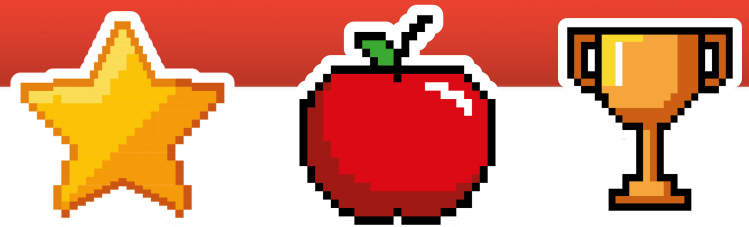


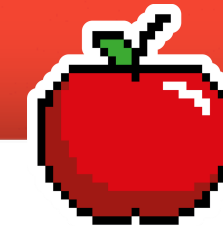
# **HARVEST A GOOD TIME: ENGAGING LESSONS THAT GET KIDS OUT OF THEIR SEATS**

Taylor Talbert



# I'M TAYLOR!





# ILLINOIS AITC

Lessons + Ag Mags + Presentations + Resources

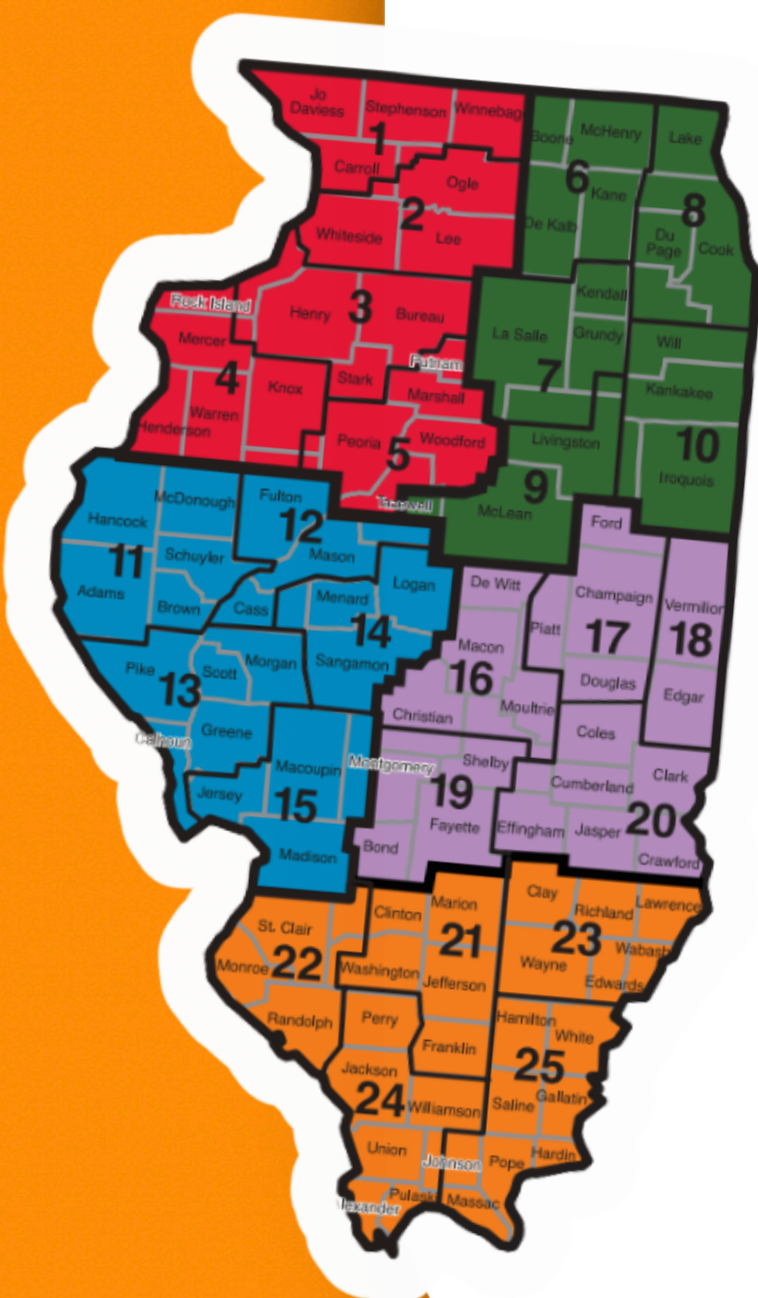


90+ County-Level Coordinators



660,000+ Illinois Students  
40,000+ classrooms = 65% of Illinois' schools

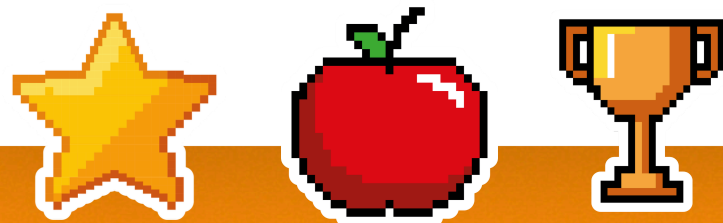
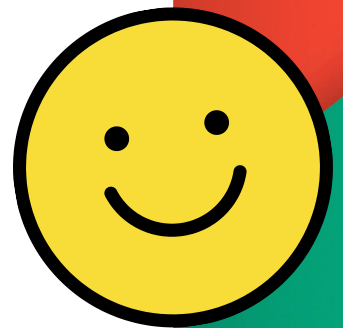
[agintheclassroom.org](http://agintheclassroom.org)



