

Sea swim!

Dive into the ocean for an undersea adventure!

This teachers' supplement should be used in conjunction with Project Pull-out #17: Sea Swim, which is found in DMAG's issue 69, December 2007. The Project Pull-out will inspire students to learn about Australia's underwater marine life, its importance, and the need for conservation.



These activities encourage students to:

- Learn how plants and animals live in environments that supply their needs
- See how living things depend on other living things to survive
- See how the activities of people can change the balance of nature
- Manage and care for Australia's natural heritage
- Use library books or Internet sites to find information
- Learn how information can be presented in a number of different forms, including graphics, pictures and texts
- Cultivate their geographical and spatial skills

Science and Technology: Underwater ecosystems

Marine Life

As a class, visit the local beach or the aquarium. Ask each student to write

down or draw and label the different animals and plants that they see.

Back in the classroom, write on the whiteboard the different creatures that the students spotted. How many did they come up with? How many had they previously heard of?

Creature Feature

Break the class up into groups of three or four. Using the Internet and book resources, ask each group to investigate an underwater species from the board that they have not heard of before. Each group needs to find out specific details about their species, including its:

- 1. Habitat**
- 2. Diet**
- 3. Predators**
- 4. Survival tactics**
- 5. Size**
- 6. If it has any special or interesting features and what they do**

Once this research is completed, ask

each group to draw a picture of their selected species within its natural environment.

Swim Cycles

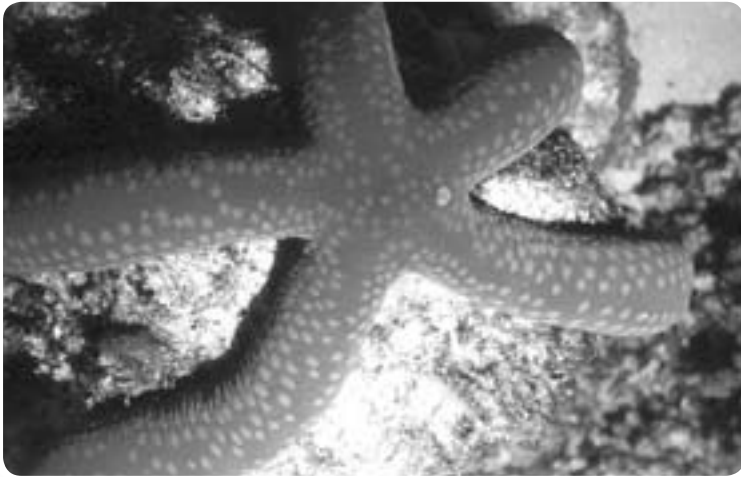
Each group is to present their findings to the class. After all the groups have presented their creature, discuss as a class some of the findings. Especially talk about the food and predators and see if one creature is the prey of another.

More than a Chain Reaction Food webs v Food chains

Often people think of the interrelationships between animal and plant life as a chain, but in actual fact it is more correct to call these relationships part of a web. This is because with a chain there is only one predator and one prey per animal, but in reality that is not the case. Most animals feed on and are fed upon by more than one species, creating a food web.

Sea swim!

Dive into the ocean for an undersea adventure!



Great Barrier Reef.

Using a ruler or a piece of string, measure its length. Compare this to the length of the Australian coastline. What

write a 500 word (2 page) exposition explaining the importance of the Great Barrier Reef, why it should be saved, and suggesting everyday ways in which to help save it.

Create Your Own

Students are to design their own underwater world. They can either draw a picture or write a description. They must include at least three underwater sea creatures and two types of plants/bacteria.

Discuss as a class, how the following creatures, plants, and energy sources are related. Using this information, draw up a food web. How many links have you drawn? What would happen to the web if one of these species/ components were removed?

- Sea urchin
- Bacteria
- Crab
- Sea snails
- Parrot fish
- Zooplankton
- Octopus
- Black tip reef shark
- Sun
- Coral
- Kelp
- Humans

Maths and Map work: The Reef from Space

Hand out a copy of a map of Australia to each of the students. Looking at the following image taken from space, <http://veimages.gsfc.nasa.gov/686/S2000194015528.png>, ask students to locate and draw in the

percentage of the whole coast does it take up? How many kilometres long is this?

