



Kansas Corn: C is for Corn

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Kansas Corn: C is for Corn

Grade Level: Kindergarten

Lesson 1: Parts and Sounds of Corn (30-40 minutes)

Key Questions

- What are the parts of a corn plant?
- What are the parts of an ear of corn?
- How can we describe them?

Learning Objectives

- The children will describe and name the ear of corn and the parts of a corn plant.

Materials

- Ear of corn with husk
- Pictures of a mature corn plant (page S1)
- Paper
- Pencil
- Markers or Crayons

Guided Teaching

Introduction of Corn

Lay out page S1 in front of your child for them to examine.

Guided Questions

- What do you think the names of the different parts are called?
- What do you think the different plant parts jobs are?

Listen and help your child expand their knowledge. You do not need to give them the answers right now. At this time, it is all about exploration. Bring your child's attention to the ear of corn on the plant in the picture.

- Have you ever seen this in real life? If so, where?
- Do you know what this plant is growing? How do you know?

Explore an Ear of Corn

Lay out the corn with the husk still on it. Have your child explore the husk. They can turn it over and over, they can peel layers back and see what they find!

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Guided Questions

- Describe how it feels.
- Describe how it smells.
- Describe how it looks.
- Describe how it sounds.
- What did you find when you pulled the husks back?
- What did you find underneath?
- How does that feel, sound, smell, and look?

Name the Parts of an Ear of Corn

Using the corn with the husk still on it. Make sure that half of the husk is pulled back, exposing the corn kernels. Put the corn with the husk on a piece of paper. Talk about the different parts of the ear of corn. You will use this paper to label the parts of the corn.

- **HUSK:** The outside of the ear of corn is called the husk. It is the tan, papery feeling material on the outside of the ear of corn. Break off some of the husk and put it on the paper. Write the word HUSK next to it. The job of the husk is to protect the ear of corn from the elements like wind and rain but also to keep animals from eating the kernels. Take the time to talk about how the husk looks, sounds and smells, feels. Write these describing words under the word husk.
- **SILK:** In between the husk and the ear of corn are string like pieces. This is called the silk. Pull some of the silk off and lay it on the paper to label it. Take the time to talk about how the silk looks, sounds, smells and feels. Write the describing words under the word silk. (There is one silk for every kernel)
- **KERNELS:** The individual pieces on the ear of corn are called kernels. Take some of the kernels out to allow for observations. Take the time to talk about how the kernels look, sound, smell and feel. Write the describing words under the word kernel.

Guided Questions

- Out of all the parts we have talked about already, which part do you think we can eat?
- Where does corn come from?
- Where does corn grow?
- Who grows the corn on a farm?

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Early Elementary Activity

Art/Science Activity

- Your child can make their own diagram of the ear of corn. Using a blank piece of paper, they can draw what they see. Encourage them to color their diagram. Lastly, have them label the parts of the ear of corn.

Phonics Activity

- Talk about how an ear of corn is sometimes called a cob. Have your child stretch out the word cob as they sound out the three letters. Ask, what sound does the letter C make? What sounds does the letter O make? What sound does the letter B make?
- Now talk about the word corn. Does corn start with the same sound as cob?
- On a piece of paper, write the word cob at the top. Below it, write the word corn. Encourage your child to come up with more words that begin like cob and corn. Really stress the C/c sound you hear at the beginning of the word.

Upper Elementary Activity

Art/Science Activity

- Your child can make their own diagram of the ear of corn. Using a blank piece of paper, they can draw what they see with the ear of corn and half of the husk pulled down. Encourage them to color their diagrams. Lastly, have them label the parts of the ear of corn.

Social Studies

- Through the guided questions it was discussed that farmers grow corn in fields. Research the closest farm land near you. Is it close enough that you can go and look at it? If so, make notes about what the field looks like right now, making sure to include the date. In a month you can revisit and see if the field has changed.
- If you are not close to a farmer's field, do some research on YouTube and find videos about farming. The next time you go to the public library, look for books that talk about planting and farming.

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Lesson 2: Corny Patterns (20 minutes)

Key Question

- What is a pattern?

Learning Objectives

- Children will explore patterns by handling an ear of corn.

