PHYSICAL DIFFERENCES BETWEEN SWEET CORN AND FIELD CORN

Objective: After the lesson and activity, students should be able to distinguish the differences between field corn and sweet corn.

Materials Needed:

-ears of sweet corn
-kernels of sweet corn (preferably fresh)
-ears of field corn (can be obtained from Ag Supply store as squirrel feed)
-kernels of field corn (can be obtained at Ag Supply store or local elevator)
-"Physical Differences Among Field Corn and Sweet Corn" video by Illinois Corn Marketing Board (available on YouTube or TeacherTube)
-"Paper Corn Plants Instructions" handout (PDF on Illinois Corn Website)
-green 9"x12" construction paper
-yellow construction paper
-scissors
-tape
-glue
-stapler
-Differences Among Corn worksheet (PDF on Illinois Corn website)
-Corn Math worksheet (PDF on Illinois Corn website)

Interest Approach:

Hold up two different ears of corn, one being sweet corn and one being field corn. Ask students if these two ears are alike or different. Have them discuss why they think they are the same or different from each other. Also, have them discuss the fields of corn they see while driving and what that corn is used for.

Lesson:

-Even though the two types of corn may look the same; to an experienced farmer, there are also distinct differences. Yes both plants are green and have lots of leaves, a couple full ears, and tassels, but that is where the similarities end.

-One of the most noticeable differences between field corn and sweet corn is the height difference. Field corn can grow to be 7-10 feet tall and sweet corn is normally around 2 feet shorter than that.

-Another difference is that a sweet corn plant is normally a small plant as a whole. As well as being shorter, the stalk is usually smaller, and the ears aren't as big as they are on a field corn plant.

-When it comes to the kernels of the two different types of corn, there is one major distinct difference. When field corn becomes mature and dries down, it gets a noticeable dent at the top of the kernel, giving it the name dent corn.

-Also, sweet corn is supposed to be harvested while it is immature and the kernels are full of sugar. So sweet corn kernels are usually rounder and plumper than those of field corn.

-Finally, there can be a color difference between field corn and sweet corn. Sweet corn is usually more yellow than field corn. Field corn when dried down has more of an orange tint in it.

Make sure to show students examples of field and sweet corn ears as well as individual kernels.

**To reinforce the topic, have students watch the "Physical Differences Among Field Corn and Sweet Corn" video that goes along with this lesson.

Activity:

Have students make a craft project depicting a stalk of corn. Use the Illinois Ag in the Classroom activity, the PDF of the instructions is on the Illinois Corn Website in the Tale of Two Corns folder, entitled "Paper Corn Plant Instructions". All you need for the activity is green and yellow construction paper, as well as a stapler, scissors, and glue. After you make the actual stalks and curl the leaves, you can make the ears by using their samples or making your own. You can even glue kernels of either sweet corn or field corn and distinguish the differences between the two. If you wanted to be really creative, you could make the sweet corn plant shorter by making the green paper narrower.

Illinois Learning Standard: 26.B.2d

Additional Activities:

****Venn Diagram Comparison (any grade-tailor it to meet students):** You can also make a Venn diagram to assess students on what they learned about the differences between field corn and sweet corn. Have students say what the two corns have in common and what is different between them. You can use the "Differences among Corn" activity sheet that has a Venn diagram on it for students to use.

Illinois Learning Standard: 12.A.3c

****Corn Math (for elementary grades):** If you wanted to do a math activity with elementary students, you could put a pile of corn on their desks/tables and have sweet corn kernels and field corn kernels in the pile. Do addition, subtraction, or any other arithmetic with the seeds. For example you could say, add 3 kernels of sweet corn and 5 kernels of field corn or you have 12 kernels of corn and take away 6 sweet corn kernels, now how many do you have? Just help the students work on their math skills while recognizing the different kernels. There is a simple addition and subtraction worksheet, "Corn Math" that goes along with this lesson.

Illinois Learning Standards: 6.A.1a, 6.C.1b, 6.B.1, 6.D.1, 8.C.1

Illinois Assessment Framework: 6.3.01, 6.3.09, 6.3.12, 8.3.02

To be used with:
Corn Exports Visually

Name _____

Paper Corn Plants

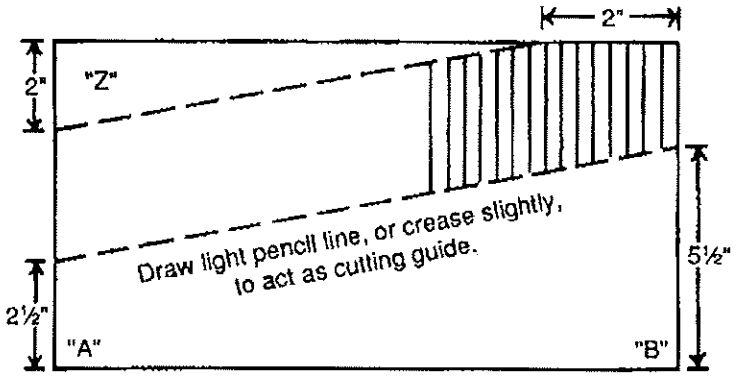
Make a corn plant out of construction paper using the patterns below. You will need scissors, staplers, glue or rubber cement, and yellow and green construction paper.

Directions:

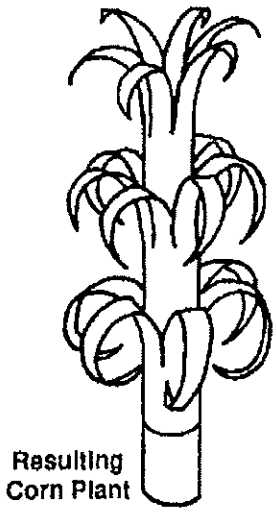
1. Cut off corner "Z" and make vertical cuts in the green paper down to the dotted line. Roll up the corn plant starting at corner "B" and rolling toward "A." Secure the open edge with a staple, glue, or rubber cement.

