

HIGH SCHOOL AG STUDENTS

# Educating the FUTURE of Agriculture



*Illinois*  
**A**GRICULTURE  
in the Classroom<sup>SM</sup>

**SCHOOL YEAR LESSON BOOKLET**

Lessons for students to  
teach elementary students!

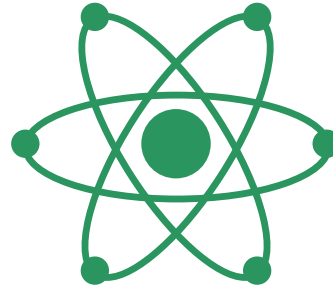


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# STANDARDS

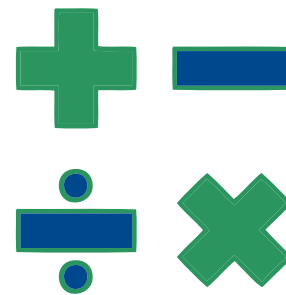
## New Generation Science Standards

- K-LS1-1
- 2-LS2-1
- 2-LS2-2
- 3-LS1-1
- 5-LS2-1
- K-ESS3-1
- 2-ESS2-3
- 2-PS1-1
- 3-PS2-2
- 5-PS1-4



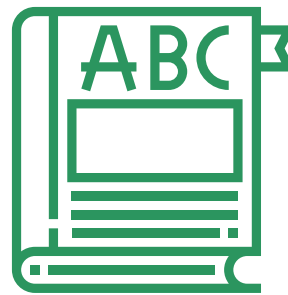
## Common Core Standards Math

- CCSS.MATH.CONTENT.K.CC
  - A.1
  - A.3
- CCSS.MATH.CONTENT.2
  - MD.A.1
  - MD.A.
- CCSS.MATH.CONTENT.3
  - MD.2
- CCSS.MATH.CONTENT.4
  - MD.2



## Common Core Standards ELA

- CCSS.ELA-LITERACY.RL.K.1
  - RL.K.7
  - RL.1.1
  - RL.2.1
  - RL.3.1
  - RL.3.4
  - RL.3.7
  - RL.4.1
- CCSS.ELA-LITERACY.RI.K.1
  - RI.K.2
  - RI.K.4
  - RI.1.1
  - RI.1.3
  - RI.2.1
  - RI.2.3
  - RI.3.1
  - RI.3.4
  - RI.4.1
  - RI.4.1
  - RI.4.7
  - RI.5.7



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On August 21, 2007 the GoldRush apple was designated as the official Illinois state fruit.

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September 21st is National Pepperoni Day! Pepperoni is made from a mixture of ground pork and beef.

### **October: Pumpkin Patch Pie** 21

National Pumpkin Day is on October 26th! Celebrate with a lesson all about pumpkins.

### **November: Thankful Turkeys** 27

About 46 million turkeys are eaten each Thanksgiving! Ben Franklin proposed that the Turkey should be our national bird!

### **December: Oh Evergreen Trees** 31

In 1913 the tradition of an official Chicago, IL Christmas tree was initiated when one was lit by Mayor Carter H. Harrison in Grant Park.

### **January: Sweater Weather** 36

Enjoy a lesson all about sheep! Sheep are short day breeders, meaning lambing season is usually throughout January and February.

### **February: Make Your Own Gumdrops** 40

February 15th is National Gumdrop Day! Celebrate a month full of sweetness with this sugary lesson.

### **March: Cerealsly Fun Soil Profiles** 43

National Plant a Flower Day is on March 12th. To plant flowers we need soil! Use this lesson to teach about soil and why it is so important!

### **April: Circle of Earth Bracelet** 45

In the month of April we celebrate Earth Day! Help students get involved by teaching this lesson.

### **May: Red Ripe Strawberries** 50

May 20th is National Pick Strawberries Day! Use this lesson to teach about what it takes to grow strawberries and to find where to pick them.



Literacy



Art

# ALL ABOUT APPLES

## Grade Level

K-3

## Length of Lesson

45-60 minutes

## Objective

By the end of this lesson, students will have a better understanding of the life cycle of an apple tree.

## Materials Needed

- 2 Red Paper Plates (per student)
- Colored Construction Paper
- Templates
- Stapler and Staples
- Tape
- Yarn
- Hole Punch

**Food  
Allergen  
Friendly!**

## Lesson Summary

This lesson is designed to help students in sequencing and building models as well as help them understand the life cycle of an apple.

## Suggested Sequence of Events:

1. Before the Lesson: Print each template onto colored construction paper: seed (brown), tree (green), blossom (pink), bee (yellow), little apple (green). Cut out the shapes and then punch a hole on opposite sides of each template, except the seed which only needs one hole. Cut short strands of yarn—students will need 5 pieces each.
2. Introduce yourself! Have students share their first names and their favorite kind of apple. (10-15 minutes)
3. Read “[Apples to Oregon](#)” by Deborah Hopkinson to capture student interest. (5 minutes)
4. Complete the activity following the procedures (25 minutes):
  - Have students staple their 2 red plates together around 2/3 of the edge. Leave the other 1/3 open.
  - Have them tape one end of a piece of yarn to the inside of the stapled paper plates and extend the yarn out of the opening.
  - Add a stem to the red paper plates to make them look like an apple. Put this to the side.
  - Ask students what shape is the start of a plant (seed). Then ask them what a seed grows into (tree). Use the yarn to tie these to shapes together. Repeat this until you get the chain completed.
  - Tuck the shapes into the red apple. Starting with the seed, slowly pull the shapes out of the apple and tell the story of how the apple grows.

Seed — tree — blossom — bee — green apple — red apple

5. Watch a video about another apple chain, an apple supply chain! Apples go on a journey to get to the store and to your fridge. Explain that through all of these steps, everyone takes great care of the apples so that they can be healthy and safe for us to eat: <https://iaitc.co/AppleFarm> (5-10 minutes)
6. If time allows, read through the IAITC Apple Ag Mag to discover more exciting facts about apples: [https://iaitc.co/AgMag\\_Apple](https://iaitc.co/AgMag_Apple). Ask for any questions.

# ADDITIONAL RESOURCES

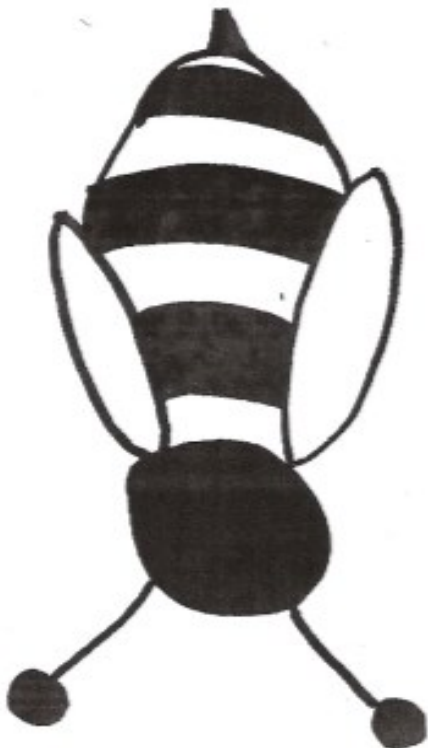
- How to adjust for different ages:
  - 4-6th:
    - After introductions, start with this video to show students the history of apples and how they're grown.
      - Review video terms
        - Grafting: a plant that has a twig or bud from another plant attached to it so they are joined and grow together
        - Cross-Pollination: Pollen in one flower needs to be mixed with the pollen from a different kind of apple.
        - Early August: When the harvest begins
        - Variety: Apples that differ in some way from other apples are considered different varieties of apples.
        - Trait: A quality or characteristic that makes one person, animal, or thing different from another
    - Talk more about apple varieties and traits and what makes them different
      - Show students a red apple and a red onion. Ask, "Which one would you like to eat in a pie? How can you tell the difference between the apple and the onion?"
        - As a class, list the physical characteristics of the apple and the onion. Point out that many of these characteristics are heritable traits that can be used to tell apples from onions.
      - Bring in or show pictures of 4 different varieties of apples. (Ex: Honeycrisp, Golden Delicious, Granny Smith, Pink lady, Jonagold, Jazz, Fuji, etc.)
        - Have students fill out apple variety worksheet and/or bring in different varieties of apples for students to taste.
        - Have them write a short paragraph about which type they like the best or want to try and why.
    - Watch the apple chain video and read the ag mag listed on the main activity page as time allows.
  - If you have an orchard in your community, tell your students about it!
    - Find nearby apple orchards by going to this link: <https://iaitc.co/Appleorchards>
  - Ag Kid Connection:
    - FFA: Does your chapter or a nearby chapter work at an apple orchard for their SAE? Have them record a short farm tour and share it with your class.
    - 4-H: Does someone from your club grow apples? Have them record themselves giving a talk or a demonstration about it! Then play it for your students.
      - Other Ag in the Classroom apple lessons:
        - One Bad Apple
        - Apple Blossom Tree
        - Apple Idioms



