Name: _____ Date: _____

Why the Date Line Zigzags Across the Pacific

Circle group

Picture a ship crossing the Pacific Ocean. On the day it passes an invisible line, the calendar jumps. Sail west across the line and you skip a day. Sail east and you get the same day again. This is the International Date Line.

We need the line because the Earth spins. It is morning in some places while it is night in others. Each time zone is about one hour from the next. If you go all the way around the world, you pass through every zone. Somewhere the date has to change. Mapmakers put the change in the Pacific, where there is mostly water and few people.

The Date Line runs north to south, near the 180 degree line of longitude. But on a map it is not straight. It bends around islands and countries. People who live close together should share the same date. It would be odd for one island to have Monday while its neighbor has Tuesday. Schools, jobs, and families need the same day.

So the line follows the choices of the countries it passes. Those choices have changed a few times. That is why the line zigzags.

Questions

1. What happens when you sail west across the Date Line?

_____

_____

2. Why does the date have to change somewhere?

_____

_____

3. Why did mapmakers put the line in the Pacific?

_____

_____

4. Near which line of longitude does the Date Line run?

_____

_____

5. Why does the line bend around islands?

_____

_____

6. Why might the zigzag change over time?

_____

_____

Words to know

invisible: not able to be seen
zone: an area that is treated as one part
longitude: imaginary lines that run from pole to pole on a map
mapmakers: people who draw and design maps
zigzags: turns sharply left and right again and again

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 the Date Line Zigzags Across the Pacific

Triangle group

Imagine crossing the Pacific Ocean on a ship. On the day you pass a certain invisible line, the calendar jumps. Sail west across it and you skip a day. Sail east and you get the same day again. That line is called the International Date Line.

The line is needed because the Earth spins, so it is morning in some places while it is night in others. Each time zone is about an hour from its neighbors. If you travel all the way around the world, you pass through every zone, and somewhere along the way the date has to change. Mapmakers placed the change in the Pacific, where there is mostly water and few people.

The Date Line runs roughly north to south along the 180 degree line of longitude, which is halfway around the globe from the Prime Meridian. But look at a map and you will see that it is not a straight line. It bends and steps around island groups and countries. This is because people who live close together would find it very strange to have one island on Monday and its neighbor on Tuesday. Their workplaces, schools, and families need to share the same date.

So the line follows the choices of the countries it passes. Those choices have shifted a few times over the years, which is why the Date Line zigzags.

Questions

1. What happens when you sail west across the International Date Line?

_____

_____

2. Why does the date have to change somewhere on Earth?

_____

_____

3. Why did mapmakers place the line in the Pacific?

_____

_____

4. Along which line of longitude does the Date Line roughly run?

_____

_____

5. Why does the Date Line bend around islands?

_____

_____

6. Why might the zigzag shape change over time?

_____

_____

Words to know

invisible: not able to be seen
zone: an area that is treated as one part
longitude: imaginary lines that run from pole to pole on a map
mapmakers: people who draw and design maps
zigzags: turns sharply left and right again and again

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 the Date Line Zigzags Across the Pacific

Square group

Imagine sailing across the Pacific Ocean on a ship. On the day you cross a certain invisible boundary, the calendar suddenly leaps. Travel west across it and you lose an entire day, while traveling east gives you the same day a second time. That boundary is called the International Date Line.

Such a line is necessary because the Earth rotates, so it is morning in some regions while it is night in others. Each time zone differs from its neighbor by roughly an hour, and anyone who travels completely around the world passes through every zone. Somewhere along the journey the date must change, and mapmakers chose to place that change in the Pacific, where there is mostly open water and very few people.

The Date Line runs roughly north to south along the 180 degree line of longitude, which lies halfway around the globe from the Prime Meridian. A glance at a map, however, reveals that it is far from straight. It bends and steps around island groups and countries, since people who live close together would find it bewildering for one island to be on Monday while its nearest neighbor is on Tuesday. Workplaces, schools, and families all depend on sharing the same date.

The line therefore follows the decisions of the countries it passes, and those decisions have shifted several times over the years, which explains why the Date Line zigzags.

Questions

1. What happens to the calendar when you travel west across the International Date Line?

_____

_____

2. Why must the date change somewhere on Earth?

_____

_____

3. Why did mapmakers place the line in the Pacific?

_____

_____

4. Along which line of longitude does the Date Line roughly run?

_____

_____

5. Why does the Date Line bend around islands?

_____

_____

6. Why might the zigzag shape change in the future?

_____

_____

Words to know

invisible: not able to be seen
zone: an area that is treated as one part
longitude: imaginary lines that run from pole to pole on a map
mapmakers: people who draw and design maps
zigzags: turns sharply left and right again and again

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 the Date Line Zigzags Across the Pacific

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

Circle: Why the Date Line Zigzags Across the Pacific

Easier · 192 words · Flesch-Kincaid grade 3.6

1. You skip a day.
2. The Earth spins, and going around the world passes every time zone.
3. There is mostly water there and few people.
4. The 180 degree line.
5. Neighbors should share the same date for school, jobs, and family life.
6. The line follows the choices of countries, and those choices can change.

Triangle: Why the Date Line Zigzags Across the Pacific

This passage · 228 words · Flesch-Kincaid grade 5.7

1. You skip a day.
2. The Earth spins, so each place has a different time of day, and going around the world passes through every zone.
3. There is mostly water there and few people.
4. The 180 degree line.
5. Neighbors need to share the same date for school, work, and family life.
6. The line follows the choices of the countries it passes, and those choices can shift.

Square: Why the Date Line Zigzags Across the Pacific

Harder · 233 words · Flesch-Kincaid grade 9.6

1. You lose an entire day.
2. The Earth rotates, so every place has a different time of day, and going around passes through every zone.
3. There is mostly open water there and very few people.
4. The 180 degree line.
5. Neighbors would be confused to have different dates, and work, school, and family need the same one.
6. The line follows the decisions of the countries it passes, and those can shift.