

Exploring the Ocean

Tide Dock Station with Aqualing

Learning target

Describe basic ocean features using maps and comparisons.



Before you begin

Use the reference page and discussion prompts on their own, or open the optional browser adventure. No earlier lesson or physical kit is required.

For online play: use an internet-connected current browser with local storage enabled. Read the three-part Gemling briefing, answer the quick check, and apply the evidence at three checkpoints. Retry feedback supports review; results are not a secure test or gradebook.

Use for teacher-led review, science centers or partner practice. Independent readers may need support with the vocabulary below. The design target is grades 3-5; choose support based on the learner.

Vocabulary and concepts to discuss

Connected ocean; saltwater; ocean basins; seafloor features

Open Tide Dock Station - direct lesson link

Scan the QR code or use the clickable link. This guide is usable offline; the adventure runs on an external educational website.



Exploring the Ocean - key ideas

1. The first clues

Earth has one connected global ocean, often divided into named regions on maps. Its water contains dissolved salts.

2. How the clues connect

The seafloor has mountains, plains, ridges and trenches. A flat blue patch on a small map does not mean the bottom is flat.

3. Our evidence record

Our chart marks a shallow continental shelf and a deep trench. Use the depth key to compare them; the trench extends farther below sea level.

Keep the science accurate

Use qualitative depth, tide and current models. Do not require pressure equations, global-current memorization or ocean-zone trivia.

Apply the evidence

Use a specific observation from this lesson to explain one choice. Point to a clue, then connect that clue to a scientific idea.

Curriculum reference: <https://www.nextgenscience.org/dci-arrangement/5-ess2-earths-systems>

Talk through the evidence

1. Are the named oceans connected?

Expected answer: Yes

Reasoning: Earth has one connected global ocean, often divided into named regions on maps. Its water contains dissolved salts.

2. Which feature is deeper in our chart?

Expected answer: The trench

Reasoning: Our chart marks a shallow continental shelf and a deep trench. Use the depth key to compare them; the trench extends farther below sea level.

3. What makes ocean water salty?

Expected answer: Dissolved salts

Reasoning: Earth has one connected global ocean, often divided into named regions on maps. Its water contains dissolved salts.

4. What should we use to interpret chart colors?

Expected answer: The depth key

Reasoning: Our chart marks a shallow continental shelf and a deep trench. Use the depth key to compare them; the trench extends farther below sea level.

Guide the discussion

Ask learners to name the evidence that supports their answer. If an answer differs, revisit the matching key idea on page 2 and invite a revised explanation.

Online rewards: this lesson grants one fixed digital Expedition Discovery. Five saved digital Gemling friends become available only after all six distinct subject lessons are complete, in any order. Digital rewards do not establish physical ownership.