Literacy



Art





Literacy



Art



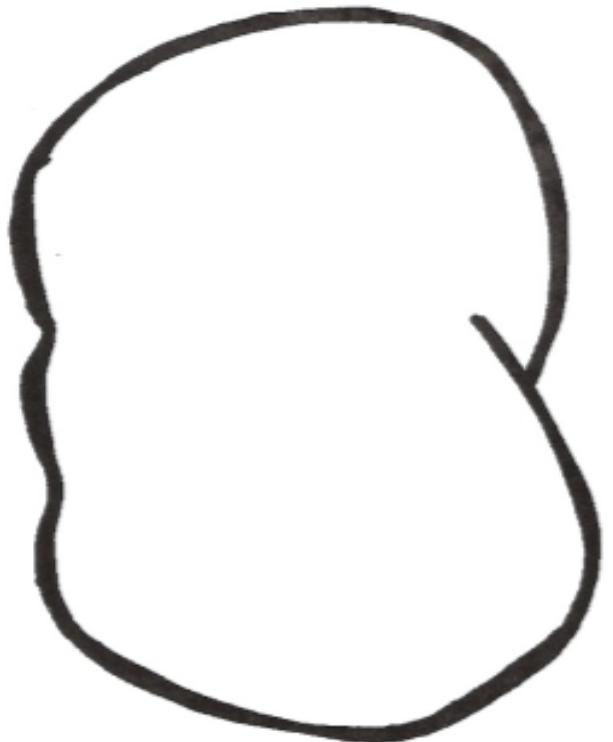
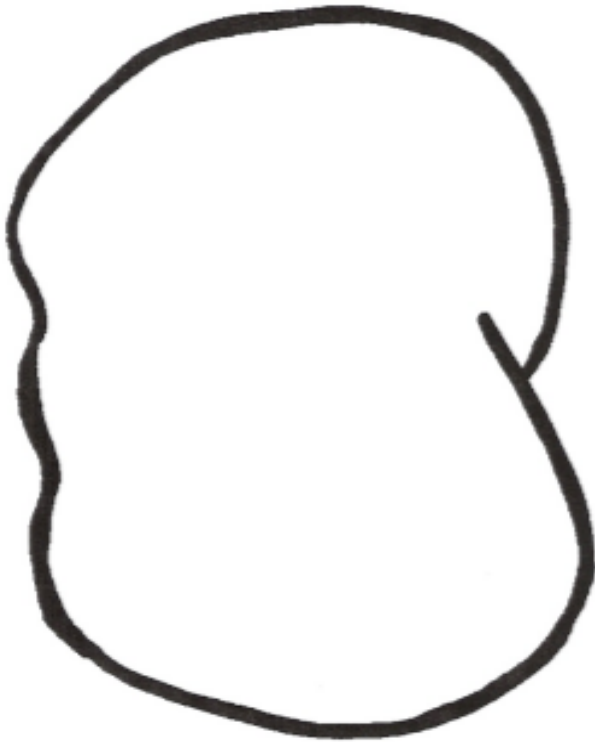
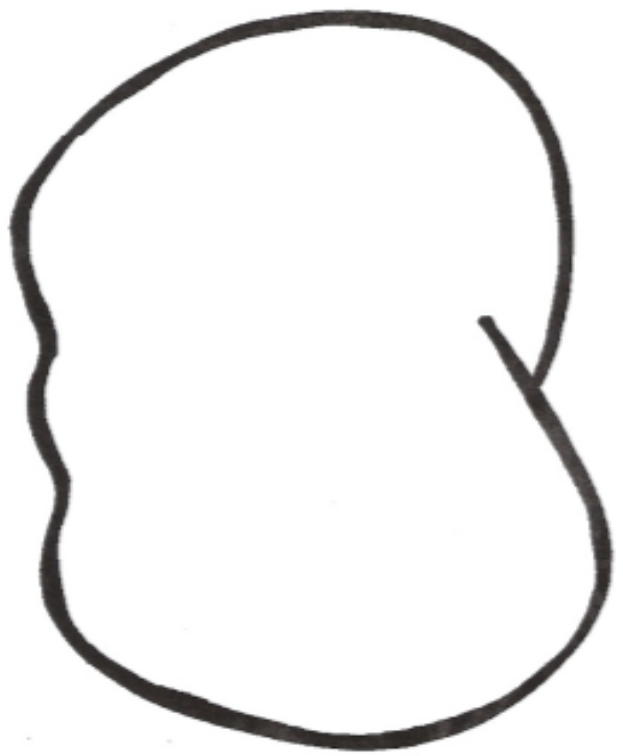




Literacy



Art

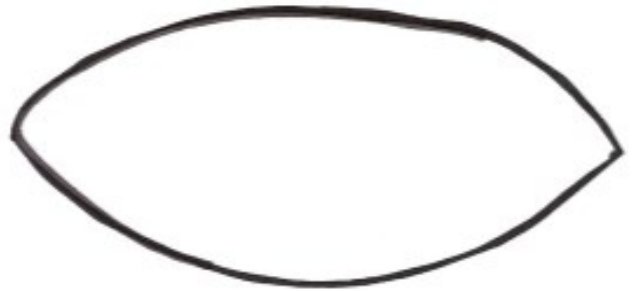
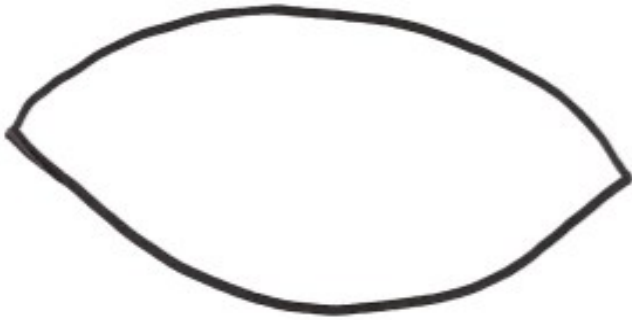




Literacy



Art

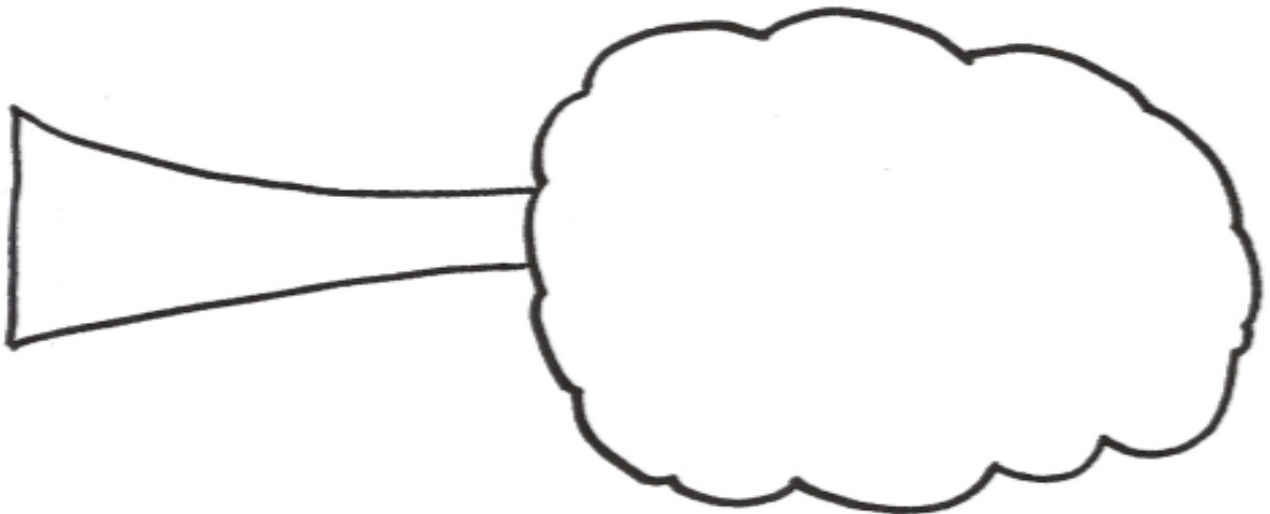
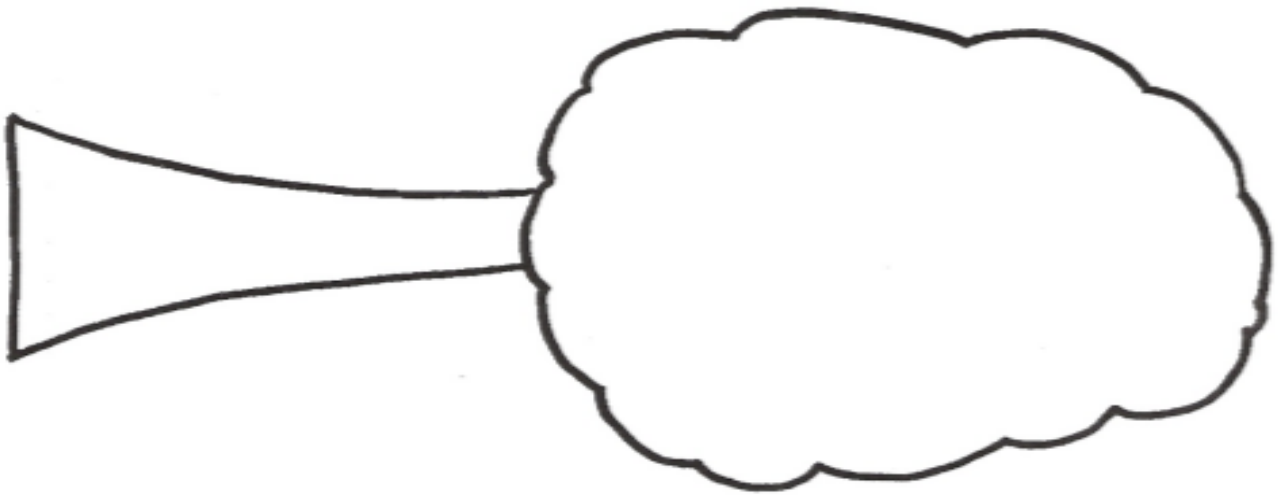
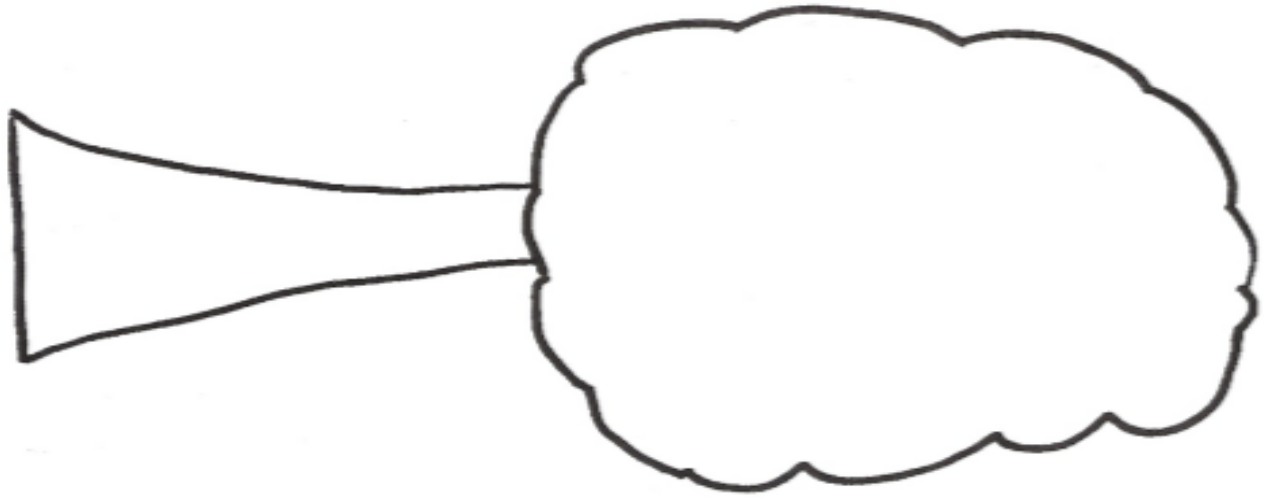




Literacy



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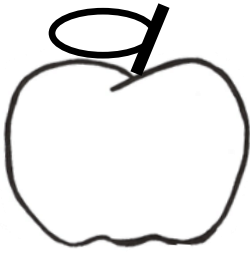


Literacy



Art

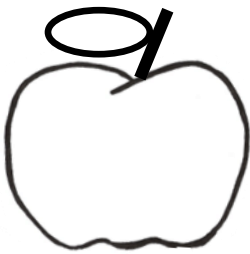
# APPLE VARIETIES: 4-6TH



Name:

Color:

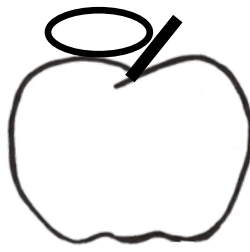
Flavor:



Name:

Color:

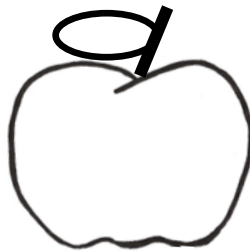
Flavor:



Name:

Color:

Flavor:



Name:

Color:

Flavor:

Which variety do I like best or want to try and why?:

# PIGS



Science



Literacy

## Grade Level

K-2

## Length of Lesson

50 minutes

## Objective

After completing this exercise, students will have a better understanding of pigs.

