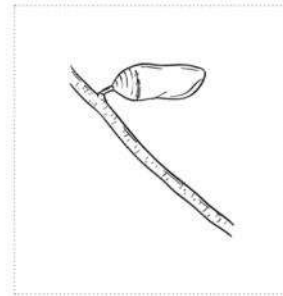
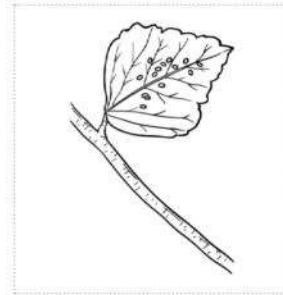
DATE: _____

8.1

Activity Page

229

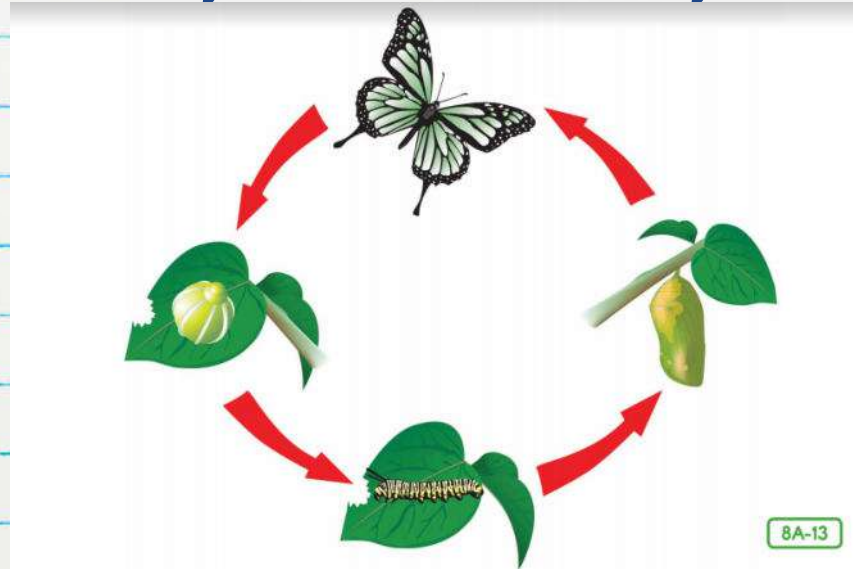
Directions: Color and cut out the pictures showing the different stages of metamorphosis for a monarch butterfly, and then sequence them in the correct order. Glue or tape the pictures onto drawing paper. Work with a partner to retell the stages of metamorphosis.



QUICK WRITE

230

Using sequence words, list the steps in the life cycle of a butterfly.



LESSON 9

THE WATER CYCLE

Video

LESSON OBJECTIVES

232

Students will:

- Explain that a cycle is a sequence of events that repeats itself again and again
- Define the term **water cycle**
- Explain that there is a limited amount of water on Earth
- Describe **evaporation** and **condensation**
- Identify forms and importance of **precipitation**
- Describe the formation of clouds
- Identify three types of clouds: cirrus, cumulus, and stratus

LESSON VOCABULARY

233

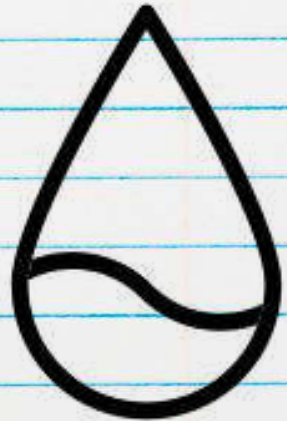
- **condensation**- the process by which a gas changes into a liquid