# GAMEPLAY IN THE CLASSROOM

According to research, incorporating game play into the classroom can:

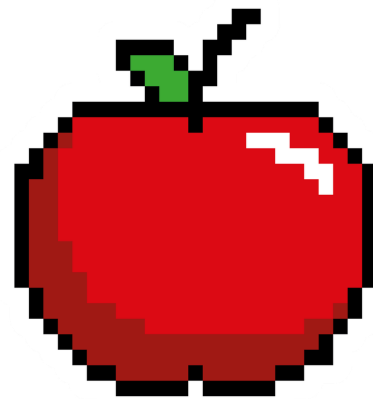
- Increase student participation
- Foster social and emotional learning
- Motivate students to take risks
- Improve student attitudes toward learning
- Boost academic scores



# THE GAME PLAN FOR TODAY



LESSONS &  
ACTIVITIES



BOOK  
RECOMMENDATIONS



TAKE BACK TO THE  
CLASSROOM IDEAS!

# PUMPKIN CATAPULT



Catapult made with instructions



Catapult designed by a 1st grader



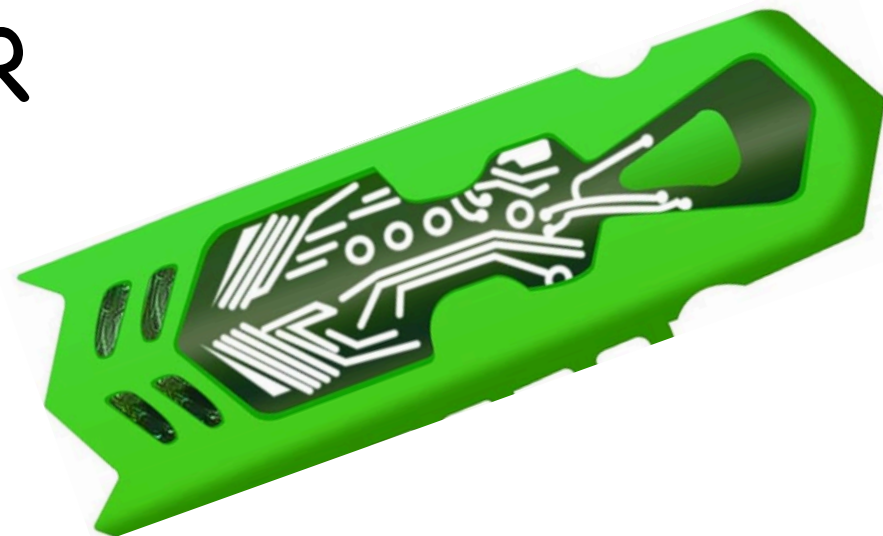
PVC Catapult

# BUZZ BOT HARVESTER

WHO CAN CREATE THE BEST HARVESTER?


SUPPLIES:

- POPSICLE STICKS
- STRAWS
- PAPER DIXIE CUPS
- PAPER
- TAPE



# APPLE ADDITION

**YELLOW=SUNLIGHT**  
**GREEN=SOIL NUTRIENTS**  
**PINK=HARMFUL INSECTS**  
**ORANGE=POLLINATORS**  
**WHITE=KILLING FROST**  
**PURPLE=DISEASE**  
**BLUE=WATER**  
**RED=EFFECTIVE PRUNING**  
**BLACK=PRPER THINNING**  
**FUCHISIA=STAKING & TRESLLISING**



## HEALTHY TREES: APPLE ADDITION

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

Just like all other plants, apple trees need certain things to be healthy! But there are also things that can be harmful to apple tree health. Each color chip represents something that is either beneficial (good) or harmful (bad) for the overall health of an apple tree. Complete the math equations below based on the number of chips you collected to see how healthy your tree is!

- Sort the color chips you collected into separate piles.
- Record (write) the number of chips collected into the box labeled with the same color. That number of chips represents how each thing *affects* your tree's overall health.
- Fill in the remaining blanks in the box to write the multiplication equation.

