Teacher Resource

Ocean Census

Focus Questions

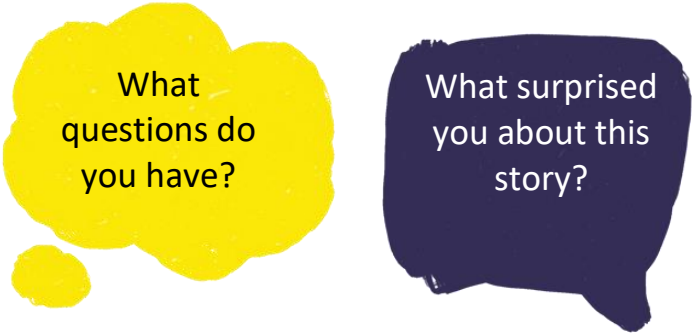
Discuss the BTN story as a class and record the main points of the discussion. Students will then respond to the following:

1. What is the aim of the Ocean Census?
2. About how many new species have been identified in the census?
3. The ocean is home to up to _____% of life on the planet.
4. What percentage of the ocean has been discovered?
    a. 10%
    b. 30%
    c. 80%
5. Why is it important to find new species?

Activity: Class Discussion

Discuss the BTN Ocean Census story as a class, using the following questions to guide the discussion. Record responses on a mind map. Clarify students' understanding of the following terms: marine life, deep sea, biodiversity, ecosystem, animal populations and marine scientist.

- What is a census? What is an ocean census? Write a class definition for the term 'ocean census'.
- Why is it important to explore our oceans and marine life?
- Name a marine species that was discovered in the ocean census.
- What kind of equipment do scientists use to find out about life in our oceans?
- What is meant by the term biodiversity?
- What questions would you like to ask the scientists in the BTN story?



EPISODE 7
18 March 2025

KEY LEARNING
Students will learn about marine life and ecosystems; understanding their diversity and how they're connected.

CURRICULUM
Science – Year 4
Living things depend on each other and the environment to survive.

Science – Year 5
Living things have structural features and adaptations that help them to survive in their environment.

Science – Year 6
The growth and survival of living things are affected by physical conditions of their environment.

Science – Year 7
Interactions between organisms, including the effects of human activities can be represented by food chains and food webs.

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available.

Activity: Vocabulary

Students will brainstorm a list of key words that relate to the BTN Ocean Census story. Here are some words to get them started.

OCEAN CENSUS	BIODIVERSITY	ECOSYSTEM
MARINE HABITAT	MARINE LIFE	SPECIES

Ask students to write what they think is the meaning of each word (including unfamiliar words). They will swap definitions with a partner and ask them to add to or change the definition. Check these against the dictionary definition.

Further activities for students:

- Students will add to their glossary by downloading the transcript for the BTN Ocean Census story and highlight all the words that relate to the topic.
- What is an ecologist? Later in this resource students will think and behave like ecologists (*an ecologist studies the relationship between living things and their habitats*).

Activity: Schoolyard Habitat

Students will think and behave like ecologists and launch their own census of the animals either living in or visiting their schoolyard. In this activity students will be given the mission to explore a natural ecosystem in their local area, identify an animal and document what they find. Use the following as a guide.

During their expedition students will record what they find using a journal or survey including the type of animal, location, time and any interesting behaviours. Students will collect data, sort the information, analyse the data and then communicate their findings. Students can use the following framework to help guide them through the activity.

Expedition Guide	
Plan	Plan a visit to a local nature reserve or your own school yard to explore the natural ecosystem and identify any animals living or visiting the area. You will need to write a list of tools you may need for the investigation, for example: pen and paper for taking notes, camera and magnifying glass. Predict what animals you might see.
Explore	Carry out an exploration of the area. Choose a spot in the environment to investigate. Consider exploring the area from different angles, closeup or far away. Look and listen for evidence that animals live in the area.