LESSON VOCABULARY

234

- **humidity**- the amount of moisture or water vapor in the air



LESSON VOCABULARY

235

- **precipitation**- water that falls from the sky as rain, snow, sleet, or hail



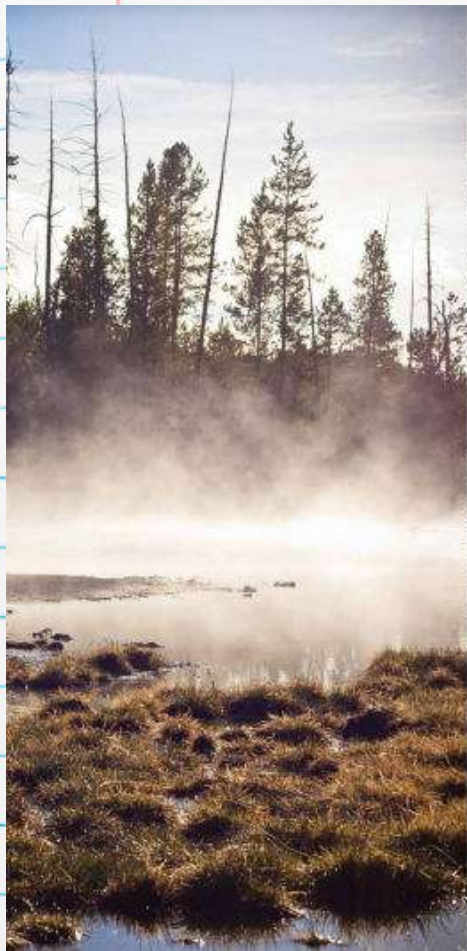
Cycles in Nature

Lesson 9

Video







9A-3

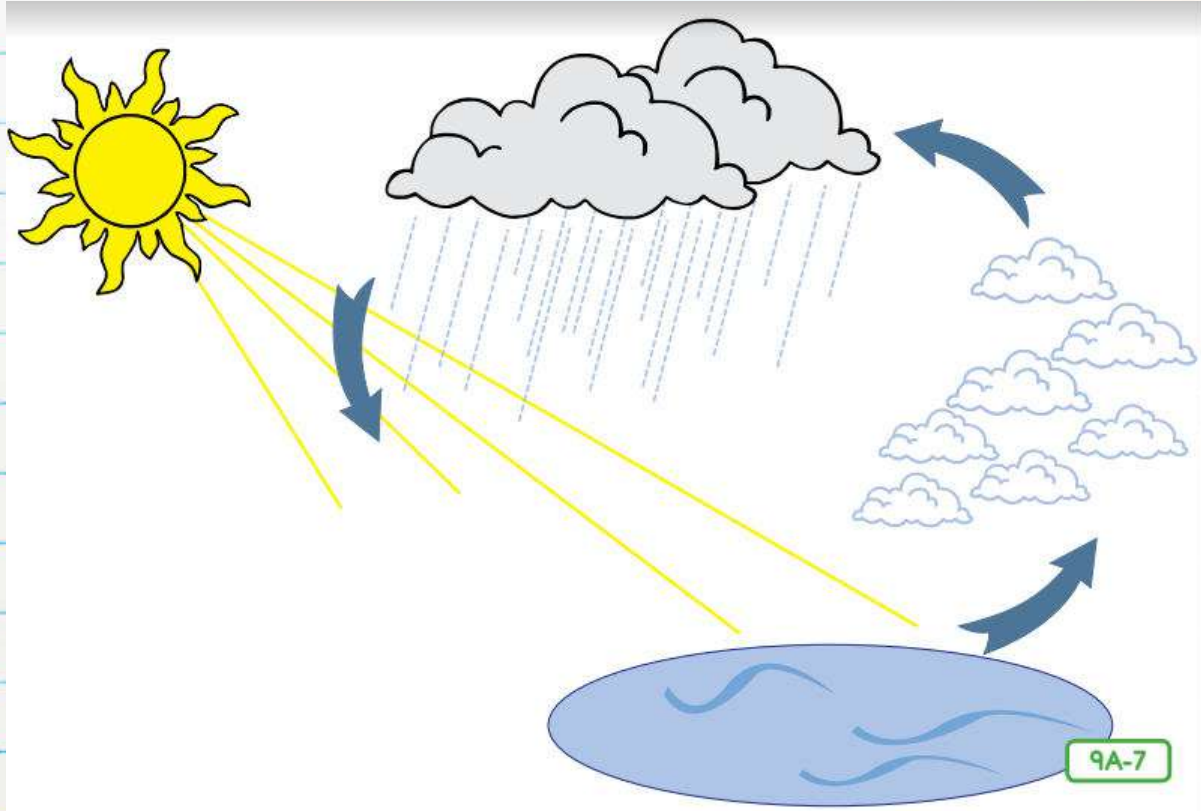


9A-4



9A-5





9A-7







9A-10



COMPREHENSION QUESTIONS

248

- What is the main topic of today's read aloud?
- Is the Earth covered mostly by land or by water?
- What do we call the process when water from oceans, rivers, and puddles changes to a gas and moves into the air?
- What causes **evaporation**? Can we usually see evaporation or water vapor?

