# LET'S LEARN ABOUT FLORIDA SWEET CORN!

**This Virtual Farm Field Trip unit is all about sweet corn. It begins with an informative 4-minute video, transporting students to Sweet Magnolia Ridge in Havana, Florida. Your students will meet farmers Stephanie and Vincent to learn how Florida sweet corn is planted, grown, harvested and distributed.**

**We encourage you to expand the learning experience using this section's worksheets and guided activities, including a taste test. You may choose to use all these resources or pick the ones best suited to your classroom.**





## ACCESS VIRTUAL FARM FIELD TRIP

**Scan code or visit:**
***FarmToSchoolFL.com/FieldTrips***

## FLORIDA SWEET CORN FUN FACTS

- **Florida grows more sweet corn than anywhere else in the United States.**
- **Sweet corn is a great source of nutrients like vitamin C, which helps boost the immune system and keep us healthy. It is also high in fiber, which helps your tummy feel good.**
- **Every single strand of silk on an ear of corn has the potential to become a kernel. The average ear of corn has between 500 and 1,000 kernels!**
- **Corn is usually yellow, but it can come in lots of colors, like green, red and white.**
- **You probably think of corn as a vegetable, but it's actually a grain and fruit!**
- **The two most common kinds of corn are sweet corn and field corn, also called dent corn. Sweet corn is harvested early for its soft, sugary kernels – perfect for eating fresh. Dent corn is left to mature fully. Its starchy kernels are used in processed foods, like tortillas and cereal.**

# BEFORE YOU WATCH: DISCUSSION STARTERS

**Get students thinking about agriculture, science and nutrition by asking questions such as:**

- *How do you think fruits and vegetables grow?*
- *What kind of fruits or vegetables would you like to grow?*
- *Name some fruits and vegetables that you've tasted.*
- *Where do the fruits and vegetables you eat come from? How did they get there?*
- *How do fruits and vegetables help us stay healthy?*
- *Today, we'll be taking a virtual field trip to visit a Florida sweet corn farm. What do you know about sweet corn?*

# AFTER YOU WATCH:

Explore the activities and worksheets on the following pages – including a video trivia sheet! You might pass the trivia sheet out before starting the video so students can complete it as they watch or wait until after to test understanding.

## TRIVIA TOSS

**Want to liven up your video trivia sheet exercise? Have students complete their worksheets separately, then come together in teams to compare and finalize answers. Go around the room asking each team a question. If they answer it correctly, they get a chance to toss a ball into one of three buckets to earn a prize for their team. Prizes might be a homework pass, free time, extra computer time or lunch in the classroom.**



**GEOGRAPHY MOMENT**

***Ask students to find Havana on a map of Florida. (Hint: It's just north/northwest of Tallahassee.)***

# USING THESE TEACHING TOOLS

**Below is an overview and guide for using the teaching tools included in this section, including guided activities, a recipe and worksheets. We've included the education standards each tool complements, materials needed for each activity, a brief overview of each tool and tips for building your lessons.**