**YELLOW = SUNLIGHT**  
Beneficial, earn double points!

Number of chips collected: \_\_\_\_\_

$\text{_____} \times 2 = \text{_____}$

The number of color chips collected Total score for the color

**ORANGE = POLLINATORS**  
Beneficial, earn double points!

Number of chips collected: \_\_\_\_\_

$\text{_____} \times 2 = \text{_____}$

The number of color chips collected Total score for the color

**GREEN = SOIL NUTRIENTS**  
Beneficial, score equals number of chips collected!

Number of chips collected: \_\_\_\_\_

$\text{_____} \times 1 = \text{_____}$

The number of color chips collected Total score for the color

**WHITE = KILLING FROST**  
Harmful, lose triple points!

Number of chips collected: \_\_\_\_\_

$\text{_____} \times 3 = \text{_____}$

The number of color chips collected Total score for the color

**PURPLE = DISEASE**  
Harmful, lose double points!

Number of chips collected: \_\_\_\_\_

$\text{_____} \times 2 = \text{_____}$

The number of color chips collected Total score for the color

**PINK = HARMFUL INSECTS**  
Harmful, score equals number of chips collected!

Number of chips collected: \_\_\_\_\_

$\text{_____} \times 1 = \text{_____}$

The number of color chips collected Total score for the color

## TREE HEALTH INDICATORS

**YELLOW - SUNLIGHT**

Trees need sunlight for photosynthesis in order to create their own food for energy.

**GREEN - SOIL NUTRIENTS**

Trees get vital nutrients from the soil through their roots. If the soil doesn't have many nutrients, farmers add fertilizer to the soil or to irrigation water.

**PINK - HARMFUL INSECTS**

Apple trees have many harmful pests that can impact tree health throughout the entire growing season.

**ORANGE - POLLINATORS**

Pollinators are vital for apple crops. Honeybees and other native IL pollinators help blossoms turn into apples for us to eat.

**WHITE - KILLING FROST**

different plants are sensitive to temperature changes. On cold spring summer nights, some growers water their apple trees with water during cold spells to insulate sensitive blossoms.

**PURPLE - DISEASE**

A combination of heat and humidity is the perfect environment for many microorganisms to grow, some of which cause plant diseases. Some microbes can live in the soil for many years.

**BLUE - WATER**

es need substantial amounts of water, especially trees, but most don't like their "feet wet".

**RED - EFFECTIVE PRUNING**


Effective pruning of apple trees is essential for tree and fruit health. Apple trees need a leader branch and a lot of room between branches for airflow and sunlight.

**PROPER THINNING**

st be properly thinned to a certain number of fruits to maintain tree health. This helps the tree grow larger and protect itself from being too heavy.

**FUCHSIA - STAKING & TRESSLISING**

Young trees are not as strong as mature trees. Using a trellis or stake to hold it upright will help the young tree stay standing if it gets really windy outside.



# PLANT PARTS LOGIC PUZZLE

**PLANT PARTS LOGIC PUZZLE**

Designed to help students understand the different parts of plants.

**Grade Level:** 3-8

**Length of Lesson:** Less than 30 minutes

**Objective:** By the end of the lesson, students will have a better understanding of the different parts of plants and why we eat them.

**Materials Needed:** Scissors, Glue or Tape, Copies of the puzzle sheets.

**Standard:** NGSS 3-LS3-1

Cut out the plant part labels on the next page and match them to the corresponding vegetables below according to which part we eat. Each one will be used once.

stem	seed	flower
root	leaf	seed
root	leaf	fruit
stem	leaf	fruit
stem	seed	fruit

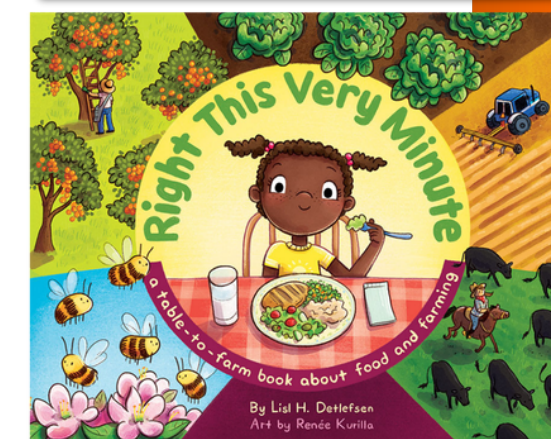
Time to go shopping at the Farmers Market and put your knowledge to the test!

Arrange the Vegetable Cards into the shopping bag below so that "like" plant parts are touching each other (i.e. - stems touching stems, roots touching roots).

**Illinois AGRICULTURE in the Classroom**



<b>Flower</b> 	<b>Fruit</b> 
<b>Seed</b> 	<b>Leaf</b> 
<b>Stem</b> 	<b>Root</b> 



# ROCKS TO ROBOTS: AG TECH TIMELINE



## Rocks to Robots: Ag Tech Timeline INSTRUCTIONS

### Game Setup:

Shuffle and deal the cards according to the chart. Keep cards with the date side down! Place remaining cards in a pile at the center of the gameplay area, also with the date side down.

### Deal:

Number of players	2-3	4-5	6-8
Number of cards	6	5	4

**Starting Card:** Draw one card from the top of the pile and place it date side up at the center of the playing area. This card will serve as the starting place for the timeline.

**Objective:** Be the first player to get rid of all your cards by placing them in chronological order.

1

## Rocks to Robots: Ag Tech Timeline INSTRUCTIONS

### Game Play :

The youngest player goes first, and play continues clockwise.

