

Level 2

Teacher Resource Book



Anna Cooke

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Ashmore 4214 AUSTRALIA
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Fax (07) 5539 4187
www.wetpaper.com.au



ISBN 978-1-86283-223-7 (EPub)
January 2025

National Library of Australia HARD COPY cataloguing-in-publication data

Cooke Anna 1969 -
Kids & Water Level 2 Teacher Resource Book
ISBN 1 86283 070 3

Marine reader series creators: Bob Moffatt and Jim Grant

Editing: Paula Moffatt

Learning outcomes: Bob Winters

Cover: Trent Moffatt Designs

Printing: Heaneys Performers in Print, Gold Coast, Australia.

Illustrations: Wet Paper, Rose Bedford, Sharyn Madder, Jan Taylor, Sue Oats, Steven Byers, Gould League.

Acknowledgements

The Moffatt Group Australia Pty Ltd. is grateful to the students of Fitzroy and Beaumaris Schools and Nick Sandalis for assistance in the photograph on page (i) and for the assistance of Sally Flynn, Geoff Franklin, Ken Maclean, Greg McGarvie, Moyra McRae, Sue Olsson, Matt Pedersen, Graham Rogers, Tim Ryan, Peter Schloss, Annie Schmidt, Phil Smith, Stephanie Smith, Mark Snartt, Kathy Steggles, Claire Thelander

This publication was supported by grants from Queensland Transport, NSW WaterWays, Australian Maritime Safety Authority, Marine Board Victoria, South Australia Transport, Western Australian Transport, Marine and Safety Tasmania, Northern Territory Transport and Queensland Government State Development.

The Gould League is supported by staff and other resources supplied by Department of Education, Employment and Training, State Government, Victoria.

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The Kids and Water Project was printed and published in Australia.



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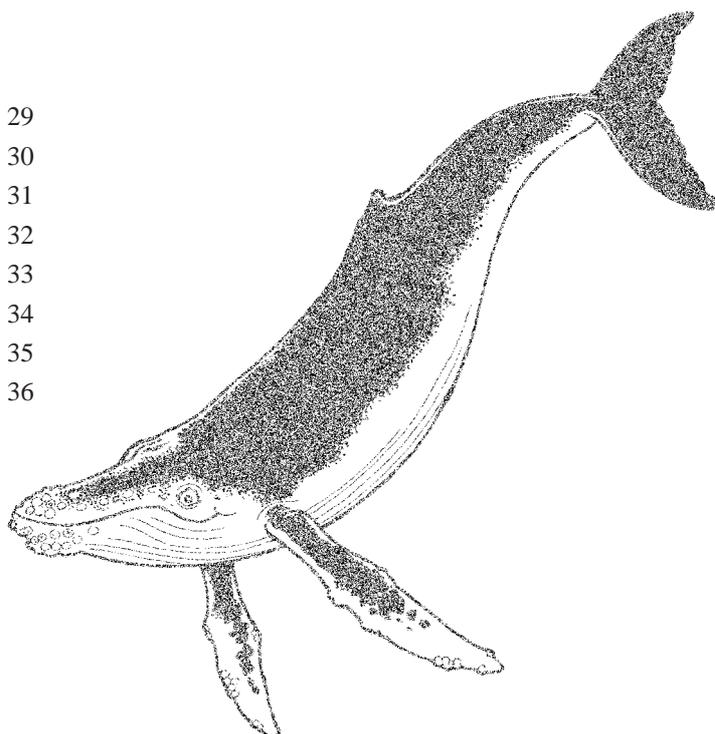
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The readers

Book 4: Fun by the Sea

There is so much fun to have by the sea. In this book are just a few of the simple fun activities people do by the sea. We can snorkel, build sandcastles, ride a bodyboard, go explore some rock pools and lots more!

Book 5: Working at Sea

What jobs do people have who work at sea? Find out what a sailor, a diver, a scientist and the water police as well as others do at sea.

Book 6: Be Safe at the Beach

What would you do if you saw a blue-ringed octopus? Find out a few simple things you can do to make sure your time at the beach is fun and safe.