Collect	Choose one animal to explore in detail. Collect as much data as you can about that animal and record what you find. You may write notes and sketch what you see to help in your investigation. You may want to record what you see with a stills or video camera. • What does the animal look like? Describe its appearance. • What is the animal doing? • How does the animal move? • What do you notice about the animal's habitat? • How does the animal interact with other animals?
Share	Return to the classroom and share/compare your findings.
Analyse	Analyse your findings and write a short summary of your investigation. • Did you find any animals during your investigation? If yes, identify and describe what you found. • How could you help protect this habitat?
Research	• What does the animal look like? Describe its physical characteristics. • What is its classification? • What role does the animal play in the ecosystem? • Why is this animal important?
Reflect	• What was the most interesting thing you discovered during your investigation? • What did you enjoy about the investigation? • What would you do differently next time?

Table to record observations

Photo of animal	The animal being observed	Observation 1	Observation 2	Observation 3

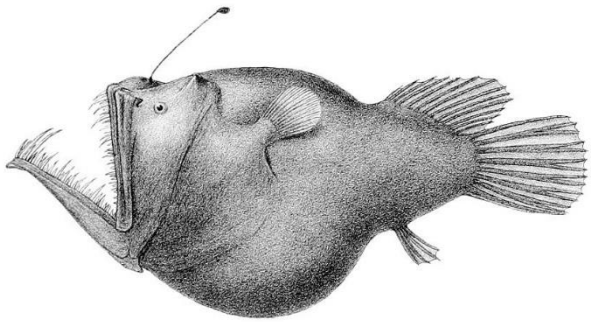
Activity: Species Profile

Students will imagine they are marine biologists and study one species that calls the ocean its home. Students will create a profile about the species, see below for some examples:

- Guitar fish
- Squat Lobster
- Deep-sea Limpet
- Pygmy Pipehorse

Students will research the following and then share their research findings with the class or create a display in the classroom.

- Name (common and scientific name)
- Biological illustration or photo
- Classification (class, family, genus)
- Description (size, colour, physical features)
- Habitat
- Diet
- Behaviours
- Adaptations
- Threats



Students will then choose one of the following activities to complete:

- **Model** – Create a 3D model of the species using upcycled materials. Display your model in the classroom.
- **Diary –** Write a diary of what might happen in the daily life of a deep-sea species.
- **Haiku** – Write a haiku poem about the species.
- **Children's book or comic** – Write and illustrate either a children's book or comic which tells the story of the species.
- **True or false?** – Find out as much as you can about the deep sea and the species that live there. Create a true or false quiz and test your classmates.
- **Celebrate** – Celebrate World Ocean's Day on the 8th of June. Think of a creative way to celebrate the day in your class.

Activity: Create your own species

Students will use their imagination and create their own marine species. Students will imagine they have discovered a new species of deep-sea creature which has never been seen before. Use the following as a guide for this activity:

- Illustrate the new animal species using only a black felt-tip pen on a piece of A4 art paper – include as much detail as you can. You may want to draw a scientific illustration or draw the animal in its natural habitat. Label important features.
- Create a 3D model of your new species using upcycled materials.
- Name the species. Give the animal a common and scientific name.
- Where does it live in the deep sea?
- Describe what the animal looks like – what are some of its physical characteristics?
- List the animal's classification.
- How does it get its food? How does it eat?
- How does it survive in its environment? What are its adaptations?
- Does it have any interesting or unique features?
- How possible do you think it is that your new species exists? Explain your answer.

Useful Websites

- 800 New Species – Newsbreak
- Ocean Census
- Deep Sea Exploration – BTN
- Underwater Research – BTN
- Underwater Explorer – BTN
- The fishes of the deep sea – Natural History Museum
- The Deep Sea – Biomes
- Down to the Deep – Monterey Bay Aquarium
- 10 minutes of fascinating deep-sea animals (YouTube) - Monterey Bay Aquarium
- How Deep is the Ocean? – TEDEd
- The otherworldly creatures in the ocean's deepest depths – TEDEd