

Ocean Water in Motion

Read closely to connect ocean water properties with movement.

4.7.b “physical properties and movement of ocean water; and”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB In each paragraph, underline the sentence that begins with a bold word, then circle that bold word to identify a type of ocean-water movement.

Moving Ocean Water

- ① **Waves** are up-and-down movements at the ocean surface. Wind blowing across water gives energy to the surface and makes most waves. As a wave passes, water mainly moves in small circles, while the energy travels forward. A floating bottle may bob up and down without traveling far across the sea. Near shore, waves can break when shallow water slows their bottom parts.
- ② **Tides** are the regular rise and fall of ocean water along a shore. The Moon's gravity pulls on Earth and is the main cause of tides. The Sun's gravity also affects tides, but less strongly. A place usually has two high tides and two low tides each day, although the timing can vary. Tides change water depth near coasts.
- ③ **Currents** are large streams of ocean water that move in a steady direction. Some surface currents begin when winds push water. Deep currents can form because cold, salty water is denser than warm, less salty water and sinks. Coasts and the ocean floor can turn a current. Currents carry heat, salt, and tiny living things from one place to another.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What gives energy to the ocean surface and makes most waves?

2 How does water mainly move as a wave passes?

3 What is the main cause of tides, and what do tides change near coasts?

4 Why can cold, salty water form a deep current?

3 YOUR TURN _____ Your own words

Make up a coastal place. Write exactly three sentences: one explains a wave caused by wind, one explains a tide caused by gravity, and one explains a deep current caused by density. Use the words wave, tide, and current.

PART 1 • READ AND MARK

In each paragraph, underline the sentence that begins with a bold word, then circle that bold word to identify a type of ocean-water movement. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What gives energy to the ocean surface and makes most waves?	Wind blowing across the water gives energy to the surface and makes most waves.
2	How does water mainly move as a wave passes?	It mainly moves in small circles.
3	What is the main cause of tides, and what do tides change near coasts?	The Moon's gravity is the main cause of tides. Tides change water depth near coasts.
4	Why can cold, salty water form a deep current?	Cold, salty water is denser than warm, less salty water, so it sinks and can form a deep current.

PART 3 • YOUR TURN (SAMPLE ANSWER)

At Pine Cove, a strong wind makes a wave that rocks a small boat. The tide rises at Pine Cove as the Moon's gravity pulls on Earth's ocean water. Far below the boat, cold, salty water sinks and forms a deep current because it is denser than warmer water.

Accept answers that accurately connect wind to waves, gravity to tides, and density differences to deep currents. For the open response, accept different made-up places and details when all three sentences use accurate cause-and-movement connections.