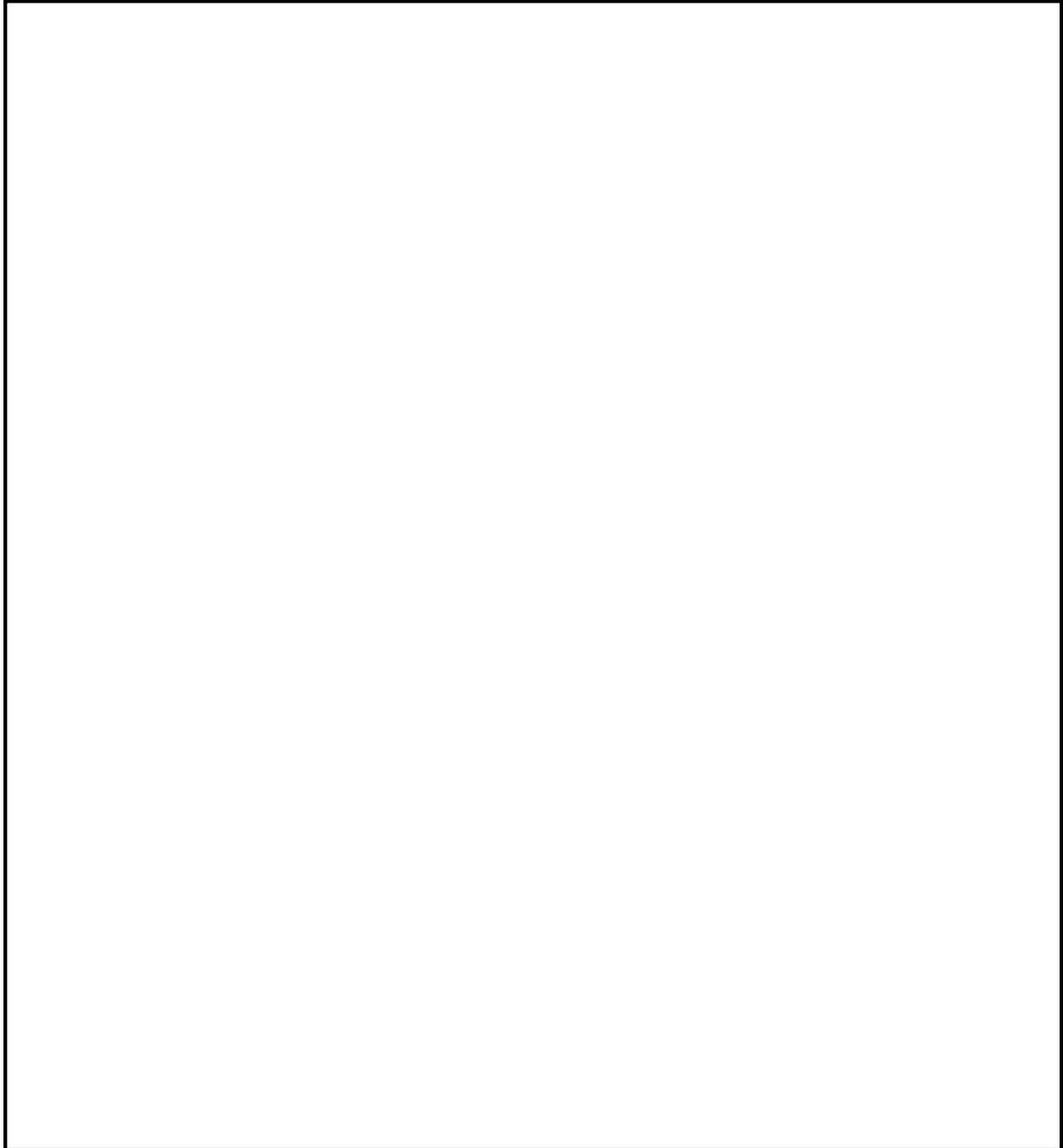


Activity sheets and model answers
see below

Rocky shore drawing: draw a rocky shore animal that you know of in the box below:

Name: _____



Model answers for Play 'Who Am I'

A shell is where I live.

I carry my protection as I walk.

I have to find a new home as I grow bigger.

I have nippers.

I am a hermit crab

I look like a flower, but really am an animal.

I can move very slowly.

I reach out with tentacles and grab my food.

I tuck my tentacles away when I am not covered with water.

I am a sea anemone ...

I have eight legs covered with suckers.

I have excellent eye-sight to spot my prey.

I can change colour to blend in with my surroundings.

I am an octopus

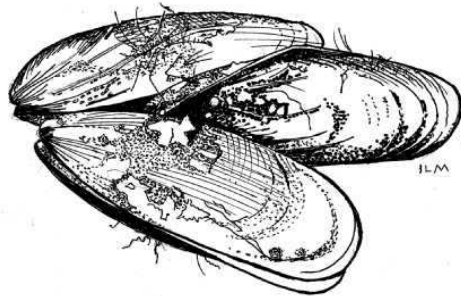
I come in many different shapes, sizes and colours.