## Materials Needed

- “Pigs” by Gail Gibbons
- “Pigs True or False” Handout
- Vocab Word Memory Game
- Optional: A pink snack such as starbursts or strawberries.

**Low Cost!**

**Food Allergy Friendly!**

## Lesson Summary

This lesson is designed to help students learn all about pigs!

## Suggested Sequence of Events:

1. Before the Lesson: Print out and cut out the Pig Vocab Memory game. You will want to use cardstock to print out the cards. Contact your county Ag in the Classroom to check out “Pigs” by Gail Gibbons.
2. Read “Pigs” by Gail Gibbons. Tell students to pay extra close attention so that they can answer the true or false questions later. (5 minutes)
3. Complete the activity following the procedures:
  - Pig true or false (15 minutes) .
    - Write T/F statements on board and tell students we will be learning about pigs. Help read aloud and then ask whether each statement is true or false.
  - Pig vocab memory game (25 minutes)
    - Flip cards face down and mix them up. Set up cards in a 6x5 Grid.
    - One by one, have each student flip over a card.
    - Read the definition out loud and ask students if it’s a match. They can also tell it’s a match by looking at the shapes! (You may need to correct them if it is wrong)
    - If a student gets a match they get to keep it. The student with the most matches wins.
4. Whole class discussion and reflection of activity. If you have a small number of students, have each student share something they learned or liked. If you have a large number, ask if anyone wants to share something they learned and call on a few. (5 minutes)
5. Need something else to fill the time?
  - Watch this video of a pig farm in Ohio: <https://iaitc.co/Pigs>
  - Show students the IL AITC Pork Ag Mag: <https://iaitc.co/PorkMag>

# ADDITIONAL RESOURCES

- How to adjust for older students:
  - Print out multiple game sets and have students race to match the words with the correct definitions.
  - Have students draw a true false statement out of a hat and read it aloud. Then have the class help them determine if it is true or false
  - Instead of having students just share what they learned, make a game out of it (Check with the teacher to make sure it's okay).
    - Silent Speed Toss:
      - Bring a small, easy to throw ball or stuffed animal.
      - Have students gently toss the object to each other.
      - As they catch the object, have them share something they learned today.
      - Explain that if they throw too hard, or toss to someone that has already gone that round, they will be out.
      - You may have to help a few students recall some of the information.
- Other Tips:
  - Kids love snacks! If you have it in your budget, bring some fruits snacks, rice krispie treats, or something pink like a pig!
  - Ask a classmate to help you! Depending on how many students you have, it can be challenging to teach, pass things out, and do crowd control at the same time.
- Ag Kid Connection:
  - FFA: Invite someone from your chapter that does the livestock judging CDE or someone with a Swine SAE to help you teach!
  - 4-H: Have someone from your club record a video of them showing a pig. Show that video to your students. You could even bring that person in to explain the video and help you out!
- Other Ag in the Classroom Pig Lessons:
  - Paper Plate Pig
  - Paper Bag Pigs
  - Pork Ag Math
  - Pig Cookies (Might be a fun snack to bring in!)



Science



Literacy

# TRUTH OR HOGWASH?

<b>Pigs on the farm usually come from wild boars.</b>	<b>True</b>
<b>Pigs have five toes like us.</b>	<b>False, they have four</b>
<b>A baby pig is called a piglet.</b>	<b>True.</b>
<b>Pigs have good eyesight.</b>	<b>False, it is poor. They do have good hearing!</b>
<b>Pigs only come in one color.</b>	<b>False</b>
<b>Pigs can be trained like dogs.</b>	<b>True</b>
<b>Pigs hang out in water or mud to stay cool.</b>	<b>True</b>
<b>Pigs eat corn, grains, and soybean meal.</b>	<b>True</b>
<b>A mother pig has about 3-5 piglets in every litter.</b>	<b>False, they usually have 6-12!</b>
<b>Most pigs are raised for their meat.</b>	<b>True</b>



Science



Literacy

# PIG MEMORY GAME

**Litter**



**Mama pig gives birth to a lot of piglets!**



**Bacon**



**A food that most commonly comes from the belly of a pig.**



**Corn**



**What most pigs eat.**







Science



Literacy

**Piglet**



**A baby pig.**



**Boar**



**An adult male pig.**



**Drift or Drove**



**A group of pigs.**





Science



Literacy

**Wallow**



**What pigs like to do  
in the mud.**



**Ham**



**A food that comes  
from the lower  
shoulder of a pig.**



**Pork Chop**



**A food that comes  
from the loin of a pig.**



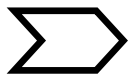


Science

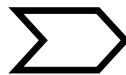


Literacy

**Insulin**



**A medicine that can be made from pigs.**



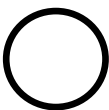
**Farrow**



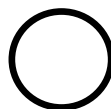
**To give birth to piglets.**



**Gilt**



**A female pig that has not given birth.**





Science



Literacy

**Sow**



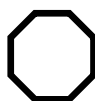
**A female pig that has had piglets.**



**Swine**



**Animals in the pig family.**



**Pork Producer**



**A farmer that provides you a safe, healthy food to eat!**





Math



Literacy

# PUMPKIN PATCH PIE

## Grade Level

K-5

## Length of Lesson

50 minutes

## Materials Needed

(per 4-5 kids)

- Scissors
- 5 Spoons
- (5) 3 oz dixie cups
- 4-5 plastic sandwich bags
- 1 Gallon Ziploc® Freezer Bag
- 2/3 Cups Cold Milk
- 1 Package (4 oz serving size) Instant Vanilla Pudding Mix
- 1/2 Can (15 ounces) Solid-Pack Pumpkin
- 1 Teaspoon Ground Cinnamon
- 1/2 Teaspoon Pumpkin Pie Spice
- Graham Cracker Crumbs (1 graham cracker sheet/ student)
- 1/2 Can Whipped Topping

**Has Gluten and Dairy!**

**Food Free Alternative Included**

## Lesson Summary

This lesson is designed to help students have a better understanding of where their food comes from. It also educates them on good nutritional habits while helping them practice math through measuring.

## Suggested Sequence of Events:

1. **Set Up:** Put students in groups of 4-5. Be sure to multiply ingredients for each additional group of students you plan on having. Pass out cups, spoons, Gallon Ziploc® bags, measuring cups, and ingredients. Before the lesson, put one graham cracker sheet in a plastic sandwich bag for each student.
2. Read "[Life Cycle of a Pumpkin](#)" by Ron Fridell & Patricia Walsh to capture student interest and to show them how pumpkins grow.
3. After going through these instructions once, complete the activity following the procedures. Go step by step with your own pie to give them a reference:
  - Help students measure out the milk and have them dump it into the Gallon Ziploc. Combine the milk with the vanilla pudding.
  - Remove the air in the Ziploc and close.
  - Have students take turns squeezing and kneading with their hands for about 1 minute or until blended.
  - Add the pumpkin, cinnamon, and pumpkin pie spice.
  - Remove the air in the Ziploc and close.
  - Have students take turns squeezing and kneading with their hands for about 2 minutes or until blended.
  - Let each students mash up their graham cracker and pour the crumbs in the bottom of their plastic cup.
  - Cut the corner of the gallon freezer bag and squeeze pie filling into cups.
  - Garnish with whipped topping and add a spoon.
  - Discuss pumpkin production and watch Pumpkins, Gourds, & More! while students are eating: <https://iaitc.co/Pumpkins>
5. Whole class discussion and reflection of activity. Have students discuss whether or not they liked their pumpkin patch pie. Then, encourage students to share their pumpkin life cycles with their group!
6. If you have more time: Read through AITC Pumpkin Ag Mag to check out the pumpkin life cycle. Then, have students draw the life cycle from seed to pumpkin.: <https://iaitc.co/pumpkinmag>

# ADDITIONAL RESOURCES

- How to adjust to make it a food free activity:
  - K-2: Bring a decent sized pumpkin in to the class to have students estimate the amount of seeds that will be found inside.
    - After students estimate, carve off the top of the pumpkin and have students take turns digging out the inside. You may want two pumpkins if you have more than 10 students.
    - Have the students help you count out the number of seeds you pull out of the pumpkin.
    - Show them how to find the difference between what they estimated and what the actual number was.
    - Were their estimations accurate?
  - 3-5: Work on estimating the weight, diameter, and height of pumpkins. Provide each group of students a pumpkin and each student an estimation worksheet.
    - Ask these questions along the way:
      - Which pumpkin weighs the most? Do they think the largest pumpkin will weigh the most? Will the smallest pumpkin weigh the least? Which two pumpkins are the closest in size? Which two pumpkins are the closest in weight?
    - Provide each group with a tape measurer (or just string) and a ruler and have a scale handy to gather the actual calculations. Then help them calculate the difference.
- Other Tips:
  - This lesson is especially hard to do without help. Ask a classmate to help you!
  - You may want to make a PowerPoint or google slides presentation to set up the lesson. This presentation can have some fun facts on pumpkins, go over the instructions for the activity, or include short pumpkin videos!
- Ag Kid Connection:
  - FFA: Invite someone from your chapter that grows pumpkins or works somewhere that does for their SAE to help you with this activity.
  - 4-H: Have someone from your club record a video of their pumpkin patch. Have them wear a 4-H t-shirt and explain why they are growing pumpkins. If no one from your club has pumpkins have someone record touring a pumpkin patch.
- Other Ag in the Classroom Pig Lessons:
  - Can You Find My Pumpkin?
  - 3D Pumpkins
  - What's Inside my Pumpkin?