**You can find each of these tools on the following pages, along with additional information and pointers.**

## GUIDED ACTIVITIES

| TOOL | COMPLEMENTARY STANDARDS | MATERIALS NEEDED | ABOUT THIS TOOL | TEACHER TIPS |
|---|---|---|---|---|
| **Video, Discussion Questions and Trivia Toss (in Classroom Guide)**<br><br>*On page 102* | Standard(s) Supported: SC.2.L.16.1, SC.3.L.14.1, SC.3.L.17.2, HE.2.PHC.1.5, HE.3.PHC.3.2, HE.2.CH.3.1, HE.3.PHC.1.1 | - 3 buckets, boxes or similar containers<br>- 2 palm-sized balls (enough for each team to have one) | This activity gets students out of their seats as they respond to questions about the Virtual Farm Field Trip video. | Use this activity to complement or reinforce the Sweet Corn Video Trivia sheet. |
| **Corn Three Ways**<br><br>*On page 107* | Standard(s) Supported: SC.2.P.9.1, SC.2.P.8.1, SC.3.P.8.3, SC.3.N.1.6, HE.2.PHC.1.5, HE.3.PHC.3.2, HE.2.CH.3.1, HE.3.PHC.1.1 | - Ear of sweet corn (uncooked)<br>- Cooked corn on the cob (see recipe page)<br>- Popcorn<br>*See Guided Activity overview for a full list of alternate corn food ideas.* | In this activity, you'll guide students through tasting corn in three different forms – as fresh, uncooked corn, as cooked corn and as popcorn. | Start by asking your school nutrition team if they can support you by acquiring and/or preparing the food items.<br><br>Use this activity to introduce students to new, nutritious foods. Educate them on the nutritional differences between whole foods – like fresh corn – and processed foods – like corn puff cereal. |
| **Recipe: Corn on the Cob**<br><br>*On page 109* | | - Microwave<br>- Wet paper towel<br>- Knife (optional)<br>- Ears of sweet corn (with or without husk)<br>- Plates/paper towels (for serving) | If you choose to prepare the cooked corn on the cob yourself, this recipe provides simple microwave instructions. | You might microwave the corn as part of your lesson rather than preparing it ahead of time. That way, you can show students how the corn's properties change in real time. |

| TOOL | COMPLEMENTARY STANDARDS | MATERIALS NEEDED | ABOUT THIS TOOL | TEACHER TIPS |
|---|---|---|---|---|
| **Dancing Corn**<br><br>*On page 110* | Standard(s) Supported: SC.2.P.9.1, SC.2.P.8.1, SC.5.P.8.2, SC.3.N.1.6 | - Dried corn kernels (popcorn kernels)<br>- Vinegar<br>- Baking soda<br>- Large clear jar or vase<br>- Spoon or stick to stir<br>- Measuring cups | In this simple STEM activity, combine popcorn kernels, baking soda and vinegar to create carbon dioxide bubbles that lift and drop the kernels, making them appear to dance. | This is a fun activity to introduce students to concepts like chemical reaction, density and acid-base reactions.<br><br>You might also use this activity to help students learn to ask questions and seek answers through exploration, make predictions based on observations and past experiences, and draw conclusions. |

## WORKSHEETS

| TOOL | COMPLEMENTARY STANDARDS | MATERIALS NEEDED | ABOUT THIS TOOL | TEACHER TIPS |
|---|---|---|---|---|
| **Sweet Corn Video Trivia**<br><br>*On page 111* | Standard(s) Supported: SC.2.L.16.1, SC.3.L.14.1, SC.3.L.17.2 | - Writing instrument | This worksheet tests students' comprehension of the Virtual Farm Field Trip by asking questions answered in the video. | You might hand the worksheet out before the video so students can answer as they go or wait until after the video.<br><br>Consider enhancing this activity with the "Trivia Toss" activity, explained in this Classroom Guide, under "After You Watch." |
| **On the Sweet Corn Farm**<br><br>*On page 112* | Standard(s) Supported: ELA.2.C.3.1, ELA.3.C.3.1, ELA.2.R.3.2 | - Writing instrument<br>- Crayons, colored pencils or markers | This worksheet asks students to draw a scene from the sweet corn farm they visited in the Virtual Farm Field Trip and describe what is happening. | This tool reinforces comprehension, encourages observation skills and allows students to express their understanding creatively.<br><br>You might ask students to each share with the class what they drew and wrote. |

| TOOL | COMPLEMENTARY STANDARDS | MATERIALS NEEDED | ABOUT THIS TOOL | TEACHER TIPS |
|---|---|---|---|---|
| **Parts of a Sweet Corn Plant**<br><br>*On page 113* | Standard(s) Supported: SC.3.L.14.1, SC.3.L.17.2 | - Writing instrument<br>- Crayons, colored pencils or markers | This worksheet has students (1) label parts of the corn plant using a word bank, then (2) match each part of the plant with a description of its function. | This worksheet complements life science lessons about parts of the plant.<br><br>It also touches on the concept of photosynthesis. If students have already learned about photosynthesis, it's great reinforcement. If not, it provides the perfect introduction. |
| **Life Cycle of Sweet Corn**<br><br>*On page 114* | Standard(s) Supported: SC.2.L.16.1, SC.3.L.14.1, SC.3.L.17.2 | - Scissors<br>- Glue<br>- Writing instrument<br>- Crayons, colored pencils or markers (optional) | This worksheet invites students to cut and paste words indicating stages of corn's life cycle in the correct order. | This worksheet complements life science lessons about plant life cycles. |
| **Answer Key**<br><br>*On page 115* | | | See here for answers to each worksheet. | |