Australian Guide to Seashores

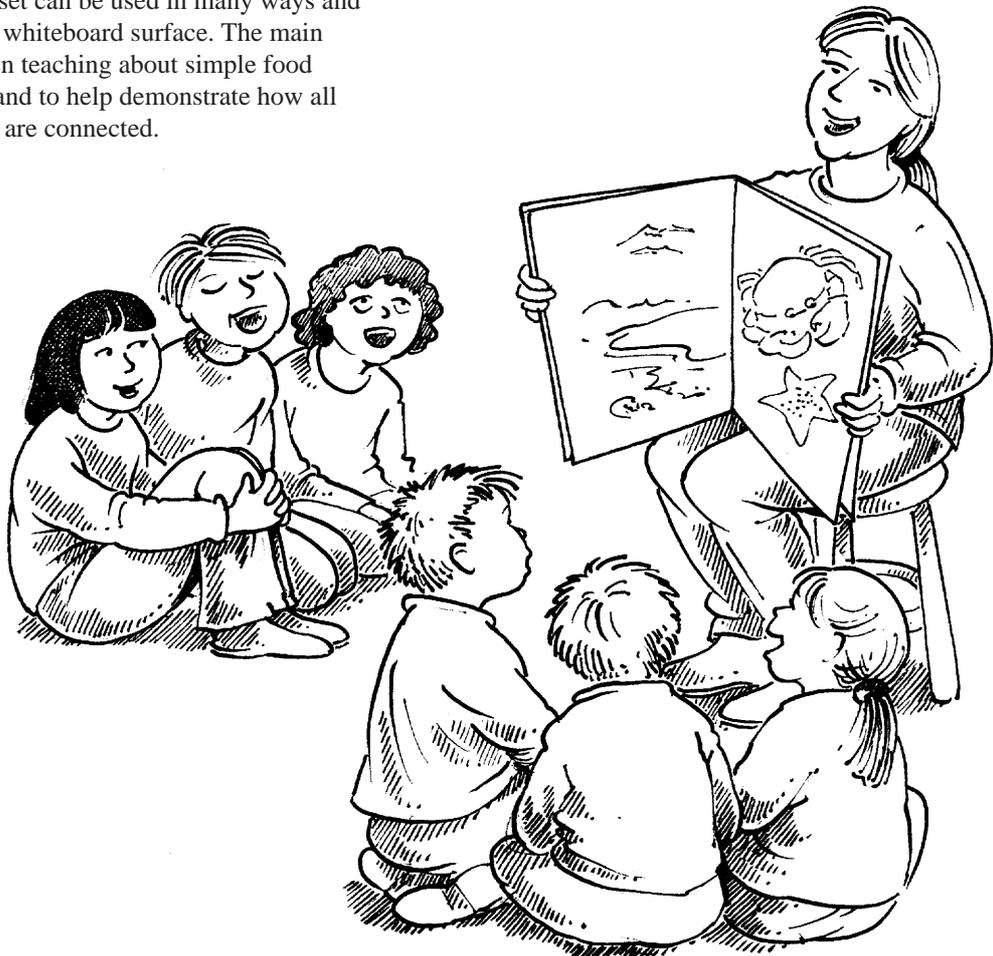
This book will help students and teachers to identify common sea creatures, learn some interesting facts about them and find out about some beach treasures that get washed onto the seashore.

Sea life magnetic set

This magnetic sea life set can be used in many ways and will easily stick onto a whiteboard surface. The main function is for use when teaching about simple food chains and food webs and to help demonstrate how all living things in the sea are connected.

Reading tapes and big books

There are big books and reading post tapes to accompany each of the readers



About this resource book

The following suggested activities, blackline masters and worksheets are for use with the Kids and Water marine reader series:

- Book 4 *Fun by the Sea*,
- Book 5 *Working at Sea* and
- Book 6 *Be safe at the Beach*.

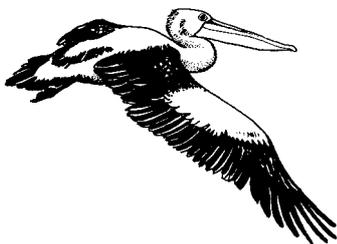
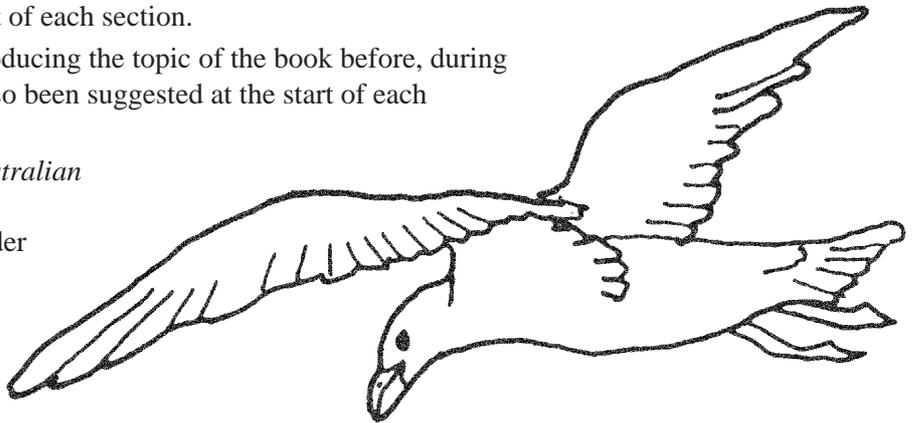
There are eight activities for each book and the KLA's and learning outcomes for each activity are summarised at the start of each section.

Focus questions and ideas for introducing the topic of the book before, during and after reading the book have also been suggested at the start of each section.

The Gould League publication *Australian Guide to Seashores* is a wonderful accompaniment to this marine reader series. This book can be used in numerous ways in the classroom and taken on an excursion to the beach.

There are 11 activities for use in a classroom environment and a comprehensive list of fun, stimulating and educational activities to do at the beach which will motivate minds and create lasting memories!

