

Wheat: From Field to Oven

Objective

The student will read some paragraphs about wheat production and identify the main idea and supporting statements for each one.

Materials

- white, whole wheat, wheat germ and wheat bran
- white part whole wheat and 100 percent whole wheat bread

Procedures

1. Read and discuss background and vocabulary.
2. Hand out the student worksheets included with this lesson.
 - Review with students the method used to identify the main idea and supporting details of a paragraph.
 - Read the worksheet directions with your class.
 - Students will complete the worksheets.
 - Students will cut out the worksheet pages and staple them together to make a booklet.
3. Students will summarize or write the main idea of each paragraph in their own words.
4. Students will set up a display in the library or media room showing the different stages of wheat.
 - Students will draw pictures of the different stages or acquire samples of wheat in the different stages of growth (clean wheat, sprouting wheat, stalks with wheat heads still attached, wheat with the “trash” still in it).
 - Students will record messages for each stage to make the exhibit a self-guided display.
5. Bring white flour, whole wheat flour, wheat germ and wheat bran to class.
 - Students will examine and write compare/contrast paragraphs.
6. Bring samples of white, part whole wheat and 100 percent whole wheat bread to class.
 - Students will taste and write compare/contrast paragraphs about the similarities and differences in texture.

Oklahoma Academic Standards

GRADE 2

Speaking and Listening:
R.1,2,3,4; W.1,2. Reading and
Writing Process: R.1,3

GRADE 3

Speaking and Listening:
R.1,2,3,4; W.1,2. Reading and
Writing Process: R.1,3

GRADE 4

Speaking and Listening:
R.1,2,3,4; W.1,2. Reading and
Writing Process: R.3

Name _____

Wheat: From Field to Oven

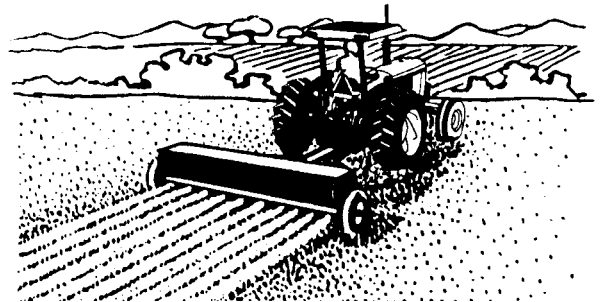
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Read the paragraphs below and find the sentence with the main idea. Write the sentence on the lines below each paragraph.

1. Clarence and Susie Brown grow winter wheat. They plant their wheat in the fall. It rests during the winter and starts growing again in the spring. In the summer, the Browns harvest their wheat.



2. Before they plant their wheat, Clarence and Susie must till the fields to get rid of all the weeds. Then they work the soil to break the large clumps into smaller pieces. Getting ready to grow wheat is not an easy job.

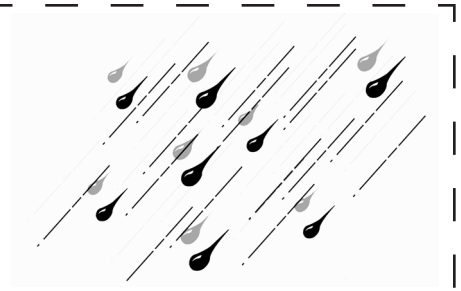


3. The winter wheat plant will grow about six inches before the frost comes. It is called winter wheat because it doesn't die when the weather gets cold. The wheat stops growing, but it stays green. This is called the "dormant period." When the sun warms the soil in the spring, the wheat starts to grow again.

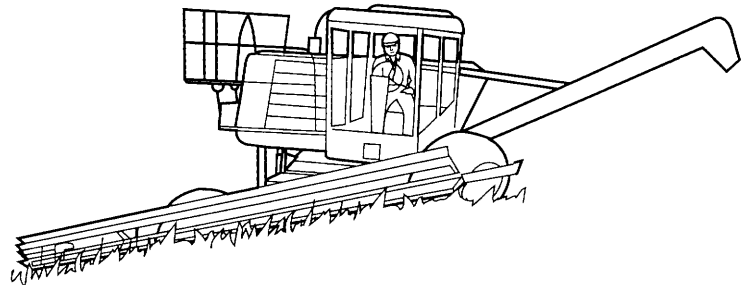


4. In the spring the warm, moist days make the wheat plants grow quickly. As it comes out of its dormancy period, more stalks of wheat sprout from the root. This is called "tillering." Each tiller can form a head of wheat.

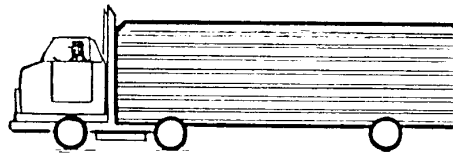
5. When the wheat is ready for harvest, Clarence and Susie must race with the weather to get it out of the fields. Some years the wind and rain keep the wheat from getting ripe. Other years hail might break all the heads. One year a lightening storm started a fire and burned their biggest field!



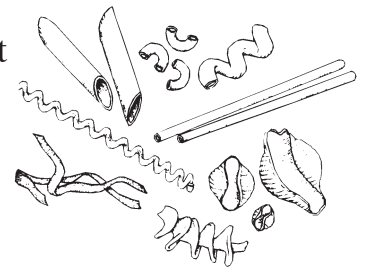
6. The Browns couldn't grow wheat if they didn't have the right kind of machinery. They use a plow and harrow to prepare the field. A grain drill helps them plant the wheat. They harvest the wheat with a combine. After the wheat is harvested, Clarence and Susie load the wheat on a truck and haul it to the grain elevator.



7. After wheat is harvested, the farmer must get it to the mill. Wheat can be transported in many different ways. It can be shipped by barges over water. It can be loaded onto rail cars and moved by train, or it can be hauled by trucks along interstate highways.



8. At the mill, workers test the wheat to decide what kind of flour they can make from it. If the wheat is soft, they use it to make flour that can be used to make cakes and pastries. If it is hard they make flour that keeps well and can be used for making bread. Durum wheat is the hardest kind of wheat. It can be used for making macaroni, spaghetti and noodles.



9. The wheat must be cleaned several times before it is ground into flour. Several disks separate the wheat kernels from weed seeds, dirt and small stones. A giant magnet removes any metal pieces that have fallen in with the wheat. Finally the kernels go into a giant water bath. Heavy materials sink to the bottom. Light materials float to the top and are washed away.

10. Now it its time to grind the kernels into flour. First, rollers crack them into smaller pieces. Then the huge machinery shakes them through several screens to make the pieces even smaller. If the wheat is to be made into white flour, air currents blow the bran away from the rest of the wheat. The bran is the outer layer of the wheat kernel. Smooth rollers grind the wheat finer and finer. Then the wheat is sifted through more screens, sometimes as many as 25 times. Each screen has smaller openings than the one before.



11. After the flour has been ground, workers add the extra ingredients. Some ingredients age the flour. Others whiten it. Vitamins and iron are also added to replace those that have been removed with the wheat germ and bran. Now the flour is ready for baking.

12. People buy the flour from the grocery store and take it home. Sometimes they use it to make birthday cake or cookies for classroom parties. Sometimes they make biscuits or pancakes for breakfast. Sometimes they use it to make bread. Wheat can be prepared in many different ways to make nutritious, delicious food.