# CORN THREE WAYS

**This group activity brings the field trip to life as students get the opportunity to not only taste corn but also begin to recognize its many uses in popular food products, like popcorn and cereal.**

## MATERIALS



**Ear of sweet corn**
*(uncooked)*



**Cooked corn on the cob**
*(see instructions on the following pages)*



**Popcorn**
*(be sure to reserve an unpopped kernel to show)*

## ALTERNATE IDEAS

**With so many uses for corn, finding options that intrigue your students is easy. You could easily substitute a microwavable bag of frozen corn or canned corn for cooked corn on the cob.**

Other creative options for taste testing or show and tell (with items likely already in your pantry) include:

- **Cornbread**
- **Grits**
- **Corn flakes cereal**
- **Puffed corn cereal**
- **Corn syrup**
- **Cornmeal**
- **Corn muffins**
- **Rice cakes**
- **Most brands of chips, including corn tortilla chips**

## COLLABORATE WITH YOUR CAFETERIA

**You might also consider partnering with your school nutrition team to obtain these food items and/or prepare a corn-themed dish for your taste test. Be sure to contact them ahead of time, discuss the support you will need and show gratitude for their collaboration!**

# SUGGESTED QUESTIONS

**Lead a discussion as your students try corn three different ways. Questions like the following can help kids better connect with their food, think about their preferences and encourage them to make nutritious choices in the future.**

***Before the tasting:***

1. *Have you tried corn before? What did you think?*
2. *If not, what do you think it will taste like?*
3. *Did you know popcorn and many chips are made from corn?*

***As they try the fresh sweet corn:***

1. *What do you think of the texture of the uncooked corn? Is it crunchy or soft?*
2. *Describe the flavor. Is it like corn you've tasted before? If yes, how so? If not, how is it different?*
3. *Before today, did you know you could eat sweet corn right off the cob, without cooking it? What other fruits or vegetables can you eat fresh and cooked? (Examples: Broccoli, carrots, sweet peppers, peaches.)*

***As they try the cooked sweet corn:***

1. *How is this corn similar to the uncooked corn you just tried? Prompt students to comment on taste, temperature, texture, etc.*
2. *How is it different?*
3. *Have you eaten corn like this before? What did you think?*
4. *How would you feel about eating fresh corn with a meal or as a snack? Why? What else might you eat with corn?*

***As they try the popcorn:***

**Teacher Tip:** Explain to students why the popcorn pops! The hard outer shell traps steam from the moisture inside the kernel as it heats up. When the internal temperature reaches around 356 °F, the pressure causes the kernel to burst open, turning the starchy interior into the fluffy, white popcorn we eat!

1. *Show the students an un-popped kernel. Here is a kernel of popcorn before it's heated up and it expands. How does this look like the fresh sweet corn? How is it different?*
2. *Describe the flavor of the popcorn. Does it taste like the fresh corn at all? If yes, how so? If not, how is it different?*
3. *How do you think corn turns into popcorn? (See explanation above.)*
4. *What do you think of the texture of the popcorn? Is it soft or crispy?*

### TEACHER TIP:

You can also use this activity as a nutrition lesson for students! Explain how whole foods made of just one ingredient – like a fresh ear of corn – are more nutritious than packaged, processed foods with many ingredients.

You can explain that food with lots of ingredients – like chips or cereal – are like a big puzzle with many pieces, and some of those pieces might not be as healthy (like added sugar). The simple food with one ingredient is usually better for your body and helps you feel your best! You might even pass around a processed food item to show the students the list of ingredients on the nutrition label. Then ask them where the fresh corn's ingredient list is. (There is none – because there's just one ingredient!)