The magnetic sea life set is a useful tool to accompany this series and can be used in the classroom in a variety of ways when teaching about simple food chains and food webs.



Why is marine education important?

If you could travel into space and look back at our earth you would understand why it might be called the Blue Planet! The oceans of the world are rich and valuable environments. They are filled with some of the most amazing, fascinating and bizarre creatures, plants and geological features. The oceans cover 71% of our earth's surface, contain most of the life on earth and produce most of the world's oxygen!

The oceans are in danger. Oil spills, rubbish dumping, overfishing, erosion, habitat disturbance and a host of human activities are all severely affecting our Blue Planet.

Many young people are interested in preserving the oceans. The sea is more than just a nice place to visit; it is a major part of our life support system.

What we do each day and how we use and care for the land will affect the health of the oceans.

Through education we can create student awareness, influence attitudes and encourage action, to support our marine and coastal environments.



Fun by the Sea

Book 4

Before reading the book

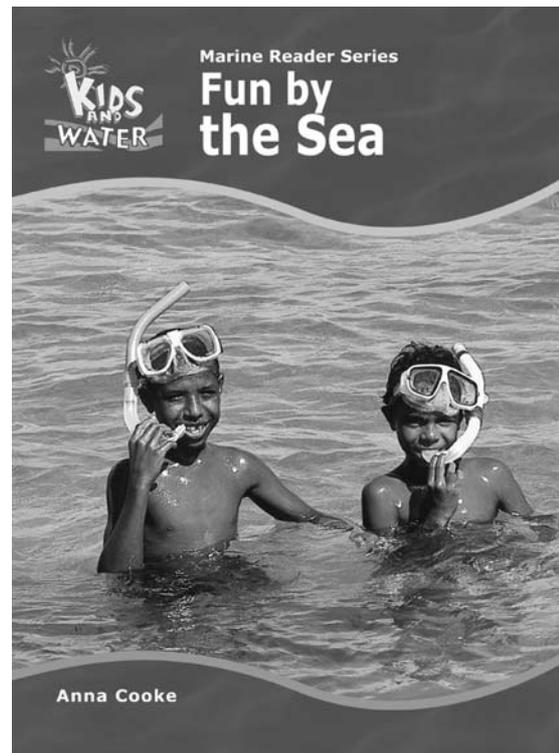
- Ask the students who has been to the beach.
Discuss what they did while they were at the beach.
- Ask the students what some of the important things are to take when they go to the beach.
- Find out if the students have found anything interesting that has been washed ashore on the beach.
- Introduce the text by reading the title and discussing the cover picture.

While reading the book

- Use the heading on each page and ask the students if they think this would be fun, have they done this activity before or something similar to it and what did it feel like?
- Use the pictures in the book to create further thought and discussion.
- Discuss the safety aspects with each activity. That is making sure to wear shoes when climbing over rocks, looking out for big waves when body boarding, not to pick up sharp objects, taking their rubbish home so it does not end up in the sea where it will harm sea creatures.

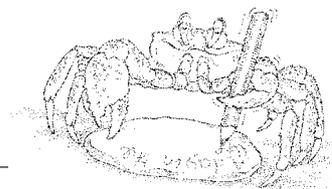
After reading the book

- Have students choose some words from the glossary and some words in the text and think of a rhyming word to match.
- Write a list of different words and find out their meaning.
- Can the students think of any other fun things to do at the beach that were not in the text.
- Discuss the words in the glossary.
- Ask students to describe the meanings of some of these or make up a sentence using the word.
- Write a list of difficult words and find out their meaning.



Coastal Banksia

Learning outcomes



Activity	KLA	Outcome
1 Rock pool ramble - p3	Science	LIFE AND LIVING – 2.7 Describes the types of relationships between living things. 2.8 Links observable features to their functions in familiar living things. 2.9 Compares and contrasts similarities and differences within and between groups of familiar living things.
2 A window to the sea - p4	English The Arts	WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics. VISUAL ARTS – 2.21 Uses experience and imagination to make art works.
3 Beach bingo - p5	English	READING AND VIEWING – 2.5 Constructs and retells meanings from: - short written texts with familiar topics and vocabulary, predictable text structures and frequent illustrations, and - visual texts with predictable narrative structures.
4 Undersea view - p6	Science The Arts	LIFE AND LIVING – 2.7 Describes the types of relationships between living things. VISUAL ARTS – 2.22 Makes choices about elements in the visual arts and organises them in expressive ways.
5 My fun beach list - p7	English SOSE	WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics. PLACE AND SPACE – 2.5 Describes choices people make in their use of places.
6 Fun things to do at the beach! - p8	English SOSE	READING AND VIEWING – 2.5 Constructs and retells meanings from visual texts with predictable narrative structures. PLACE AND SPACE – 2.5 Describes choices people make in their use of places.
7 Salty sea words - p9	English	READING AND VIEWING – 2.7 Recognises and interprets basic linguistic structures and features of texts.
8 Beachcomber - p10	English Science	READING AND VIEWING – 2.5 Constructs and retells meanings from short written texts with familiar topics. LIFE AND LIVING – 2.9 Compares and contrasts similarities and differences within and between groups of familiar living things.