Math



Literacy

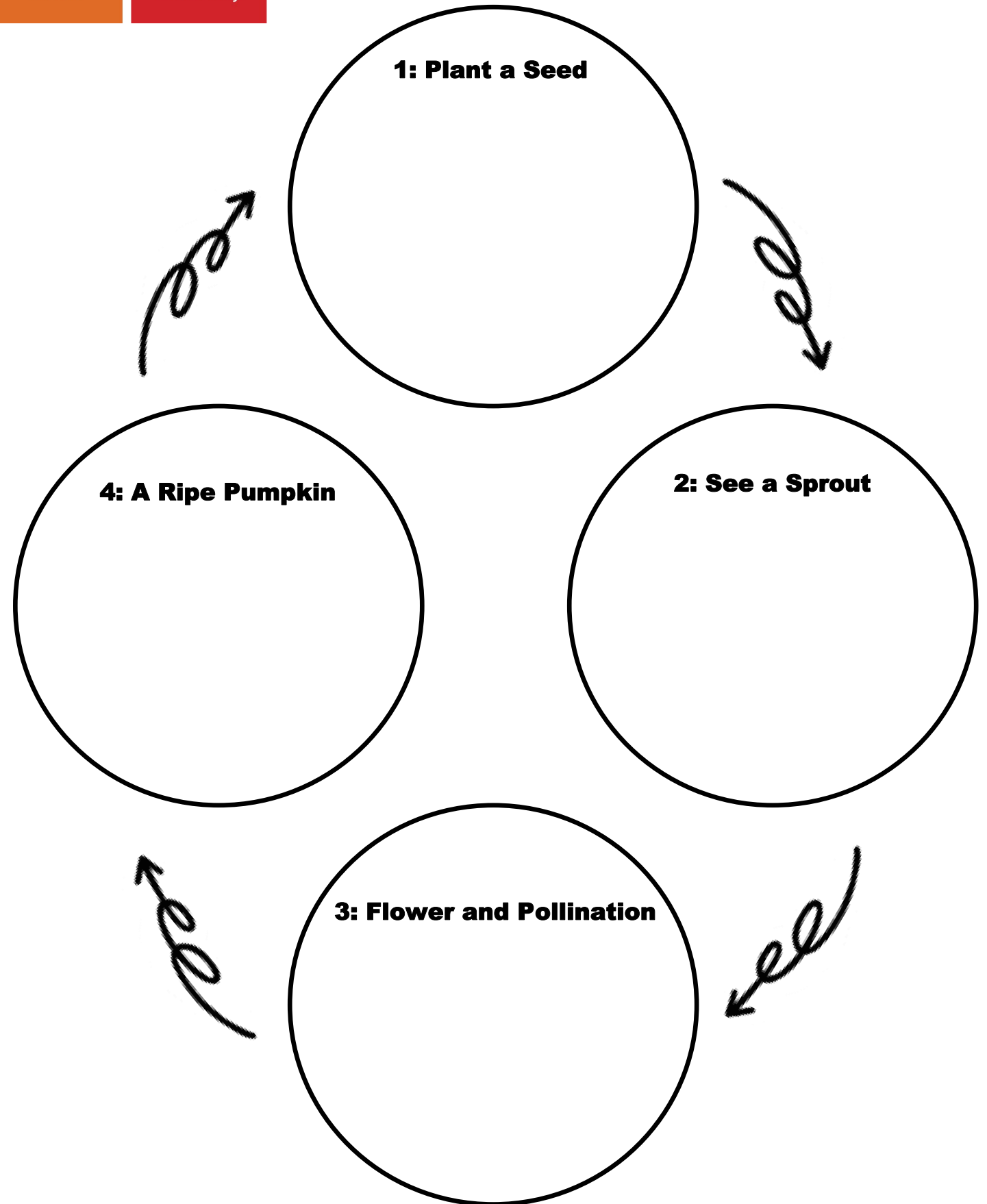
# DRAW A PUMPKIN LIFE CYCLE

**1: Plant a Seed**

**2: See a Sprout**

**3: Flower and Pollination**

**4: A Ripe Pumpkin**





Math



Literacy

# Pumpkin ESTIMATIONS

By: \_\_\_\_\_

<b>Data Collection</b>	<b>Numbers</b>
Estimate the number of seeds before opening the pumpkin	
Estimate the number of seeds before counting	
Actual Number of Pumpkin Seeds	
Differences between the actual and estimated number of seeds	







Math



Literacy

# Pumpkin ESTIMATIONS

By: \_\_\_\_\_

<b>Data Collection</b>	<b>Answers</b>
Estimate the diameter of the pumpkin	
Actual Diameter of the pumpkin:	
Calculate the difference in diameter:	
Estimate the height of the pumpkin	
Actual height of the pumpkin:	
Calculate the difference in height:	
Estimate the weight of the pumpkin	
Actual weight of the pumpkin:	
Calculate the difference in weight:	





Math



Literacy

# ILLINOIS PUMPKIN FUN FACTS

**#1 PUMPKIN**   
**PRODUCING STATE!**

**MORTON, IL**  
**THE PUMPKIN CAPITAL**  
**OF THE WORLD**

**90%**

Illinois grows  
90-95% of the  
pumpkins used  
for processing

**3,699 POUNDS**

The largest pumpkin  
pie ever made!

**THE TOP 5 PUMPKIN PRODUCING COUNTIES**



1. TAZEWELL 2. MASON 3. WAYNE 4. PEORIA 5. STARK

**PUMPKINS CONTAIN  
POTASSIUM AND  
VITAMIN A!**





# THANKFUL TURKEYS

## Grade Level

K-5

## Length of Lesson

45 minutes

## Objective

By the end of this lesson, students will have a better understanding of turkeys and thankfulness.

## Materials Needed

- Turkey Cards (Attached Below)
- Paper Plates (1/ student and 1/ table)
- Red, Orange, Yellow, and Brown Finger Paint
- A finished plate craft for students to model theirs off of.
- Wet wipes (for clean up)

## Lesson Summary

This lesson is designed to help students learn about turkeys. Additionally, students will have an opportunity to reflect on the things they are thankful for.

## Suggested Sequence of Events:

1. **Set Up:** Pass out a plate to each table. Squeeze some of each color onto the plate.
2. Introduce the activity. Talk or make a short PowerPoint featuring the attached fun facts. (10 minutes)
3. Explain the steps of the activity and then release students into groups of 3-4. (5 minutes)
4. Complete the main activity by following these procedures (20 minutes) :
  - Have students write their names on the back of their plates.
  - Show students how to place their thumbs into the red paint. Then have them do the same and help as needed. Have them make an arch around the middle of the paper plate, forming the top of the turkey's tail.
  - Wipe finger off and repeat the process with orange paint. Make a second arch underneath the red.
  - Wipe finger off and have students use their index finger to dip into the yellow paint and create another arch underneath the orange,
  - Help/show them how to use their thumb to make a brown print in the middle for the turkey's head.
  - Use a black marker to add feet, a beak, and eyes.
  - Tell students three things you are thankful for and have them write things that they are thankful for around the turkey.
5. When the activity is done, set the plates to the side to dry. Then talk about the life cycle of a turkey. (10 minutes)
  - Call on volunteers from the class to be the egg (Sitting crisscross applesauce), poult (sitting with their bottom on their knees), young turkey (on their knees but sitting tall, and turkey (standing).
6. If you have more time, ask students what their favorite thanksgiving food is.
  - Explain the different ag products that come from their favorite Thanksgiving foods.
  - Ex: Ham (pigs), Mashed potatoes (potatoes) , Stuffing (wheat, chicken eggs, onions, etc.), Butter and rolls (wheat and dairy)



**Individual  
Activity**

**Low  
Cost!**

# ADDITIONAL RESOURCES

- How to adjust for different ages:
  - K-2
    - Start out with the Turkey Dance Freeze to get students excited: <https://iaitc.co/Turkeydance>
    - Have a helper for each table to help students dip their fingers in the paint.
  - 3-5
    - Show students the life cycle and have them act it out on their own.
    - Have students write a sentence about turkeys on the back of their turkey plates.
- Other tips:
  - If you can't have a lot of volunteers in the classroom, do this activity with mixed age groups. This way you can have a second or third grader at the same table as a kindergartener and they can help out.
  - Send them home with the IL AITC Poultry Ag Mag or cover it during the lesson if you have time: <https://iaitc.co/poultry>
- Ag Kid Connection:
  - FFA: Has someone from your chapter done the poultry CDE? Do you or someone else from your chapter have turkeys? Film or have them film a video on the turkey farm and share it with the class.
  - 4-H: Does someone from your club raise turkeys? Invite them in to give a talk to your students.
- Other Ag in the Classroom poultry lessons.
  - Illinois Ag in the Classroom:
    - Chickens aren't the only ones
    - Describe Your Chicken
    - The Little Red Hen
    - Poultry Taste Test
    - My Turkey Lapbook
    - Will the Egg Break?



<p><b>The turkeys most of eat today have very little in common with the Standard Bronze turkey.</b></p>	
<p><b>The turkey we buy in the supermarket is a breed with white feathers, called the “White Breasted Tom.”</b></p>	
<p><b>The White Breasted Tom</b></p>	<p><b>The only turkey in large-scale production in the United States.</b></p>
<p><b>A Turkey’s Diet</b></p>	<p><b>Corn and soybean meal mixed with a supplement of vitamins and minerals.</b></p>



<b>Rafter</b>	<b>A group of turkeys.</b>
<b>Tom</b>	<b>A Male Turkey</b>
<b>Hen</b>	<b>A female Turkey</b>
<b>Gobble</b>	<b>Only male Turkeys gobble. Females cluck.</b>
<b>Myoglobin</b>	<b>The dark of dark meat comes from a chemical compound called <i>myoglobin</i>, which plays a key role in oxygen transport. Dark meat is found in muscles that are used frequently, such as the legs.</b>



Literacy



Art

# OH, EVERGREEN TREES

## Grade Level

3-5

## Length of Lesson

50-60 minutes

## Objective

After completing this activity, students will be more familiar with the basic life stages of an evergreen tree.

## Materials Needed

- Book
- Scissors
- Tape
- Green markers or Green Paper

## Lesson Summary

This lesson is designed to help students learn about evergreen trees, their lifecycle, and their purposes.

## Suggested Sequence of Events:

1. **Before lesson day:** Print out the Christmas tree templates. If you don't want or think you'll have time for students to color, print out on green paper.
2. Greet your students and have them share one thing they love about the holidays. (5 minutes)
3. Read [Christmas Tree Farm by Sandra Jordan](#) to show students the activities that take place on a Christmas tree farm. (5 minutes)
4. Pre-Activity information: Discuss the life-cycle of an evergreen tree with your students. Draw or show pictures of the stages as you explain them with the attached descriptions. (10 minutes)
5. If students are sitting on the floor, dismiss them to tables or desks now.
6. Complete the main activity by following these procedures (20 minutes) :
  - Explain the rules:
    - Use scissors to cut a 1-inch slit along the outside edge of the tree.
    - Fold the tree in thirds along the dotted lines.
    - Then, insert the tab into the 1-inch slit.
    - Tape along the side for extra reinforcement.
    - Ask for and do your best to answer their questions.
7. If you have extra time:
  - Have students make poems about evergreen trees.
  - Have a "poetry reading" where students can share their poems with the class.
  - Have them make shorter poems such as this:  
"Evergreen trees are tall and green.  
At Christmas time they are meant to be seen.  
With lights all over, they shine like the sun.  
Oh these trees are so much fun!"