I move around on my tube feet.

My stomach comes out of my mouth when I eat.

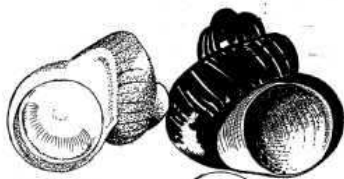
I am a sea star/ starfish

PICTURES FOR CAN YOU CATCH MY DRIFT?



NZ MUSSEL

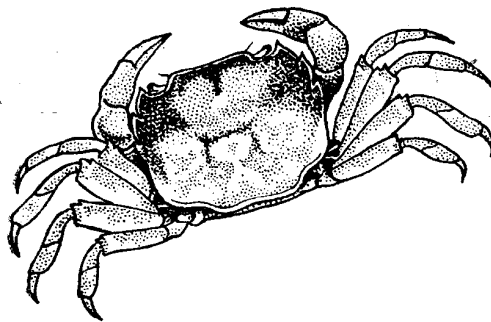
Mussel



CATS EYE
Lunella smaragda

THE OPERCULUM
LOOKS LIKE A CAT'S EYE

Cat's eye



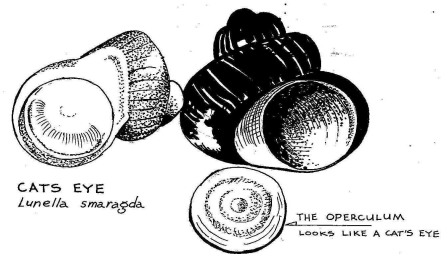
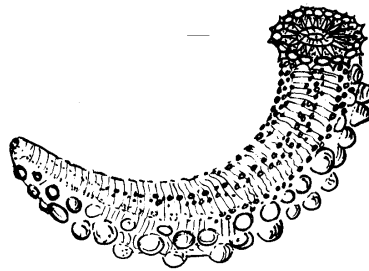
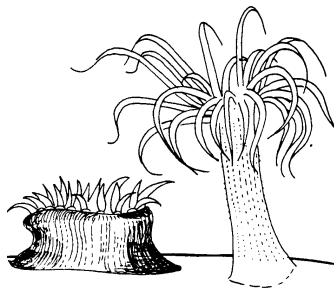
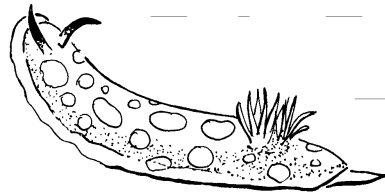
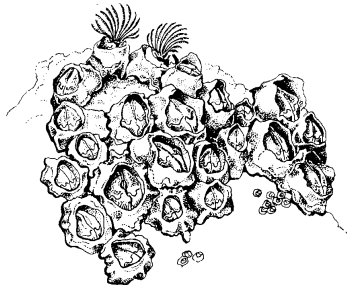
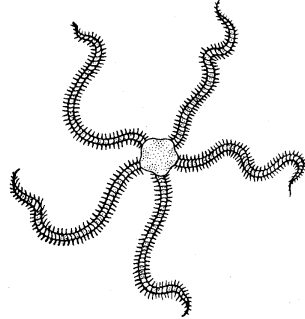
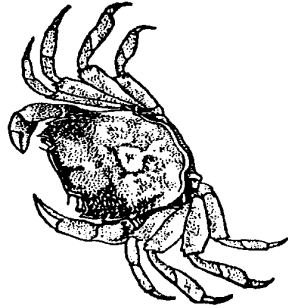
Crab



Barnacle

Pictures and activity sheet for Adapting to change

Ask the class to look at the rocky shore animals and discuss what they will do when the tide goes out...

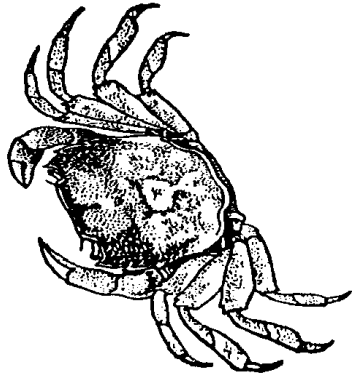
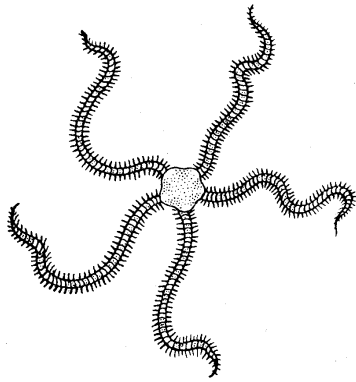


