

**Goal** • Use this quiz-quiz-trade activity to build your understanding of the concepts in Unit 1.

### What to Do

1. **Quiz** Each card has a question at the top and an answer at the bottom. Take a card and choose a partner. Ask the question on your card. If your partner answers correctly, move to step 2. If your partner answers incorrectly, or doesn't know, share the answer, then move to step 2.
2. **Quiz** Repeat step 1 using your partner's card.
3. **Trade** Trade cards with your partner. Find a new partner and start the quiz-quiz-trade again.

<p><b>Question:</b> What is the water cycle?</p> <p><b>Answer:</b> The process that occurs as water evaporates from the land, lakes, and oceans in the form of a gas; cools in the atmosphere; and falls to Earth as rain or snow</p> <p>Chapter 1</p>	<p><b>Question:</b> What is the difference between the hydrosphere and the atmosphere?</p> <p><b>Answer:</b> The hydrosphere refers to the water on Earth's surface, for example, in rivers, lakes, and soil. Atmosphere refers to the air that surrounds Earth.</p> <p>Chapter 1</p>
<p><b>Question:</b> What are 3 ways that ocean water and fresh water differ?</p> <p><b>Answer:</b> More salt is dissolved in ocean water than in fresh water; ocean water is denser; the freezing point of ocean water is lower.</p> <p>Chapter 1</p>	<p><b>Question:</b> What are 3 sources of fresh water?</p> <p><b>Answer:</b> Drainage basins, ground water, and glaciers</p> <p>Chapter 1</p>
<p><b>Question:</b> What is ground water?</p> <p><b>Answer:</b> Water that sinks into the soil and is found under Earth's surface in the small spaces between bits of soil and rock</p> <p>Chapter 1</p>	<p><b>Question:</b> What is a drainage basin?</p> <p><b>Answer:</b> An area of land that drains into a body of water such as a river, lake, or ocean</p> <p>Chapter 1</p>

<p><b>Question:</b> What is the source of energy that runs the water cycle? Explain.</p> <p><b>Answer:</b> The Sun; its energy causes water to evaporate from Earth's surface into the atmosphere where it cools and falls back to Earth.</p> <p>Chapter 1</p>	<p><b>Question:</b> How are glaciers an important part of the water cycle?</p> <p><b>Answer:</b> Glaciers are a source of fresh water which the Sun's energy causes to evaporate as part of the water cycle. They store fresh water as ice and snow, and release the water slowly as the snow and ice melt.</p> <p>Chapter 1</p>
<p><b>Question:</b> How might changes in temperature affect glaciers and the water cycle?</p> <p><b>Answer:</b> If temperatures drop, less water will be released as melt water and the supply of fresh water on Earth will be reduced. If temperatures rise, more water will be released, resulting in flooding and reducing the amount of fresh water stored in glaciers.</p> <p>Chapter 1</p>	<p><b>Question:</b> How might the destruction of marshes and bogs (wetlands) affect neighbouring rivers and streams?</p> <p><b>Answer:</b> Marshes and bogs store and slowly release water to neighbouring rivers and streams as drainage or run-off. The destruction of a wetland will reduce this storehouse of fresh water and result in lower water levels in the rivers and streams.</p> <p>Chapter 1</p>
<p><b>Question:</b> How did oceans form on Earth?</p> <p><b>Answer:</b> Oceans formed as the continents split apart through the process of plate tectonics.</p> <p>Chapter 2</p>	<p><b>Question:</b> What is the source of ocean water?</p> <p><b>Answer:</b> Volcanoes released materials containing water vapour into the atmosphere. This vapour cooled and fell to Earth's surface as precipitation. This water flowed downhill and collected in the lowest parts of Earth's surface, which are ocean basins.</p> <p>Chapter 2</p>