2. Curl the fringe pieces around your finger, or a pencil, to create the effect of a stalk. Optional: tips of leaves may be cut to a point.

3. Cut an ear of corn from yellow construction paper. You may want to use markers or crayons to decorate the ear with kernels or husks. Glue the ear of corn to the plant.

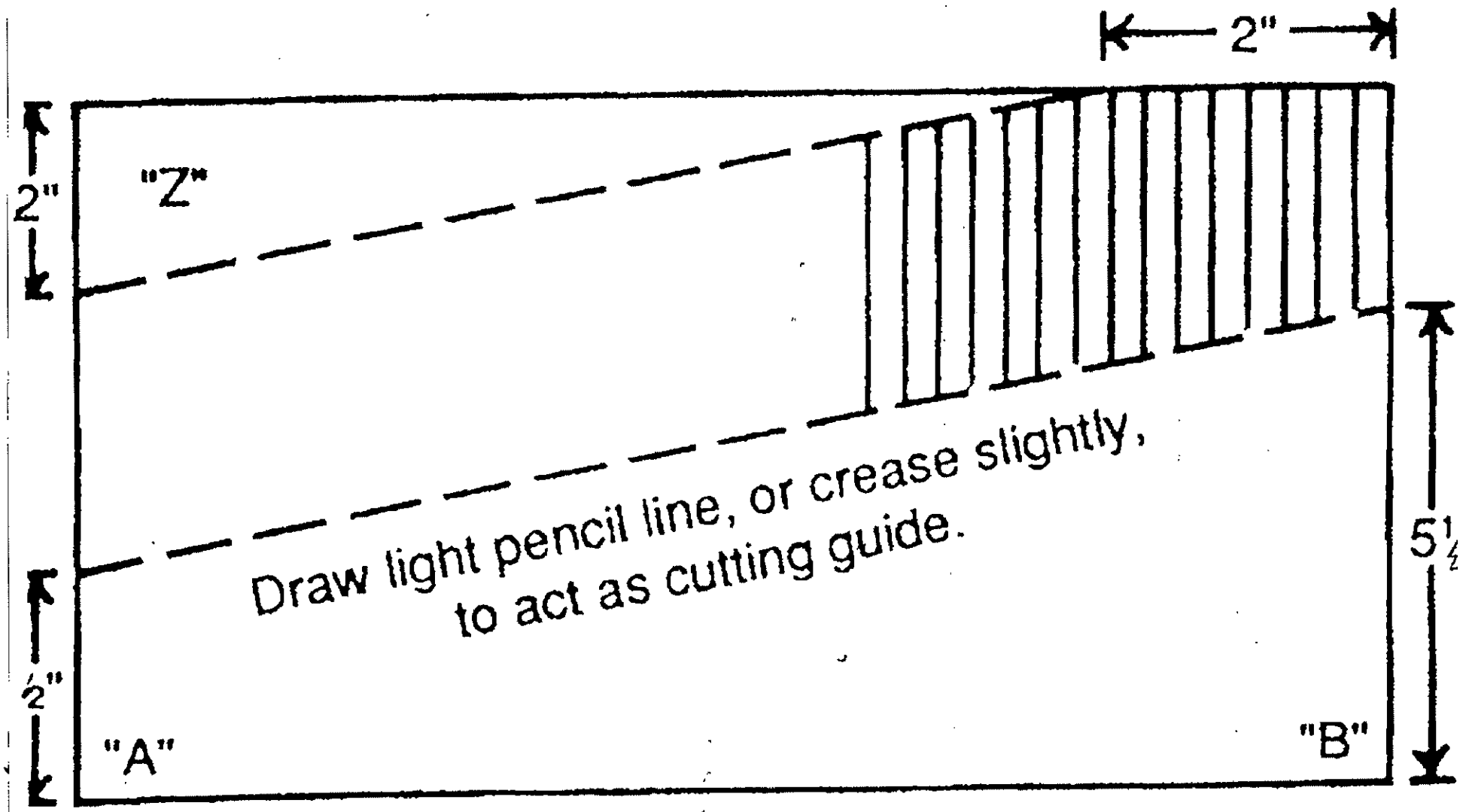


9" x 12" green construction, banner, or mimeograph paper



Resulting Corn Plant

Ear of Corn
Actual Size



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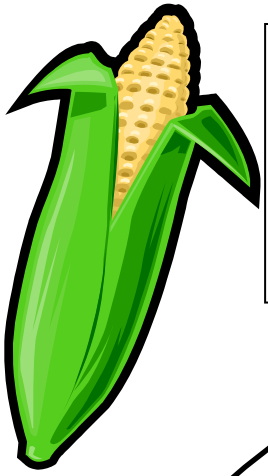

Differences and Similarities between Field Corn and Sweet Corn

Sweet Corn

Field Corn

Both

Corn Math!

Directions: Get two piles of corn, one of field corn and one of sweet corn. Do the following problems by using the different types of corn. This way you can work on your math skills and can see the differences between field corn and sweet corn kernels.

1. How many sweet corn kernels do you have? _____
2. How many field corn kernels do you have? _____
3. 5 sweet corn + 3 field corn=_____kernels
4. Now subtract 4 sweet corn=_____kernels
5. 7 field corn + 2 sweet corn=_____kernels
6. Now subtract 1 sweet corn=_____kernels
7. Then subtract 3 field corn=_____kernels
8. 3 sweet corn + 4 field corn=_____kernels
9. Now subtract 2 field corn =_____kernels
10. Then add 4 more field corn=_____kernels
11. Now, write your own corn math problem!