Name: _____ Date: _____

Why Swiss Cheese Has Holes

Circle group

Why does some cheese have holes? Swiss cheese is a good example. The round holes are called eyes. Tiny living things make them.

Cheese starts as milk. Cheesemakers add helpful bacteria to the milk. Bacteria are too small to see. They help turn the milk into curd. Curd is a soft solid. The cheesemaker presses the curd into a big wheel.

The wheel rests in a warm room for a few weeks. One kind of bacteria in the cheese gives off a gas. The cheese is thick, so the gas cannot get out. It makes small bubbles. The cheese gets firm, and the bubbles leave round holes.

The holes are not a mistake. They show the cheese aged the right way. Some cheesemakers say the holes go with the mild, nutty taste.

Cheddar has no holes. It is pressed tighter, so the gas has no room to make bubbles.

Questions

1. What are the holes in Swiss cheese called?

_____

_____

2. What do cheesemakers add to milk?

_____

_____

3. What makes the bubbles in the cheese?

_____

_____

4. Why does the gas make bubbles and not escape?

_____

_____

5. Are the holes a mistake?

_____

_____

6. Why does cheddar have no holes?

_____

_____

Words to know

bacteria: tiny living things too small to see
curd: the soft solid that forms when milk is made into cheese
aged: left to rest for a long time so the flavor changes
wheel: a large, round block of cheese

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: _____

Why Swiss Cheese Has Holes

Triangle group

Have you ever wondered why some cheese is full of holes? Swiss cheese is a good example. The round holes are called eyes, and they are made by tiny living things.

Cheese starts as milk. Cheesemakers add helpful bacteria to the milk. The bacteria are far too small to see. Then they turn the milk into a soft solid called curd, and they press the curd into a big wheel.

Next the wheel rests in a warm room for a few weeks. During this time, one kind of bacteria in the cheese gives off a gas. The gas cannot escape from the thick cheese, so it forms small bubbles. The bubbles stay in place as the cheese gets firm, and they leave behind round holes.

The holes are not a mistake. They are a sign that the cheese has aged the right way. Some cheesemakers say the holes also help give the cheese its mild, nutty taste.

Not all cheeses have holes. Cheddar, for example, is pressed more tightly, so there is no room for the gas to make bubbles.

Questions

1. What are the holes in Swiss cheese called?

_____

_____

2. What do cheesemakers add to milk to start making cheese?

_____

_____

3. What makes the bubbles inside the cheese?

_____

_____

4. Why does the gas turn into bubbles instead of escaping?

_____

_____

5. Are the holes a mistake?

_____

_____

6. Why does cheddar not have holes?

_____

_____

Words to know

bacteria: tiny living things too small to see
curd: the soft solid that forms when milk is made into cheese
aged: left to rest for a long time so the flavor changes
wheel: a large, round block of cheese

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: _____

Why Swiss Cheese Has Holes

Square group

Have you ever wondered why certain cheeses are full of holes? Swiss cheese is a famous example. Its round holes are called eyes, and they are produced by microscopic living things.

Cheese begins as milk. Cheesemakers stir helpful bacteria into the milk, and these organisms are far too small for anyone to see. The milk then turns into a soft solid called curd, which the cheesemaker presses into a large wheel.

Afterward, the wheel rests in a warm room for several weeks. During that time, one kind of bacteria inside the cheese gives off a gas. Because the cheese is so thick, the gas has nowhere to escape, so it gathers into small bubbles. The bubbles stay in place while the cheese grows firm, and they leave behind round holes.

The holes are not a mistake. They are a sign that the cheese has aged properly. Some cheesemakers also believe that the holes go along with the cheese's mild, nutty taste.

Not every cheese has holes. Cheddar, for instance, is pressed far more tightly, which leaves no room for the gas to form bubbles.

Questions

1. What are the round holes in Swiss cheese called?

_____

_____

2. What do cheesemakers stir into milk to begin making cheese?

_____

_____

3. What produces the bubbles inside the cheese?

_____

_____

4. Why does the gas gather into bubbles instead of escaping?

_____

_____

5. Are the holes in Swiss cheese a mistake?

_____

_____

6. Why does cheddar lack holes?

_____

_____

Words to know

bacteria: tiny living things too small to see
curd: the soft solid that forms when milk is made into cheese
aged: left to rest for a long time so the flavor changes
wheel: a large, round block of cheese

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: Why Swiss Cheese Has Holes

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

Circle: Why Swiss Cheese Has Holes

Easier · 149 words · Flesch-Kincaid grade 2.4

1. Eyes.
2. Helpful bacteria.
3. One kind of bacteria gives off a gas.
4. The cheese is thick, so the gas cannot get out.
5. No, they show the cheese aged the right way.
6. It is pressed tighter, so the gas has no room to make bubbles.

Triangle: Why Swiss Cheese Has Holes

This passage · 180 words · Flesch-Kincaid grade 3.6

1. Eyes.
2. Helpful bacteria.
3. A kind of bacteria gives off a gas.
4. The cheese is thick, so the gas cannot get out.
5. No, they are a sign the cheese has aged the right way.
6. It is pressed more tightly, so there is no room for gas bubbles.

Square: Why Swiss Cheese Has Holes

Harder · 184 words · Flesch-Kincaid grade 5.6

1. Eyes.
2. Helpful bacteria.
3. One kind of bacteria gives off a gas.
4. The cheese is so thick that the gas has nowhere to go.
5. No, they are a sign that the cheese has aged properly.
6. It is pressed far more tightly, which leaves no room for gas bubbles.