Name: _____

Rock pool ramble

The seashore is an exciting place full of life. There are strange creatures clinging to rocks, tiny fish darting about, crabs hiding in the sand and anemones that look like sea flowers! Take a journey to a rock pool and find out all its secrets!

Have you ever looked into a rock pool?

Sit very still and quiet and stare for a while.

Can you see anything moving?

Can you see any shells? Watch closer, are they moving?

Turn some rocks gently over. Make sure you can still see your fingers, you don't know what's underneath!

Wait for the sand to settle and look hard.

Is there anything clinging to the rock underneath?

What did you see?

Turn the rock gently back over as you found it.

How many different coloured seaweeds can you find?

Look closer at their shapes, can you see any patterns?

Where is most of the seaweed growing?

What does it feel like?



Rock pool rules

Wear some shoes, rocks can be sharp and slippery!

“If it sticks it wins!”

Leave the creatures in their homes.

When you return to school draw your rock pool and what you saw in it.

Decorate your picture with coloured paper and blue cellophane for water.

Name: _____

A window to the sea

My favourite things to do at the beach are _____



Draw your favourite things to do at the beach in the windows below. Cut them out and make a story in your workbook.





Name:

Beach bingo

Explore the beach for its treasures!
Take this with you to the beach! Can you complete this beach bingo chart?



Find something hard	Find something that came from a sea creature	Find something flat
Find something with holes in it	Find something smooth	Find something with a pattern
Find something round	Find something green	Find a nice place to sit

Once you have completed this one – make up your own beach bingo chart for a friend to try!

Name:

Undersea view

What to do

Step 1 Cut out the front of the box (the part where the tissues pull through).

Step 2 Cut out two holes big enough for your eyes at the back of the box.

Step 3 Line the box with silver foil, coloured paper or cellophane (leave the eye holes clear).

Step 4 Cut out pictures of sea creatures from old magazines or make sea creatures and seaweeds from the coloured paper, e.g. turtles, fish, sea stars, sea urchins, dolphins, octopus, cuttles, crabs. Use your imagination.

Step 5 Hang these from the top of your box by tying a piece of string through your sea life then through the top of the box.

Step 6 Decorate the bottom with sand or shells.

Step 7 Decorate the outside of your box with coloured paper.

Step 8 Cover the open front of the viewer with a piece of blue cellophane to enclose the scene.

Step 9 Hold the viewer up to the light!

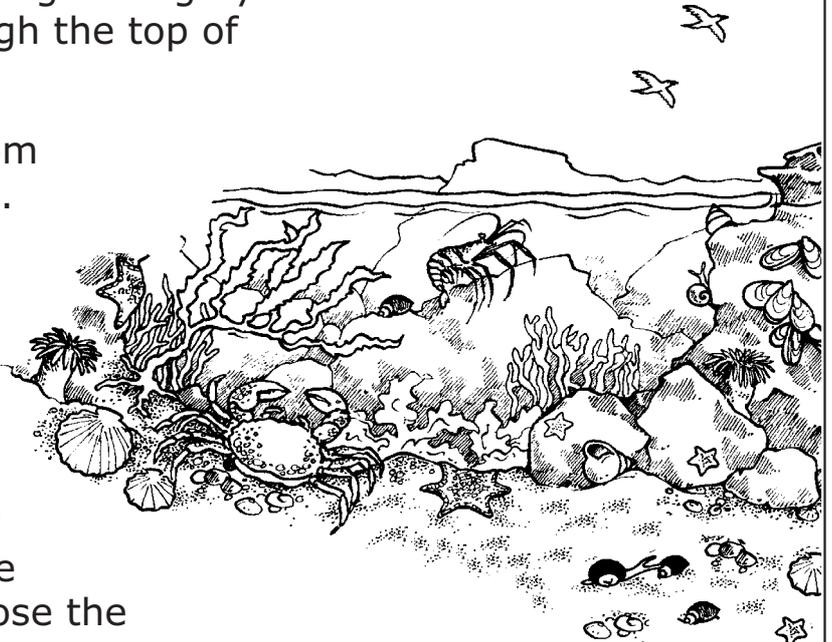
When you look through the box you will view an amazing underwater world full of life!

Aim

To create a crafty undersea viewer with some simple materials and some imagination.

Materials

- Magazines with pictures of sea creatures
- Large deep tissue box, shoe box or a similar size and shape cardboard box
- Scissors
- Silver foil
- Blue and other coloured cellophane
- Coloured paper/thin cardboard
- String
- Hole punch
- Glue



Name: _____

My fun beach list



Things to take to the beach

Things to do in the sand

Things to do in the water



Name: _____

Fun things to do at the beach

Can you finish these sentences by filling in the missing letters?