**Low  
Cost!**

**Individual  
Activity**

# ADDITIONAL RESOURCES

- How to adjust for different ages:
  - Kindergarten-2nd
    - Do steps 2,3, 4, and 5 as normal.
    - Switch out the 3-D tree activity with an activity about real vs artificial Christmas trees.
      - Supplies:
        - Christmas tree outlines for each student
        - Green markers
      - Directions:
        - Have your students brainstorm together all of the living and non-living parts of their world (specific animals, people, plants, soil, air, water, fungus, insects, etc.) that benefit from a real Christmas tree—before it's cut, after it's cut, after it dies, and after it decays and becomes part of the soil.
        - Have each student illustrate one of these living or non-living elements inside their Christmas trees.
    - Instead of finishing with writing quotes, ask your students some questions and show them a video about a Christmas tree farm
      - Ask your students when they think Christmas tree farmers are busy working on their farm. Explain that although December is the big sales month on a Christmas tree farm, caring for Christmas trees is a year-round job.
      - What work do your students think is involved in growing and selling Christmas trees?
      - Show this short video of a Christmas tree farm: <https://iaitc.co/trees>
- Ag Kid Connection:
  - FFA: Does your chapter sell Christmas trees in the winter? Does someone in your chapter grow them for their SAE? Invite them to make a video about it or come in and talk about it.
  - 4-H: Does someone from your club grow Christmas trees? Have them record themselves giving a talk or a demonstration about it! Then play it for your students. Encourage your club to tour a Christmas tree farm and invite students 3rd grade and older to join you!
- Other Ag in the Classroom tree lessons!
  - Discover Christmas Trees K-2
  - Discover Christmas Trees 3-5



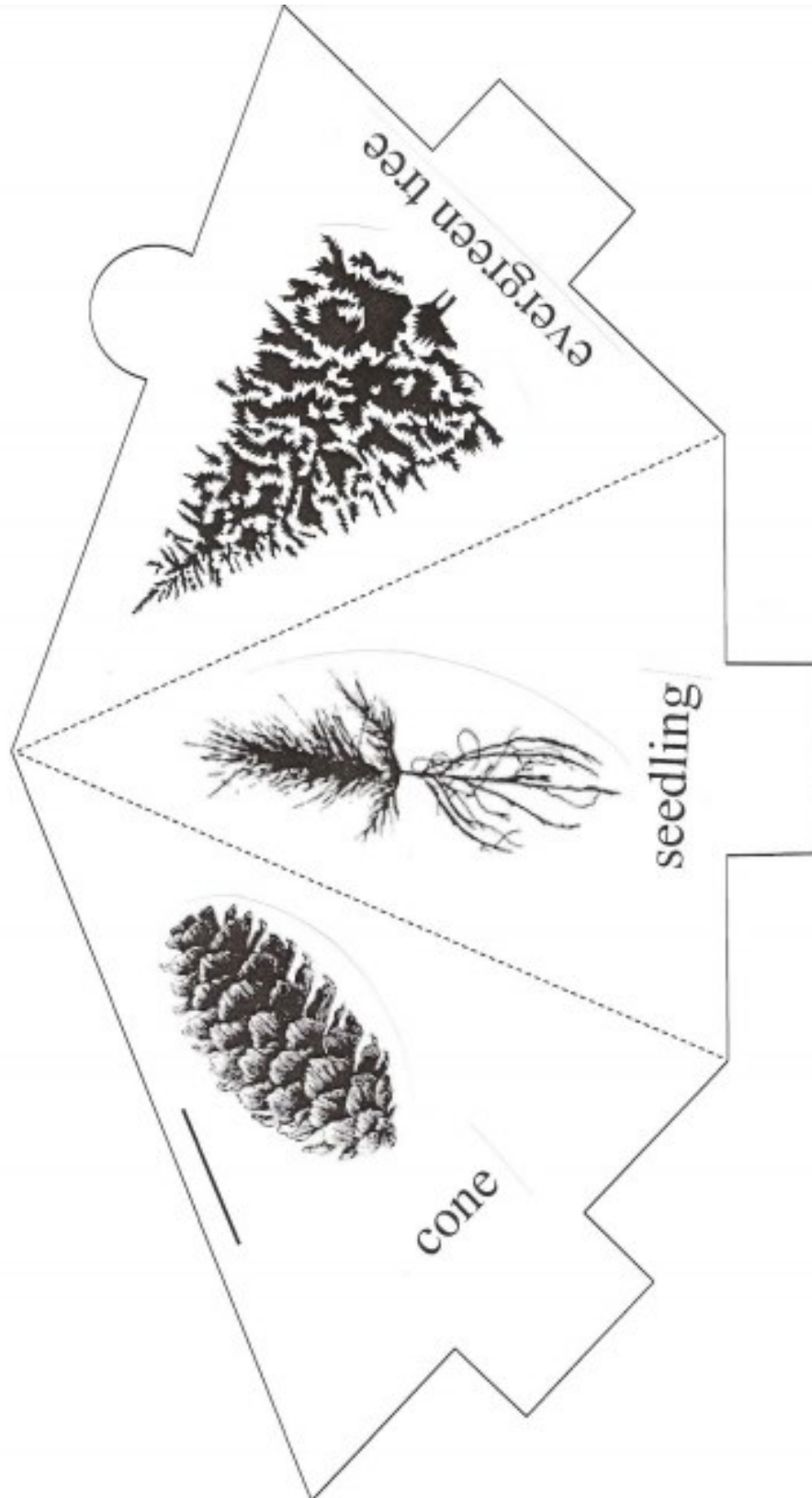


Literacy



Art

# 3-D TREE TEMPLATE (3-5)



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Literacy



Art

# MY EVERGREEN POEM

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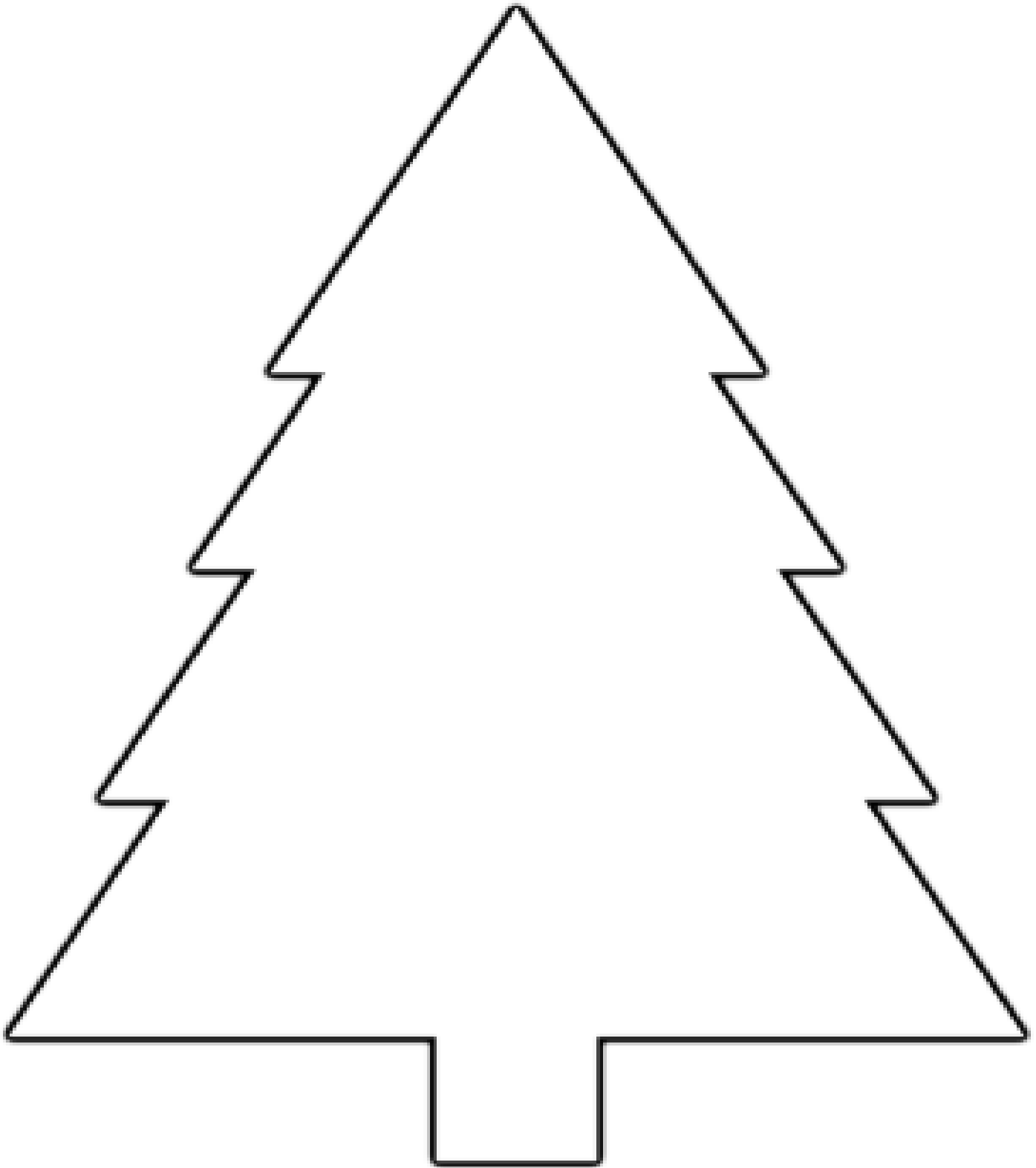


Literacy



Art

# TREE TEMPLATE ( K-2 )





Literacy



Art

# SWEATER WEATHER

## Grade Level

4-6

## Length of Lesson

Approximately 60 minutes

## Objective

This lesson allows students to learn more about Illinois sheep and the production of wool.

## Materials Needed:

- “Charlie Needs a Cloak” by Tomie dePaola
- 2 colors of yarn
- Tape
- Scissors

**Food  
Allergen  
Friendly**

**Individual  
Activity**

## Lesson Summary

Sheep provide us with wool that can help keep us warm. This activity provides students with a hands-on experience weaving wool.