- **Placing Cards:** On their turn, a player selects one of their cards and places it next to the starting card based on their belief of its chronological position:
  - If they think their event is earlier, they place their card to the left.
  - If they think it is later, they place it to the right.
  - Players can also place their cards between two existing cards if they believe it fits chronologically there.
- **Revealing Dates:** After placing a card, the player flips it over to reveal the date.
  - If the card is correctly placed, it remains on the table with the date side up and the game proceeds to the next player.
  - If the card is incorrectly placed, it is discarded, and the player must draw a new card from the pile.

2

**Farming Practice**

Pig insulin is first used to treat diabetes.

**Ag Statistic**

One U.S. farmer produces enough food to feed approximately 165 people.

**Illinois History**

Josephine Garris Cochrane invents the dishwasher.

**Ag Invention**

The first commercially sliced loaf of bread is sold.

**Ag Invention**

1928

The first commercially sliced loaf of bread is sold.

**ILLINOIS AG MAG**  
An Agricultural Magazine for Kids

**ILLINOIS HISTORY**

*The Land of Lincoln*

**FIRST people**

**The Archaic Period**

**The Middle Woodland Period**

**The Mississippian Period**



# ROCKS TO ROBOTS: AG TECH TIMELINE




**A** Illinois History 

**GARIS-COCHRANE DISH WASHING MACHINE CO.**  
325 Dearborn St.  
Phone Wabash - 431


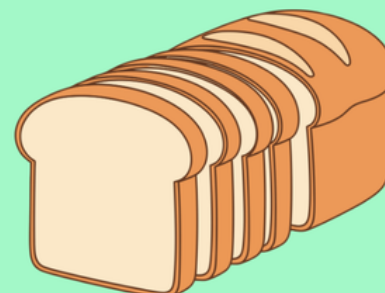
FOR RESIDENCES, CLUBS, HOTELS, Etc. A practical machine for household use. Handles the finest China without chipping or breaking.


Josephine Garris Cochrane invents the dishwasher.





**A** Ag Invention 

The first commercially sliced loaf of bread is sold.



**A** Farming Practice 

Pig insulin is first used to treat diabetes.



**A** Ag Statistic 

One U.S. farmer produces enough food to feed approximately 165 people.



**A** Illinois History 


**GARIS-COCHRANE DISH WASHING MACHINE CO.**  
325 Dearborn St.  
Phone Wabash - 431

FOR RESIDENCES, CLUBS, HOTELS, Etc. A practical machine for household use. Handles the finest China without chipping or breaking.

**1886**

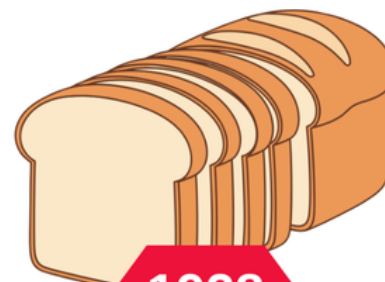
Josephine Garris Cochrane invents the dishwasher.




**A** Ag Invention 

The first commercially sliced loaf of bread is sold.


**1928**



**A** Farming Practice 

Pig insulin is first used to treat diabetes.

**1930**



**A** Ag Statistic 

One U.S. farmer produces enough food to feed approximately 165 people.

**2026**



# SPOT IL!

## Spot IL!

a game from

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



## SPOT IL!

From the clothes you wear and the food you eat, to the sun in the sky and worms below your feet, the world of agriculture is all around you! This game highlights various parts of the world of agriculture all throughout the supply chain, environment, and more.

### Directions:

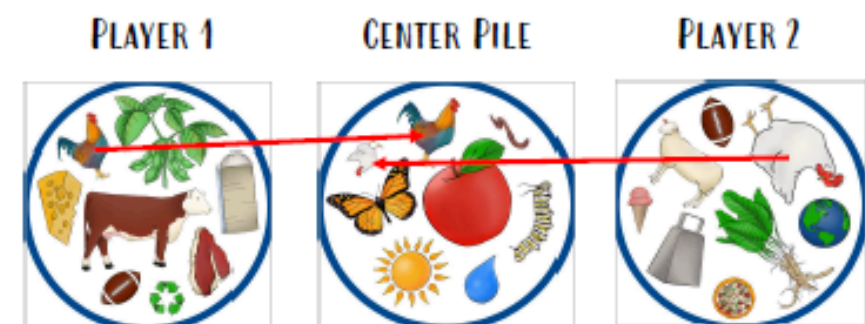
1. Shuffle the deck of cards and deal them out, one card at a time to each player, until they are gone. Players should keep their cards in a stack, face down.
2. Put the very last card down in the center of the players, face up.
3. To begin playing, each player will flip over the top card of their stack and try to find the one symbol on their card that matches the center card.
4. When the matching symbol is found, the player will quickly lay their card down on the center pile and say, out loud, which symbol they've matched.
5. Players will continue to find the one matching symbol on the top card in their hand to the center card. Continue this until one player runs out of cards.
  - Every card has only one matching symbol to every other card. Symbols will be in different locations and have different sizes on various cards.
5. Whoever runs out of cards first, wins!