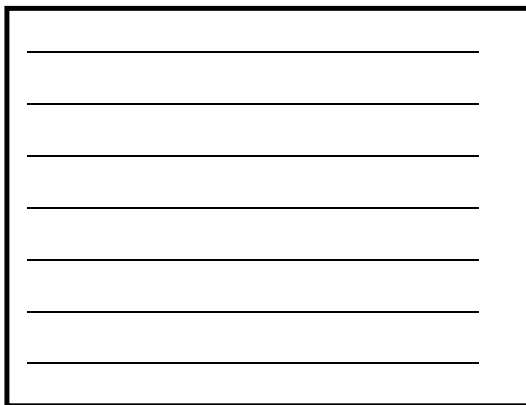
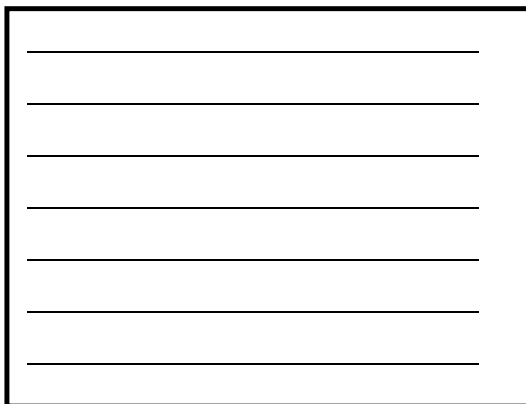
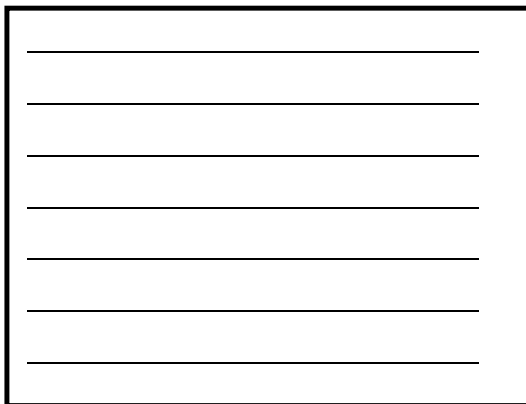
ADAPTING TO CHANGE ACTIVITY SHEET

Using this activity sheet write what each will do beside each animal. Some might do more than one thing.

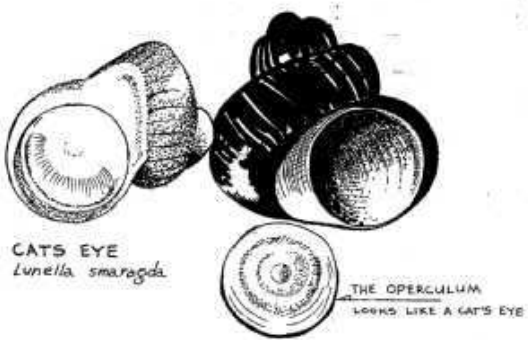
ADAPTING TO CHANGE ACTIVITY SHEET

Using this activity sheet write what each will do beside each animal. Some might do more than one thing.

This is a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across most of the width of the page. There is no handwriting or other markings on the paper.[illegible][illegible]

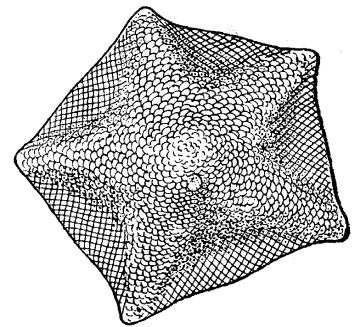
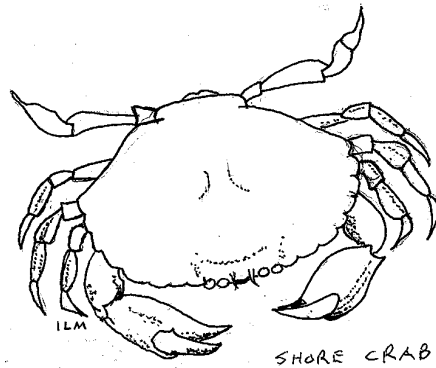
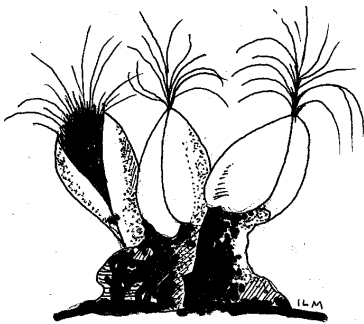
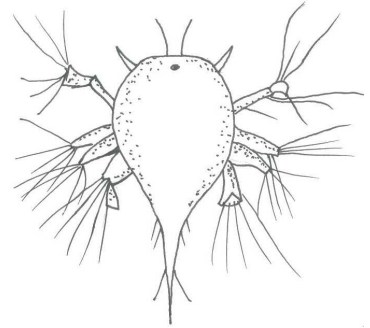
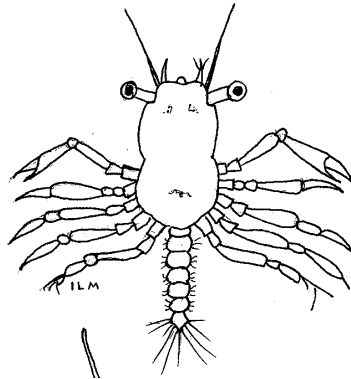
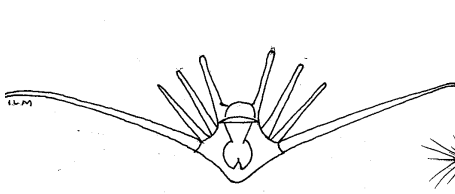