ore ish oo ash oa ll ee at um al ea ick an as ur

1. We wear sunscr____n and a h_____ .

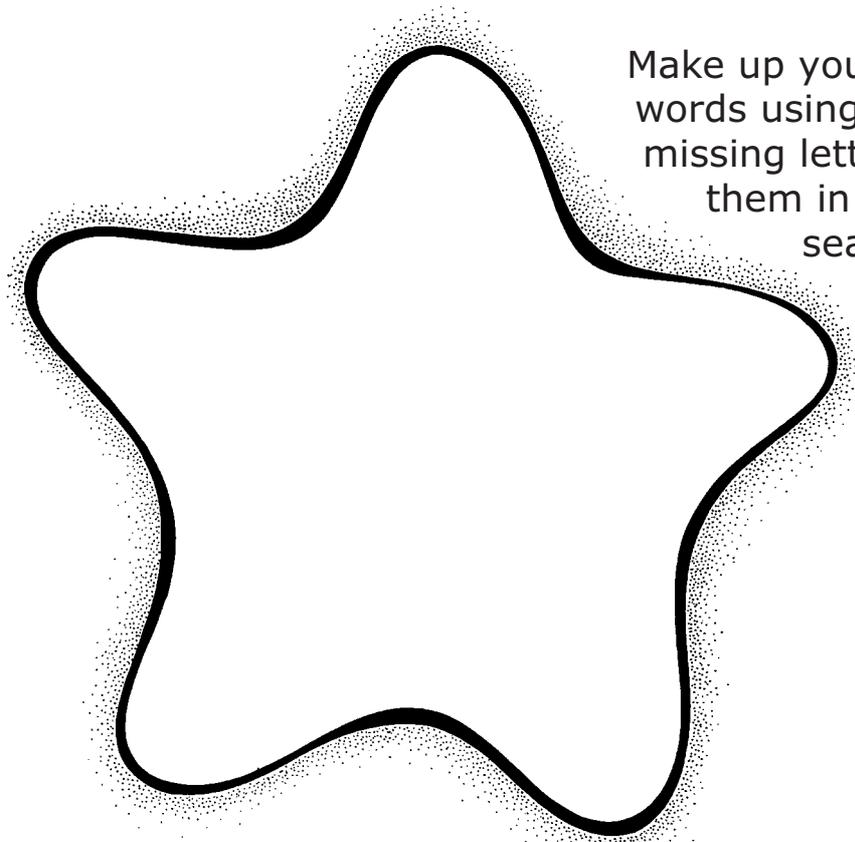


2. Snorke_____ing is a great way to see f_____ under the water.

3. My bodyb_____rd helps me to float in the water.



Make up your own words using the missing letters. Write them in the seastar.



4. I practise my b_____ance for when I next go for a s_____f.

5. I like to j_____p over the waves as they spl_____ onto the shore.

6. We are very careful as we expl_____ the rock p_____ls.

7. I make a s_____d c_____tle with my hands.



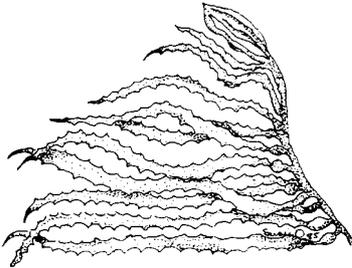
8. My family likes to play cr_____et at the b_____ch.

Name: _____

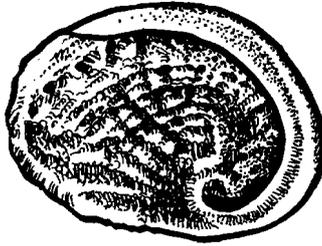
Beachcomber

See if you can find these at the beach! Tick off the ones you find.
Choose one of these and find out more about it.

