Name: _____ Date: _____

Brackish Water: Where a River Meets the Sea

Circle group

A river has fresh water. The sea has salt water. Where they meet, they mix. This place is an estuary. Its water is brackish. That means it is saltier than a river but less salty than the open ocean.

The mix changes all the time. When the tide rises, salty water pushes up the river mouth. When the tide falls, fresh water flows out to the sea. Heavy rain upstream makes the water fresher. A dry spell makes it saltier. Animals here must cope with the changes. Oysters close their shells tight when the water shifts. Crabs scuttle to a better spot.

Estuaries are also nurseries. Young fish and shrimp grow up in the calm, shallow water. There is lots to eat. Then they move out to sea. Marsh plants slow the water and catch mud. Their roots help to clean it. People work to protect estuaries.

Questions

1. What is an estuary?

_____

_____

2. What does brackish mean?

_____

_____

3. What happens when the tide rises?

_____

_____

4. How do oysters cope when the water changes?

_____

_____

5. Why is an estuary a good nursery for young fish and shrimp?

_____

_____

6. How can heavy rain upstream change an estuary?

_____

_____

Words to know

estuary: the wide mouth of a river where fresh water meets the sea
brackish: a little salty, but not as salty as the sea
tide: the daily rise and fall of the sea along the shore
cope: to deal with something hard and manage well
marsh: low, 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: _____

Brackish Water: Where a River Meets the Sea

Triangle group

A river carries fresh water, and the sea holds salt water. At the place where they meet, they mix. This area is called an estuary, and its water is brackish, which means it is saltier than a river but less salty than the open ocean.

The mix is never quite the same twice. When the tide rises, salty water pushes up into the river mouth. When the tide falls, fresh water flows out toward the sea. Heavy rain upstream can make the estuary fresher, and a dry spell can make it saltier. Animals that live here must cope with changes that would trouble many other creatures. Oysters close their shells tightly when the water shifts too much, and crabs scuttle to a better spot.

Estuaries are also nurseries. Many kinds of young fish and shrimp grow up in the calm, shallow water, where there is plenty to eat, before they move out to sea. Marsh plants along the edge slow the water and catch mud, and their roots help to clean it. Because estuaries are so useful to so many animals, people work to protect them.

Questions

1. What is an estuary?

_____

_____

2. What does brackish mean?

_____

_____

3. What happens to the estuary water when the tide rises?

_____

_____

4. How do oysters cope when the water changes too much?

_____

_____

5. Why is an estuary a good nursery for young fish and shrimp?

_____

_____

6. How can heavy rain upstream change an estuary?

_____

_____

Words to know

estuary: the wide mouth of a river where fresh water meets the sea
brackish: a little salty, but not as salty as the sea
tide: the daily rise and fall of the sea along the shore
cope: to deal with something hard and manage well
marsh: low, 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: _____

Brackish Water: Where a River Meets the Sea

Square group

A river carries fresh water, while the sea holds salt water, and at the place where the two meet, they mingle. This region is called an estuary, and its water is described as brackish, which means that it is saltier than a river yet considerably less salty than the open ocean.

The mixture is never quite the same twice. When the tide rises, salty water pushes far up into the mouth of the river, and when the tide falls, fresh water flows out toward the sea. Heavy rain upstream can make the estuary fresher, whereas a long dry spell can make it saltier. Animals that live here must cope with changes that would trouble many other creatures. Oysters close their shells tightly when the water shifts too much, and crabs scuttle off to a more comfortable spot.

Estuaries also serve as nurseries. Many kinds of young fish and shrimp grow up in the calm, shallow water, where there is plenty to eat, before they venture out to sea. Marsh plants along the edge slow the moving water and catch the mud it carries, and their roots help to clean it. Because estuaries are so valuable to so many animals, people work hard to protect them.

Questions

1. What is an estuary?

_____

_____

2. What does the word brackish mean?

_____

_____

3. What happens to the water in an estuary when the tide rises?

_____

_____

4. How do oysters cope when the water shifts too much?

_____

_____

5. Why is an estuary such a good nursery for young fish and shrimp?

_____

_____

6. How can heavy rain upstream change the water in an estuary?

_____

_____

Words to know

estuary: the wide mouth of a river where fresh water meets the sea
brackish: a little salty, but not as salty as the sea
tide: the daily rise and fall of the sea along the shore
cope: to deal with something hard and manage well
marsh: low, 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: Brackish Water: Where a River Meets the Sea

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

Circle: Brackish Water: Where a River Meets the Sea

Easier · 147 words · Flesch-Kincaid grade 2.7

1. The place where a river meets the sea and their waters mix.
2. Saltier than a river but less salty than the open ocean.
3. Salty water pushes up the river mouth.
4. They close their shells tight.
5. The water is calm and shallow, and there is lots to eat.
6. It makes the water fresher because more river water flows in.

Triangle: Brackish Water: Where a River Meets the Sea

This passage · 186 words · Flesch-Kincaid grade 6.1

1. The place where a river meets the sea and their waters mix.
2. Saltier than a river but less salty than the open ocean.
3. Salty water pushes up into the river mouth.
4. They close their shells tightly.
5. The water is calm and shallow, and there is plenty to eat.
6. It makes the water fresher because more river water flows in.

Square: Brackish Water: Where a River Meets the Sea

Harder · 205 words · Flesch-Kincaid grade 8.3

1. The place where a river meets the sea and their waters mingle.
2. Saltier than a river but less salty than the open ocean.
3. Salty water pushes far up into the mouth of the river.
4. They close their shells tightly.
5. The water is calm and shallow, and there is plenty to eat.
6. It makes the water fresher because more river water flows in.