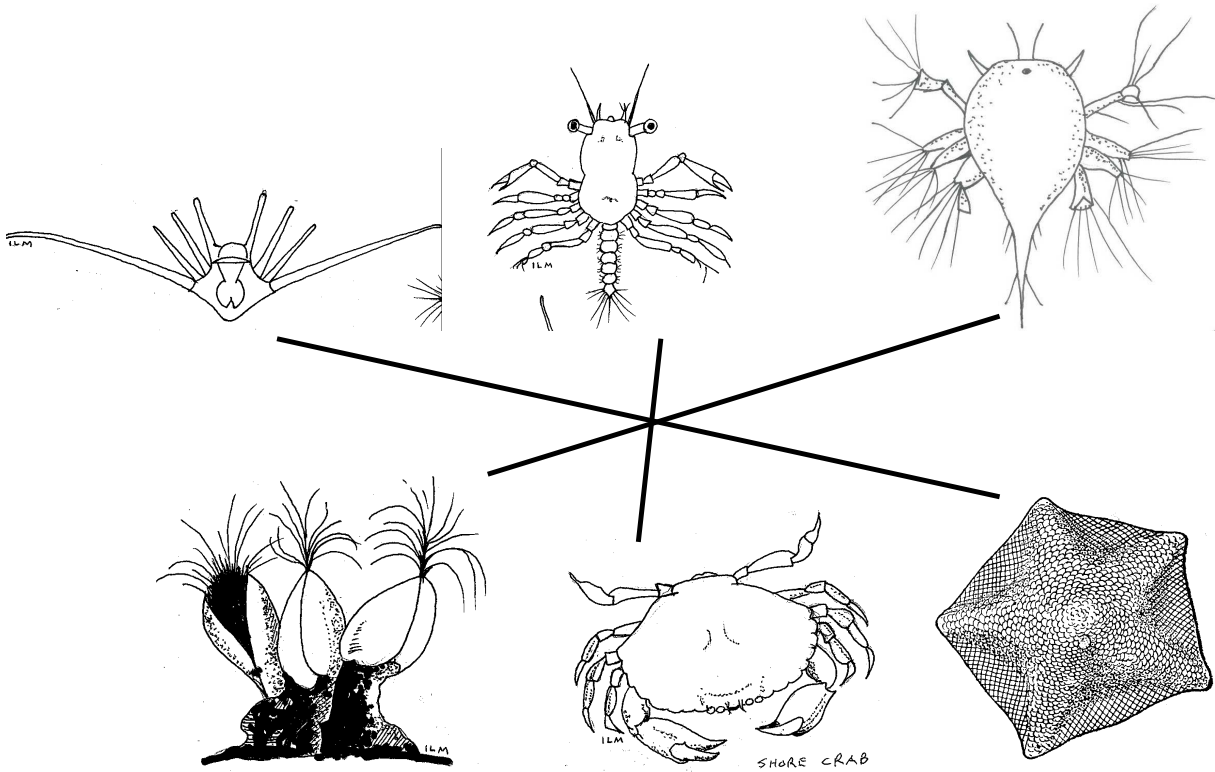
Match up the adults with the larvae!

Use the pictures below, match up the larval form with the adult marine creature.



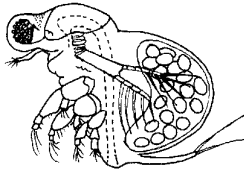
Match up the adults with the larvae!

Model answers

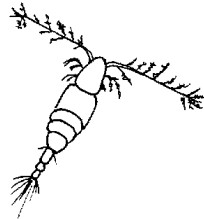


Identification chart for micro-organisms commonly found in pond water

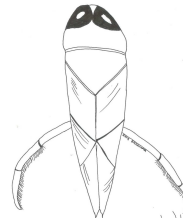
Take a few droplets of water from a pond near your school – look at it under a microscope! Can you identify any of the micro-organisms in the water? Other bigger creatures to watch out for are water bugs, copepods and daphnia.



Daphnia

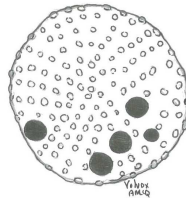


Copepod

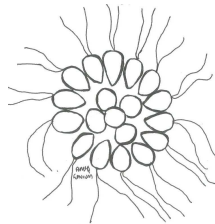


Water bug

Golf balls (Volvox) are bright green spiky balls. They are a type of colonial green algae.



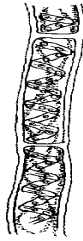
Gonium are another type of colonial green algae. Each cell has flagella (swimming-like tails) which help the colony manoeuvre around.