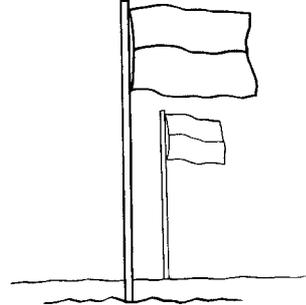
Seaweed



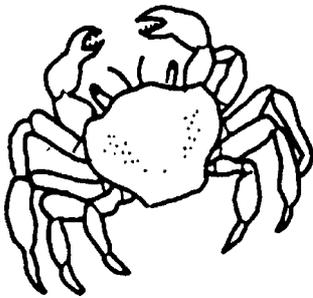
Abalone shell



Safe swimming flags



Crab



Sea jelly



Don't touch

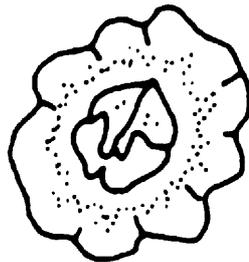
Seaweed



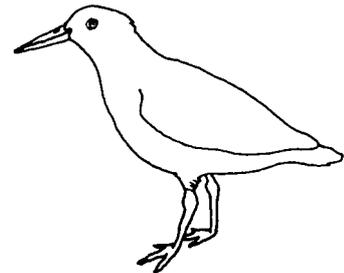
Hermit crab



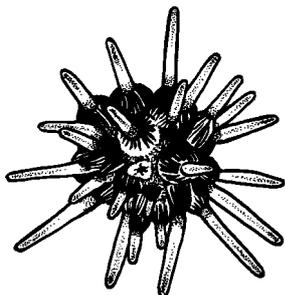
Barnacle



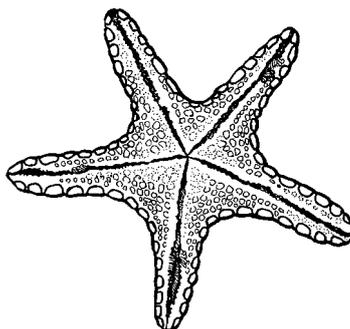
Sea bird



Sea urchin



Sea star



Sea shell



Working at Sea

Book 5



Before reading the book

- Have students brainstorm different places to work, e.g. factories, farms, mines, oceans, snowfields.
- Have the students think about what jobs we could do if we worked at sea. Discuss some of these.
- Introduce the text by reading the title and discussing the cover picture. What work might this person do? What is the equipment he has on him used for?

While reading the book

- Ask students if they would like to do that type of work. If no, why not?
- Ask students to describe what it might be like to do that type of work using the pictures in the book.
- Discuss what other responsibilities or actions that each role might have, e.g. divers may also work on oil rigs underwater or some may teach others how to scuba dive.
- Discuss the different sort of equipment that might be used for each different job. What might they need to do that job.

After reading the book

- What other types of work at sea are there which were not discussed in the book?
- Have the students ever met someone who has worked at sea? What type of work was it? What did they do?

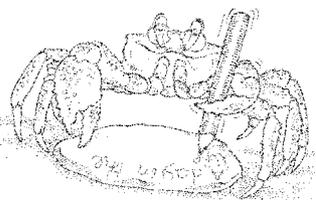


Other ideas

- Charades. Students can take turns silently acting out one of the jobs they read about. The other students have to guess which job they are acting out.
- Invite someone who has or is working at sea to speak at your class. Find out more about their job.
- Visit a place where people work with the sea. For example go behind the scenes at an aquarium and find out what they do.
- Turn the classroom into a place where you are all "working whilst at sea". Choose a theme and decorate your classroom with posters, newspaper articles, photos. Make paper sea creatures, stuff a wetsuit or overalls with paper to use in your scene and cover the windows with cellophane to create water all around you.
- Become a conservationist and conduct a litter survey either at the beach or in the school grounds.
- Make a poster showing your results and how the litter can be reduced.



Learning outcomes



Activity	KLA	Outcome
1 Rock pool explorer - p13	Technology	DESIGNING, MAKING AND APPRAISING – 2.3 Plans production processes and makes products and processes using resources safely.
2 Conservationist - p14	SOSE Health & PE	NATURAL AND SOCIAL SYSTEMS – 2.14 Identifies reasons why groups and communities have rules. PLACE AND SPACE – 2.6 Identifies how people can cooperate to care for places in a community. HEALTH OF INDIVIDUALS AND POPULATIONS – 2.11 Explains how people are part of the natural environment and why people should care for the environment to promote and protect their health.
3 Marine biologist - p15	Mathematics	NUMBER – 2.11 Counts, orders, estimates and describes with whole numbers within everyday experience and with fractions expressed in words. 2.15 Estimates and calculates mentally, including adding and subtracting numbers to 10 and making extensions based on place value.
4 Divers - p16	English	READING AND VIEWING – 2.5 Constructs and retells meanings from short written texts with familiar topics and vocabulary, predictable text structures and frequent illustrations. WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics.
5 Anglers - p17	English	READING AND VIEWING – 2.5 Constructs and retells meanings from short written texts with familiar topics and vocabulary, predictable text structures and frequent illustrations. WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics.
6 A poet who works at sea - p18	English	Writing – 2.11 Uses some basic linguistic structures and features of written language so that writing can be readily interpreted by others. 2.12a Uses talk to plan and review own writing.
7 Aquarium visit - p19	Science	WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics. RESOURCES – 2.11 Describes ways in which people cooperate with and depend on one another in their work.
8 What equipment? - p 20	English SOSE	WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics. RESOURCES – 2.11 Describes ways in which people cooperate with and depend on one another in their work.

Name:

Rock pool explorer

Make a waterscope and dip net to do your own scientific studies at the beach.

Waterscope

- Step 1. Cut off the bottom of your empty tin can with the can opener (let an adult do this for you).
- Step 2. Cut up a piece of plastic wrap big enough to cover the bottom of your can.
- Step 3. Using the rubber band, attach the plastic to the bottom of the can – making sure it is tight.
- Step 4. Tape down the edges.
Gently place the plastic end into the water and look through the open end! You can now see underwater without getting wet!



Waterscope materials

- A large empty tin can
 - A can opener
 - Scissors
 - Plastic wrap
 - Strong sticky tape
 - A rubber band
- Hint: Tins with ring top lids usually have a smooth edge*

Dip net materials

- Coat hanger
- Old stockings
- Scissors
- A needle threaded with wool
- A bucket

Dip net

- Step 1. Bend the coat hanger into a circle.
- Step 2. Cut off one leg from the stockings. Stretch this open end over the coat hanger.
- Step 3. Use the needle and wool to attach the stocking to the coat hanger.
- Step 4. Fill the bucket with sea water.
Using your dip net gently lift some creatures out of the water and quickly put them into your bucket with sea water in. You can now study them up close before you return them to their homes!