# PREPARING CORN ON THE COB

## CORN ON THE COB

### EQUIPMENT REQUIRED

- Microwave
- Wet paper towel
- Knife (optional)

### MATERIALS AND INGREDIENTS

*Adjust quantities based on class size.*

- Ears of corn (with or without husk)
- Plates/paper towels (for serving to students)

### DIRECTIONS

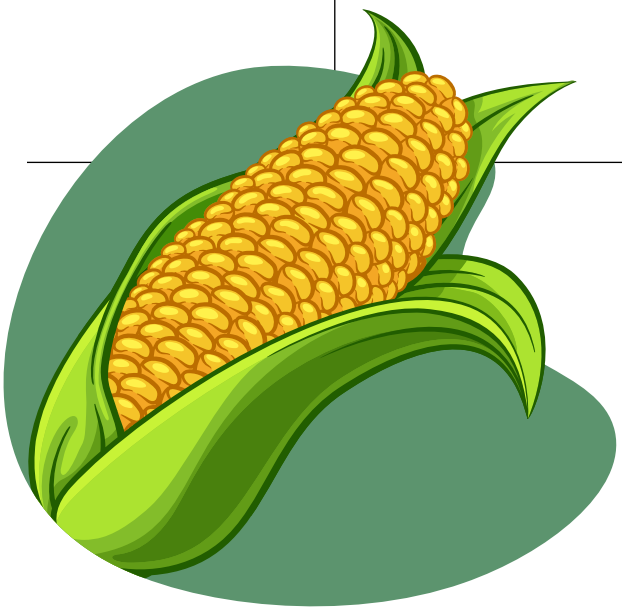
Microwaving corn on the cob is quick and easy. Here are the steps to microwave corn on the cob:

**With the Husk:**

1. Place the ear of corn with the husk on in the microwave.
2. Microwave on high for 3 minutes. If needed, add an additional 30 seconds.
3. Let the corn cool for a few minutes, then shuck the corn before eating.

**Without the Husk:**

1. Wet a paper towel and wring it out. Wrap the ear of corn in the damp paper towel.
2. Microwave on high for 3 minutes.
3. Carefully remove the paper towel and serve.



***TIPS:***

- **You could give every student an ear of corn or cut each ear into two or three pieces.**
- **For multiple ears of corn, adjust the cooking time:**
  - **1 ear: 2 minutes**
  - **2 ears: 4 minutes**
  - **3 ears: 5 minutes**
  - **4 ears: 6 minutes**

# DANCING CORN

**Did you know you can do a science experiment with things you likely already have in your classroom or kitchen? You can even make popcorn kernels dance!**

## MATERIALS

- Dried corn kernels (popcorn kernels)
- Vinegar
- Baking soda
- Large clear jar or vase
- Spoon or stick to stir
- Measuring cups

## PROCEDURE

**STEP 1:** Pour one cup of dried corn kernels into the jar or vase.

**STEP 2:** Pour in two cups of vinegar.

**STEP 3:** Sprinkle in baking soda.

**STEP 4:** Watch your corn start to dance! Give it a big stir to watch it dance again.

### *TEACHER TIP:*

*You can experiment with how much baking soda you add and how much your corn dances. Encourage students to guess if adjusting this variable will make the corn dance more or less. You may choose to fill multiple jars to compare.*

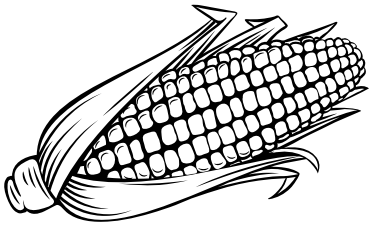
## WHY DO THE KERNELS "DANCE"?