Materials

- Play-Doh
- Rolling pin or a can to roll out dough
- Kernel of corn
- Cob of corn (from yesterday make sure kernels are still on it)
- Paper
- Pencil

Guided Teaching

1. Review the parts of the ear of corn from the lesson prior. If your child is struggling with being able to identify the parts, refer to their diagram they made from the activity section.
2. Pass out Play-Doh so everyone has some. Roll the dough until it is flat. Using the ear of corn, use it as a roller on the Play-Doh. Doing this will make an imprint of the kernels onto the Play-Doh.
3. Ask the following questions:
 - What do you see in your Play-Doh?
 - What do you see that looks the same?
 - Does everyone's imprint of the corn look the same? Why or why not?
 - Does the pattern repeat? How?

Guided Questions

1. What is a pattern? Explain what a pattern is using the ear of corn imprint.
2. Where else have you seen patterns? Either in nature or man-made.

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Early Elementary Activity

Math Activity

- Expand on the topic of patterns. Using multiple color counting blocks or counters, make an ABAB pattern. Example: Red, Blue, Red, Blue. Can your child continue that pattern?
- If your child can continue that pattern then try an ABCABC pattern. Example: Red, Blue, Green, Red, Blue, Green. Can your child continue that pattern?
- If your child can continue that pattern try an ABBA pattern. Example: Red, Blue, Blue, Red, Blue, Blue. Can your child continue that pattern?

Exploring Activity

- Your child can come up with a pattern on their own and then have you continue the pattern. Are they able to identify what type of pattern it is?

Phonics Activity

- Talking about the C/c sound again, have your child trace a C in their Play-Doh. Then have them trace the C they made with a corn kernel. While they are tracing, encourage them to make the C/c sound.
- This activity can be continued by having your child build items that start with a C with their Play-Doh.

Upper Elementary Activity

Math Activity

- Expand on the topic of patterns. Using paper and color pencils or markers, have your child create an ABAB pattern (see in the early elementary for explanation of the different types of patterns).
- If your child can go through all the patterns then have them get creative and create their own.
- Now can they create patterns out of household items. Example: shoe, penny, book, shoe, penny, book.

Exploring Activity

- Using the internet, look up patterns in nature. Discuss the patterns that are seen. Explore on this topic talking about why the patterns are in nature, how do you think they were made and why is it important for that animal or plant to have that pattern?

Writing Activity

- From the lesson it was shown that the kernels are laid out in a pattern on the ear of corn. Write about why the ear of corn was created this way. This writing activity can be strictly a creative piece. Writing just for fun and coming up with their own conclusions. This writing activity can also be turned into an informative paragraph where research is done.

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Lesson 3: From Kernel to Corn (30-40 minutes)

Key Questions

- Where does corn come from?
- Who produces corn?
- How is corn produced?

Learning Objectives

- The children will describe the process it takes to grow corn.
- The children will communicate the idea that all living things need water to live.

Materials

- Clear cup
- Soil wafers for each cup
- Spoon
- Dixie Cup
- Kernels of corn
- “We Grow Corn: Seasons on a Kansas Family Farm” Book
- Spray bottle

Prepare before the lesson

- Add 1 soil wafer to each clear cup.
- Premeasure water needed for the soil, follow directions on the package. Add that water to the dixie cup (children will mix the soil wafer with water during the activity).

Guided Teaching

1. Review before the lesson
 - Who can explain what a pattern is?
 - Can someone explain how we made a pattern yesterday?
 - Where did the ears of corn we used come from?
2. Read Aloud
 - Read the We Grow Corn book.
 - Stop at the beginning to talk about vocabulary words.

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3. Discussion after Read Aloud

- Where does corn come from?
- What animals might eat the corn?
- What is a combine?
- If the farmer runs out of corn and needs more corn to feed the animals, what will the farmer need to do?

Start the Investigation

“We are going to help the farmer grow some corn right here in our classroom!” Brainstorm: What do we need to grow corn?

Planting Steps

- Give each child a clear cup with a soil wafer and a spoon.
- Give each child a dixie cup of pre-measured water and have them add it to the cup with soil in it.
- Children will begin to stir the water and soil together with their spoons in the cups.
- Direct their attention to what is happening in the cups: “Do you know what you are doing right now? You are rehydrating the soil by putting water in it.”
- “What is happening to the soil wafers? (Soaking up the water). “This is called rehydrating the soil so we can plant a seed in the soil. Because without water, the seed will not be able to grow.”
- Give each student four kernels of corn and have them poke them down in the soil with their finger.
 - Model this for your child.
 - Do not poke them too deep.
- Place cups in a sunny window and watch your corn grow.
 - Takes 5-10 days to sprout.

Discussion

Discuss that all living things need water and prepare children to water their cups over the next several days.

