Name: _____ Date: _____

Pumice: The Rock That Floats on Water

Circle group

Most rocks sink when you drop them in a pond. Pumice is different. This light gray stone can float on water like a cork. It feels odd in your hand, too. It is rough and scratchy, and it is very light.

Pumice is born in a volcano. Deep under the ground, melted rock called magma holds a lot of gas. When the volcano erupts, the magma shoots up, and the pressure on it drops fast. The gas grows into thousands of bubbles, just like a soda fizzes when you open the bottle.

Then the froth cools so fast that it hardens before the bubbles can get out. The rock is full of tiny holes. Much of it is trapped air, so pumice weighs far less than most stone of the same size. That is why it floats.

People use pumice in many ways. It can be ground into a soft powder or used as a scrubbing stone for rough skin. Gardeners mix crushed pumice into soil so roots can find air and water.

After an eruption near the sea, floating pumice can wash across the ocean in big rafts. Small animals sometimes ride on them.

Questions

1. How is pumice different from most rocks?

_____

_____

2. Where does pumice come from?

_____

_____

3. What happens to the gas in magma when a volcano erupts?

_____

_____

4. Why does pumice float?

_____

_____

5. How do gardeners use crushed pumice?

_____

_____

6. Why does the passage talk about opening a soda?

_____

_____

Words to know

pumice: a light rock full of tiny air holes
magma: hot melted rock beneath the earth
erupts: bursts out with force, like a volcano
pressure: the force of something pushing on something else
froth: a mass of small bubbles

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: _____

Pumice: The Rock That Floats on Water

Triangle group

Most rocks sink the moment you drop them into a pond. Pumice is different. This light gray stone can bob on the surface of water like a cork. It even feels odd in your hand, because it is rough, scratchy and surprisingly light.

Pumice is born in a volcano. Deep underground, melted rock called magma holds a lot of dissolved gas. When the volcano erupts, the magma shoots upward, and the pressure on it drops quickly. The gas expands into thousands of bubbles, just as a soda fizzes when you open the bottle.

Then the froth cools so fast that it hardens before the bubbles can escape. The result is a rock full of tiny holes. Because so much of it is trapped air, pumice weighs far less than most stone of the same size, and that is why it floats.

Pumice has many uses. Pieces of it can be ground into a gentle powder or used as a scrubbing stone for rough skin. Gardeners mix crushed pumice into soil so that roots can find air and water.

Sometimes after an eruption near the sea, floating pumice washes across the ocean in great rafts. Small animals sometimes ride along on them.

Questions

1. What makes pumice different from most rocks?

_____

_____

2. Where does pumice come from?

_____

_____

3. What happens to the gas in magma when a volcano erupts?

_____

_____

4. Why does pumice float?

_____

_____

5. How do gardeners use crushed pumice?

_____

_____

6. Why does the passage compare an eruption to opening a soda?

_____

_____

Words to know

pumice: a light rock full of tiny air holes
magma: hot melted rock beneath the earth
erupts: bursts out with force, like a volcano
pressure: the force of something pushing on something else
froth: a mass of small bubbles

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: _____

Pumice: The Rock That Floats on Water

Square group

Nearly every rock sinks the instant it is dropped into a pond, but pumice behaves quite differently. This pale gray stone is capable of bobbing on the surface of water like a cork. It even feels peculiar in your hand, because it is rough, scratchy and astonishingly light.

Pumice is born inside a volcano. Deep underground, molten rock called magma holds a considerable amount of dissolved gas. When the volcano erupts, the magma surges upward, and the pressure bearing down on it falls abruptly. The gas expands into thousands of bubbles, just as a soda fizzes when the bottle is opened.

The froth then cools so swiftly that it hardens before the bubbles have a chance to escape. The result is a rock riddled with tiny holes. Because so much of it consists of trapped air, pumice weighs far less than most stone of comparable size, which explains why it floats.

Pumice has numerous practical uses. Pieces of it can be ground into a gentle powder or used as a scrubbing stone for rough skin. Gardeners blend crushed pumice into soil so that roots can reach both air and water.

Occasionally, after an eruption near the sea, floating pumice drifts across the ocean in enormous rafts, and small animals sometimes ride along on them.

Questions

1. What distinguishes pumice from nearly every other rock?

_____

_____

2. Where is pumice born?

_____

_____

3. What happens to the dissolved gas in magma when a volcano erupts?

_____

_____

4. Why is pumice able to float?

_____

_____

5. How do gardeners make use of crushed pumice?

_____

_____

6. Why does the passage compare an eruption to opening a soda bottle?

_____

_____

Words to know

pumice: a light rock full of tiny air holes
magma: hot melted rock beneath the earth
erupts: bursts out with force, like a volcano
pressure: the force of something pushing on something else
froth: a mass of small bubbles

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: Pumice: The Rock That Floats on Water

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

Circle: Pumice: The Rock That Floats on Water

Easier · 195 words · Flesch-Kincaid grade 3.6

1. It can float on water.
2. A volcano.
3. It grows into thousands of bubbles.
4. It has tiny holes full of air, so it is very light.
5. They mix it into soil so roots can get air and water.
6. Both let gas out as bubbles when the pressure drops.

Triangle: Pumice: The Rock That Floats on Water

This passage · 201 words · Flesch-Kincaid grade 5.4

1. It can float on water.
2. A volcano.
3. It expands into thousands of bubbles.
4. It is full of tiny holes with trapped air, so it weighs very little.
5. They mix it into soil so roots can get air and water.
6. Both let gas escape as bubbles when the pressure drops.

Square: Pumice: The Rock That Floats on Water

Harder · 214 words · Flesch-Kincaid grade 8.1

1. It is able to float on water.
2. Inside a volcano.
3. It expands into thousands of bubbles.
4. It is riddled with tiny air-filled holes, so it weighs very little.
5. They blend it into soil so roots can reach air and water.
6. In both cases, gas escapes as bubbles when the pressure falls.