**When you add baking soda to vinegar, a chemical reaction occurs that produces carbon dioxide gas. This is the same type of gas found in carbonated drinks. These bubbles attach to the popcorn kernels, making them buoyant enough to rise to the surface. Then the bubbles pop, causing the kernels to lose buoyancy and sink back down. When you stir the mixture, it releases more carbon dioxide bubbles, starting the process all over again!**



**Name** _____ **Date** _____

# Sweet Corn Video Trivia



**Directions:** Answer these trivia questions based on the video about the Florida sweet corn farm.

1. What does "harrow" mean? (Hint: You do this before planting the corn seeds.) _____

_____

2. How many ears of corn does one corn plant produce? _____

3. What three creatures were named as pollinators? _____

_____

**Circle whether the statements below are true or false.**

| | |
|---|---|
| 4. The process for growing sweet corn takes 60 to 90 days. | **TRUE** \| **FALSE** |
| 5. Popcorn is harvested while the corn is soft and sweet corn is harvested when the corn gets hard. | **TRUE** \| **FALSE** |
| 6. Florida is the top producer of sweet corn in the United States. | **TRUE** \| **FALSE** |
| 7. Florida has good weather to grow corn. | **TRUE** \| **FALSE** |
| 8. Each ear of corn is picked by hand. | **TRUE** \| **FALSE** |

**Name** _____ **Date** _____

# On the Sweet Corn Farm

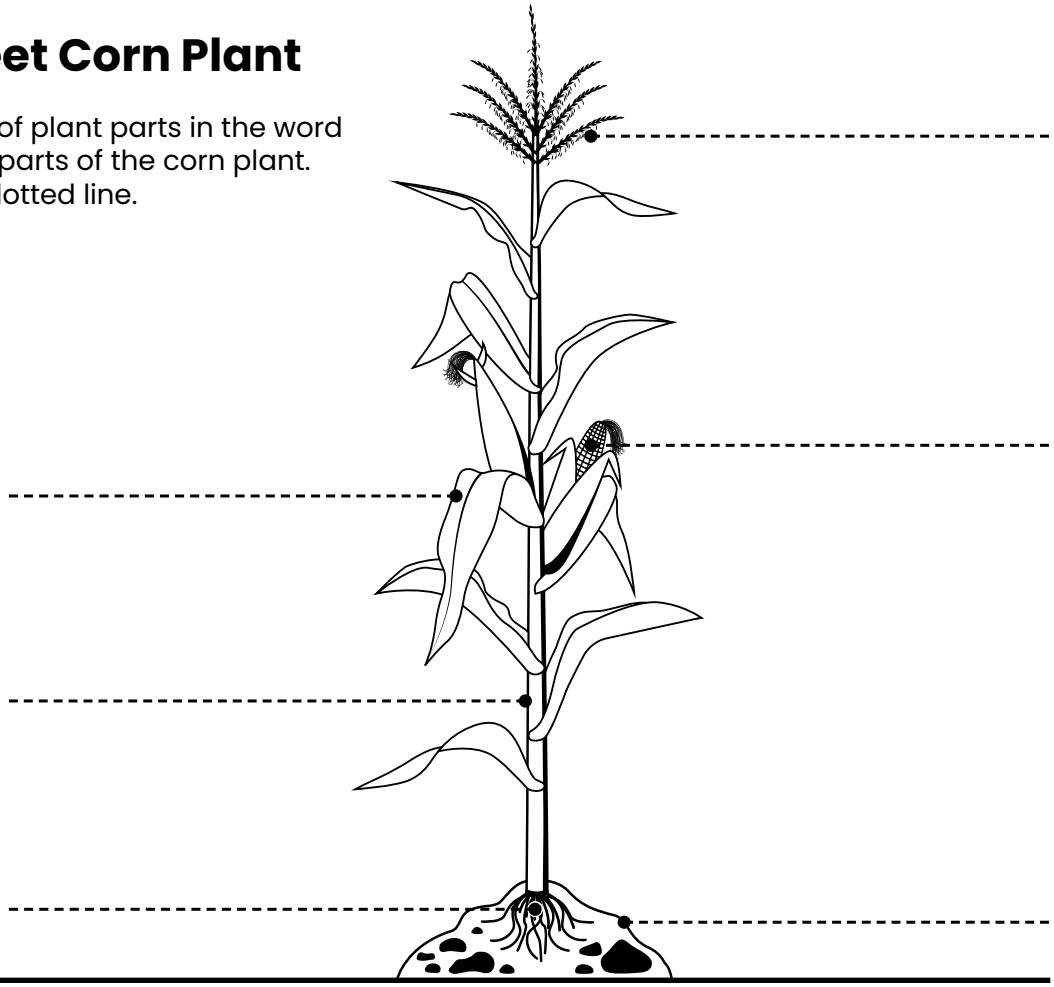
**Directions:** Draw a scene from the Florida sweet corn farm you just learned about. Next, describe what is happening.