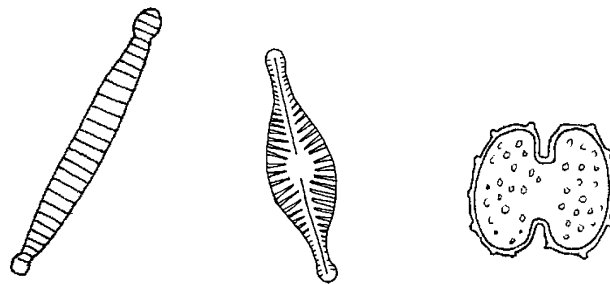
Rotifers are transparent, tube-like creatures which have cilia at one end. They are very quick swimming and will zip in and out of the microscope viewers.



Multicellular algae are recognised as long green filaments or broad green sheets.



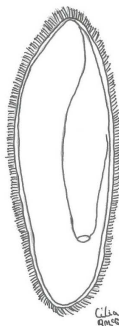
Diatoms are type of algae which are usually recognised as round or diamond shaped objects. They are able to move around using small cilia found in the groove along their bodies.



Unicellular flagellates (Euglenoids) are tube-like creatures with two flagella – tails, one is often visible and the other is often wrapped around its body. A red eye spot may also be visible.



Ciliates are small round creature (they may have green blobs inside their bodies – chlorophyll). Ciliates are covered in small fine ‘hairs’ called cilia which help them manoeuvre around ... and yes they can swim fast!

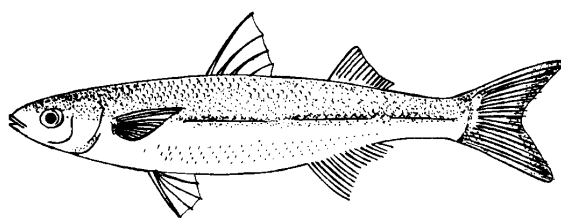
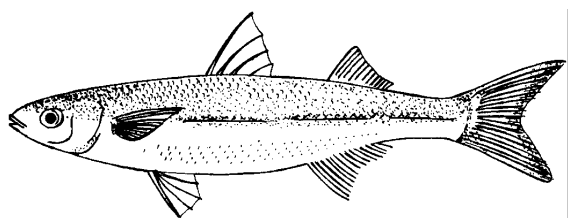


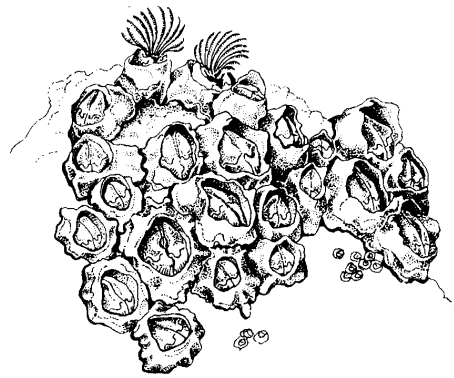
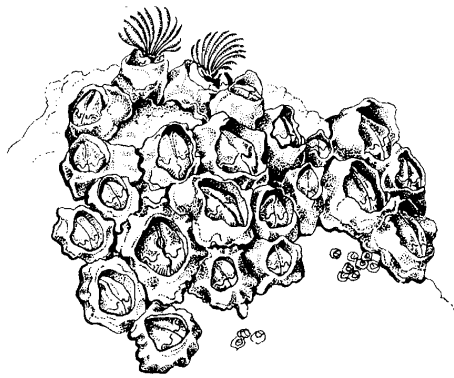
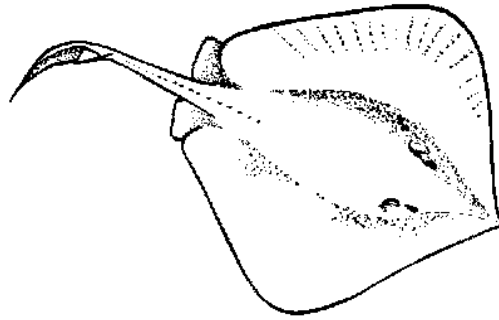
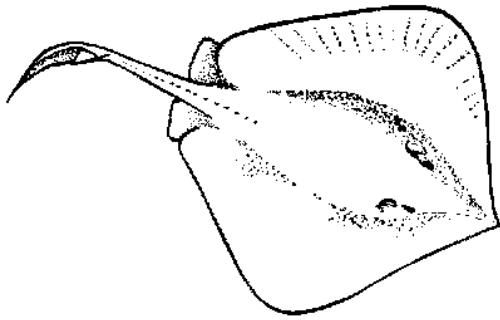
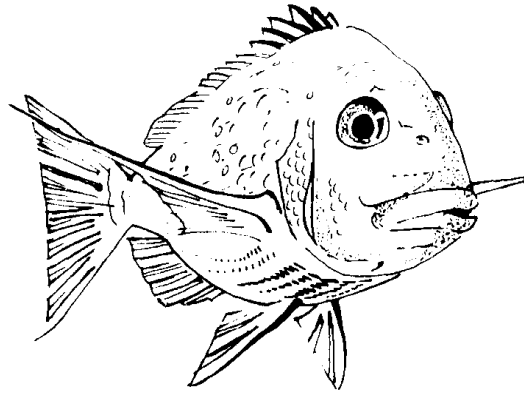
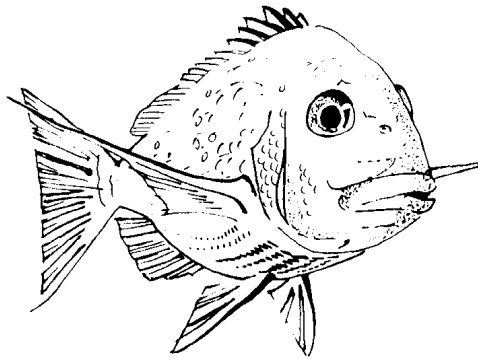
Food web snap

