

Name _____

Date _____

Oceans - Answer Key

Use the text to answer each question below.

1. The Atlantic Ocean separates North and South America from Europe and Africa. The equator divides the Atlantic Ocean into two sections: The North Atlantic and the South Atlantic. The world's longest mountain range is located on the floor of the Atlantic Ocean. This mountain range, called the Mid-Atlantic Ridge, formed because of the movement of tectonic plates. Because of the plates' movement, the Atlantic Ocean is growing about 2.5 cm per year at this ridge.

The arrow in this map is pointing to the {}.



A. North Atlantic

B. South Atlantic



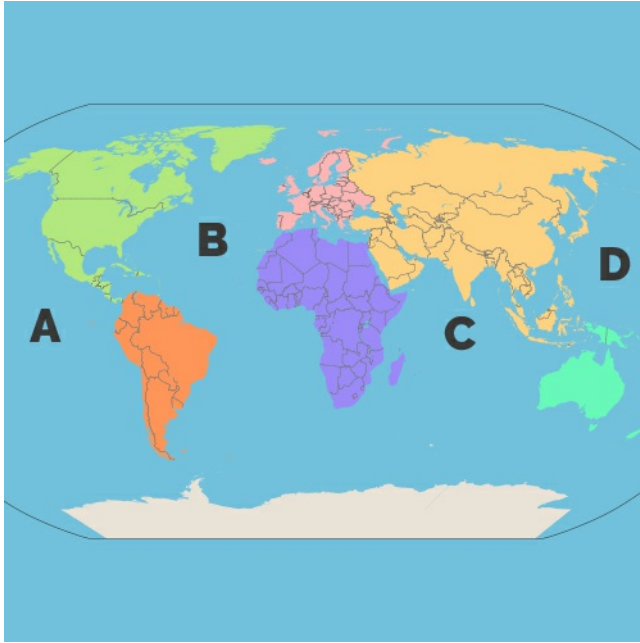
C. Mid-Atlantic Ridge

D. equator

The text states that the Mid-Atlantic Ridge is "the world's longest mountain range" and is "located on the floor of the Atlantic Ocean."

2. The Pacific Ocean covers more than 30% of the Earth's surface. It is bigger than all the continents put together! There are more than 25,000 islands in the Pacific Ocean, including the archipelagos of Hawaii and the Philippines. Most of these islands are located close to the equator. On many world maps, the Pacific is shown in two places: west of the Americas and east of Australia.

In the map above, where is the Pacific Ocean?



- A. A only
- C. C only

B. B and C



D.

A and D

According to the text, "The Pacific Ocean covers more than 30% of the Earth's surface," and "on many world maps, the Pacific is shown in two places: west of the Americas and east of Australia."

3. The Indian Ocean is bordered by Asia, Africa, and Australia. The Indian Ocean contains important trade routes for oil and has many major port cities. A port city is a city located on the coast where ships dock and transfer people and cargo to and from land. A few of the port cities on the Indian Ocean include: Singapore, Mumbai (India), Aden (Yemen), Durban (South Africa), Jakarta (Indonesia), and Muscat (Oman). The Indian Ocean brings powerful winds, called monsoons, to India and parts of Southeast Asia. These winds change direction with the seasons. Summer monsoons carry heavy rainfall and warm, moist air from the southwest Indian Ocean toward India, Sri Lanka, Bangladesh, Myanmar, and other nearby nations. Farmers rely on the rain during monsoon season to help their crops grow. Winter monsoons blow in from the northeast.

Which of these would not be an effect of summer monsoons?

- A. Flooding in the coastal regions of Bangladesh
- B. Roofs torn off homes in Sri Lanka
- C. A good rice harvest in India
- ✓ D. People in Thailand wearing warm, heavy coats

According to the text, monsoons are “powerful winds,” and “summer monsoons carry heavy rainfall and warm, moist air from the southwest Indian Ocean.” They therefore would not cause people in Thailand to wear warm, heavy coats.

4. The oceans of the world are all connected, but humans have divided them into different bodies of water and given them names. The Atlantic, Pacific, Indian, and Arctic Oceans used to be the four oceans that everyone accepted. In 2000, the government suggested a fifth ocean: the Southern Ocean. The Southern Ocean would be the water that extends from Antarctica to the line of 60 degrees south latitude. Most countries now recognize the Southern Ocean as the world's fifth ocean. The Southern Ocean has currents that make it different from the Pacific and Atlantic. These currents also create a unique ecosystem. The Southern Ocean is home to many species of whales and seals. Sometimes, it's frozen.