- “What do plants need to grow?” (water)
- “What do animals need to live?” (food, water)
- “What is one thing both of them need that is the same?” (water)
- “Could we say the same about humans?” (yes)
- “What do all living things need?” (water)

Closing

- “Today, you helped the farmer produce more corn. You know that it takes soil, water, seeds, and sun to grow more corn for the farmer. We are going to watch our corn over the next couple of weeks and see what happens.”
- “You also know that all living things need what? Water!”

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- “Tomorrow, we are going to compare field corn that the farms grow and Indian corn that has many colors on the cob.”

Early Elementary Activity

Art/Science Activity

- Have your child make a journal, or you can use the journal provided, to keep track of the growth of their corn plant.
- Each day, have your child draw a picture of what they see. Make sure to date your journal. A sentence or two can be added to the picture for their observations.

Writing Activity

- Have your child write about what is happening in the soil. Your child may already have knowledge about roots. If they do not, let them be creative and come up with some ideas about how the kernel is growing.

Upper Elementary Activity

Art/Science Activity

- Have your child make a journal, or you can use the journal provided, to keep track of the growth of their corn plant. Each day, have your child draw a picture of what they see. Make sure to date your journal. Encourage your child to write about their observations.
- Your child can also keep track of the weather in their journal as well as how much they are watering their plant each day. Keeping a scientific journal of their plant growing will provide them with a lot of information when this project is over.

Social Studies Activity

- Have your child do some research about growing conditions for corn in the state of Kansas, specifically your area. Then look up another state or country and compare their growing conditions to ours. Are they the same or different?
- This activity can be expanded on by looking up what states are not able to grow corn. Is there a common reason why they cannot?

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Lesson 4: Corny Sorting (20 minutes)

Key Questions

- How do we know which kernel came from field corn and which kernel came from Indian corn?
- Do they look like, but not exactly like, their parents?

Learning Objectives

- The children will explore, identify and verbally state the similarities and differences between field corn and Indian corn.

Materials

- Field corn and Indian corn cob
- Field corn and Indian corn kernels
- Pencil
- Balance scale
- Sorting mat (page S2-3)
- Prepare before: a cup of kernels that contain both field corn and Indian corn. One for each child.

Guided Teaching

Introduction

- “Today, we will explore another kind of corn that can be grown, called Indian corn. What is the difference between field corn and Indian corn?”
- “If I wanted to sort out the field corn and the Indian corn, how could I do it?” (let your child demonstrate or verbally tell you how to do it).

Exploration

- Today, we are going to be sorting our corn kernels on our sorting mats. “(page S2-3)”
- “First, you will put your sorting mat in front of you.”
- “Next, you will take a cup of mixed kernels and begin sorting them on your mat. All the field corn kernels will go on one side. The Indian corn will go on the other side of the mat.

Evaluate

- “How many do you have of each kernel?”
- “Could we weigh our kernels to see which kind of corn weighs the most? Using just one kernel of each type of corn, place it on the balance. Talk about the weight of the corn kernels and which one weighs more.

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- “Is there a way we could sort these corn kernels in a different way? Examples: by color, by size, my weight.

Kernel Talk

Take time to talk about the difference between the field corn and Indian corn kernels.

- The field corn will have a dent at the top of the kernel.
- Another name for field corn is dent corn.
- “Which corn kernel seems harder?”
- “How are both types of corn different than sweet corn?”

Early Elementary Activity

Writing/Art Activity

- Draw a picture of Indian corn and field corn. Under each of the types of corn write words to describe the corn. Example: Field corn: dent at the top, deep yellow, hard. Indian corn: colorful, hard, round top.
- Hand out the “History of Corn” Mystery of Corn reader to learn more about the different types of corn.

Math Activity

- Using the balance, place 5 corn kernels on one side of the balance. On the other side, find something in your house that would be lighter than the corn, something that would weigh more and something that would weigh the same. Continue this activity by using 10 corn kernels and proceed through the same steps above.

Upper Elementary Activity

Social Studies Activity

- Using the Mystery of Corn reader, issue “History of Corn,” do further research about the different types of corn. This reader will take you through the history of how corn came to the United States and how the corn started and how it turned into the corn we use today. To subscribe or view online visit: <https://kscorn.com/reader/>

Writing Activity

- After reading through the “History of Corn” reader, create a timeline of the history of corn. Include in your timeline, where the corn is located, the time period, a picture of what the corn looked like.

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Lesson 5: How Can You Tell? (30-40 minutes)

Key Questions

- What things are the same about all the corn kernels?
- What things are different among the corn kernels?
- What kind of corn will each kernel grow? How can you tell?

