Name: _____ Date: _____

Obsidian Is Glass Made by a Volcano

Circle group

Most rocks are dull and rough. Obsidian is smooth and shiny. It is usually black. It looks like glass. It is natural glass, and a volcano makes it.

A volcano sends out hot melted rock called lava. As lava cools, tiny pieces inside it usually lock together into crystals. That gives most rocks a grainy look. But sometimes thick lava cools very fast. The pieces have no time to line up. They freeze in a jumble. The result is glass.

Obsidian breaks in a special way. It does not crumble. It snaps into curved pieces with very sharp edges. Long ago, people used it to make blades and tools. Some of these tools were found far from any volcano. So people must have traded the stone over long distances.

Today, a rock collector can feel how smooth obsidian is. Be careful with broken pieces.

Questions

1. What does obsidian look like?

_____

_____

2. What makes obsidian?

_____

_____

3. Why is obsidian not grainy like most rocks?

_____

_____

4. How does obsidian break?

_____

_____

5. What do tools found far from a volcano suggest?

_____

_____

6. Why should you be careful with broken obsidian?

_____

_____

Words to know

obsidian: a smooth, shiny rock that looks like dark glass
lava: hot melted rock that flows out of a volcano
crystals: solid pieces of minerals with flat sides and sharp corners
blades: the sharp cutting parts of tools

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: _____

Obsidian Is Glass Made by a Volcano

Triangle group

Most rocks are dull and rough, but obsidian is smooth and shiny. It is usually black or very dark, and it looks like glass. In fact, it is a kind of natural glass, and a volcano makes it.

A volcano can send out hot melted rock called lava. As lava cools, the tiny pieces inside it usually have time to lock together into crystals. This gives most rocks a grainy look. Sometimes, though, a thick lava cools very quickly. The pieces do not have time to line up. They freeze in a jumble, and the result is glass.

Obsidian has a special way of breaking. It does not crumble. It snaps into curved pieces with edges that are extremely sharp. Because of that, people long ago used it to make blades and other tools. Some of those tools have been found far from any volcano, which shows that people traded the stone over long distances.

Today, a rock collector can hold a piece of obsidian and feel how smooth it is. It is wise to handle broken pieces with great care.

Questions

1. What does obsidian look like?

_____

_____

2. What makes obsidian?

_____

_____

3. Why does obsidian not have a grainy look like most rocks?

_____

_____

4. How does obsidian break?

_____

_____

5. What do tools found far from any volcano suggest?

_____

_____

6. Why should broken pieces of obsidian be handled with care?

_____

_____

Words to know

obsidian: a smooth, shiny rock that looks like dark glass
lava: hot melted rock that flows out of a volcano
crystals: solid pieces of minerals with flat sides and sharp corners
blades: the sharp cutting parts of tools

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: _____

Obsidian Is Glass Made by a Volcano

Square group

Most rocks are dull and rough, but obsidian is remarkably smooth and glossy. It is typically black or very dark, and it resembles glass. In fact, it is a form of natural glass, and it is produced by a volcano.

A volcano can release hot, melted rock known as lava. As lava cools, the tiny particles inside it usually have enough time to lock together into crystals, which gives most rocks a grainy appearance. Occasionally, however, a thick lava cools extremely quickly. The particles do not have time to arrange themselves in order. They freeze in a jumble, and the result is glass.

Obsidian has a distinctive way of breaking. Instead of crumbling, it snaps into curved pieces with astonishingly sharp edges. For that reason, people long ago used it to make blades and other tools. Some of those tools have been discovered far from any volcano, which shows that people traded the stone across great distances.

Today, a rock collector can hold a piece of obsidian and feel how smooth it is, although it is wise to handle broken pieces with great care.

Questions

1. How would you describe the appearance of obsidian?

_____

_____

2. What produces obsidian?

_____

_____

3. Why does obsidian lack the grainy appearance of most rocks?

_____

_____

4. How does obsidian break?

_____

_____

5. What do tools discovered far from any volcano suggest?

_____

_____

6. Why is it wise to handle broken obsidian with great care?

_____

_____

Words to know

obsidian: a smooth, shiny rock that looks like dark glass
lava: hot melted rock that flows out of a volcano
crystals: solid pieces of minerals with flat sides and sharp corners
blades: the sharp cutting parts of tools

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: Obsidian Is Glass Made by a Volcano

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

Circle: Obsidian Is Glass Made by a Volcano

Easier · 144 words · Flesch-Kincaid grade 4.3

1. It is smooth, shiny, usually black, and looks like glass.
2. A volcano, when thick lava cools very fast.
3. The pieces had no time to line up into crystals.
4. It snaps into curved pieces with very sharp edges.
5. People traded the stone over long distances.
6. The edges are very sharp.

Triangle: Obsidian Is Glass Made by a Volcano

This passage · 181 words · Flesch-Kincaid grade 5.2

1. It is smooth, shiny, usually dark, and looks like glass.
2. A volcano, when thick lava cools very quickly.
3. The pieces did not have time to line up into crystals.
4. It snaps into curved pieces with very sharp edges.
5. That people traded the stone over long distances.
6. Their edges are extremely sharp.

Square: Obsidian Is Glass Made by a Volcano

Harder · 184 words · Flesch-Kincaid grade 7.9

1. It is smooth, glossy, typically dark, and resembles glass.
2. A volcano, when thick lava cools extremely quickly.
3. Its particles did not have time to arrange themselves into crystals.
4. It snaps into curved pieces with astonishingly sharp edges.
5. That people traded the stone across great distances.
6. Its edges are extremely sharp.