## Suggested Sequence of Events:

1. **Before the activity:** If you know the amount of students you have, cut enough yarn for each student to have (2) 18 inch long pieces of one color yarn and (2) 18 inch pieces of a different colored yarn. If you don't know the number, ask the teacher or estimate and bring extra!
2. Welcome students and read [Charlie Needs a Cloak by Tomie dePaola](#). This will capture student interest (10 minutes).
3. Complete the activity following the procedures (30 minutes):
  - Have students collect (4) 15 inch long pieces of yarn (2 of each color).
  - (1) Tie the end of the strings together and knot it leaving about 1 inch at the end.
  - (2) Have students tape the strings down to the table and out them in an A B B A pattern. (ex. orange blue blue orange)
  - (3) Now it's time to start weaving! Place the A string over the blue string so that it forms a backwards 4 shape.
  - (4) Wrap the A string under the B string and pull tight to the top.
  - (5) Repeat the process with the A string on the other side using a forward 4 shape.
  - (6) Using a forward 4 shape, tie the orange strings together in the middle.
  - (7) Repeat the process with the B strings.
  - Alternate with the A and B strings until the bracelet is at the desired length.
  - Once you reach your desired length, Tie a knot on the bottom and trim off any excess string.
  - Help the students tie their bracelet onto their wrists.
4. Watch a video about making clothes from sheep and then ask students to share something they learned or liked about the activity (10 minutes). Find the video here: <https://www.youtube.com/watch?v=x0HeCL6nano>

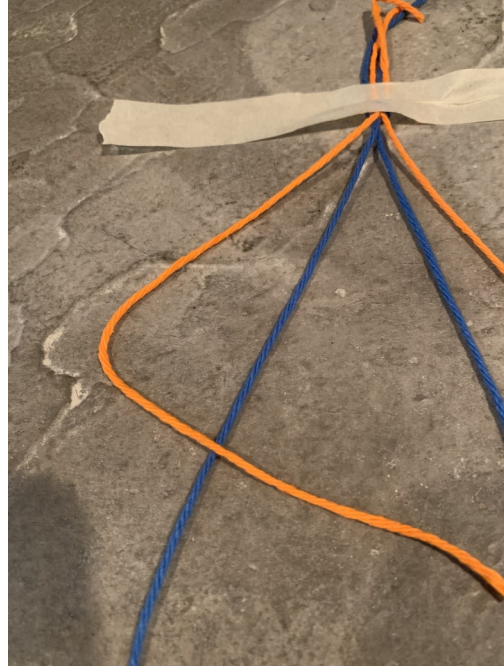
# ADDITIONAL RESOURCES

- How to adjust for younger students:
  - K-3
    - Instead of weaving, make sheep graham crackers instead!
    - You will need:
      - 1 Graham Cracker Sheet per student
      - 1 plastic knife per student
      - 1 package of vanilla frosting per group
      - 1-2 bags of mini marshmallows
    - Instructions
      - Start with the same book and fun facts about sheep.
      - Next, have each student frost their graham crackers and top them with mini marshmallows.
      - Tell students that in order to make clothes from sheep wool, we have to give them a hair cut by shearing them.
      - Tell them to eat their marshmallows off the sheep one by one like they are shearing the wool off the sheep!
      - While they finish eating, do number 4 on the 4-6th grade lesson.
- Other Tips:
  - If your budget allows, bring in mini marshmallows or rice krispie treats for your students if you don't make a snack!
  - Practice this lesson at home before you teach it. It will help you be more comfortable when teaching it.
- Ag Kid Connection:
  - FFA: Have someone from your chapter with a sheep SAE record themselves giving a tour of their farm and share it with your students. Have them explain what type of sheep they show and how they care for their sheep.
  - 4-H: Does someone from your club show sheep? Does someone from your club make clothes from wool? Invite them to make and share a video or have them come talk to your students.
- Other Ag in the Classroom Sheep Lessons:
  - From Wool to Wheel
  - Sheep See, Sheep Do
  - Counting Sheep or People

## STEPS 1 AND 2



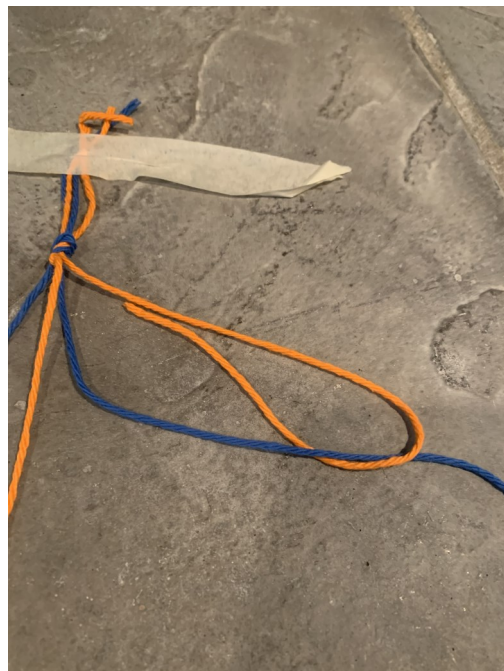
## STEP 3



## STEP 4



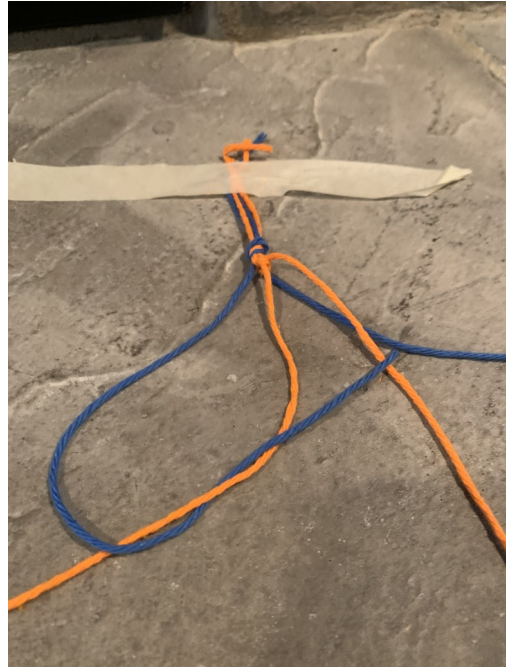
## STEP 5



## STEP 6



## STEP 7



## LAST STEPS





Science



Literacy

# FROM SUGAR TO GUMDROP

## Grade Focus Level

K-2

## Length of Lesson

50-60 minutes

## Objective

By the end of this lesson, students will have a better understanding of what it takes to make candy.

## Materials Needed

- 2 tsps Jell-O Powder per student (about 20 tsp/3.4 oz package)
- Water
- 1 paper plate/student
- Sugar
- Eyedroppers
- Store bought gumdrops
- (Optional): Small plastic containers with lids

**Individual  
Activity**

**Food  
Lesson**

## Lesson Summary

This lesson is designed to be a hands-on activity where students can create their gumdrops while learning about the process.

## Suggested Sequence of Events:

1. Before lesson day: If you know your usual number of students, divide the Jell-O powder into containers ahead of time.
2. Lesson Day: Introduction: Greet your students. Share that today we will be talking about candy and making our own. Tell them what your favorite candy is and have students share their names again and their favorite candy. (15 minutes)
  - Show this video to explain where sugar comes from: <https://iaitc.co/makingsugar>
  - Dismiss to tables after, if you haven't already.
3. Complete the main activity by following these procedures (10 minutes):
  - Pour 2 teaspoons of Jell-O on each student's plate. If you want to save time during the activity, put a teaspoon of Jell-O powder in small containers and pass those out to each student.
  - Add drops of water to the students' Jell-O and have them mix it with their fingers.
  - Then, have them roll the mixture into a ball.
  - Have each student roll the gum drop in some sugar and then it's ready to eat!
4. When the activity is done, pass out the store bought gum drops for students to eat (20 minutes).
  - While students are eating, bring in or show them pictures of cereal boxes, jelly, chocolate bars, fruit drinks, and/or ice cream.
  - As you show each item, have students raise their hands if they think these items were sweetened with corn.
  - After you've asked about each item, reveal that each of your items were actually made with corn-based sweeteners!
5. Which did you like best? Make a T chart on a large piece of paper or on the dry erase board (or chalk board) Then have each student come up and write their name under which gumdrop they liked the best (5-10 minutes).
  - You can ask for volunteers to share their reason for choosing one or the other if time allows.



# ADDITIONAL RESOURCES

- How to adjust for different ages:
  - 3-5
    - After the introduction, Instead of showing the video, start out with reading “[From Cane to Sugar](#)” by Jill Braithwaite or “[How it Happens at the Candy Company](#)” by Jenna Anderson.
    - Dismiss to tables and do the gumdrop making activity as normal.
    - After the students make their own gumdrops, pass out the store bought ones. Explain how things can be similar or different, and then have students compare and contrast the two candies.
    - Finish with the “Which did you like best?” activity. Have students also write a sentence or two about which they liked best and why.
- Ag Kid Connection:
  - FFA: Does your chapter participate in the Food Science CDE? Record a short video of yourself, a fellow FFA member, or your advisor talking about the contest!
  - 4-H: Does someone in your club make candy for their 4-H project? Has your club or someone from you club been to a sugar beet or sugar cane farm? Record a video of them talking about it or invite them in to share!
- Other Ag in the Classroom candy lessons!
  - Candy Ingredients
  - Candy and Culture
  - What’s in a Tootsie Roll Label?
  - Candy and Food Safety
  - Peanut Candy
  - Where Does Candy Come From Resource Guide



Science



Literacy

# COMPARE AND CONTRAST (3RD-5TH)

Name: \_\_\_\_\_

<b>Compare</b>	<b>Contrast</b>

<b>Which one did I like the best?</b>



# CEREALSLY FUN SOIL PROFILES

## Grade Level

K-2

## Length of Lesson

45-60 minutes

## Objective

Students will learn about the layers of soil while understanding why we need to take care of the ground.

## Materials Needed

- Clear plastic cups and spoons
- Kix or Corn Flakes (Bedrock)
- Cocoa Puffs or Chocolate Chex (Sub soil)
- Cocoa Pebbles (Top Soil)
- 1 Gallon of milk (Small carton of dairy free milk if needed)
- Markers or crayons

## Lesson Summary

Students will make a fun edible soil profile using cereal. This will help them understand the ground beneath them.

## Suggested Sequence of Events:

1. **Set Up: Before the lesson** split up cereal into smaller bags for 3-5 groups (depending on usual numbers). **Before you start the lesson**, pass out supplies to each table .
2. Get students' attention by starting out with the top soil dance! This basic song and dance will introduce and help them remember the layers of the soil: <https://iaitc.co/topsoildance>. Send students to tables afterwards (5 minutes).
3. Complete the main activity by following these procedures (30 minutes):
  - Explain things as you do the activity with them:
    - First, have students pour in the Kix or Cornflakes into the bottom of their cups
      - Explain that this is the bedrock. Bedrock is the bottom layer of the soil. It is about 3 feet below us. Ask again what layer it is to make sure they have it.
    - Next, Have students pour in the cocoa puffs or chocolate Chex cereal.
      - Explain that this is the subsoil. Subsoil is a layer about 1 foot below us. Ask again what layer it is to make sure they have it.
    - Lastly, have them add the cocoa pebbles on top. Explain that this represents the topsoil. Topsoil is the layer where plants grow. Ask again what layer it is to make sure they have it.
    - Review all of the layers one last time. Then, let them eat! Pour milk into the cups of those who want it.
4. Questions and Clean Up: While the students are eating, ask if there are any questions (10-15 minutes)?
  - If none or you have more time ask these discussion questions:
    - What can we get from soil? (plants, pencils, microchips in our phones, water)
  - Expand: We get so many things from the soil. Farmers know how much we rely on the ground so they take really good care of it.
    - Have students think about something they really care about. Share an example too like your family, your friends, or your dog.
    - Share that when we have something we really care about, we want to take good care of it.
    - That's why farmers take such good care of our land. They really care about it and want it to be able to provide for us in the future.
  - Have students help you clean up the supplies and wipe down the tables.