Learning Objectives

- The children will detect and verbally state the similarities and differences between field corn and Indian corn.
- The children will identify the colors needed to produce the pattern of Indian corn to be like, but not exactly like, the parent Indian corn.

Materials

- Field corn and Indian corn ear of corn
- Field corn and Indian corn kernels of corn
- Crayons (yellow, green, brown, black)
- Corn pattern coloring sheets (page S4-6)
- Glue
- Clear Tape
- Scissors

Guided Teaching

Introduction

- “Who can recall what it takes to grow corn?” (soil, water, seeds, sun)
- “Today, we will compare Indian corn to the field corn that farmers grow to feed their animals.”

Discussion

Hold up an ear of field corn and an ear of Indian corn. Observe the patterns of Indian corn.

- “What is the same about the two types of corn?”
- “What is different about the two types of corn?”
- “Do the kernels look the same?”
- “How can you tell?”
- “If we plant field corn like we did in our cups, what kind of corn do you think will grow and produce?” (field corn)
- “What will it look like?” (field corn)

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- “If we plant Indian corn like we did in our cups, (show ear of Indian corn) what kind of corn will it grow and produce?” (Indian corn)
- “What will the Indian corn look like?” (Indian corn, one with many colors of kernels)

Exploration

- “When a kernel of corn is replanted, it grows and produces another ear of corn. The new corn will look like, but not exactly like, the original ear of corn, or parent corn.”
- “If we take a kernel of field corn (hold it up) and plant it, it grows and produces an ear of corn that will be like but not exactly like its parent.”
- “This is the same as Indian corn. If I take a kernel of Indian corn (hold it up) and plant it, it will grow and produce an ear of corn like, but not exactly like (hold up the Indian corn), its parents. It is possible that the sizes of the kernels may change or the length of the ear of corn may be longer or shorter.”
- Hold up the Corn Pattern Coloring Sheet (page S4-6). “We are going to say this was produced from a kernel of Indian corn (hold up an ear of Indian corn). What colors of crayons do we need to make it look like the ear of an Indian corn pattern? What colors do you see in the Indian corn?” (have your child color the colors they see). Hint: You may wish to place the ear of Indian corn on the table while your child colors.
- Next color the husk and take it to the Indian corn so it can still flip up to reveal the corn.

Closing Discussion

- “Today, we compared field corn to Indian corn. We talked about what was the same and what was different.”
- “How can we tell what the parent plant of Indian corn looked like?”
- “How can we tell what the parent plant of the field corn looked like?”
- “How do we know? How can we tell?”
- “We learned that when we plant a kernel of corn, it will produce an ear of corn that is like, but not exactly like, its parents.”

Early Elementary Activity

Writing/Art Activity

- Using the diagram you made yesterday, between the field corn and Indian corn, are there any new words that can be added? Continue to add information to your diagram to show how much you have learned.

Science Activity

- Continue your daily observations for your corn plant.

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Other Activities

- Finish up any of the materials provided in these five lessons that have not been finished. If your child has further questions, this would be a great time to expand and research these questions.

Upper Elementary Activity

Social Studies Activity

- Continue your research about the history of corn. Look for online resources to help you in your research. Specifically, where is the majority of each type of corn grown in the United States? Where is the majority of each type of corn grown in the world?

Science Activity

- Continue your daily observations for your corn plant.

