Name: _____ Date: _____

Ultramarine, the Blue Paint Brought Across the Sea

Circle group

Long ago, one blue paint cost a lot of money. Painters in Europe called it ultramarine. The name means "beyond the sea." The blue did not come from nearby. It was carried across the sea from far away.

The paint began as a stone called lapis lazuli. This deep blue rock was dug from mountains in Afghanistan. Traders took it to workshops on long routes. Making paint from it took time. Workers ground the stone into powder. They mixed the powder with wax and oils. They washed it again and again. Only the purest blue was left at the end.

The work was slow, and the stone cost a lot. So a painter might save ultramarine for the most important parts of a picture. A rich client sometimes paid for the paint on its own. Cheaper blues were used for skies and backgrounds.

In the 1800s, chemists learned how to make a like blue in a factory. It was bright and steady and cost much less. Today, an artist can buy a tube of ultramarine for a small price. The paint still has a name from the days when a color could cross an ocean.

Questions

1. What does ultramarine mean?

_____

_____

2. What stone was used to make the first blue paint?

_____

_____

3. Where was the stone dug up?

_____

_____

4. How did workers turn the stone into pigment?

_____

_____

5. Why might a painter save ultramarine for the most important parts?

_____

_____

6. What changed in the 1800s?

_____

_____

Words to know

ground: crushed into tiny bits
chemists: scientists who study how materials mix and change
steady: not changing, staying the same

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: _____

Ultramarine, the Blue Paint Brought Across the Sea

Triangle group

Hundreds of years ago, some blue paint cost a great deal of money. Painters in Europe called it ultramarine, a name that means "beyond the sea." The blue did not come from nearby. It was carried across the sea from far away.

The paint began as a stone called lapis lazuli. This deep blue rock was dug out of mountains in Afghanistan and sent to workshops by long trade routes. Making a good pigment from it took patience. Workers ground the stone to a powder, then kneaded the powder with wax and oils, and washed it again and again. Only the purest blue settled out in the end.

Because the work was slow and the stone was costly, a painter might save ultramarine for the most important parts of a picture. A rich client sometimes even paid for the paint separately. Cheaper blues were used for skies and backgrounds.

Things changed in the 1800s, when chemists learned how to make a similar blue in a factory. The new color was bright, steady, and much less expensive. Today an artist can buy a tube of ultramarine at a shop for a small price. Even so, the paint still carries a name from the days when a color could cross an ocean.

Questions

1. What does the word ultramarine mean?

_____

_____

2. What stone was used to make the original blue paint?

_____

_____

3. Where was the stone dug out of the ground?

_____

_____

4. What did workers do to turn the stone into pigment?

_____

_____

5. Why might a painter save ultramarine for the most important parts of a picture?

_____

_____

6. What changed in the 1800s?

_____

_____

Words to know

pigment: a colored powder that is mixed into paint
ground: crushed into tiny bits
costly: expensive, costing a lot of money
chemists: scientists who study how materials mix and change
steady: not changing, staying the same

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: _____

Ultramarine, the Blue Paint Brought Across the Sea

Square group

Several hundred years ago, one particular blue paint cost an enormous amount of money. Painters throughout Europe called it ultramarine, a name meaning "beyond the sea," because the color was not found nearby but was transported across the water from distant lands.

The paint originated from a stone known as lapis lazuli. This deep blue rock was quarried from mountains in Afghanistan and sent to workshops along lengthy trade routes. Producing a fine pigment from it demanded considerable patience: workers ground the stone to a powder, kneaded the powder with wax and oils, and washed it repeatedly until only the purest blue settled out.

Since the process was slow and the stone was so costly, a painter might reserve ultramarine for the most significant parts of a picture, and a wealthy client sometimes paid for the paint separately. Cheaper blues were used for skies and backgrounds.

Matters changed in the 1800s, when chemists discovered how to manufacture a similar blue in a factory. The new color was bright, steady, and far less expensive. Today, an artist can buy a tube of ultramarine at a shop for a modest price, although the paint still carries a name from the era when a color could cross an entire ocean.

Questions

1. What does the word ultramarine mean?

_____

_____

2. Which stone was the source of the original blue paint?

_____

_____

3. Where was the stone quarried?

_____

_____

4. What steps did workers follow to produce pigment from the stone?

_____

_____

5. Why might a painter reserve ultramarine for the most significant parts of a picture?

_____

_____

6. What changed in the 1800s?

_____

_____

Words to know

pigment: a colored powder that is mixed into paint
ground: crushed into tiny bits
costly: expensive, costing a lot of money
chemists: scientists who study how materials mix and change
steady: not changing, staying the same

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: Ultramarine, the Blue Paint Brought Across the Sea

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

Circle: Ultramarine, the Blue Paint Brought Across the Sea

Easier · 195 words · Flesch-Kincaid grade 2.9

1. Beyond the sea.
2. Lapis lazuli.
3. In the mountains of Afghanistan.
4. They ground it to powder, mixed it with wax and oils, and washed it many times.
5. It was slow to make and cost a lot, so it was too precious to use everywhere.
6. Chemists learned to make a like blue in a factory, so it cost less.

Triangle: Ultramarine, the Blue Paint Brought Across the Sea

This passage · 210 words · Flesch-Kincaid grade 5.1

1. Beyond the sea.
2. Lapis lazuli.
3. In the mountains of Afghanistan.
4. They ground it to a powder, kneaded it with wax and oils, and washed it many times.
5. It was slow to make and costly, so it was too precious to use everywhere.
6. Chemists learned to make a similar blue in a factory, so it became cheaper.

Square: Ultramarine, the Blue Paint Brought Across the Sea

Harder · 207 words · Flesch-Kincaid grade 10.4

1. Beyond the sea.
2. Lapis lazuli.
3. In the mountains of Afghanistan.
4. They ground it to a powder, kneaded it with wax and oils, and washed it repeatedly.
5. It was slow to make and costly, so it was too precious to use everywhere.
6. Chemists discovered how to make a similar blue in a factory, which made it cheaper.