**Food Lesson!**

**Food Allergy Friendly**

# ADDITIONAL RESOURCES

- How to adjust for older students:
  - Begin with reading a book instead of doing the top soil dance. A good choice is [Dirt: The Scoop on Soil](#) by Natalie Rosinsky.
  - Instead of having students just share what they learned, make a game out of it (Check with the teacher to make sure it's okay).
    - Silent Speed Toss:
      - Bring a small, easy to throw ball or stuffed animal.
      - Have students gently toss the object to each other.
      - As they catch the object, have them share something they learned today.
      - Explain that if they throw too hard, or toss to someone that has already gone that round, they will be out.
      - You may have to help a few students recall some of the information.
- Other Tips:
  - Ask a classmate to help you! Depending on how many students you have, it can be challenging to teach, pass things out, and do crowd control at the same time.
- Ag Kid Connection:
  - FFA: Invite someone from your chapter that does the land use or horticulture CDE to help you teach!
  - 4-H: Have someone from your club record a video of them showing their garden or field. Ask them to give a talk about it and share it with the class. You could also invite them in to talk about it and help you out!
- Other Ag in the Classroom Soil Lessons:
  - Say it With Soil
  - Diary of a Worm
  - Soil Slurry



Science



Literacy

# CIRCLE OF EARTH BRACELET

## Grade Level

K-3

## Length of Lesson

50-60 minutes

## Objective

After completing this lesson, students will discover the circles of our Earth.

## Materials Needed:

- 1 pipe cleaner per student
- 1 small clear pony bead (people)
- 1 small blue pony bead (water)
- 1 small green pony bead (plants)
- 1 small brown pony bead (soil)
- 1 small orange pony bead (day)
- 1 small black pony bead (night)
- 1 small white pony bead (air)
- 1 small yellow pony bead (sun)
- 1 small red pony bead (animals)

**Food  
Allergy  
Friendly**

**Low  
Cost**

## Lesson Summary

This lesson is designed to help students recognize the important resources our Planet Earth provides us. Students will learn about protecting the planet and will be more prepared for Earth Day!

## Suggested Sequence of Events:

1. Welcome students and listen to "[Earth: Where Would we be Without It?](#)" by Kathleen Kranking to get students thinking about protecting the Earth. (10 minutes)
2. Pre-Activity Discussion (15 minutes) :
  - Pass out materials to each students
  - Talk about what the beads represent
  - Have them fill out the worksheet as you guide them through what each bead represents
3. Complete the activity following the procedures (10 minutes):
  - String the colored beads onto the pipe cleaner to represent the circles of the Earth.
  - String opposite end of the pipe cleaner back through the clear "People" bead. Now your clear "People" bead is an adjuster for the bracelet.
4. Explain how all of these things come from the earth and that's why we need to take care of it. Share these ways to take care of the earth (5 minutes):
  - Reduce Waste: Use less plastic straws, paper plates, and plastic bags to pack your lunches. Pack your lunch food in reusable containers instead!
  - Use Less Water: Take shorter showers, wear jeans or shorts that didn't get that dirty another day, and turn off the sink when you brush your teeth!
  - Recycle: If you do use plastic or paper products be sure to reuse and/or recycle! Recycling also means donating your clothes that you no longer wear!
5. Have students color in the planet Earth and draw one way they are going to try to take care of it. (10-20 minutes)

# ADDITIONAL RESOURCES

- How to adjust for older students:
  - 4th-5th
    - Do everything the same except for number 5.
    - Have students color in the planet Earth. Then, have them write a short sentence or two about what they will do to save the Earth!
- Other Tips:
  - Kids love snacks! If you have it in your budget, bring some eco-friendly snacks such as apples, bananas, or clementines
  - Ask a classmate to help you! Depending on how many students you have, it can be challenging to teach, pass things out, and do crowd control at the same time.
- Ag Kid Connection:
  - FFA: If your chapter uses water conservation for their greenhouse or test-plot, record yourself or someone from your chapter talking about it or invite them in to talk about it. If they don't do anything, encourage them to start!
  - 4-H: Does someone from your club have a rain garden? Does someone from your club compost? Make a video about it or invite them in to give a talk.
- Other Ag in the Classroom Earth Day Lessons.
  - Slice of Soil
  - Why Farmers Double Crop
  - Ethanol in a Bag
  - Anywhere the Wind Blows
  - From Moo to Methane
  - Throw 'n' Grow



Science



Literacy

<b>Color(s)</b>	<b>Description</b>
<b>Clear</b>	<b>The Earth’s health “hinges” on the <u>people</u> and how we take care of the Earth.</b>
<b>Blue</b>	<b><u>Water</u> is a circle. Water rains down on land. Water collects in oceans, rivers, lakes, and streams. It evaporates back up into the sky and collects in clouds. The clouds become heavy, and rain falls down to land again.</b>
<b>Green and Brown</b>	<b><u>Plants</u> and soil are circles. Plants grow from <u>soil</u>. Plants provide food for animals.</b>
<b>Red</b>	<b><u>Animals</u> provide food for other animals. Animals die and decompose. New soil is made. New plants grow.</b>
<b>Black and Orange</b>	<b>Earth is spinning through space, rotating on its axis, revolving around the sun. The Earth and sun give us the circle of the seasons and the circle of <u>night</u> (black) and <u>day</u> (orange).</b>
<b>White</b>	<b><u>Air</u> is a circle. Animals breathe in oxygen and exhale carbon dioxide. Plants take in carbon dioxide, use it to make food, and give off oxygen. Animals breathe it in again.</b>
<b>Yellow</b>	<b>The <u>sun</u> is a circle. The sun provides warmth for light for all of the Earth’s circles. Without the sun, plants and animals would not survive. The sun binds us together .</b>



Science



Literacy

<b>Color(s)</b>	<b>Description</b>
	<b>The Earth's health "hinges" on the <u>people</u> and how we take care of the Earth.</b>
	<b><u>Water</u> is a circle. Water rains down on land. Water collects in oceans, rivers, lakes, and streams. It evaporates back up into the sky and collects in clouds. The clouds become heavy, and rain falls down to land again.</b>
	<b><u>Plants and soil</u> are circles. Plants grow from soil. Plants provide food</b>
	<b><u>Animals</u> provide food for other animals. Animals die and decompose. New soil is made. New plants grow.</b>
	<b>Earth is spinning through space, rotating on its axis, revolving around the sun. The Earth and sun give us the circle of the seasons and the circle of <u>night</u> (black) and <u>day</u> (orange).</b>
	<b><u>Air</u> is a circle. Animals breathe in oxygen and exhale carbon dioxide. Plants take in carbon dioxide, use it to make food, and give off oxygen. Animals breathe it in again.</b>
	<b><u>The sun</u> is a circle. The sun provides warmth for light for all of the Earth's circles. Without the sun, plants and animals would not sur-</b>





Science



Literacy

## How will I help protect the Earth?





Literacy



Art

# RED, RIPE STRAWBERRIES!

## Grade Level

1-3

## Length of Lesson

Approximately 60 minutes

## Objective

By the end of this lesson, students will have a better understanding of what it takes to grow a strawberry.

## Materials Needed

- “The Little mouse, the Red Ripe Strawberry, and the Big Hungry Bear” book
- Chocolate chips (55 per group)
- Strawberry templates printed onto red paper(1 per group)
- Tongs (1 per group)
- Cards numbered 1 -10 (1 set per group)

## Lesson Summary

This lesson is designed to help students develop teamwork skills and teach them about the amount of care it takes to grow strawberries.

## Suggested Sequence of Events:

1. Set Up: Create red strawberry mats from the attached template. You'll need one for each group. It is better to have too many supplies than not enough. Plan for at least 5 groups of 4-5 students each. Put 55 chocolate chips in Ziploc sandwich bags for each group. Additionally, you will need to cut out sets of cards numbered 1-10 for each group. You can find tongs for each group here: <https://iaitc.co/Strawberrytongs>
2. Have students share their favorite fruit! Then, place students into groups of 4-5 (10 minutes).
3. Complete the main activity by following these procedures (20 minutes):
  - Explain the rules:
    - Designate a student to go first. Tell each student that when you say go, the first person can flip over a card.
    - After they flip over the card, have them use the tongs to pick up that number of chocolate chips from the strawberry mat.
    - After they have picked up that number, the tongs are passed to the next person.
    - Keep a timer on your phone and mark when each student finishes.
  - Ask for and do your best to answer their questions.
  - SAY GO and start the timer.
4. When the activity is done, pass out more chocolate chips to the students who only got a few. Allow them to eat the chips while reading [\*\*“The Little Mouse, the Red Ripe Strawberry, and the Big Hungry Bear”\*\*](#) by Audrey Wood (5-10 minutes).
5. What does it take to grow a red ripe strawberry (20 minutes)?
  - Talk about where strawberries grow in Illinois and when they are in season. For example, strawberries in Illinois are usually planted in April and harvested in June. For more information visit: <https://iaitc.co/Strawberrypartners>
  - Draw or show the life cycle of a strawberry and what strawberries need to grow BIG and red! For example they need a lot of sunlight so it's important to provide that for them.
  - Then give students about 10 minutes to draw a picture of a red ripe strawberry and what structure they would build to protect it! You can ask for volunteers to share their pictures if time allows.