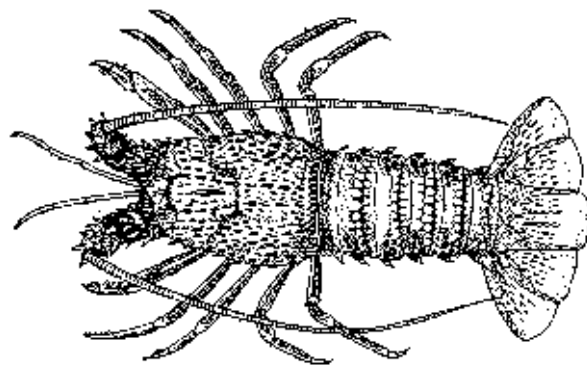
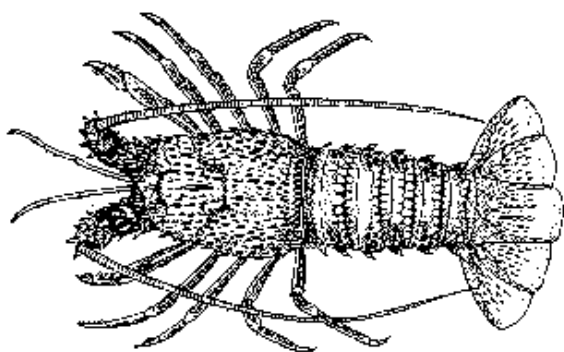
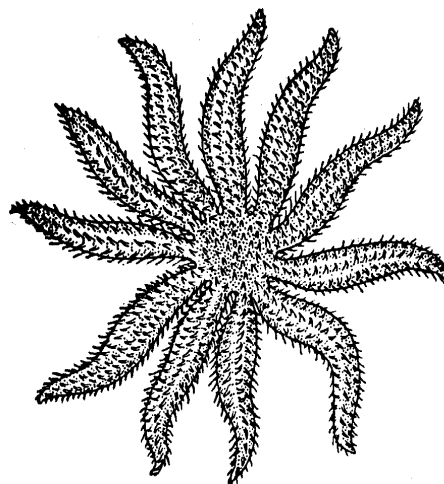
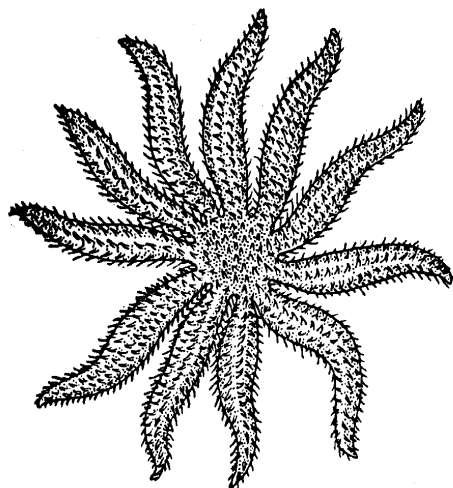
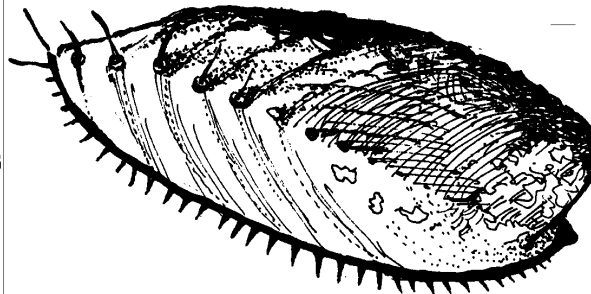
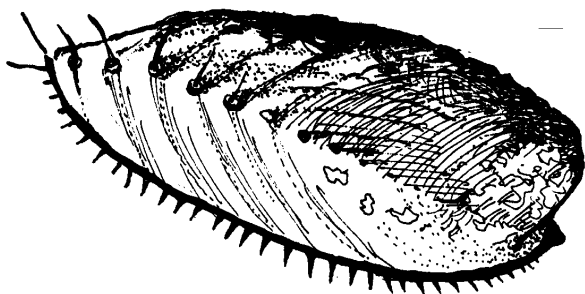
Use the snap cards (see pictures below). The children have to decide if any of their animal cards are eaten by, or eat the animal of the snap card that is face up on the table.