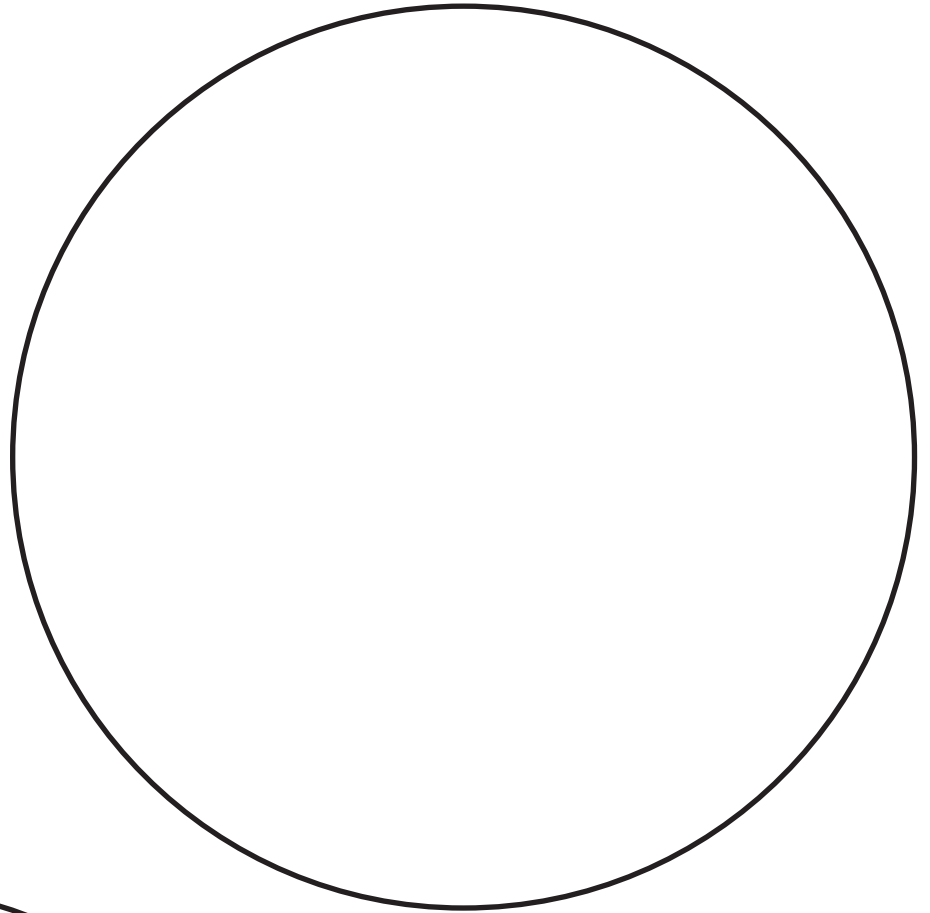
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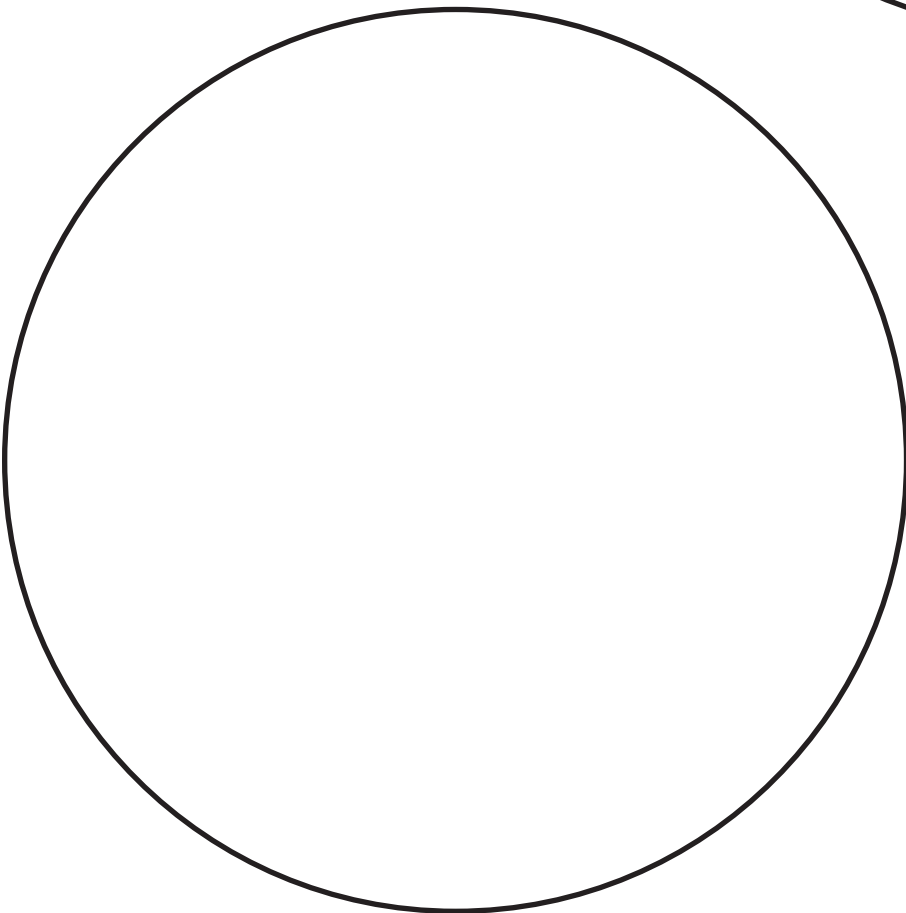