**Team  
Activity!**

**Budget  
Friendly!**

# ADDITIONAL RESOURCES

- How to adjust for different ages:
  - Kindergarten:
    - After introductions, do a strawberry scavenger hunt activity instead of the counting activity.
      - Hide enough paper strawberries around the room for each group to find. For this activity you'll want smaller groups of 3 or 4.
      - Have groups stay together as they travel around the room to find a strawberry.
      - Make sure each group only finds one strawberry.
      - After explaining the rules, start a 10 minute timer and release groups to find a strawberry!
    - Then, do the other activities as normal.
  - 4-6th:
    - Do all of the activities leading up to the book as normal. Have students wear oven mitts while picking up the chocolate chips for an extra challenge!
    - Watch this video that tours a California strawberry farm (California grows the most strawberries in the US!) instead of reading the book: <https://youtu.be/hOQxe4IGww8>
    - What does it take to grow a red ripe strawberry? (20 minutes)
      - Draw or show the life cycle of a strawberry and what strawberries need to grow .
      - Talk about where strawberries grow in Illinois and when they are in season. For example, strawberries in Illinois are usually planted in April and harvested in June. For more information visit: <https://iaitc.co/Strawberrypartners>
      - Draw or show the life cycle of a strawberry and what strawberries need to grow BIG and red! For example they need a lot of sunlight so it's important to provide that for them.
      - Talk about how farmers take care of their land and why. Then, have students write about how they would take care of their strawberry field. Tell students their structure needs to protect the strawberry from pests without blocking it from the sun or necessary water.
      - Look up places near by where you can grow strawberry picking. Share those place with your students:<https://www.ilfbpartners.com/family/pick-your-own-strawberries/>
- Ag Kid Connection:
  - FFA: Does your chapter have a greenhouse the grows strawberries? Invite a FFA member (or yourself) or an advisor to talk about it!
  - 4-H: Does someone from your club grow strawberries? Have them record themselves giving a talk or a demonstration about it! Then play it for your students.
- Other Ag in the Classroom berry great lessons!
  - Illinois Ag in the Classroom
    - Berry Water Colors
    - The Berry Bucket:
    - The Cranberry Bounce Test



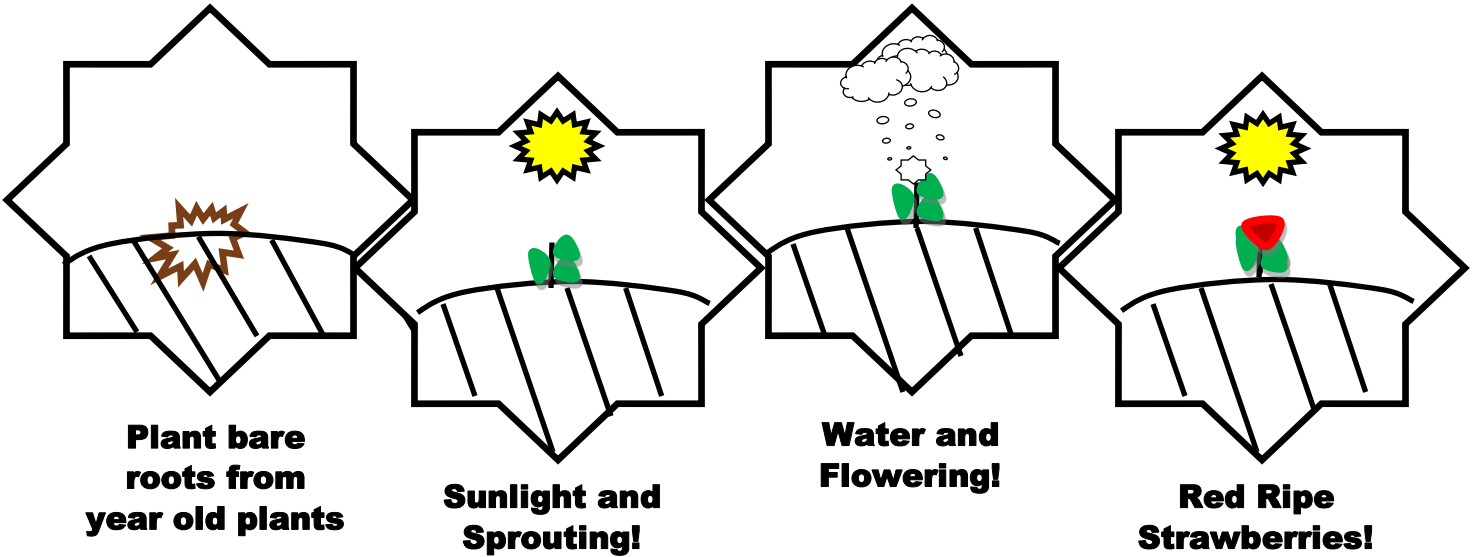
Literacy



Art

# STRAWBERRY LIFE CYCLE

By: \_\_\_\_\_



**What would I build to protect my red ripe strawberry?**



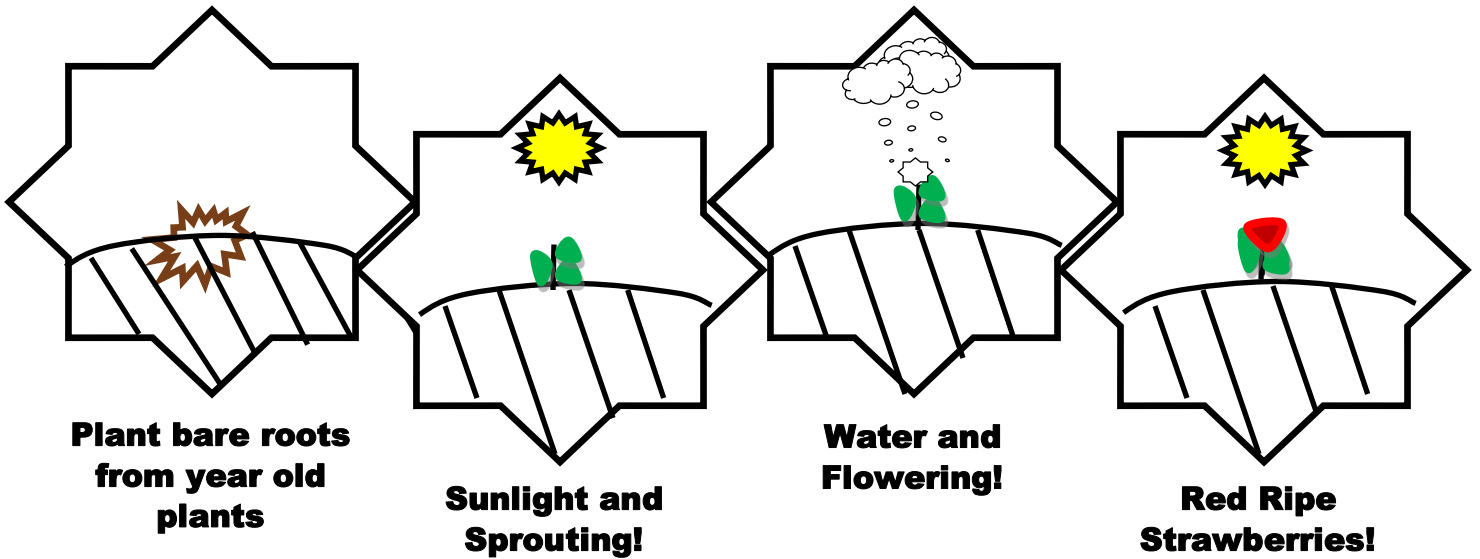
Literacy



Art

# STRAWBERRY LIFE CYCLE 4TH-6TH

By: \_\_\_\_\_



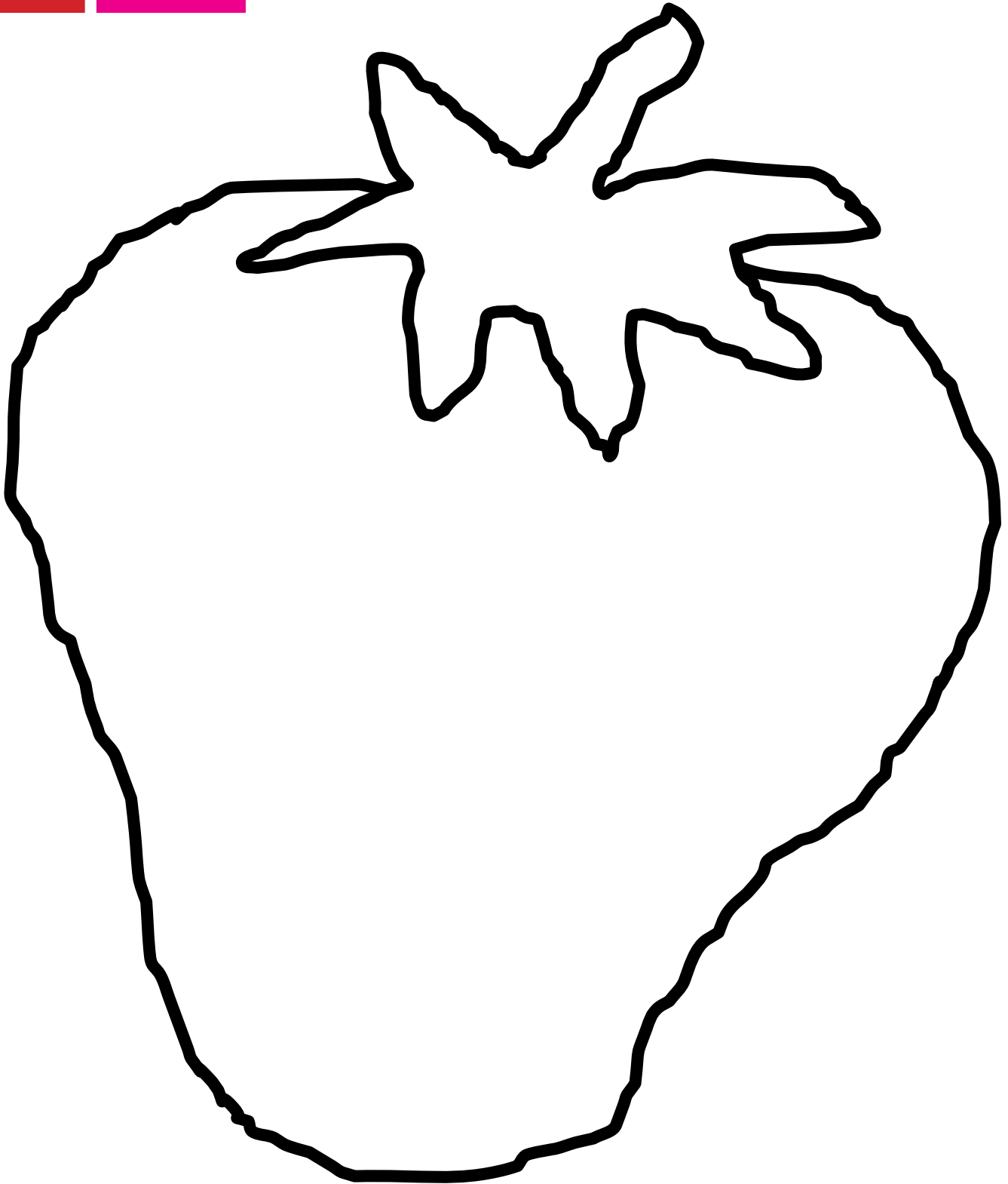
**How would I take care of my strawberry field?**



Literacy



Art





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*in the Classroom*<sup>SM</sup>

HIGH SCHOOL AG STUDENTS

# Educating the **FUTURE** of Agriculture



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