

Farmer



The farmer is responsible for planting, caring for, and harvesting the crops. What types of decisions need to be made before planting, and how might they effect the crop?

Planter

Corn is planted in the spring, and requires warmth and moisture to germinate. What factors could affect the farmer and their crop at this stage?



The Corn



The corn spends the summer growing under the care of the farmer. What does a farmer have to do to protect his crop as it grows?

Harvest

Farm equipment is expensive. What are some benefits and downsides to purchasing equipment like combines, tractors and planters?



Transportation



Corn has to be moved from farm to grain elevator to ethanol plant. What types of transportation can be used? How is fuel used to move the grain?

Elevator

What service does a grain elevator provide for a farmer? Why are these services important?



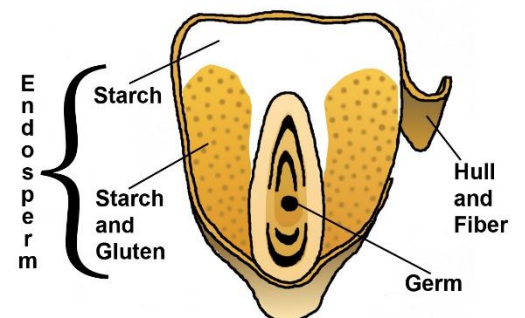
Ethanol Plant

This is where corn gets turned into ethanol. What kind of corn is processed into ethanol? Why is this type of corn used versus other types?



Grinder

Grinding corn exposes the starch from the corn. Do you think the ethanol process would work if we didn't grind the corn? Why or why not?



Cooker

The ground corn is mixed with water and enzymes and cooked at high temperatures. The enzymes convert the starch into sugar. Why do you think heat is used in this process?

Cooking



Fermentation

Yeast is added to the cooked mixture of corn. Yeast is the important ingredient to create fermentation. What are the products of fermentation?

Fermentation



Molecular Sieve

The molecular sieve dehydrates the ethanol until it is 100% pure. Why is it important that the ethanol has no impurities in it?

Molecular Sieve



Delivery

Ethanol is delivered in special safe delivery trucks. Why is it important that the ethanol is safely delivered and stored?



Retail

All cars in the U.S. can run on a 15% ethanol/gasoline mix. However, some cars have special engines designed to run on an 85% ethanol/gasoline mix, or E85. What advertising tactics are needed to encourage people to use E85 fuel?



Adapted from "Tassel to Tank", Illinois Farm Bureau® Agriculture in the Classroom