Sea code: Make sure when you return the animals and plants to be careful with them.



Name: _____

Conservationist

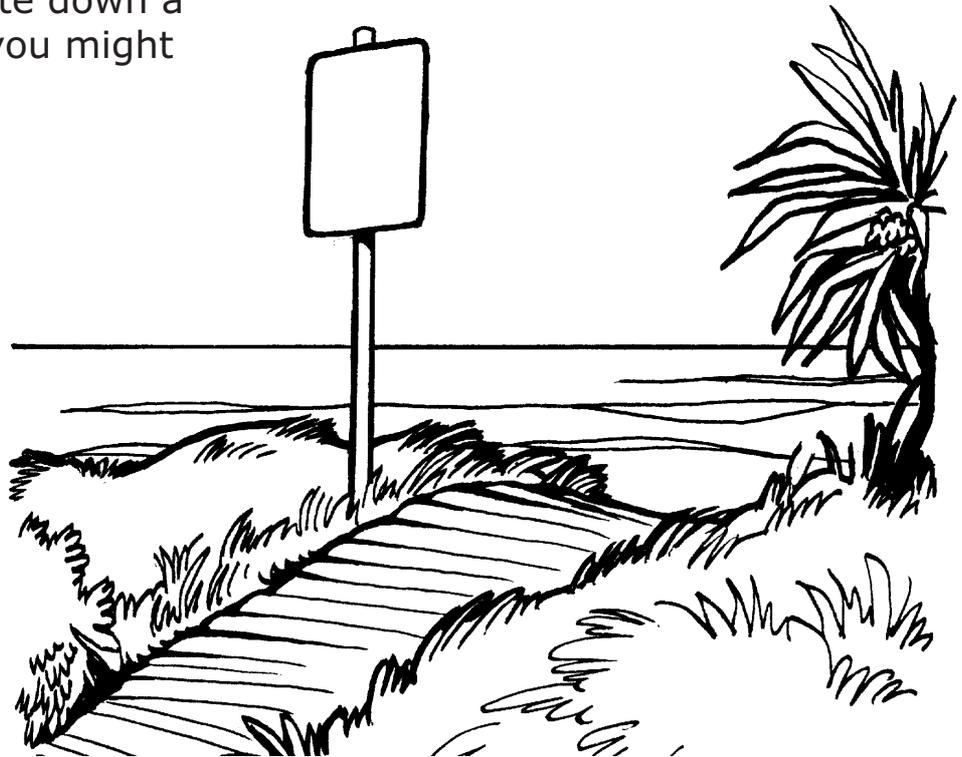
Caring for the beach

A conservationist is _____

Signs at the beach can tell us some important information about safety and caring for our beach.

With a partner write down a list of topics that you might see on signs when visiting the beach. Some ideas to get you thinking could include dogs, fishing, shell collecting, sun sense.

Write your own sign below.



What I would say on my sign at the beach.

Name: _____

Marine biologist

A Marine biologist is _____

Counting a number of fish in the ocean can help us learn something about them. For example, how quickly they grow.
Help the marine biologist count the number of fish.