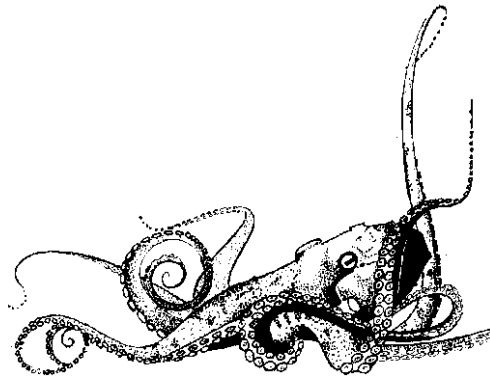
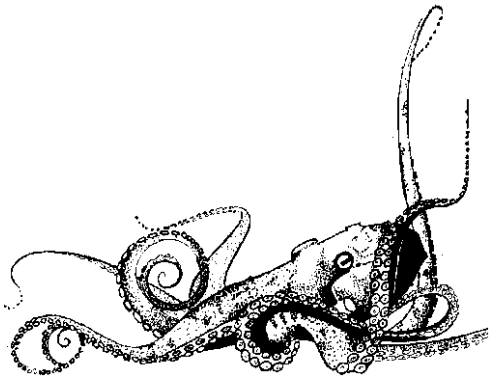
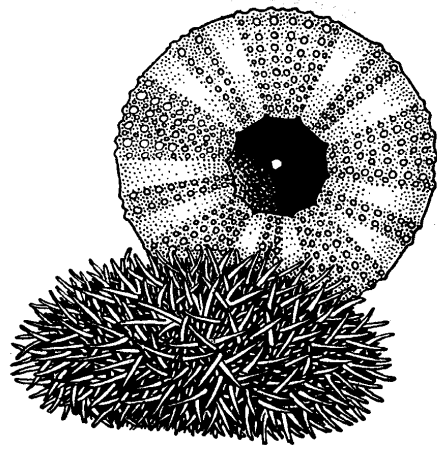
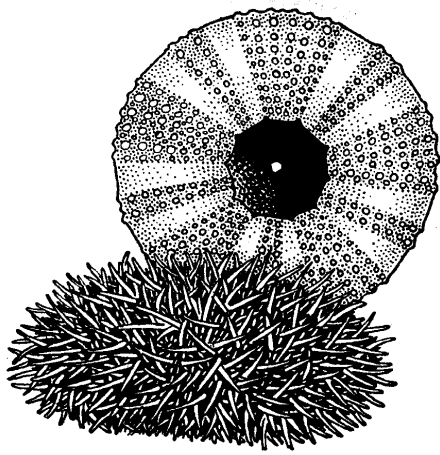
What eats what?

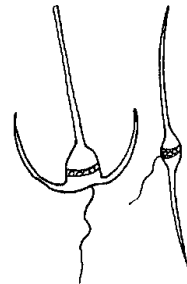
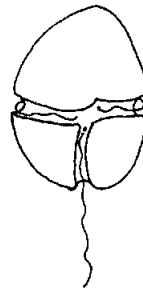
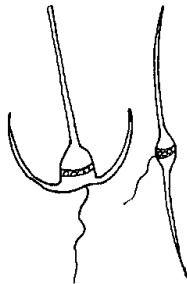
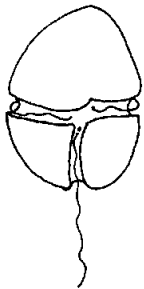
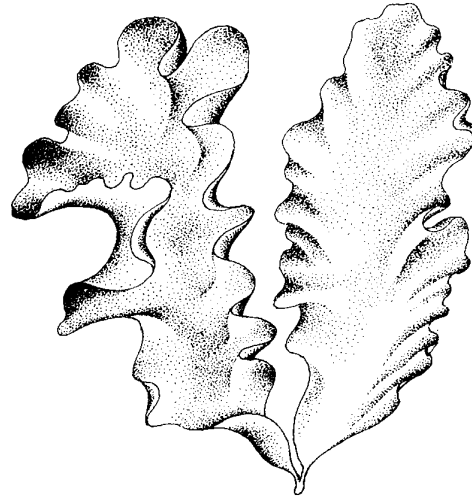
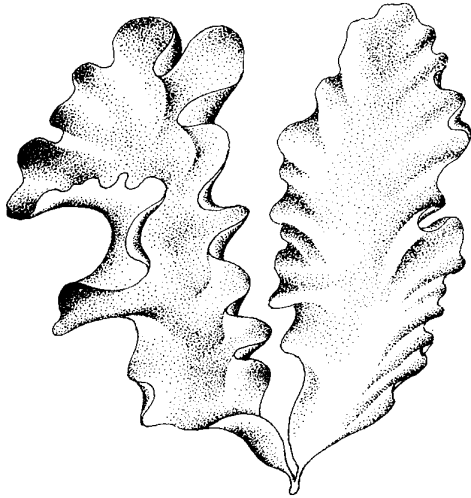
Marine creature	Eats:	Is eaten by:
Spotty	Shell fish, barnacles	Larger fish, humans
Barnacle	Zooplankton and phytoplankton	Spotty and snapper
Zooplankton	Phytoplankton	Filter-feeders, small fish
Phytoplankton	Sunlight, water and nutrients	Zooplankton
Seastar	Shellfish	Snapper and spotty
Paua	Algae films, seaweed	Sea stars, maybe crayfish
Kelp	Sunlight, water and nutrients	Kina,
Seaweed	Sunlight, water and nutrients	Paua, kina, crayfish, humans
String ray	Small fish, small crayfish, shellfish	humans
Humans	Pretty much everything	?
Kina	Kelp, seaweed	Crayfish, snapper
Crayfish	Kelp, kina, paua	Humans, snapper, octopus
Snapper	Barnacles, shellfish, kina	Large fish, humans
Octopus	Crayfish, shellfish	Humans, large fish
Shellfish	Zooplankton, phytoplankton	Octopus, sea star, stingray, snapper
Yellow eye mullet	Zooplankton, seaweed	Larger fish (snapper, stingray)

