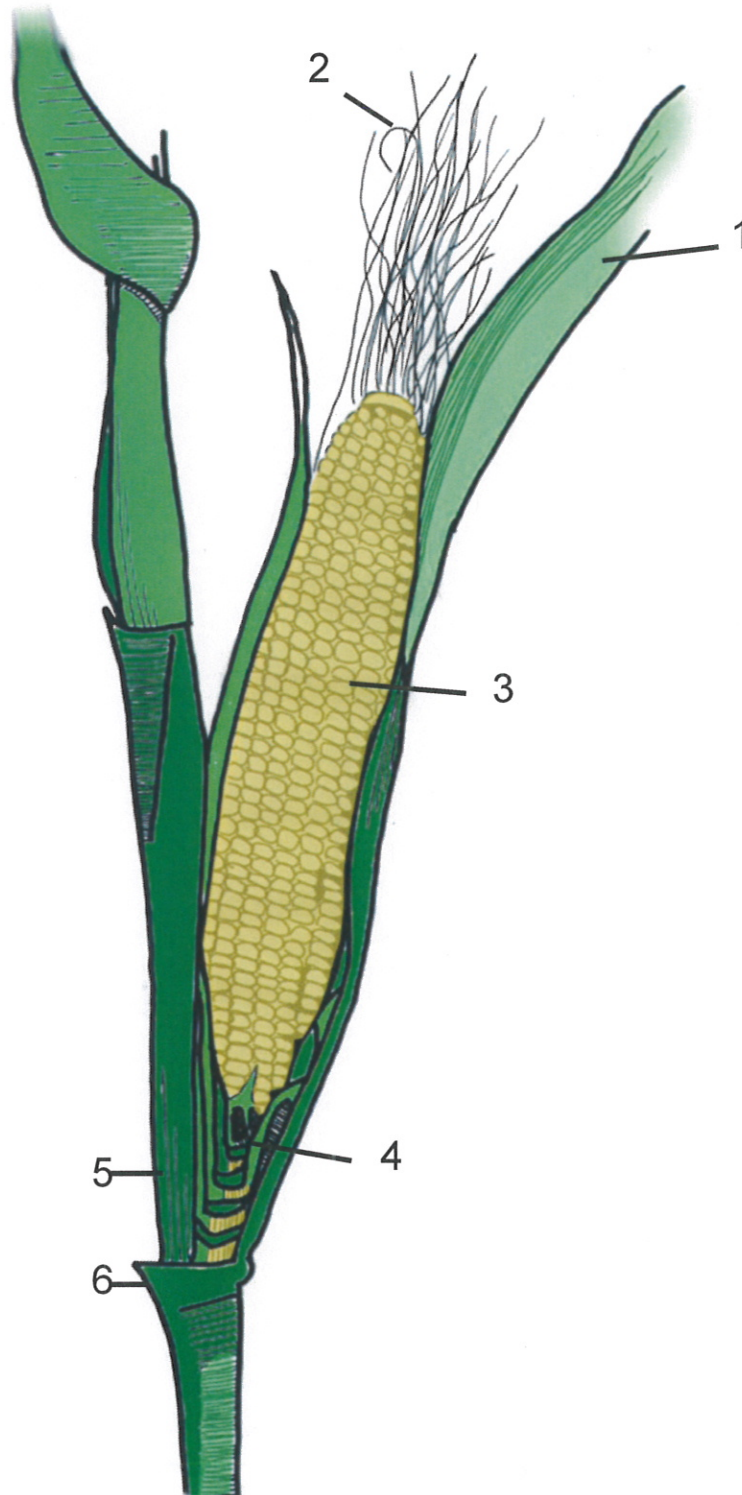


Can you identify the parts of a corn ear?

Silks
Ear leaf
Stem
Kernels
Ear node
Husks

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____



The Four Parts of a Kernel of Corn

THE ENDOSPERM

The endosperm is about 82 percent of the kernel's dry weight and is the source of energy (starch) and protein for the germinating seed. There are two types of endosperm, soft and hard. In the hard endosperm, starch is packed tightly together. In the soft endosperm, the starch is loose. When corn dries in the field before harvest, the moisture loss causes the soft endosperm to collapse and form a dent in the top of the kernel, thus the term "dent" corn.

THE PERICARP

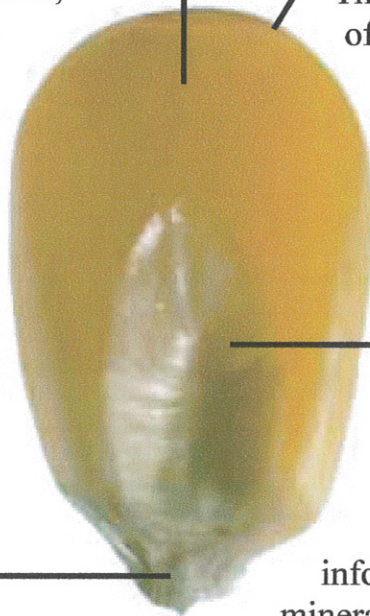
The pericarp is the outer covering of the kernel that protects it from deterioration. It resists water and water vapor and is undesirable to insects and microorganisms.