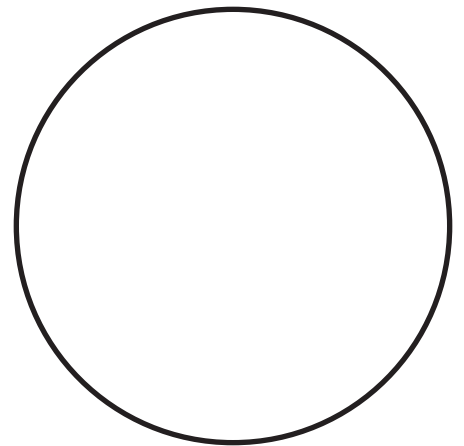
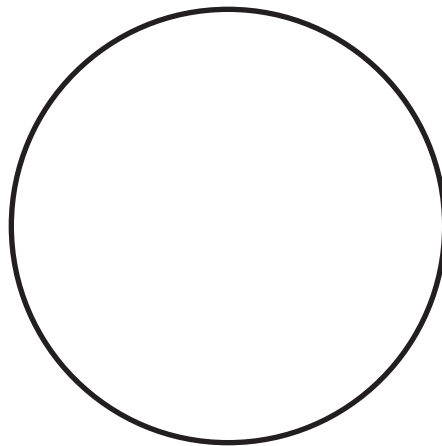
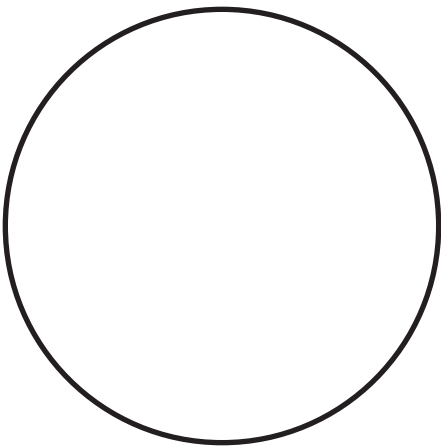
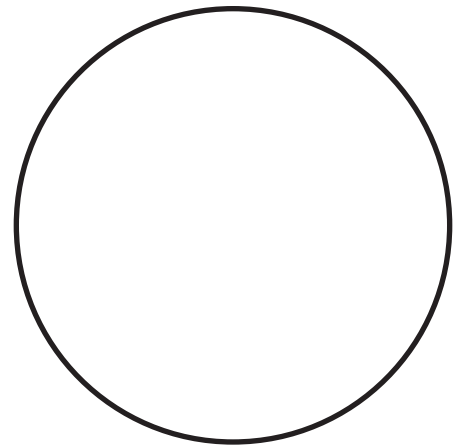
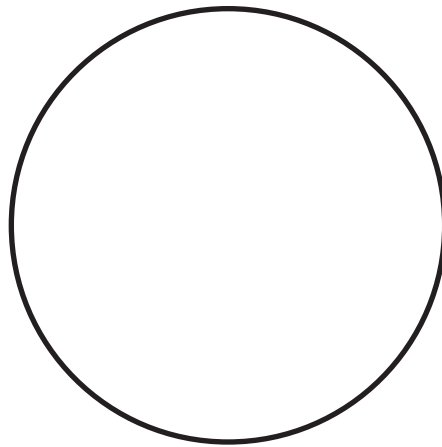
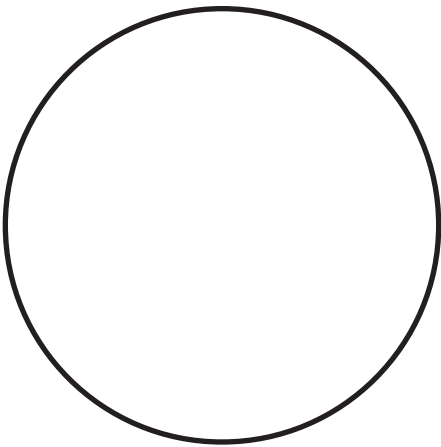
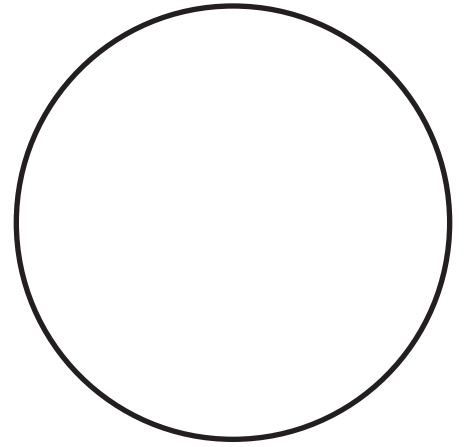
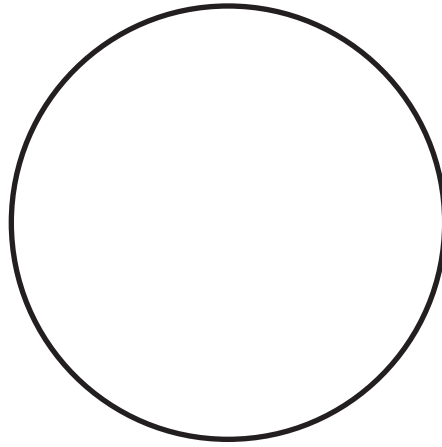
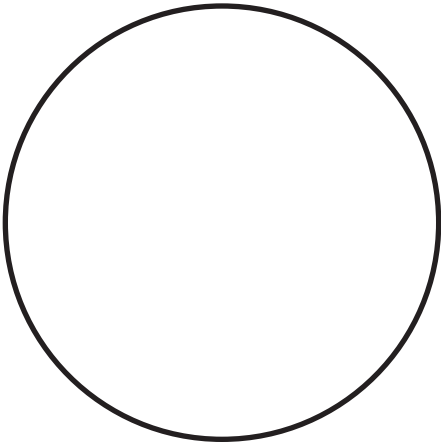
Sorting Mat

