Name: _____ Date: _____

Three Parts Inside a Grain of Wheat

Circle group

A grain of wheat is a seed. Like many seeds, it has more than one part. If you cut one kernel open, you would find three main layers. Each one matters when flour is made.

The outside is the bran. It is a tough coat that protects the seed. Bran has a lot of fiber. It gives whole wheat bread its dark color. At one end is the germ. It is a tiny bundle that could grow into a new wheat plant. It has oils and vitamins. Most of the kernel is the endosperm. It is a white, starchy middle. It would feed the baby plant if the seed were sown.

When a miller grinds wheat, the parts can be kept together or sorted apart. Whole wheat flour has the bran, the germ and the endosperm. White flour is made mostly from the endosperm. The bran and germ are sifted out. That is why white flour is softer, paler and smoother.

There is one more difference. The oils in the germ can go stale. So whole wheat flour spoils sooner than white flour. Cooks store it in a cool place and use it within a few months. White flour has no germ, so it stays fresh much longer.

Questions

1. What are the three main parts of a wheat kernel?

_____

_____

2. Which part could grow into a new wheat plant?

_____

_____

3. What would the endosperm do if the seed were sown?

_____

_____

4. How is white flour different from whole wheat flour?

_____

_____

5. Why does whole wheat flour spoil sooner than white flour?

_____

_____

6. Why does whole wheat bread look darker?

_____

_____

Words to know

kernel: a whole seed of a grain plant
bran: the tough outer coat of a grain
endosperm: the starchy middle part of a seed
miller: a person who grinds grain into flour
sifted: shaken through a screen to separate parts

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Three Parts Inside a Grain of Wheat

Triangle group

A grain of wheat is a seed, and like many seeds it has more than one part. If you could slice a single kernel open, you would find three main layers, and each one matters when flour is made.

The outside is the bran, a tough coat that protects the seed. Bran is rich in fiber and gives whole wheat bread its darker color and its slightly nutty taste. Tucked at one end is the germ, a tiny bundle that could grow into a new wheat plant. It holds natural oils, along with vitamins. Filling most of the kernel is the endosperm, a starchy white middle that would feed the baby plant if the seed were sown.

When a miller grinds wheat, the parts can be kept together or sorted apart. Whole wheat flour includes the bran, the germ and the endosperm. White flour is made mostly from the endosperm alone, after the bran and germ have been sifted out. That is why white flour is softer, paler and smoother.

There is one useful difference for the kitchen. The oils in the germ can slowly go stale. Whole wheat flour usually spoils sooner than white flour, so cooks often store it in a cool place and use it within a few months. White flour, with the germ removed, stays fresh far longer.

Questions

1. What are the three main parts of a wheat kernel?

_____

_____

2. Which part could grow into a new wheat plant?

_____

_____

3. What would the endosperm do if the seed were sown?

_____

_____

4. How is white flour different from whole wheat flour?

_____

_____

5. Why does whole wheat flour spoil sooner than white flour?

_____

_____

6. Why does whole wheat bread look darker?

_____

_____

Words to know

kernel: a whole seed of a grain plant
bran: the tough outer coat of a grain
endosperm: the starchy middle part of a seed
miller: a person who grinds grain into flour
sifted: shaken through a screen to separate parts

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Three Parts Inside a Grain of Wheat

Square group

A grain of wheat is a seed, and like many seeds it is composed of more than one part. If you were able to slice a single kernel open, you would discover three main layers, each of which plays a part in the making of flour.

The outermost layer is the bran, a tough coat that shelters the seed. Bran is abundant in fiber and gives whole wheat bread its darker color as well as a slightly nutty taste. Tucked away at one end is the germ, a tiny bundle that could develop into a new wheat plant. It contains natural oils and a number of vitamins. Filling most of the kernel is the endosperm, a starchy white center that would nourish the young plant if the seed were sown.

When a miller grinds wheat, the parts can either be kept together or sorted apart. Whole wheat flour contains the bran, the germ and the endosperm alike. White flour, on the other hand, is made chiefly from the endosperm after the bran and germ have been sifted out, which explains why it is softer, paler and smoother.

There is one practical difference for the kitchen. The oils in the germ can slowly turn stale, so whole wheat flour generally spoils sooner than white flour. Cooks therefore store it in a cool place and tend to use it within a few months, whereas white flour, having lost its germ, remains fresh for far longer.

Questions

1. What are the three main layers inside a wheat kernel?

_____

_____

2. Which part could develop into a new wheat plant?

_____

_____

3. What would the endosperm do for the young plant if the seed were sown?

_____

_____

4. How does white flour differ from whole wheat flour?

_____

_____

5. Why does whole wheat flour generally spoil sooner than white flour?

_____

_____

6. Why does whole wheat bread have a darker color?

_____

_____

Words to know

kernel: a whole seed of a grain plant
bran: the tough outer coat of a grain
endosperm: the starchy middle part of a seed
miller: a person who grinds grain into flour
sifted: shaken through a screen to separate parts

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Three Parts Inside a Grain of Wheat

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Three Parts Inside a Grain of Wheat

Easier · 208 words · Flesch-Kincaid grade 2

1. The bran, the germ and the endosperm.
2. The germ.
3. Feed the baby plant.
4. It is made mostly from the endosperm, with the bran and germ sifted out.
5. It still has the germ, and the oils in the germ can go stale.
6. The bran gives it a dark color.

Triangle: Three Parts Inside a Grain of Wheat

This passage · 222 words · Flesch-Kincaid grade 5.3

1. The bran, the germ and the endosperm.
2. The germ.
3. Feed the baby plant.
4. It is made mostly from the endosperm, with the bran and germ sifted out.
5. It still has the germ, whose oils can slowly go stale.
6. The bran gives it a darker color.

Square: Three Parts Inside a Grain of Wheat

Harder · 243 words · Flesch-Kincaid grade 7.3

1. The bran, the germ and the endosperm.
2. The germ.
3. It would nourish the young plant.
4. It is made chiefly from the endosperm, after the bran and germ are sifted out.
5. It still contains the germ, whose oils can turn stale.
6. The bran gives it a darker color.