Name: _____ Date: _____

How a River Loop Becomes an Oxbow Lake

Circle group

A river on a flat plain rarely runs straight. It winds in wide loops called meanders. Over many years, the loops change shape. Sometimes a loop is cut off and left behind as a curved lake. Its shape looks like the U-shaped piece of an ox's yoke, so it is called an oxbow lake.

It starts with a difference in speed. On the outside of a bend, the water moves faster and wears away the bank. On the inside, the current is slower. Sand and mud settle out of the water and build a small beach called a point bar. The outer bank erodes and the inner bank grows. The bend swings sideways and gets more curved. Over time, the loop becomes a narrow neck of land.

At last the neck is so thin that the river breaks through. This often happens in a flood, when the water is high and strong. The river takes the shortcut. The old loop is left out. Sand and mud at its ends seal it off from the main channel. The curved water that is left is an oxbow lake.

An oxbow lake has no strong current. It slowly fills with fine mud and the remains of plants. Marsh plants spread across it. The lake shrinks into a swamp or meadow. It leaves a curved scar on the land that can be seen from the air. The river keeps shifting. A river's path is never permanent, so people who build roads, farms, and towns near rivers often have to plan for change.

Questions

1. What is a meander?

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2. Where does the water move faster at a bend?

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3. What is a point bar?

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4. How does an oxbow lake form?

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5. Why does an oxbow lake slowly fill in?

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6. Why must people who build near rivers plan for change?

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Words to know

meanders: wide, winding bends in a river
erodes: slowly wears away, as water wears away a bank
current: the steady flow of water in one direction
marsh: soft, wet land where grasses and reeds grow

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: _____

How a River Loop Becomes an Oxbow Lake

Triangle group

A river flowing across a flat plain rarely runs straight. It winds in broad loops called meanders, and over many years those loops change shape. Sometimes a loop is cut off completely and left behind as a curved lake, which, because its shape resembles the U-shaped piece of an ox's yoke, is called an oxbow lake.

The process starts with a difference in the speed of the water. On the outside of a bend, the water moves faster and wears away the bank. On the inside, the current is slower, and sand and mud settle out of the water to build a small beach called a point bar. As the outer bank erodes and the inner bank grows, the bend swings sideways and becomes more curved, and over time the loop turns into a narrow neck of land.

Eventually the neck becomes so thin that the river breaks through, often during a flood when the water is high and powerful. The river then takes the shortcut. The old loop is suddenly bypassed. Sand and mud deposited at its ends seal it off from the main channel, and the curved stretch of water that remains becomes an oxbow lake.

An oxbow lake has no strong current, so it slowly fills with fine mud and the remains of plants. Marsh plants spread across it, and the lake shrinks into a swamp or meadow, leaving a curved scar on the land that can still be seen from the air. Meanwhile the river keeps shifting. Because meanders move, a river's path is never permanent, and people who build roads, farms, and towns near rivers often have to plan for that change.

Questions

1. What is a meander?

_____

_____

2. Where does the water move faster at a bend in a river?

_____

_____

3. What is a point bar?

_____

_____

4. How does an oxbow lake form?

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_____

5. Why does an oxbow lake slowly fill in?

_____

_____

6. Why must people who build near rivers plan for change?

_____

_____

Words to know

meanders: wide, winding bends in a river
erodes: slowly wears away, as water wears away a bank
current: the steady flow of water in one direction
deposited: dropped and left in a place
marsh: soft, wet land where grasses and reeds grow

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: _____

How a River Loop Becomes an Oxbow Lake

Square group

A river that flows across a broad, flat plain rarely follows a straight course. Instead it winds in sweeping loops called meanders, and over the span of many years those loops gradually change shape. Occasionally a loop is severed entirely and left behind as a curved lake. Because its form resembles the U-shaped piece of an ox's yoke, it is known as an oxbow lake.

The process begins with a difference in the speed of the water. On the outside of a bend, the water moves faster and wears away the bank. On the inside, the current is slower, and sand and mud settle out of the water to build a small beach called a point bar. As the outer bank erodes and the inner bank grows, the bend swings sideways and becomes increasingly curved. In time the loop turns into a very narrow neck of land.

Eventually the neck becomes so thin that the river breaks through, frequently during a flood when the water is high and powerful. The river then takes the shortcut, and the old loop is suddenly bypassed. Sand and mud deposited at its two ends seal it off from the main channel, and the curved stretch of water that remains becomes an oxbow lake.

An oxbow lake has no strong current, so it slowly fills with fine mud and the remains of plants. Marsh plants spread across its surface, and the lake shrinks into a swamp or meadow, leaving behind a curved scar on the land that can still be seen from the air. Meanwhile the river continues to shift. Because meanders move, a river's path is never permanent, and the people who build roads, farms, and towns near rivers often have to plan for that change.

Questions

1. What is a meander?

_____

_____

2. Where does the water move faster at a bend in a river?

_____

_____

3. What is a point bar?

_____

_____

4. How does an oxbow lake come into being?

_____

_____

5. Why does an oxbow lake slowly fill in?

_____

_____

6. Why do people who build near rivers often have to plan for change?

_____

_____

Words to know

meanders: wide, winding bends in a river
erodes: slowly wears away, as water wears away a bank
current: the steady flow of water in one direction
deposited: dropped and left in a place
marsh: soft, wet land where grasses and reeds grow

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: How a River Loop Becomes an Oxbow Lake

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

Circle: How a River Loop Becomes an Oxbow Lake

Easier · 259 words · Flesch-Kincaid grade 2.8

1. A wide, winding loop in a river.
2. On the outside of the bend.
3. A small beach of sand and mud on the inside of a bend.
4. The river breaks through the thin neck and takes the shortcut, and sand and mud seal off the old loop.
5. It has no strong current, so mud and the remains of plants collect in it.
6. Meanders move, so a river's path is never permanent.

Triangle: How a River Loop Becomes an Oxbow Lake

This passage · 278 words · Flesch-Kincaid grade 7.1

1. A broad, winding loop in a river.
2. On the outside of the bend.
3. A small beach of sand and mud that builds up on the inside of a bend.
4. The river breaks through the narrow neck and takes the shortcut, and sand and mud seal off the old loop.
5. It has no strong current, so mud and the remains of plants collect in it.
6. Meanders move, so a river's path is never permanent.

Square: How a River Loop Becomes an Oxbow Lake

Harder · 293 words · Flesch-Kincaid grade 7.5

1. A sweeping, winding loop in a river.
2. On the outside of the bend.
3. A small beach of sand and mud that builds up on the inside of a bend.
4. The river breaks through the narrow neck and takes the shortcut, and deposited sand and mud seal off the old loop.
5. It has no strong current, so fine mud and the remains of plants collect in it.
6. Meanders move, so a river's path is never permanent.