Name: _____ Date: _____

The Moon Gives the Sea a Tug

Circle group

Visit a beach in the morning and again in the afternoon. The sea may look very different. In the morning the water may be high on the sand. Later it may be far out. Wet sand and shells are left behind. The water goes in and out because of tides.

The Moon causes most tides. The Moon is far away, but it pulls on Earth. The pull cannot move rocks and land. But it can tug on the oceans. Water on the side facing the Moon is pulled into a bulge. Water on the far side bulges too.

Earth turns, so each beach moves through the bulges. In a bulge, the water is high. That is high tide. Between the bulges, the water is low. That is low tide.

Most beaches have two high tides and two low tides a day. Many animals need this. At low tide, you can look in tide pools for crabs and sea stars.

Questions

1. What makes the water at a beach go in and out?

_____

_____

2. What causes most tides?

_____

_____

3. What is it called when the water is high?

_____

_____

4. How many high tides do most beaches have a day?

_____

_____

5. What can people see in tide pools at low tide?

_____

_____

6. Why does the Moon move the oceans but not the land?

_____

_____

Words to know

tides: the daily rise and fall of the sea
bulge: a round part that sticks out
tug: a quick, strong pull

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: _____

The Moon Gives the Sea a Tug

Triangle group

Stand on a beach at sunrise and again at sunset, and the sea may seem like a different place. At sunrise the water may lap close to the dunes. Later it may be far out, with wet sand and shells left behind. The sea moves in and out because of the tides.

Most tides begin with the Moon. The Moon is far away, but it still pulls on Earth. That pull cannot shift rocks and land. Yet it can tug on the oceans. The water on the side facing the Moon is pulled into a bulge. Water on the other side bulges too.

As Earth turns, each beach moves through these bulges. A beach inside a bulge has deep water, which is high tide. A beach between the bulges has shallow water, which is low tide.

Most beaches have about two high tides and two low tides each day. Many animals depend on this pattern. At low tide, children and birds can look in tide pools for crabs and sea stars.

Questions

1. What causes the water at a beach to go in and out?

_____

_____

2. What mostly causes the tides?

_____

_____

3. What is it called when the water is high on the beach?

_____

_____

4. About how many high tides do most beaches have each day?

_____

_____

5. What can people find in tide pools at low tide?

_____

_____

6. Why does the Moon pull on the oceans but not move the rocks and land?

_____

_____

Words to know

tides: the daily rise and fall of the sea
bulge: a round part that sticks out
tug: a quick, strong pull
pattern: something that happens again and again in the same way
depend: to need something in order to live or work

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: _____

The Moon Gives the Sea a Tug

Square group

If you visit a beach in the morning and then return in the afternoon, the sea may look completely different. In the morning the water might reach far up the sand, while later it may have withdrawn a long way, leaving wet sand and shells behind. The water moves in and out because of the tides.

Tides are caused mostly by the Moon. Although the Moon is far away, it pulls on Earth. That pull is not strong enough to move solid rock and land, but it is strong enough to tug on the oceans. The water on the side facing the Moon is drawn into a bulge, and water on the opposite side bulges too.

As Earth turns, each beach travels through these bulges. When a beach is inside a bulge, the water is high, which is called high tide. When the beach lies between the bulges, the water is low, which is called low tide.

Most beaches experience about two high tides and two low tides every day. Many animals depend on this steady pattern. At low tide, children and birds can explore tide pools full of crabs and sea stars.

Questions

1. What causes the water at a beach to move in and out?

_____

_____

2. What mostly causes the tides?

_____

_____

3. What is it called when the water is high on the beach?

_____

_____

4. About how many high tides do most beaches experience each day?

_____

_____

5. What can children and birds find in tide pools at low tide?

_____

_____

6. Why does the Moon tug on the oceans without moving the solid land?

_____

_____

Words to know

tides: the daily rise and fall of the sea
bulge: a round part that sticks out
tug: a quick, strong pull
pattern: something that happens again and again in the same way
depend: to need something in order to live or work

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: The Moon Gives the Sea a Tug

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

Circle: The Moon Gives the Sea a Tug

Easier · 159 words · Flesch-Kincaid grade 1.7

1. The tides.
2. The pull of the Moon.
3. High tide.
4. About two.
5. Crabs and sea stars.
6. Its pull is only strong enough to move the water.

Triangle: The Moon Gives the Sea a Tug

This passage · 171 words · Flesch-Kincaid grade 2.8

1. The tides.
2. The pull of the Moon.
3. High tide.
4. About two.
5. Crabs and sea stars.
6. Its pull is only strong enough to move the water.

Square: The Moon Gives the Sea a Tug

Harder · 193 words · Flesch-Kincaid grade 5.3

1. The tides.
2. The pull of the Moon.
3. High tide.
4. About two.
5. Crabs and sea stars.
6. Its pull is strong enough only to move the water.