Name: _____ Date: _____

Finding Islands by Stars and Swells

Circle group

Long ago, people in the Pacific Ocean sailed big canoes from island to island. They had no compasses. They had no maps. Still, they crossed hundreds of miles of open sea. This skill is called wayfinding.

A wayfinder watched the sky. Stars rise in the east and set in the west. A star comes up at the same spot on the horizon each night. A sailor could steer toward a star and keep going straight.

A wayfinder also felt the sea. Swells are waves that roll in steady lines. At night, a sailor felt the swells rock the canoe and knew which way to point it.

Birds helped too. Some seabirds fly out to sea in the morning and return to land at night. If they flew home, land was near.

Wayfinders did not write lessons down. They learned from teachers and kept them in songs and stories.

Questions

1. What did Pacific sailors use instead of compasses and maps?

_____

_____

2. Where do stars rise?

_____

_____

3. What are swells?

_____

_____

4. Why could a sailor feel the swells in the dark?

_____

_____

5. What might it mean when seabirds fly toward land at night?

_____

_____

6. How did wayfinders keep what they knew without writing?

_____

_____

Words to know

wayfinding: finding your way across a long distance without tools like maps
horizon: the line where the sky seems to meet the land or sea
swells: long, smooth waves that move across the open sea

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: _____

Finding Islands by Stars and Swells

Triangle group

Long ago, people in the Pacific Ocean sailed in big canoes from one tiny island to another. They had no compasses and no maps. Still, they found their way across hundreds of miles of open water. This skill is called wayfinding.

A wayfinder watched the sky. Stars rise in the east and set in the west, and each star comes up at the same spot on the horizon night after night. A sailor could steer toward a certain star and stay on course.

A wayfinder also paid attention to the sea. Ocean waves called swells roll in steady lines. Even in the dark, a sailor could feel the swells rocking the canoe and tell which way to point it.

Birds gave clues too. Some seabirds fly out to sea in the morning and come back to land at night. If a wayfinder saw them heading home, land was probably near.

Wayfinders did not write these lessons down. They learned them from teachers and remembered them in songs and stories.

Questions

1. What did Pacific sailors use to travel instead of compasses and maps?

_____

_____

2. Where do stars rise?

_____

_____

3. What are swells?

_____

_____

4. Why could a sailor feel the swells even in the dark?

_____

_____

5. What might it mean when seabirds fly back toward land in the evening?

_____

_____

6. How did wayfinders keep their knowledge without writing?

_____

_____

Words to know

wayfinding: finding your way across a long distance without tools like maps
horizon: the line where the sky seems to meet the land or sea
swells: long, smooth waves that move across the open sea
clues: small signs that help you figure something out

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: _____

Finding Islands by Stars and Swells

Square group

Centuries ago, people throughout the Pacific Ocean sailed enormous canoes from one tiny island to another. Although they possessed neither compasses nor maps, they successfully traveled hundreds of miles across open water. This remarkable skill is known as wayfinding.

A wayfinder studied the sky with great care. Stars rise in the east and set in the west, and each star emerges at precisely the same point on the horizon night after night. A sailor could therefore steer toward a particular star and remain on course.

A wayfinder was equally attentive to the sea itself. Ocean swells, which are waves that travel in steady, regular lines, could be felt as they rocked the canoe, so even in total darkness a sailor could tell which direction to point it.

Birds offered additional clues. Certain seabirds fly far out to sea each morning and return to land at night, so a wayfinder who watched them heading home could guess that land was probably nearby.

Wayfinders never wrote these lessons down. Instead, they learned them from their teachers and preserved them in songs and stories.

Questions

1. What did Pacific sailors rely on in place of compasses and maps?

_____

_____

2. In which direction do stars rise?

_____

_____

3. What are ocean swells?

_____

_____

4. Why could a sailor sense the swells even in total darkness?

_____

_____

5. What could it mean if seabirds were heading back toward land at night?

_____

_____

6. How did wayfinders preserve their knowledge without writing it down?

_____

_____

Words to know

wayfinding: finding your way across a long distance without tools like maps
horizon: the line where the sky seems to meet the land or sea
swells: long, smooth waves that move across the open sea
clues: small signs that help you figure something out

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: Finding Islands by Stars and Swells

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

Circle: Finding Islands by Stars and Swells

Easier · 148 words · Flesch-Kincaid grade 2.4

1. They used stars, swells and birds.
2. In the east.
3. Waves that roll in steady lines.
4. The swells rocked the canoe, so no one had to see them.
5. Land is probably close.
6. They learned from teachers and kept it in songs and stories.

Triangle: Finding Islands by Stars and Swells

This passage · 169 words · Flesch-Kincaid grade 4.2

1. They used the stars, the swells and the birds.
2. In the east.
3. Waves that roll in steady lines across the ocean.
4. The swells rocked the canoe, so the sailor did not need to see them.
5. Land is probably close.
6. They learned from teachers and remembered it in songs and stories.

Square: Finding Islands by Stars and Swells

Harder · 181 words · Flesch-Kincaid grade 8.3

1. They relied on the stars, the swells and the birds.
2. In the east.
3. Waves that travel in steady, regular lines across the sea.
4. The swells rocked the canoe, so the sailor could feel them without seeing them.
5. Land was probably nearby.
6. They learned from teachers and kept it in songs and stories.