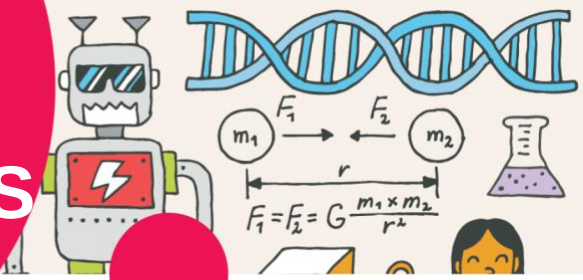
OCEAN EXPLORERS



ANSWER KEY

Maritime History (p. 3)

Throughout the museum

The museum has a lot of different ships and models of ships. **Find** two of them and answer the following questions:

1. Which two ships did you choose?
2. What was their purpose?
3. In which year were they built, launched, or active?

Ship chosen	***Purpose***	***Year***
HMS Challenger	*Scientific exploration*	*Expedition: 1872–1875*
SS Arab	*Transporting cargo*	*1890–1918*
SS Glencoe	*Delivering supplies*	*1900–1969*
RMS Empress of Japan	*Passenger liner*	*1890–1922*
RMS Empress of Britain II	*Passenger liner/ cruise ship*	*1931–1940*
Princess Helene	*Passenger service*	*1930–1963*
Spirit of British Columbia	*Ferry*	*Launched: 1993*
Northern Ranger	*Ferry*	*Launched: 1890*

Marco Polo	*1 – Timber, Canada-> England* *2 – Colonists, England -> Australia* *3 – Gold, Australia -> England*	*Built: 1851*
Great Eastern	*1 – Passenger service* *2 – Laying transatlantic communication cables*	*Launched: 1858*

Think: Ships changed quite a bit over the centuries, during the age of sail and the age of steam. Which of the museum's ships do you **think** would work well as a research ship today?

Answers will vary.

A Floating Laboratory (p. 4)

Exhibit – Hidden Worlds – HMS *Challenger*

HMS *Challenger* set sail in ***1872*** and was away for three years. **Find** the display of the HMS *Challenger* and list three things that the scientists onboard did during the voyage.

Answers will vary.

Scientists created maps, measured ocean depths, measured water temperature, and discovered more than 4,700 species of plants and animals.

Identifying Marine Life (p. 5)

Exhibit – Hidden Worlds – Sea Wall

Find the wall covered in marine life and, based on the close-up images, identify each of the creatures in the photos.

Pink urchins

Sea pig

Sponge

Think: Can you make a food chain out of the marine life you see on the wall? If not, what's missing?

The sun

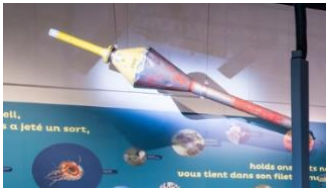
Marine Measurements (p. 6)

Exhibit – Hidden Worlds – Measuring Tools

Find three measuring tools in this section. Can you name them? What do they measure?

Batfish underwater-tow vehicle: Measures water temperature, salt content, and plankton concentration.

Core drill for deep-sea rock: Gathers rock samples from the ocean floor, to a depth of 3,600 metres.



Weather-observing buoy: Uses satellite to send temperature and pressure data to meteorological offices around the world.

Think: Why would scientists want to collect such measurements?

Answers will vary.

To learn about changes in ocean water temperature, to see how temperature changes affect marine life, and to know more about the ocean.

Into the Depths (p. 7)

Exhibit – Hidden Worlds – Getting a Feel for Scale

The items on this wall have been made large or small so you can feel them. **Find** the one that represents the deepest part of the ocean. What is it called?

HMS Challenger, *deep in the Mariana Trench*

Hint! It was named after the ship that discovered it, which is on display near you.

Think: What kind of marine life lives at the bottom of the ocean?

Answers will vary.

For example: Starfish, sea anemones, sharks, crabs, marine worms, etc.

Ahoy! (p. 8)

Exhibit – Steam – Glamour and Grit

Each of the model ships on display has a story to tell and many of them had more than one purpose. What did the cargo ships carry?

Answers will vary.

For example: Lumber, coal, clothing, machinery, wheat, steel, food, fishing gears, boat engines, mail, building material, passengers

Imagine: You're a member of the crew aboard one of these ships. What is your role? Name the hardest part of the job and the most enjoyable part.

Answers will vary.

Exploring the Deep (p. 9)

Exhibit – Wearable Tech – Newtsuit

This type of suit maintains atmospheric pressure, keeping divers safe. How deep can a diver go, wearing a Newtsuit?

305 metres

Look around! Find two other pieces of wearable tech that allow people to go under water.

Diving boot and diving helmet

Whale Sounds (p. 10)

Exhibit – Wearable Tech – Marine Sound

Using the headset to the left of the screen, **listen** to the sounds of whales speaking. You may hear a difference between them. How was this recording made?

Using a DTAG-3 marine sound and movement recorder.

Think: How else would it be possible to listen to or record whale sounds?

Answers will vary.

For example:

By approaching the whales under water and using a waterproof microphone.