**Name** _____ **Date** _____

# Parts of a Sweet Corn Plant

**Directions:** Use the list of plant parts in the word bank to correctly label parts of the corn plant. Write the word on the dotted line.

| Word Bank |
|---|
| Leaf |
| Ear of corn |
| Stem |
| Soil |
| Flower |
| Roots |



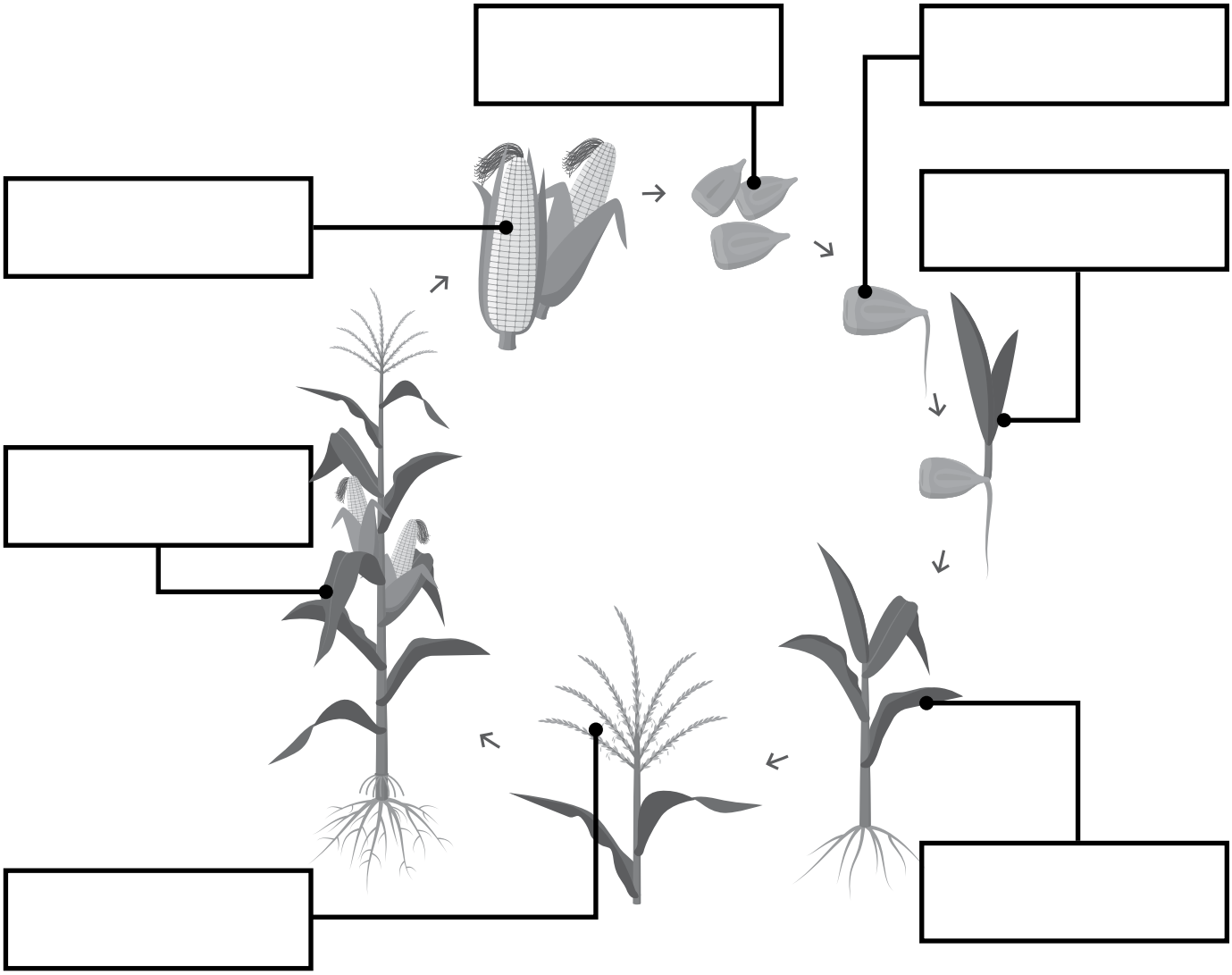
Now, draw a line between each part of the plant (on the left) and its function (on the right).

