



KIDS connection

Super Sorghum

What is Sorghum?

Grain sorghum, also called milo, produces tall panicles (group of flowers on a stem) which fill with small, round seeds in late summer. Originally from Africa, there are over 30 different species of sorghum. Humans eat sorghum syrup and grains - which have great nutrition value and have been proven to improve digestive health and inhibit some cancers. Cracked grain sorghum makes excellent animal feed.

Sorghum is the 5th most important cereal crop in the world. Kansas produces more grain sorghum than any other state in the country. We plant 2.6 million acres of sorghum every year.

Sorghum Products



flour



biofuels



molasses and syrup



pasta



popped sorghum



baked goods

Fun Facts



Sorghum was first domesticated in Egypt 10,000 years ago.

Popped sorghum tastes just like popcorn, and it's full of fiber and protein.

Sorghum is a type of grass that can grow up to 8 feet tall!

The sorghum grain head has 750-1,250 seeds. That's a lot of seeds!

Grain sorghum is an efficient crop. It only requires six inches of water to produce the first **bushel** of grain. It is also water thrifty with traits like stay-green which preserves plant health in times of water stress.

A bushel weighs 50 pound. Sorghum produces around 150 bushels per acre, that's 7,500 pounds of grain per acre.

maturity

Harvest time is near when grain turns white, tan, bronze or red.



Seed

The seed can germinate into a new plant or be processed into food or nonedible products.

sprout

The sprout emerges 3-10 days after planting.



Sorghum Growth Cycle 3-4 Months

flower

Once the flower forms, the grain begins to grow.



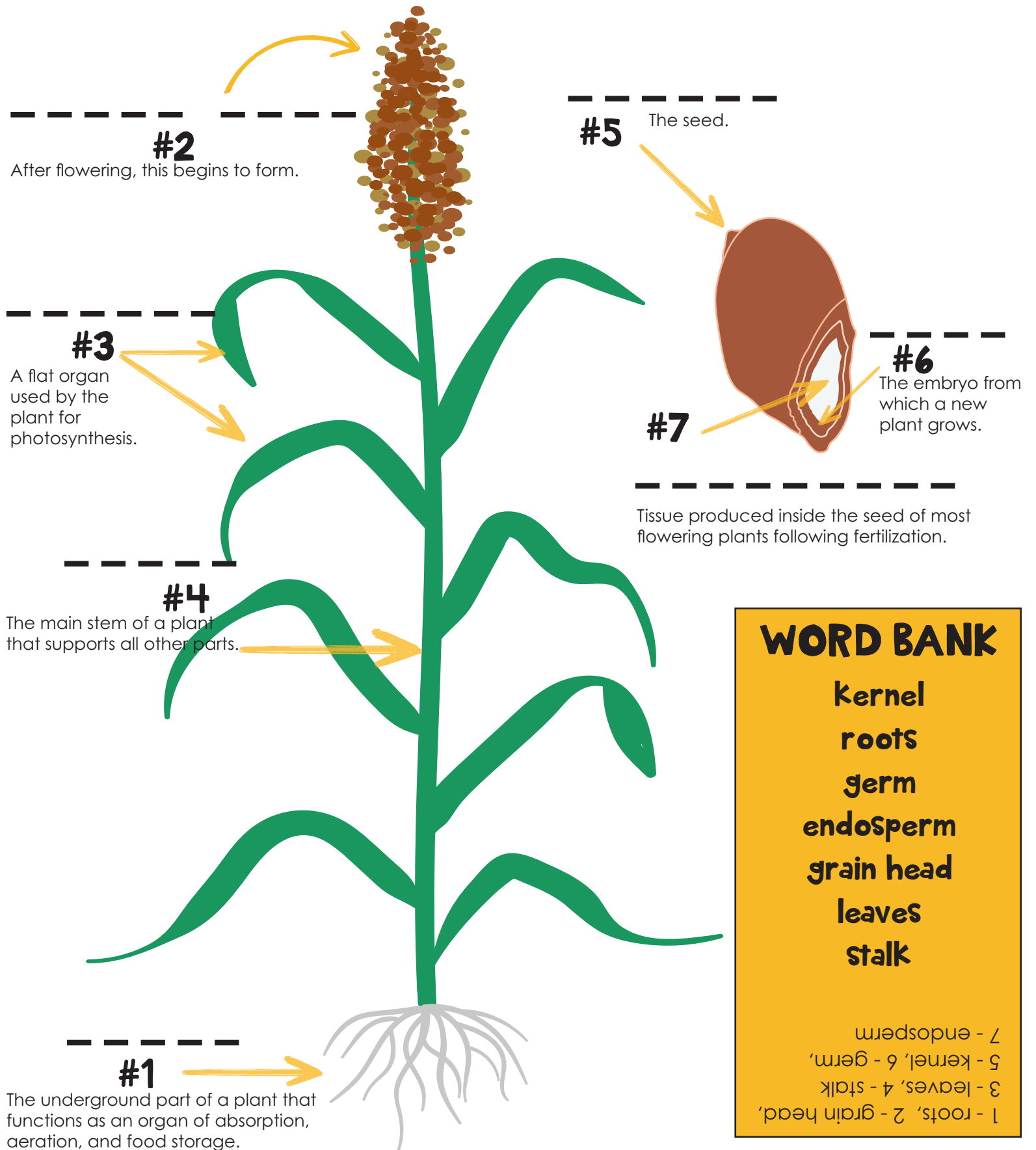
flag leaf

The flag leaf stage begins the formation of the sorghum grain head.



Label the parts of the sorghum plant

Sorghum is planted once soil temperature is 60 degrees Fahrenheit. Most hybrid sorghum plants take three to four months from planting to maturity.



WORD BANK

kernel
roots
germ
endosperm
grain head
leaves
stalk

1 - roots, 2 - grain head,
3 - leaves, 4 - stalk
5 - kernel, 6 - germ,
7 - endosperm

Poptastic Sorghum

Materials

6 T. vegetable oil
salt to taste
large pot with lid

1/2 cup grain sorghuum
1 T. butter (optional)
protective gloves

1/2 cup popcorn

bowls

Procedure

Hypothesize the outcome of adding the grain sorghum and popcorn to hot oil.

1. Heat 3 T. oil in pot on medium heat.
2. Add sorghum grains to the hot oil, cover with lid and, with gloves on, give the pot a good shake to cover all the kernals evenly with oil.
3. After about one minute, the grains will start to pop.
4. Give the pot a good shake every 30 seconds.
5. When most of the grains have popped, remove from the heat, add salt and butter to taste.
6. Repeat process with the popcorn.

Compare the popped grain sorghum and popped popcorn for taste, texture, volume, color, and overall satisfaction.

Career Corner

Kansas produces \$1.2 billion worth of sorghum each year. Nearly 5,000 Kansans work in the grain sorghum industry, including in the growing area of the biofuel ethanol.

Farmer - plant and harvest sorghum

Marketing and Sales - bring products to the consumer

Engineer - develop or improve machines used to harvest and process sorghum

Food Scientist - create new foods using sorghum as the main ingredient

From Farm to Table

Sorghum needs warm soil to germinate and grow so it is planted in late May or early June.

There are many varieties of sorghum. Sweet sorghum is harvested when the grains are young for syrup and molassas. Grain sorghum is harvested when the seeds have hard glossy seed coats.

Young canes are pressed and yield a sweet, light green juice which is made into syup and molassus. Mature seeds are pressed into cakes for animal feed, milled into flour, or brewed into beer.

Sorghum grain is used by various food industries, including milling, starch production, brewing and distilling. It is also used in biofuel, animal feed, and building materials.