### Example:

Player one's card has a sun symbol that matches the center card. Player two matches the pizza. Whoever finds the match and lays it down first, while saying their symbol out loud, moves onto their next card.



Player one laid their card down first and said "sun" before player two could spot their matching symbol. Now, players have to match their cards to player one's card that was laid in the center.



# WATER CYCLE TOWER GAME



- Blue = Precipitation (6)
- Green = Uptake water (4)
- Pink = Sublimation (4)
- Red = Evaporation (4)
- Brown = Collects (4)
- Orange = Condensation (6)
- Yellow = Transpiration (4)
- Purple = Flows (4)

**WATER CYCLE TOWER GAME** STUDENT H2O PATHS: OPTION 3

**PATH 1**

12 points if completed

1. Liquid evaporates into water vapor. (Red circle) → 2. Water vapor condenses to form clouds. (Orange circle) → 3. Water precipitates from clouds as rain or snow. (Blue circle)

**PATH 2**

16 points if completed

1. Liquid water flows across land. (Purple circle) → 2. Water then collects in rivers, lakes, the soil, and other places. (Brown circle) → 3. Plants uptake the water from the soil. (Green circle) → 4. Water then transpires from plants into the atmosphere. (Yellow circle)

**PATH 3**

12 points if completed

1. Ice can turn directly water vapor through sublimation into the atmosphere. (Pink circle) → 2. Water vapor condenses to form clouds. (Orange circle) → 3. Water precipitates from clouds as rain or snow. (Blue circle)

TOTAL SCORE

**OPTION 3**

PATH 1 POINTS + PATH 2 POINTS + PATH 3 POINTS - KNOCK DOWN PENALTY = TOTAL SCORE

**As a MATTER of Fact**

Water matters! Actually, water IS matter. Water is a molecule made up of three atoms that are hydrogen, and oxygen, which is why we call it H<sub>2</sub>O. One drop of water contains billions of H<sub>2</sub>O molecules! Although water may seem simple because it has no taste, smell, or color, it is more than it appears to be.

Water is known as the "universal solvent" because more substances dissolve in water than any other liquid. This means that wherever water flows, whether that is in the ground or through our bodies, it picks up nutrients, chemicals, and minerals and carries them along.

The amazing thing about water is that it is the only natural substance on Earth that can be found in three physical states of matter: solid (ice or snow), liquid (water), and gas (vapor or steam). Liquid water is found in rivers, lakes, streams, and swimming pools. Water vapor, in its gaseous state, forms the clouds. Water rises from the boiling water on the stove, and is even in the air - this is what makes us feel sticky on humid days. The solid form of water is known as ice. Ice can be found in our freezers or in the Arctic and Antarctic. It is incredibly important because they allow water to go through a process called the Water Cycle.

**ATOM:** the basic building block for all matter and is made up of protons, electrons, and neutrons.

**MAJORITY:** everything around you (air, water, people, rocks, etc.) and is made up of atoms.

**MOLECULE:** a substance made up of two or more atoms bonded together.

**THE WATER CYCLE**

There is nothing like taking a drink from a cold glass of water on a hot summer day. Staying hydrated is very important for our health. But did you know that the water you drink today is the same water that dinosaurs drank? That is because Earth has been recycling water for over a billion years!

**SUBLIMATION**  
Water can change from a solid to a gas without becoming a liquid first. This means that Earth's ice, like glaciers and icebergs, can evaporate directly into the atmosphere without even melting. This process is called sublimation.

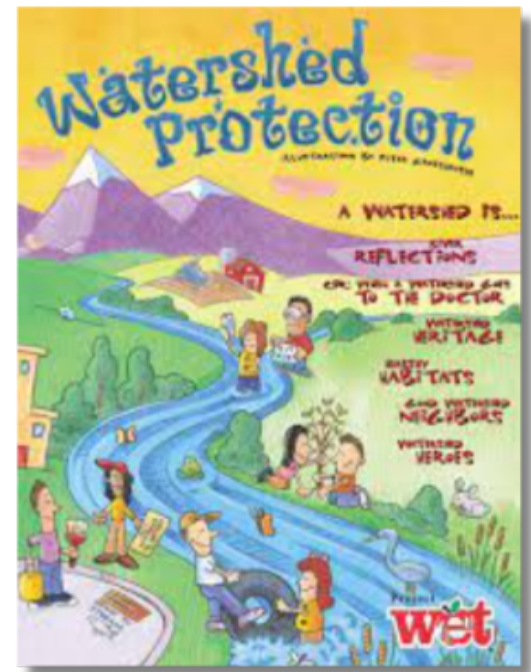
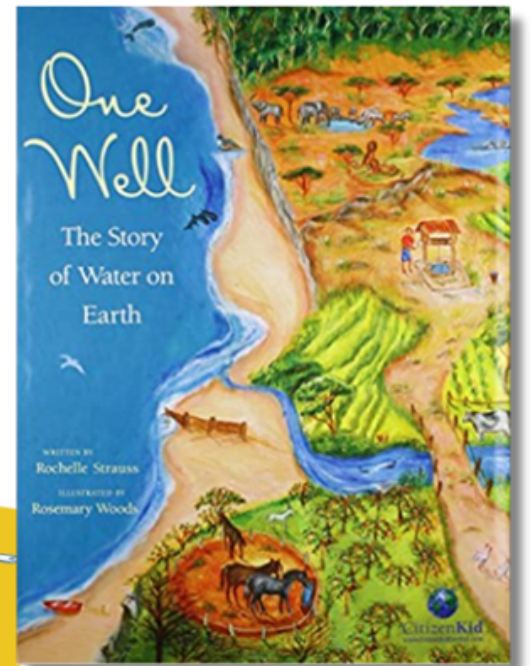
**TRANSPIRATION**  
Flowers, trees, and many other plants also lose water to the atmosphere through transpiration. This process is known as transpiration.