THE GERM

The germ is the only living part of the corn kernel. It contains the essential genetic information, enzymes, vitamins and minerals for the kernel to grow into a corn plant. About 25 percent of the germ is corn oil. Corn oil is the most valuable part of the corn kernel. It is high in linoleic fatty acid (polyunsaturated fat) and has a bland taste.

THE TIP CAP

The tip cap is the only area of the kernel not covered by the pericarp. It was the attachment point of the kernel to the cob.

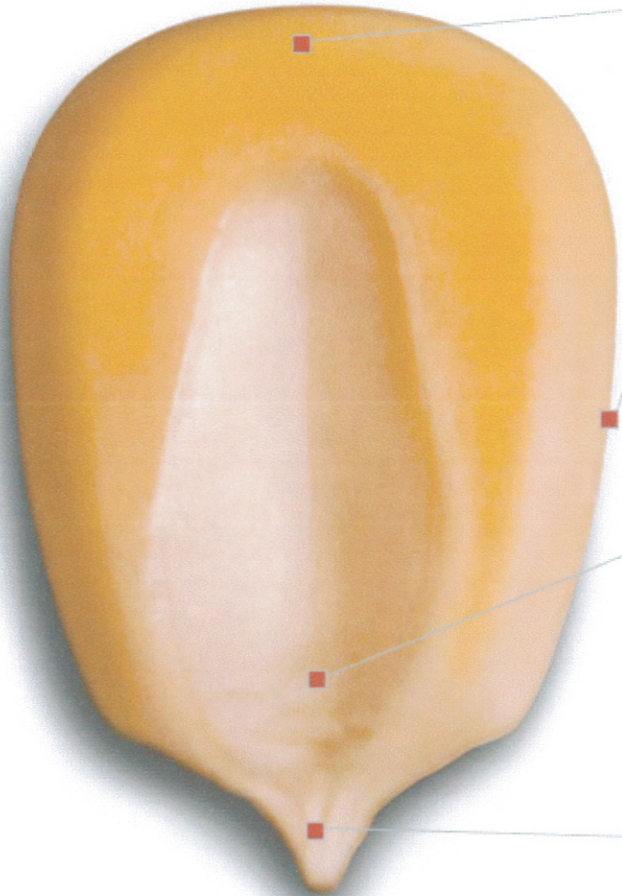


Corn Components

Starch	61.0%
Feed	19.2%
Oil	3.8%
Water	16.0%



Corn Kernel



One of America's greatest strengths is our ability to grow our own food. We also help others by exporting corn.

The **endosperm** accounts for about 82 percent of the kernel's dry weight and is the source of energy (starch) and protein for the germinating seed. Starch is the most widely used part of the kernel and is used as a starch in foods—or as the key component in fuel, sweeteners, bioplastics and other products.

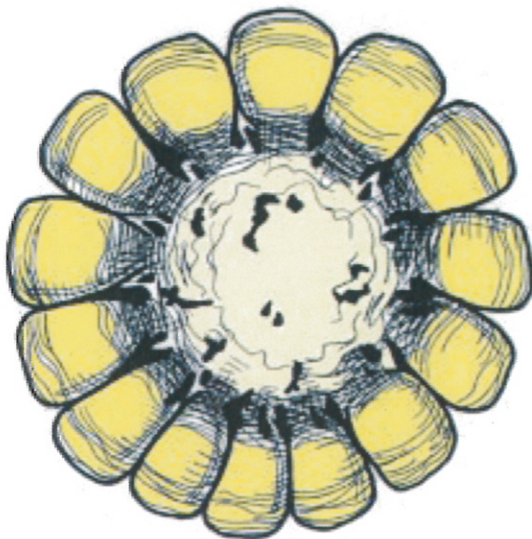
The **pericarp** is the outer covering that protects the kernel and preserves the nutrient value inside. It resists water and water vapor—and is undesirable to insects and microorganisms.

The **germ** is the only living part of the corn kernel. The germ contains the essential genetic information, enzymes, vitamins and minerals for the kernel to grow into a corn plant. About 25 percent of the germ is corn oil—the most valuable part of the kernel, which is high in polyunsaturated fats and has a mild taste.

The **tip cap** is the attachment point of the kernel to the cob, through which water and nutrients flow—and is the only area of the kernel not covered by the pericarp.

Source: 2006 World of Corn. Published by the National Corn Growers Association.
<http://www.ncga.com/WorldOfCorn/main/kernel.asp>

Count the kernels on a cob



Count the number of rows
(kernels around the cob)

answer: _____

Count the number of kernels
per row

answer: _____

Older students: Total number
of kernels on the cob

answer: _____

