

Name _____



Ag Mag: Corn

Guided Reading Questions

Directions: Read the article titled “Corn” one page at a time.
After reading each page, answer the questions about what you read.

QUIZ! Food for thought: Is corn a vegetable, fruit, or grain? YOU decide!

1. Scientifically, corn has seeds, so it is considered a (circle one): **VEGETABLE** / **FRUIT** / **GRAIN**
2. Agriculture considers corn a (circle one): **VEGETABLE** / **FRUIT** / **GRAIN** because...

Corn is a grass harvested for its kernels

From PLANTING to HARVEST and Beyond

3. Illinois ranks 2nd in US corn production.
4. What’s another name for a “corn seed”? (HINT: They are golden.) Kernels
5. During planting, a tractor pulls a Planter to place kernels into the ground.
6. Pollination is the transfer of male pollen to female part of the plant to create a new offspring.
Pollen from the Tassel lands on the Silk to make one corn kernel.
7. On average, how many kernels are on an ear of corn? 800 kernels
8. How long does a corn plant grow before it is mature and then harvested? 120 days
9. What machine is used to harvest corn? Combine
10. This machine separates the Kernels from the Ear of the corn plant before it is stored in a dry facility called a Grain Elevator.

What’s Inside That Seed?

11. Match the seed structures in the box below with the correct description.

A. Pericarp

B. Endosperm

C. Germ

D. Tip Cap

C The living part of the seed that becomes the new plant

D Where the kernel is attached to the cob

B Holds energy protein and starch for new growth

A Outside protective covering of the seed

Family Farms: A Tradition...

12. What percent of American corn farms are family owned? 95 %
13. List some of the ways that all family members, including children, are involved in working on the corn farm. Why is this important for the future?

Family members can drive the combine, pick sweet corn, run a roadside fruit/vegetable stand, or deliver meals to the field.

Modern day farm families carry on traditions but continue to grow and learn about technology to make farm more efficient and sustainable, ensuring farms to continue raising safe and healthy food.

Corn Use in Illinois...

14. What percentage of total Illinois corn production is used for ethanol production? 26 %
15. Ethanol is a Fuel made from corn and makes up 10 % of US gasoline supply.
16. Corn is a “renewable resource”. What does that mean?

Resource can be used repeatedly and replaced through a natural process

17. If one bushel of field corn can produce 2.8 gallons of fuel ethanol, what 3 other types of materials can be produced in addition to the fuel ethanol?

- | | |
|----------------------|----------------------------|
| 1. Starch | 4. Gluten Feed/Meal |
| 2. Sweetner | 5. Distillers Dried Grains |
| 3. PLA Fiber/Polymer | 6. Corn Oil |

Corn Based Products...

18. Draw a line matching the type of corn with the description:

Corn on the cob, canned or frozen corn that we eat field corn. **Field corn**

Also called dent corn, has hard outer shell used to feed livestock and 4000 other uses! **Popcorn**

Official snack of Illinois, contains water in each kernel that causes popping when heated. **Sweet corn**

Transportation and the World Market...

19. What does "exporting" mean?

Grow more than we can use and sell extra to other countries

20. What 2 rivers play an important role in exporting of Illinois corn?

1. Illinois

2. Mississippi

Growing Technology and Nutrients

21. List 3 main nutrients needed for corn crop growth.

1. *Nitrogen (N)*
2. *Phosphorus (P)*
3. *Potassium (K)*

22. How do farmers prevent nutrients from washing out of the soil?

Creating Buffer Strips of land between crops and water way, applying Cover Crops in the off season, and following the 4 R's (Right Source/Right Rate/Right Time/Right Place)

23. What is GPS?

Global Positioning System

24. How can GPS and drones help farmers?

GPS – Guides large farm equipment through a field, allowing farmers to plot and plant precise rows, which increases the possible yield in a given space.

Drowns – Farmers can collect images and data from above their fields

Bonus!!

According to Laura Gentry (Illinois Corn Growers Association), what are 3 big issues now facing corn farmers in Illinois?

Three (3) big issues:

1. *Ethanol Expansion*
2. *Water Quality*
3. *Water Sustainability*
4. *River Transportation Systems*
5. *Biotechnology*
6. *Farm Programs*
7. *Public Outreach*
8. *Public Engagement*

Corny Joke!

What do you tell maize after it graduates from high school?

Corn-gratulations!