Indian Corn

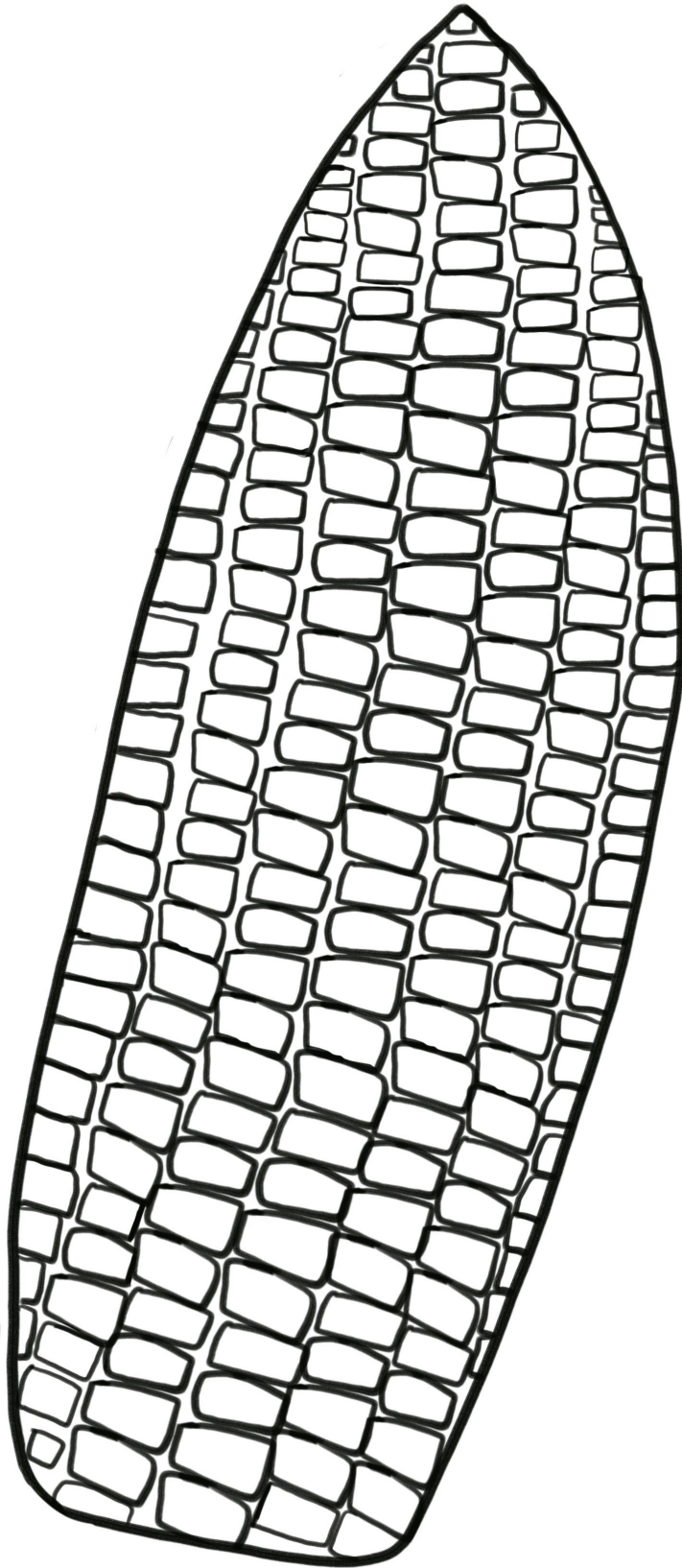


Field Corn

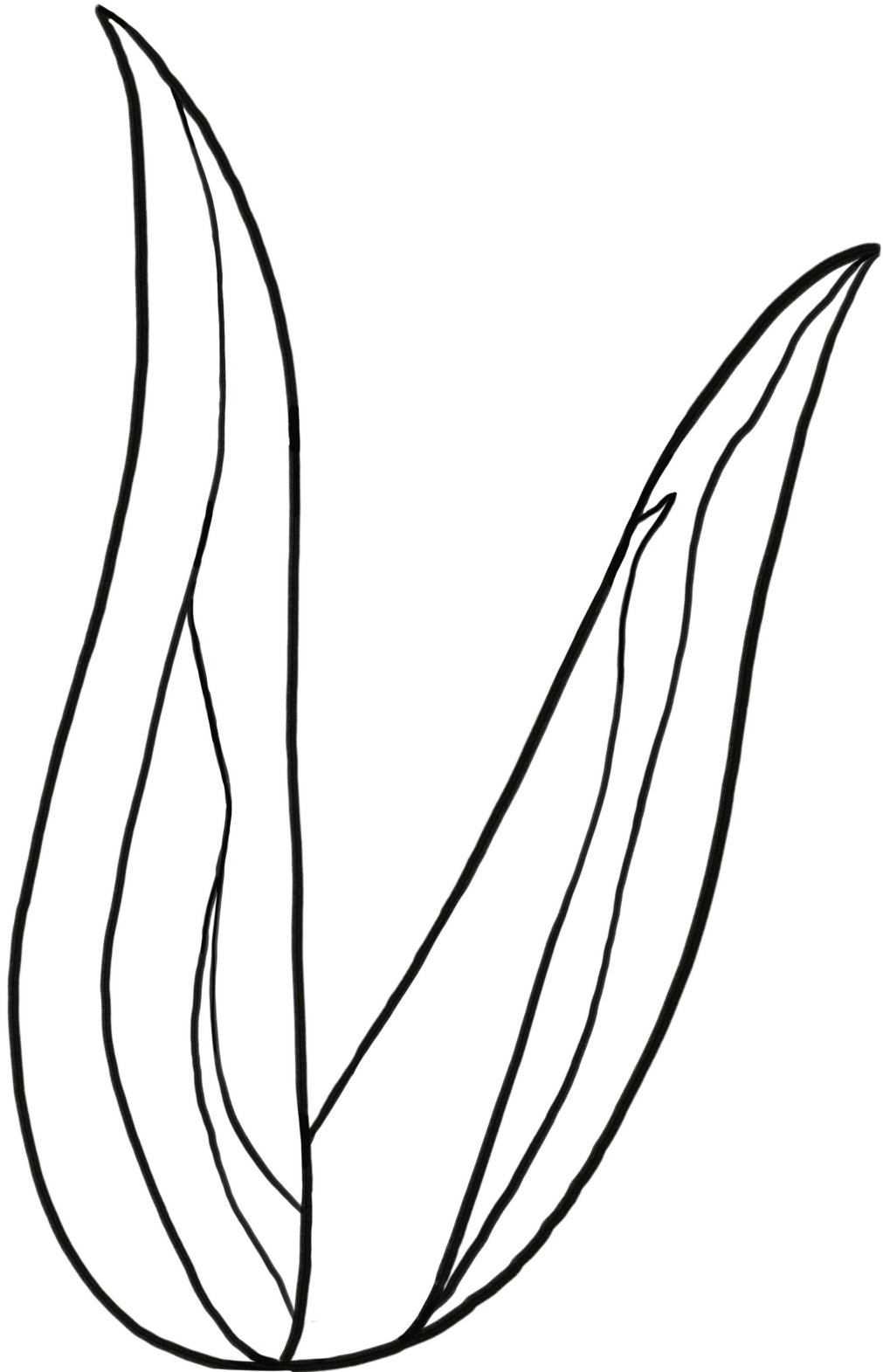




Corn Pattern Coloring Sheet 1



Corn Pattern Coloring Sheet 2



Corn Pattern Coloring Sheet 3

