

Sanctuaries and Sea Creatures: Ricketts Point



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Lesson outline

- Ricketts Point video
- Activity: Marine life bingo game
- Activity: Quiz
- Activity: Habitats and adaptations
- Activity: Biotic and abiotic factors
- Activity: Classification
- Investigation: Marine sanctuaries



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Marine life bingo



- Each bingo card is **unique**
- **Tick off** species as they are mentioned
- Call 'BINGO' once **all** your species have been ticked off
- First to call 'BINGO' wins
- **Keep going** until the end of the video
- Try and work out which three species are **missing** from your card.

Video: Beneath the Waves at Ricketts Point

Join Jack Breedon for this calming journey underwater at Ricketts Point, to discover the beautiful marine life that is just on the doorstep of Melbourne's CBD.



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Quiz

- It's time for a quick quiz to see what you can remember from the video!
- There are a total of 10 multiple choice questions



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Habitats

- Ricketts Point Marine Sanctuary offers a diverse range of **habitats**.
- A habitat is the place where an organism makes its **home**.



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Adaptations

- An **adaptation** is a special skill which helps an organism (a living thing) to survive and do everything it needs to do.
- Adaptations help an organism to survive / reproduce.
- For example an octopus has excellent **eyesight** for hunting and highly advanced skin cells called **chromatophores** used for camouflage.



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Adaptations

- There are three main types of adaptations:
 - Behavioural
 - Physiological
 - Structural



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Adaptations

- Behavioural adaptations are things organisms **do** to survive or reproduce.
- For example - a cuttlefish may release a cloud of ink to escape from a predator.



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Adaptations

- A physiological adaptation is a **body process** that helps an organism survive / reproduce.
- For example - a blue ringed octopus makes venom.



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Adaptations



- A structural adaptation is a **physical feature** that helps an organism survive / reproduce.
- For example - a rock lobster has a hard exoskeleton and long antenna for protection.



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Design challenge

- Design and draw the “ideal creature” best adapted to the kelp forest habitat.
- Describe in a paragraph how this make the organism well suited to the kelp forest?



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Biotic factors

- An environment is made up of both living and nonliving things.
- The **biotic** (living) factors consist of organisms and their products and wastes.
- Biotic is anything living and can include plants, algae and microorganisms.



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Abiotic factors

- An **abiotic** factor is a **non-living** part of an ecosystem that shapes its environment.
- Examples could be salinity, temperature and ocean currents.



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Class game

- All students must start the game standing up
- One 'factor' will be read out at a time by the teacher.
- **Stand up with arms up** means your guess is the factor is **biotic** (living)
- Standing up with arms by your side means your guessing the factor is **abiotic** (non-living).
- You must sit down if you guess incorrectly.
- Last one standing wins.



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Classification

- 
- **Classification** is a system used by scientists to describe organisms.
 - To classify things means to place them in different **categories**, or groups.
 - Can you think of any ways to group your bingo cards? Compare your grouping with a partner.



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Classification

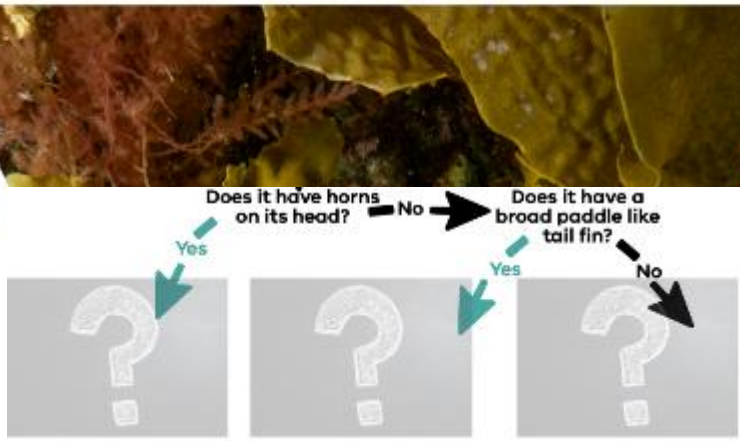
- A **classification key** is a series of questions that determine an organism's physical characteristics.
- When you answer one question, it either branches off to another question or **identifies** the organism.
- Classification keys help to identify an unknown organism, or work out how to **categorise** groups of similar organisms.



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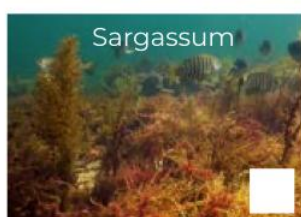
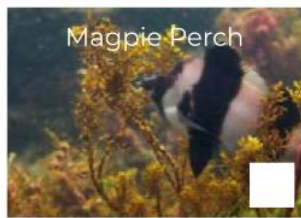


Classification activity



- Neatly cut out your bingo cards.
- In pairs, randomly choose one card and place it in front of you **without showing your partner**.
- Pose questions to try and **guess** the species on your partners card.
- If the answer is 'yes' you can ask **another question**. If the answer is 'no' it is the other person's turn.
- Continue until you choose the correct organism.
- Work out places for **all** of the cards on your worksheet.

Marine life bingo cards



Classification activity



- Now it's time to create your own classification key using the marine life bingo cards.
- Test your classification key with a partner.



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Ricketts Point Marine Sanctuary



- Ricketts Point Marine Sanctuary
- Aquaculture Reserve
- Other Marine Reserve
- Other Reserve
- Yellow triangular boundary marker
- In-water boundary marker (Pile or buoy)



Marine Sanctuaries Research Task

Research the following questions:

- What activities are not permitted in a marine sanctuary?
- What activities are permitted in a marine sanctuary?
- Why are marine sanctuaries important areas?
- What is the difference between a marine park and a marine sanctuary?
- How many other marine parks and sanctuaries are in Victoria?



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Marine Sanctuaries Research Task

Your task is to create a pamphlet to promote one of Victoria's marine sanctuaries.

The pamphlet must include a map and may use information from questions answered on the previous slide but should also focus on the following:

- What is unique about this marine sanctuary?
- How big is it?
- What does this size compare to?
- What facilities are in the area and what are good activities to do here?
- Are there any ecotourism operators / opportunities?
- What are the local threats to this area?



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