| | |
|---|---|
| **Flower** | Absorbs sunlight to produce energy for the plant through photosynthesis |
| **Ear of corn** | Provides food to the plant and a space to grow |
| **Soil** | Absorbs food and water from the soil |
| **Roots** | Distributes food and water, also called a “stalk” |
| **Leaf** | The part of a plant that produces seeds, also called a “tassel” |
| **Stem** | The plant’s “fruit” |

**Name** _____ **Date** _____

# Life Cycle of Sweet Corn

**Directions:** Cut out the words and glue them where they belong to label each stage of the corn plant's life cycle.



| | | | |
|---|---|---|---|
| **Seed** | **Germination** | **Sprout** | **Seedling** |

| | | |
|---|---|---|
| **Flower (tassel)** | **Plant with fruit** | **Fruit with seeds** |

# ANSWER KEY



Name _____ Date _____

## Sweet Corn Video Trivia

**Directions:** Answer these trivia questions based on the video about the Florida sweet corn farm.



1. What does "harrow" mean? (Hint: You do this before planting the corn seeds.) breaking up the soil to make it fluffy
2. How many ears of corn does one corn plant produce? 2-3 ears
3. What three creatures were named as pollinators? birds, bees and butterflies

**Circle whether the statements below are true or false.**

4. The process for growing sweet corn takes 60 to 90 days. **TRUE** FALSE
5. Popcorn is harvested while the corn is soft and sweet corn is harvested when the corn gets hard. TRUE **FALSE**
6. Florida is the top producer of sweet corn in the United States. **TRUE** FALSE
7. Florida has good weather to grow corn. **TRUE** FALSE
8. Each ear of corn is picked by hand. **TRUE** FALSE

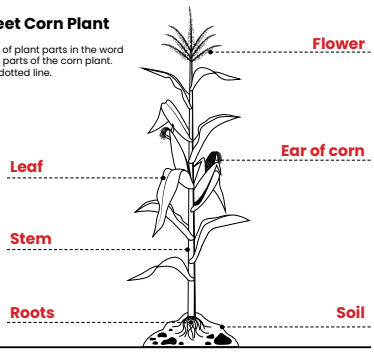
VIRTUAL FARM FIELD TRIPS
2-3 Worksheet
Sweet Corn

Name _____ Date _____

## Parts of a Sweet Corn Plant

**Directions:** Use the list of plant parts in the word bank to correctly label parts of the corn plant. Write the word on the dotted line.

**Word Bank**
Leaf
Ear of corn
Stem
Soil
Flower
Roots




Now, draw a line between each part of the plant (on the left) and its function (on the right).

| | |
|---|---|
| Flower | Absorbs sunlight to produce energy for the plant through photosynthesis |
| Ear of corn | Provides food to the plant and a space to grow |
| Soil | Absorbs food and water from the soil |
| Roots | Distributes food and water, also called a "stalk" |
| Leaf | The part of a plant that produces seeds, also called a "tassel" |
| Stem | The plant's "fruit" |

VIRTUAL FARM FIELD TRIPS
2-3 Worksheet
Sweet Corn

Name _____ Date _____

## Life Cycle of Sweet Corn

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