**EVAPORATION**  
Energy from the sun causes water to evaporate from the surface of oceans, lakes, and rivers.

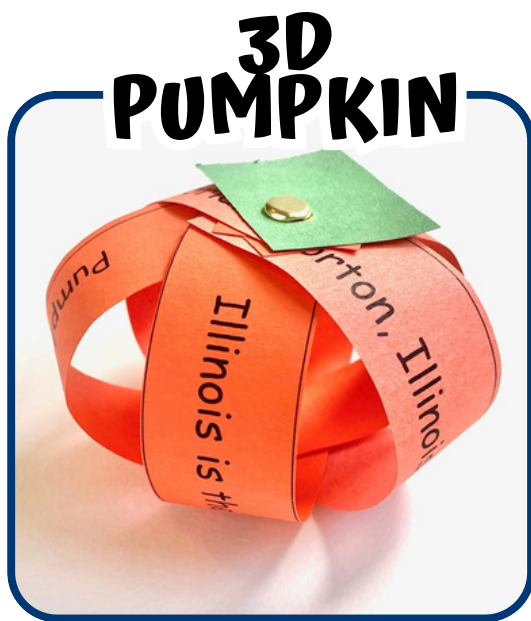
**PRECIPITATION**  
Water droplets that form the clouds continue to condense. Eventually they become too big and heavy for the atmosphere to hold them and so they fall back down to the earth's surface. This process is known as precipitation. Precipitation can be in the form of rain, sleet, snow, or hail, depending on the temperature of the atmosphere in which it is falling through.

**COLLECTION**  
The fallen precipitation is then "collected" in bodies of water like rivers, streams, oceans, glaciers, aquifers, water sheds, and reservoirs. Eventually, the water will evaporate back into the atmosphere, beginning the cycle all over again. How the water is "collected" depends on where on Earth it lands! Remember, there are many different climates and temperatures that will affect the state of matter that is precipitated!

**RUNOFF**  
Sometimes an area can experience flooding in which there is too much water for the soil below to soak up. Land and down to low areas due to gravity. This is called runoff.