COMPREHENSION QUESTIONS

249

- What do we call the process when water vapor turns back into a liquid or water droplets because of cooling?
- Water can be a solid, a liquid, or a gas. What do we call water when it is a gas?
- Why are the processes of **evaporation**, **condensation**, and **precipitation** considered a cycle? What is the name of this cycle?
- How do clouds fit into the water cycle?

COMPREHENSION QUESTIONS

250

- When clouds get heavy with water as **condensation**, what do we call water that then falls from the sky as rain, snow, sleet, or hail?
- Which type of **precipitation** is a liquid? Which types are solids?
- Where does **precipitation** go after it falls from the clouds?
- Does the earth make new water, or does the same water go through the **water cycle** again and again?

THINK-PAIR-SHARE

251

Why is precipitation important?

WORD WORK - PRECIPITATION

252

- “When water droplets fall to the ground, regardless of what they look like, it is called precipitation.”
- **precipitation**- water that falls from the sky as rain, snow, sleet, or hail



precipitate

*"rain, hasty, throw
down"*



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ion

s

WORD WORK - PRECIPITATION

254

What is **precipitation**?

The farmer had to water his garden because there had been no **precipitation** for a month.

What is your favorite kind of **precipitation**? Your least favorite?



WORD WORK - PRECIPITATION

255

Which of these is a type of **precipitation**?

1. Clouds or rain
2. Sleet or water vapor
3. Snow or humidity
4. An ocean or hail



BRAINPOPJR. & GONOODLE

256

Water Cycle Video

<https://jr.brainpop.com/science/weather/watercycle/>

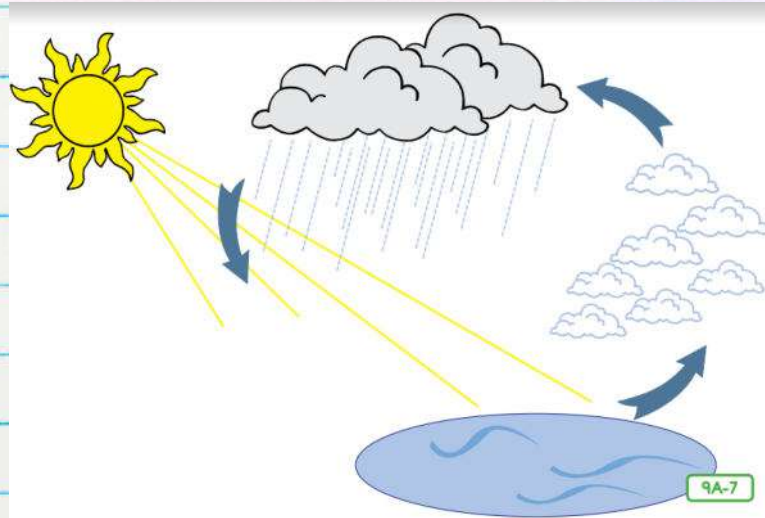
GoNoodle Video

<https://family.gonoodle.com/activities/water-cycle>

QUICK WRITE

257

Using sequence words, list the steps in the water cycle.



CULMINATING ACTIVITIES

258

BrainPopJr. Videos

- Hibernation - <https://jr.brainpop.com/science/animals/hibernation/>
- Mammals - <https://jr.brainpop.com/science/animals/mammals/>
- Natural Resources - <https://jr.brainpop.com/science/conservation/naturalresources/>
- Plant Adaptations - <https://jr.brainpop.com/science/plants/plantadaptations/>
- Soil - <https://jr.brainpop.com/science/land/soil/>