



## Investigating Corn

In this activity, students will read about corn and its uses and then examine different kinds of corn.

### Background Information



Corn comes in many sizes, shapes, and colors. Some types of corn grow to be up to 15 feet tall, while others grow to only 2 feet tall. Some ears of corn are quite long, while others are very short. Kernels may be red, white, blue, yellow, black, or lavender. Some varieties have kernels that are all one color, while others have mixed colors. Some corn is meant to be eaten right off the cob, while other kinds of corn are dried and later prepared in a variety of ways. Sweet corn, the corn we eat off the cob, was not part of the American diet until about the mid-1800s. Even today, only a fraction of the corn grown is sweet corn. Most of the corn grown in the United States is grown as animal feed.

Despite all of this diversity, there is only one species of modern corn, *Zea mays*. A member of the grass family, corn cross-pollinates very easily. As a result, there are thousands of varieties. Native Americans were the first corn breeders, selecting seeds from varieties that thrived in their local environment. For example, Hopi corn is a strain that is well adapted to the sandy, dry, desert environment of the Southwest. It generally grows just a few feet high, is compact, and can withstand the strong winds that sweep through the area. It also can be planted deeper than other types of corn. This is essential in desert areas, where the available water lies deep in the soil.

Modern corn is selected for high yield, insect and disease resistance, and taste. Much of the corn that we eat today is a result of selecting for super sweetness.



## INVESTIGATING CORN

### Materials



For each group

Note: A selection of different kinds of corn seeds and ears; for example, a sample of at least three of the following:

dent corn  
flint corn  
flour corn  
popcorn  
sweet corn



sweet



pop



flint

Other options

pod corn  
teosinte  
hand lenses  
ruler or tape measure  
drawing materials (optional)  
knife (optional)



dent



flour

For each student

journal  
pen or pencil  
photocopy of *Life Lab Beat* article "A New World Gift"

For the teacher

blackline master of *Life Lab Beat* article "A New World Gift"  
blackline master of "Types of Corn Grown in the U.S."  
blank overhead transparency  
overhead projector

Note: If you can't find ears of corn, bring in seed catalogues with color photos. Another source of pictures is the article on corn published in *National Geographic Magazine*, June 1993.

### Preparation



1. Make enough copies of the *Life Lab Beat* article "A New World Gift" to give to each student. You may wish to photocopy the entire *Life Lab Beat* to hand out to students. Collect it after each student reading for use with future activities.
2. Optional: Make an overhead transparency of "Types of Corn Grown in the U.S."

### Class Discussion



Hand out "A New World Gift" to each student. Allow them enough time to read the article. Encourage them to share what they already know about corn. Begin a class list of students' ideas and observations about what we mean when we say "corn." Stimulate discussion with questions such as

- Is there just one kind of corn?
- Is all corn alike?

## M A I Z E

### What to Do



1. Have students work in small groups of two or three. One person in each group will be the recorder.
2. Optional: Show students the transparency of “Types of Corn Grown in the U.S.” Engage students in a discussion of the differences and similarities of the different types of corn. Tell students they will examine several different kinds of corn and record their observations. Before students begin their observations, encourage them to discuss exactly what it is that they want to find out. Guide them in writing their questions at the top of a journal page. Stimulate the discussion with questions such as

- What does corn look like?
- What does corn smell like?
- What does corn feel like?
- Do you see any patterns?
- Where are the kernels located?
- What does the outside of an ear of corn look like?



3. Distribute the corn to each group. Have each group make three quick observations about the corn. Then ask students to share their observations with the class. Discuss them and add them to the class list.
4. Remind students to record their observations, as drawings and/or in words. Encourage students to make detailed observations such as the shape of the kernels, the size, the color, and so on.
5. Give students about 10 minutes to make and record their observations. Have each group display and describe their observations to the rest of the class. Add the observations to the class list.
6. If students have not already done this, encourage them to go back to an ear of corn, break it in half, and look at it from the broken end. Ask them to describe what they see. Ask them to consider how the corn is arranged on the ear. How do the kernels fit into the cob?
7. Have student groups classify their corn. They may sort it by color, shape, or any other classification system they choose.
8. Refer to the class list and engage the class in a discussion of the diversity they have observed in their corn sample.



### Extension



Estimate the number of kernels on the ear of corn.