# CORN SOY HOGS CATTLE PUMPKIN



## CORN SOY HOGS CATTLE PUMPKIN TEACHER GUIDE

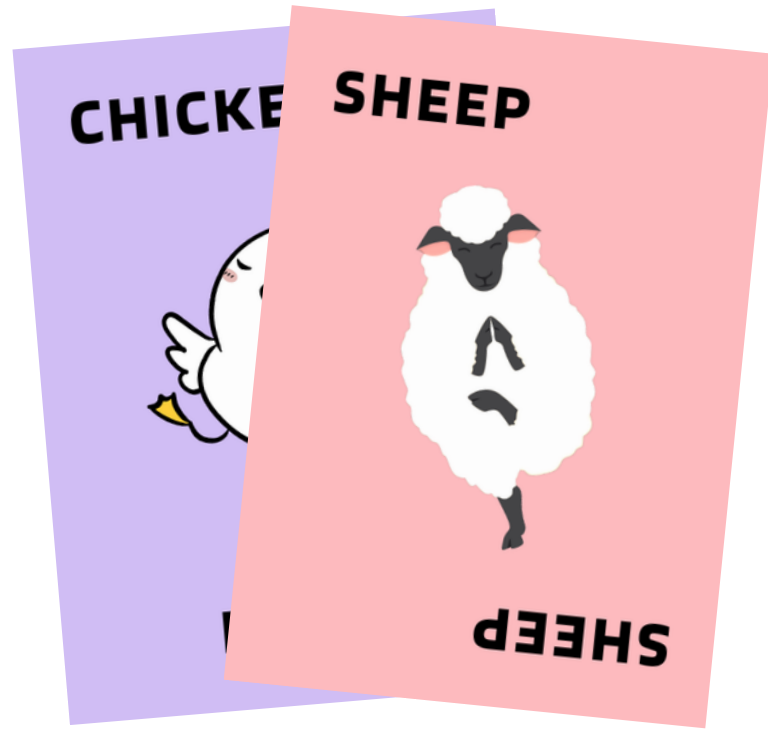
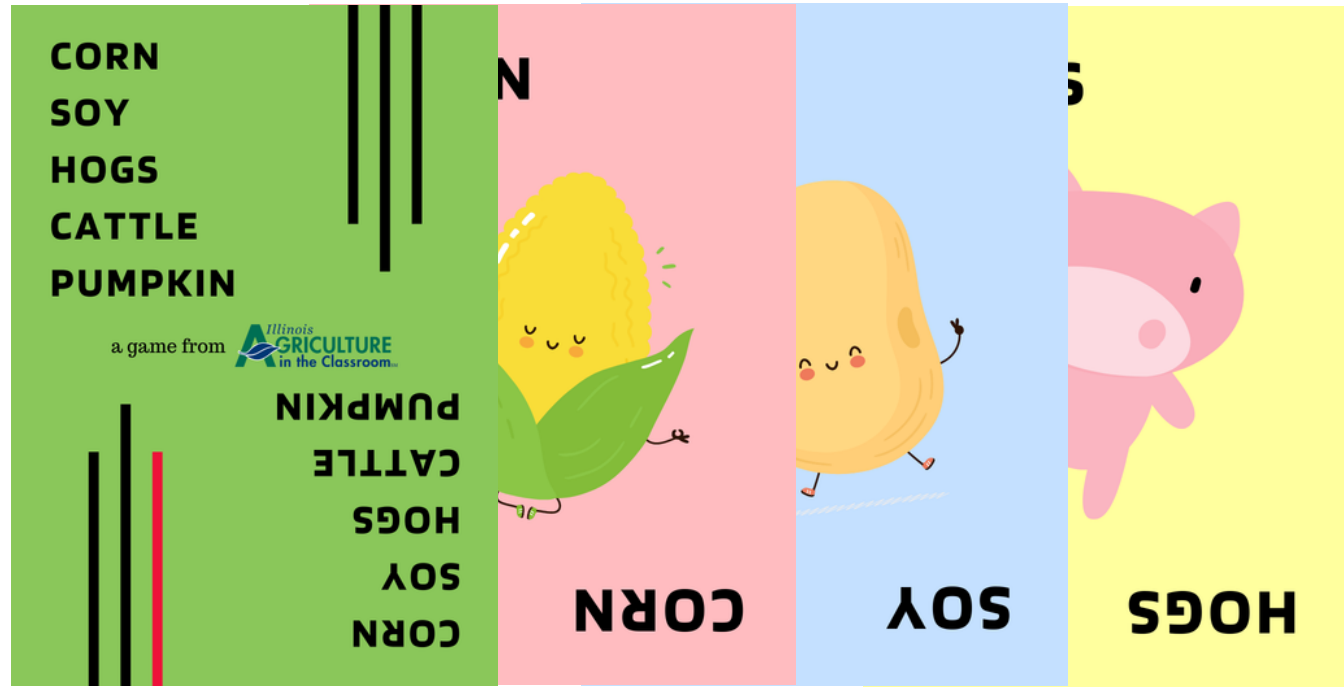
**Game Play:**

Play continues as outlined on Instructions Card 1, until the card just laid matches the word spoken by the player (eg., they put down a 'Hog' while saying "Hogs"). At this point, all the players must SLAP their hands on top of the pile of cards in the center, and the LAST player to do so takes the entire pile, and puts them on the bottom of the pile in his/her hand. He/She then starts off the next round saying, "Corn," the next player, "Soy," the next player, "Hogs," etc...