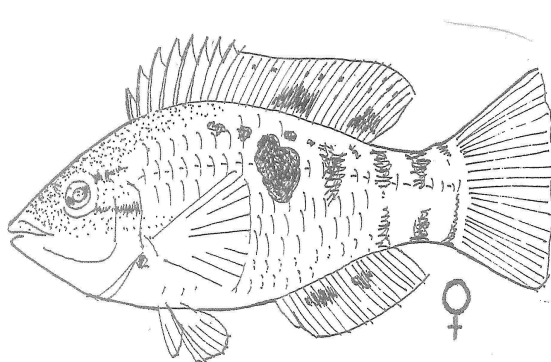
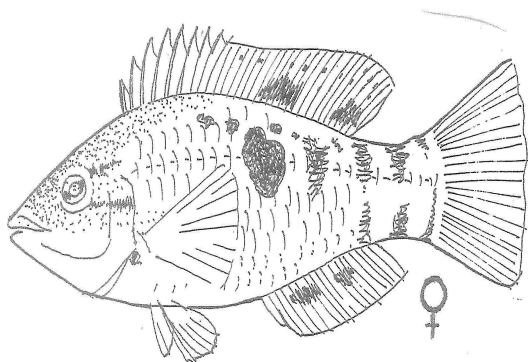
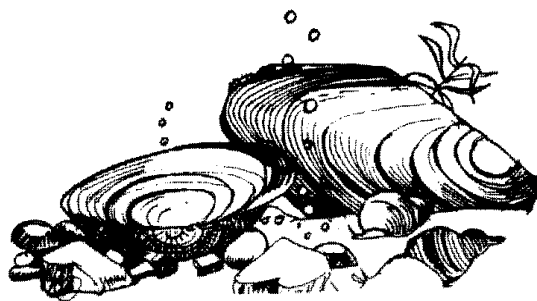
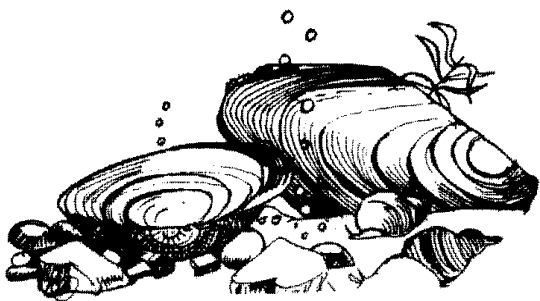
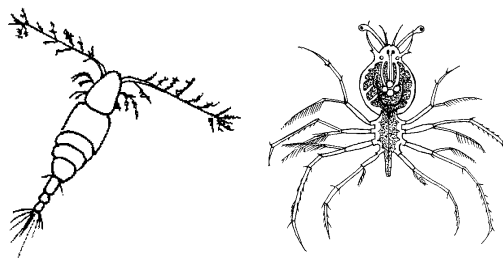
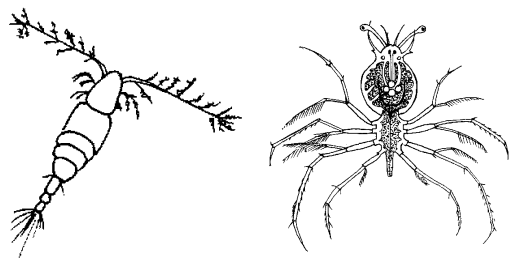












Where does the water go??

Do a survey around the school streets or in your neighbourhood (do surveys in groups, to be supervised by teacher or adults). Ask people what liquids they occasionally pour down drains. Observe the activities along the street, is anyone washing their car? Can you identify any substances in the drain?

Name of street: _____

Are there any people on the street? _____ How many: _____

What activities are the people doing? _____

Is there any waste in the drains? _____

Can you identify any of the substances in the drain? _____

Ask a few people if they would like to be part of your school survey:

Do they wash their car on the side of the street?

What cleaning agents do they use? _____

Do they use the drains to get rid of any unwanted substances?

If yes, what substances? _____

Multiple choice question

Does the waste that goes down the drain end up:

- a) into sewage waste?
- b) into rivers and out to sea?
- c) into holding drains?