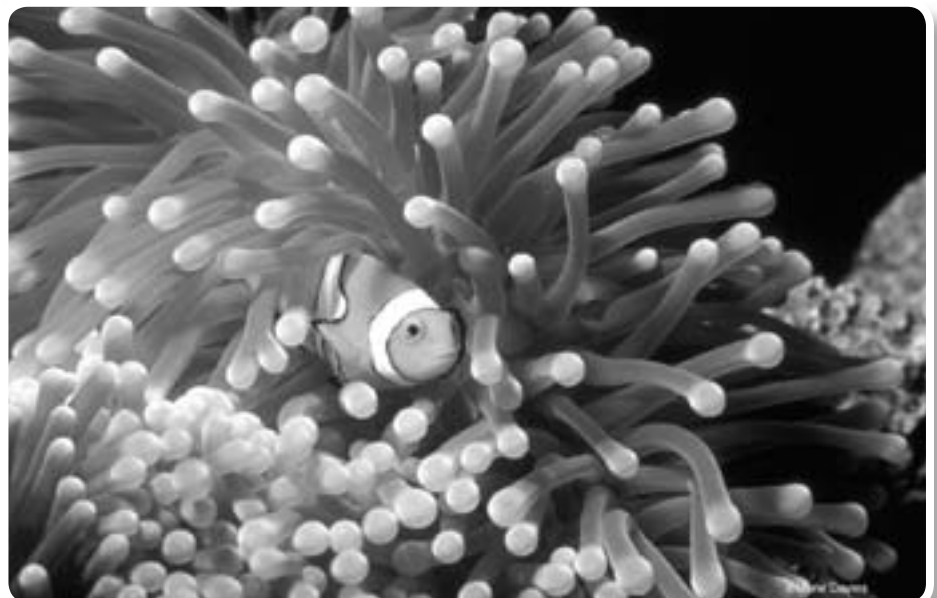
HSIE: Australian Environments, and English Help the Environment

As a class, read pages 50 – 54.

Discuss the many threats to the marine environment and why the Great Barrier Reef is an important place. Ask each student to use this information to

How will all their organisms survive within this ecosystem?

When students design their own imaginary underwater world, ask them to consider what their food web is and what special features or characteristics each of their creatures has in order to ensure its survival. Physically, they should be considering their organism's size, shape, colour, and defence or attacking abilities.



Sea swim!

Dive into the ocean for an undersea adventure!

This worksheet is to be used with Project Pull-out 17, which is found in the December 2007, Issue 69 of DMAG. You will need to read this Project Pull-out carefully to be able to carry out your mission ✦ which is to complete these activities!



THE NUMBERS GAME

The ocean is filled with numbers. Fill in the blanks and re-arrange the boxed letters in the correct order to find the name of a famous sea creature!

1. The yellow frogfish pounces on its prey in just

1/ six of a second.

2. The pygmy seahorse is just

teen millimetres high.

3. Coral grows at an average of

centimetres per year.

4. There are more than four

different species of fish found on reefs.

5. Even a temperature increase of

two can cause coral to bleach and die.

6. The sea harbours over

per cent of the world's micro-organisms.

The famous sea creature is

a

SURVIVAL OF THE FITTEST

Each sea creature has a different way of protecting itself from predators. Match up the sea creature with its survival tactic.

1. Seahorse
2. Clown Fish
3. Cuttlefish
4. Anemone

- A. Changes colour
- B. Stings its enemies
- C. Hides inside anemone
- D. Stays still

Sea swim!

Dive into the ocean for an undersea adventure!

CHAIN REACTION

Our actions, even when we are on land, can affect sealife. Using page 54 of DMAG, fill out the table; writing down what consequence the action can have on marine life and what can be done to prevent these consequences. The first one has been completed for you.

Action	Consequence	What can be done?
Touching or standing on coral whilst swimming or snorkelling.	Can cause harm to the coral or to yourself.	Be careful when swimming or snorkelling to not touch the coral.
Keeping the lights on when there is no one in the room.		
Littering on the streets – and at sea.		
Throwing old and tangled hooks and lines into the sea.		
Removing trees from along watercourses.		

FACT OR FICTION?

There are heaps of amazing creatures below the surface of the ocean. Answer true or false to find out just how amazing.

- | | |
|---|---------------------|
| 1. Male seahorses get pregnant | True / False |
| 2. SCUBA stands for Self Contained Ultra-cool Breathing Apparatus | True / False |
| 3. Old newspapers can be found inside the SS President Coolidge | True / False |
| 5. Scuba divers talk to each other using underwater sign language | True / False |
| 6. The clown anemonefish is allergic to the anemone's sting | True / False |
| 7. Prawns, lobsters, crayfish, shrimp and crabs all have their skeletons on the outside of their bodies | True / False |
| 8. Coral is a rock | True / False |
| 9. A chemical developed from the venom of a cone snail could help humans manage pain | True / False |

PICTURE THIS

There are lots of different seahorses out there! Choose one of these and have a go at drawing it, don't forget to get its shape, colour and special features right! Does it have a potbelly? What about its snout? Is its tail long and curly? You may have to do some research in books or on the internet to find a picture of it. Do your drawing on a separate piece of paper.

- Pipefish**
- Leafy sea dragon**
- Potbelly seahorse**
- White's seahorse**
- Short-headed seahorse**