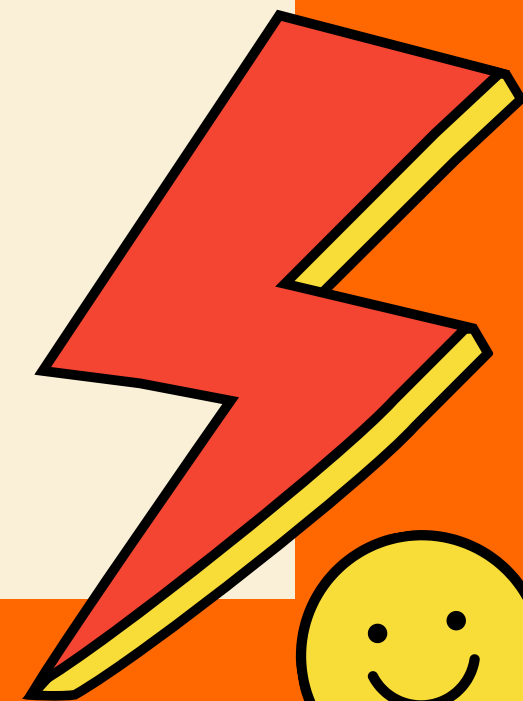
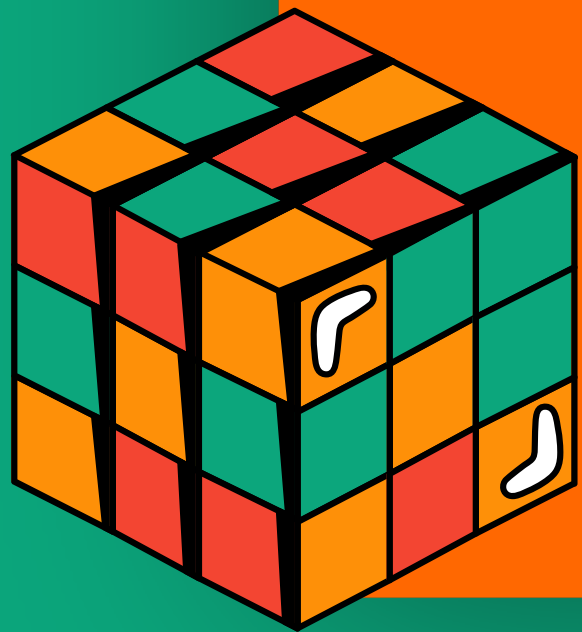
IF the card laid pictures the commodity holding a PRODUCT that comes from that commodity, all players must also - in addition to slapping the deck - name another PRODUCT that comes from that commodity (i.e. - "corn syrup" from Corn, or "bacon" from Hogs). The last to do so takes the center pile!

The following are some ideas of acceptable products originating from each commodity that the players might NAME while they SLAP the deck. Other products could be named!

<p><b>CORN</b></p> <ul style="list-style-type: none"> <li>Sweet Corn</li> <li>Canned Corn</li> <li>Corn Syrup</li> <li>Cornstarch</li> <li>Pet Food</li> </ul>	<ul style="list-style-type: none"> <li>Livestock Feed</li> <li>Ethanol</li> <li>Vegetable Oil</li> <li>Popcorn</li> <li>Corn Flour</li> </ul>	<ul style="list-style-type: none"> <li>Breakfast Cereal (Corn Flakes, Fruit Loops, etc)</li> <li>Corn Bread</li> <li>Corn Chips (Doritos, Fritos, tortilla chips, etc)</li> </ul>
<p><b>SOY</b></p> <ul style="list-style-type: none"> <li>Edamame</li> <li>Tofu</li> <li>Soy Milk</li> <li>Soy Yogurt</li> <li>Soy Sauce</li> </ul>	<ul style="list-style-type: none"> <li>Soy Flour</li> <li>Biodiesel</li> <li>Livestock Feed</li> <li>Vegetable Oil</li> <li>Tempeh</li> </ul>	<p><b>HOGS</b></p> <ul style="list-style-type: none"> <li>Ham</li> <li>Bacon</li> <li>Pork Chops</li> <li>Pork Loin</li> <li>Ground Pork</li> <li>Sausage</li> <li>Pork Ribs</li> <li>Pet Food</li> <li>Insulin</li> <li>Suede</li> </ul>
<p><b>CATTLE</b></p> <ul style="list-style-type: none"> <li>Steak</li> <li>Hamburger</li> <li>Ground Beef</li> <li>Beef Ribs</li> <li>Milk</li> <li>Cheese</li> <li>Yogurt</li> <li>Ice Cream</li> <li>Butter</li> <li>Sour Cream</li> </ul>	<p><b>PUMPKINS</b></p> <ul style="list-style-type: none"> <li>Pumpkin Pie</li> <li>Pumpkin Bread</li> <li>Pumpkin Spice</li> <li>Pumpkin Seeds</li> <li>Pumpkin Blossoms</li> </ul>	



04:59



# HOW TO FIND US AGAIN :)

agintheclassroom.org

The screenshot shows a web browser window with the URL <https://www.agintheclassroom.org>. The page features a dark blue header with the "Illinois AGRICULTURE in the Classroom" logo on the left and navigation links for "Contact", "Teacher Resources", "Programs & Events", and "Blog" on the right. A search bar is located in the top right corner. Below the header is a large blue banner with the text "Illinois Agriculture in the Classroom" and the tagline "- Free agriculture-themed resources to help kids grow in every class -". The main content area has a background image of a cornfield with a white search button that says "SEARCH OUR LESSONS". At the bottom, a green banner reads "Teacher Grant Applications for the 2026-2027 school year open now!".

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Illinois AGRICULTURE in the Classroom

Contact ▾ Teacher Resources ▾ Programs & Events ▾ Blog

Illinois Agriculture in the Classroom  
- Free agriculture-themed resources to help...

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# Thank You



Use the QR code to find all the resources,  
and more, from today's presentation!

## STAY CONNECTED:



[agintheclassroom.org](http://agintheclassroom.org)



@ilaite



@Illinois Ag in the Classroom



**HARVEST A GOOD TIME:  
ENGAGING LESSONS  
THAT GET KIDS OUT OF  
THEIR SEATS**

[iaitc.co/harvestagoodtime](http://iaitc.co/harvestagoodtime)