Which of the following was true before the year 2000?

- A. The Southern Ocean was very similar to the Atlantic Ocean and very different from the Pacific Ocean.
- B. All of the world's oceans were closer together.
- ☒ C. Many people didn't consider the water south of the 60-degree south line of latitude to be a separate ocean.
- D. Most people incorrectly believed that whales and seals only lived in the North Atlantic and Pacific Oceans.

According to the text, "The oceans of the world are all connected, but humans have divided them into different bodies of water and given them names," and the Southern Ocean, which extends "to the line of 60 degrees south latitude," wasn't proposed as a fifth ocean until 2000.

5. The Arctic Ocean is bordered by Greenland, Canada, Alaska, Russia, and Norway. Once known as the Frozen Ocean, much of the ocean's surface becomes a layer of sea ice for most of the year. However, not all of the water freezes. A polynya is an area of open water surrounded by sea ice. Polynyas are found in the same place every year. They are very important to the ecosystem. North Water, the largest Arctic polynya, is about as large as Lake Superior in Michigan.

Which of these cannot be found in the Arctic Ocean?

- A. Some frozen waters



B.

Lake Superior

According to the text, "Lake Superior" is "in Michigan" and is about the same size as "North Water," which is the largest polynya in the Arctic Ocean.

- C. Polynyas

- D. North Water

6. Ocean trenches are deep canyons on the ocean floor. Remember that Earth's crust is made of tectonic plates that move and can bump into one another. Trenches are formed when plates hit each other. One plate sinks under another and melts into Earth's mantle. This process is called subduction. The deepest place on Earth, the Challenger Deep, is found inside the Mariana Trench in the Pacific Ocean. You could put Mount Everest inside it and still have a mile left on top!

Ocean trenches are formed by { }.

- ✓ A. tectonic plates colliding
- According to the text, "Trenches are formed when plates hit each other. One plate sinks under another and melts into Earth's mantle."*
- B. mountains moving into canyons
- C. Earth's crust freezing into a solid
- D. ocean water freezing into ice

7. While we call them by different names, the five oceans of the world are not physically separated. For example, the Arctic Ocean is connected to the Pacific Ocean at the Bering Strait. It is also connected to the Atlantic Ocean at the Greenland Sea. There is a system of movement that carries water through all the world's oceans. Known as the great ocean conveyer belt, a full cycle takes about 1,000 years. The movement is powered by wind, tides, Earth's rotation, the sun, and differences in water density.

Which of these best describes the "great ocean conveyer belt"?

- A. The areas of land that physically separate the world's oceans
- ✓ B. The circulation of water through all the oceans on Earth
- According to the text, "There is a system of movement that carries water through all the world's oceans," and it is "known as the great ocean conveyer belt."*
- C. Another name for the Bering Strait and the Greenland Sea
- D. The difference in water densities between two different oceans

8. A current is a steady, predictable flow of water in the ocean. In general, the Northern Hemisphere has clockwise currents, and the Southern Hemisphere has counterclockwise currents. Currents affect life, climate, and weather all over the globe. The Gulf Stream is a particularly strong warm ocean current in the western part of the North Atlantic Ocean. It attracts a range of fish and provides shortcuts for traveling ships. Also called the North Atlantic Drift, the Gulf Stream begins in the Gulf of Mexico. It travels northeast across the Atlantic and, taking the warm water with it, heats up the east coast of Florida and England. In the Pacific, garbage from the shore and ships can get trapped by certain currents. Acting like a whirlpool, these currents move the trash into an area twice the size of Texas in the middle of the Pacific Ocean known as the Great Pacific Garbage Patch. The swirling mass contains mostly tiny plastics that mix in the seawater, creating a cloudy soup.

Which of these would most likely be a result of the Great Pacific Garbage Patch?



- A. Sea lions and other marine mammals dying from eating plastic they mistake for food

According to the text, “the Great Pacific Garbage Patch” is “garbage from the shore and ships” that has become “trapped by certain currents.” It would most likely cause sea lions to die from eating plastic.

- B. A particularly strong warm ocean current attracting a variety of fish near Florida

- C. Warm water reaching England

- D. Cloudy weather over Hawaii