<p><b>Question:</b> What is a continental margin?</p> <p><b>Answer:</b> All underwater areas from the edge of a continent to the ocean basin</p> <p>Chapter 2</p>	<p><b>Question:</b> How is a continental slope different from a continental shelf?</p> <p><b>Answer:</b> The continental shelf is the submerged part of the continent between the coast and the edge of the basin. The continental slope is the area beyond the shelf that drops steeply into the ocean basin.</p> <p>Chapter 2</p>
<p><b>Question:</b> What is a mid-ocean ridge?</p> <p><b>Answer:</b> A chain of underwater volcanic mountains found in the middle of oceans</p> <p>Chapter 2</p>	<p><b>Question:</b> How is sonar use to map the ocean floor?</p> <p><b>Answer:</b> Sound waves are sent from a ship to the ocean floor where they bounce back to the ship. The time it takes for the sound to return to the ship indicates the depth of the water. By plotting these different times in an area, we get a picture of the ocean's surface.</p> <p>Chapter 2</p>
<p><b>Question:</b> What technologies are used to explore the ocean floor?</p> <p><b>Answer:</b> Sonar, satellites, underwater photography, deep sea submersibles, and deep sea diving</p> <p>Chapter 2</p>	<p><b>Question:</b> What is an ocean current?</p> <p><b>Answer:</b> A large amount of ocean water that moves in a certain and unchanging direction</p> <p>Chapter 2</p>

<p><b>Question:</b> What is the difference between surface currents and deep water currents?</p> <p><b>Answer:</b> Surface currents occur at the ocean surface and are mainly caused by winds; deep water currents are caused by differences in water temperature and water salinity.</p> <p>Chapter 2</p>	<p><b>Question:</b> How does Earth's spinning affect surface currents?</p> <p><b>Answer:</b> The spinning of Earth on its axis causes the currents to be deflected (change direction).</p> <p>Chapter 2</p>
<p><b>Question:</b> How is the height of a wave measured?</p> <p><b>Answer:</b> From its crest (highest part) to its trough (lowest part)</p> <p>Chapter 2</p>	<p><b>Question:</b> What is the difference between a swell and a breaker?</p> <p><b>Answer:</b> A swell is a long, smooth wave that moves steadily without breaking. A breaker is the crest of a wave that falls forward and collapses onshore in a tumble of water.</p> <p>Chapter 2</p>
<p><b>Question:</b> How do oceans affect the climate of an area?</p> <p><b>Answer:</b> Water has a high heat capacity; the ocean absorbs a lot of energy in hot months keeping the surrounding area cool; and releases this heat slowly in colder months, keeping the surrounding area warm.</p> <p>Chapter 3</p>	<p><b>Question:</b> How does El Niño affect climate?</p> <p><b>Answer:</b> El Niño causes the temperature of the ocean to rise, resulting in extreme weather patterns.</p> <p>Chapter 3</p>

**Question:** How does the amount of dissolved oxygen in water affect the animals living in a freshwater ecosystem?

**Answer:** The greater the oxygen level in the water, the greater the variety of animals that will be found there. Fewer animals can tolerate lower levels of oxygen.

Chapter 3

**Question:** How might the cloudiness of the water in an ecosystem affect the types of life found there?

**Answer:** Few plants live in an ecosystem with cloudy water since plants need light to live and light cannot penetrate cloudy water very well. Increased mud or silt that creates cloudy water affects the gills of fish, preventing fish from getting enough oxygen, and preventing them from living in this ecosystem.

Chapter 3

**Question:** How do new technologies contribute to over-fishing?

**Answer:** Ships with freezers can stay out fishing longer and thus catch more fish. Sonar allows fishers to find fish more easily and accurately. Using trawl nets results in the catch of species other than the ones being fished.

Chapter 3

**Question:** What is aquaculture?

**Answer:** The growing and harvesting of marine species in a sheltered marine area

Chapter 3

**Question:** What are the potential impacts of aquaculture on marine environments?

**Answer:** Farmed fish sometimes escape and cause damage to existing marine life. Diseases and parasites sometimes affect the farmed fish and can spread to wild populations in the ocean.

Chapter 3

**Question:** How can the offshore oil industry impact a marine environment?

**Answer:** Oil from spills can damage the ecosystem and kill wildlife and fish. Seismic testing can destroy fish eggs, cause fish to leave an area, and disrupt the migration paths of whales.

Chapter 3