How many cod? _____ 

How many seahorses _____



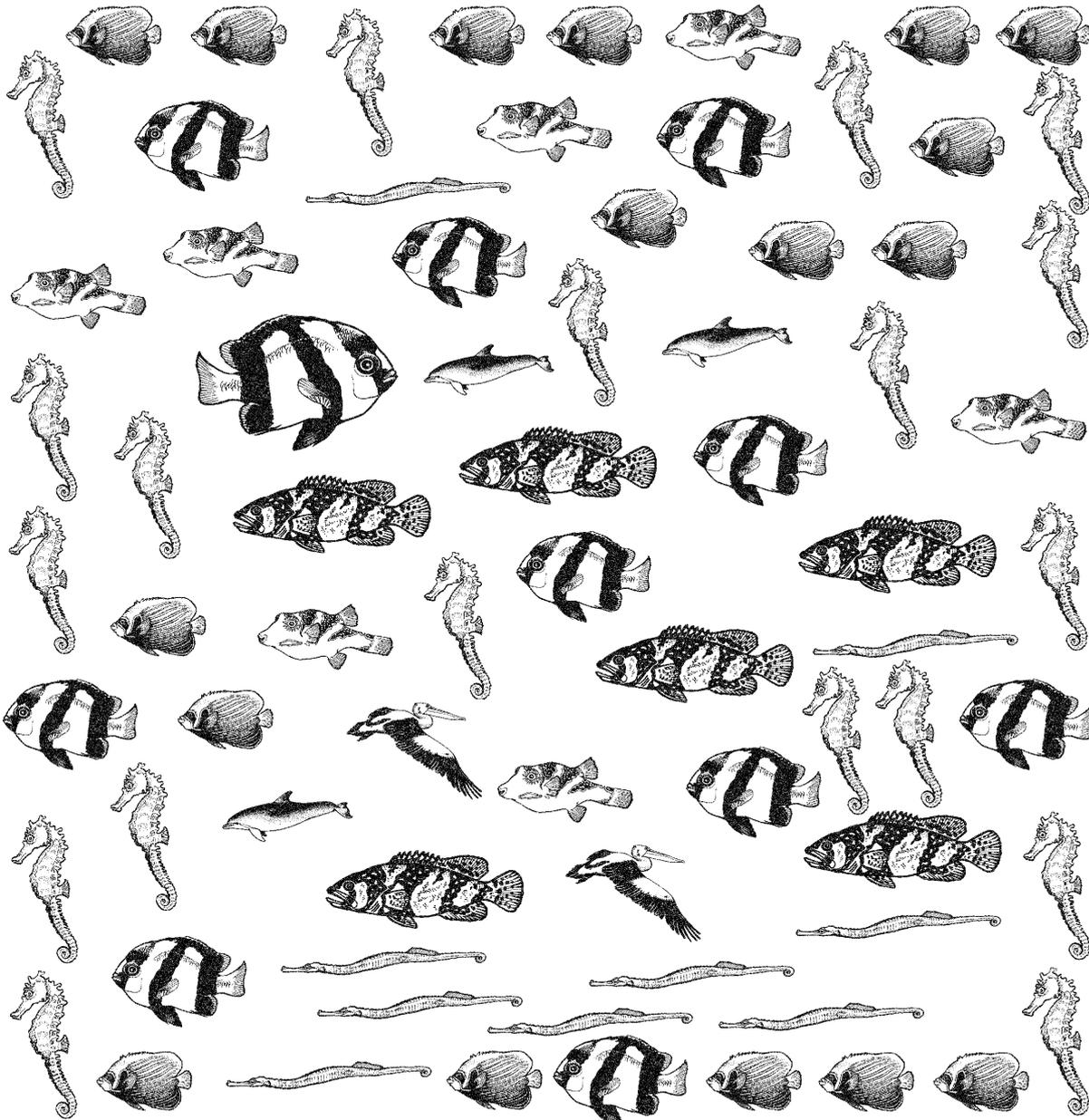
How many puffer fish _____ 

How many banded humbugs? _____



What other sea creatures can you see?

How many pipefish? _____



Name: _____

Divers

A diver is _____

Imagine you are a diver. Where would you work?

List three important pieces of equipment you need to do your work.

Write or draw three things you might see if you were diving.



Finish these sentences

Divers are _____

Divers have _____

Divers can _____

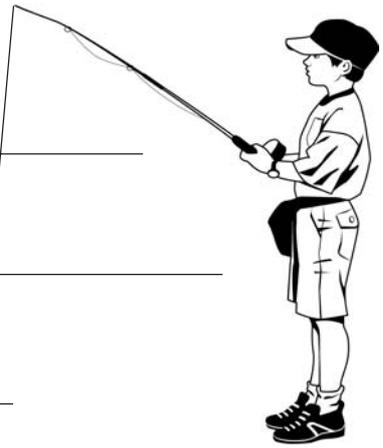
Name: _____

Anglers

An angler is _____

Anglers catch _____

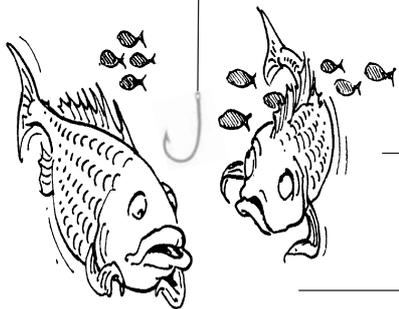
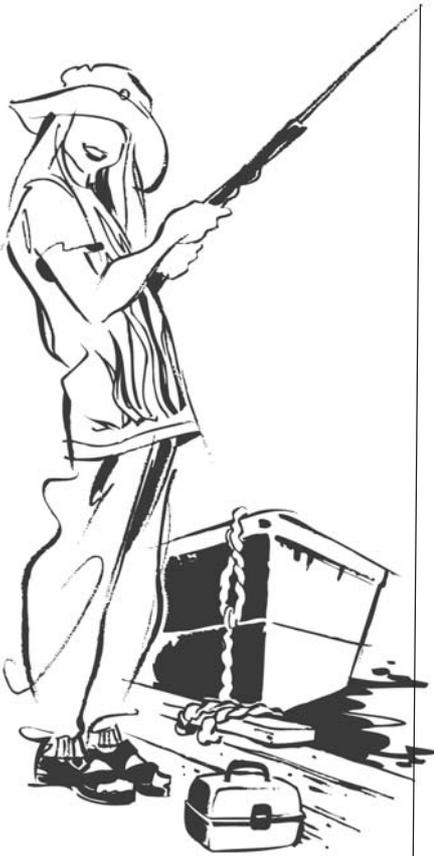
People eat _____



Fish taste _____

Fish have _____

Some fish _____



Name:

A poet who works at sea

Choose your favourite job at sea.

Write a five line poem about your favourite job - no rhyming is necessary!

Remember:

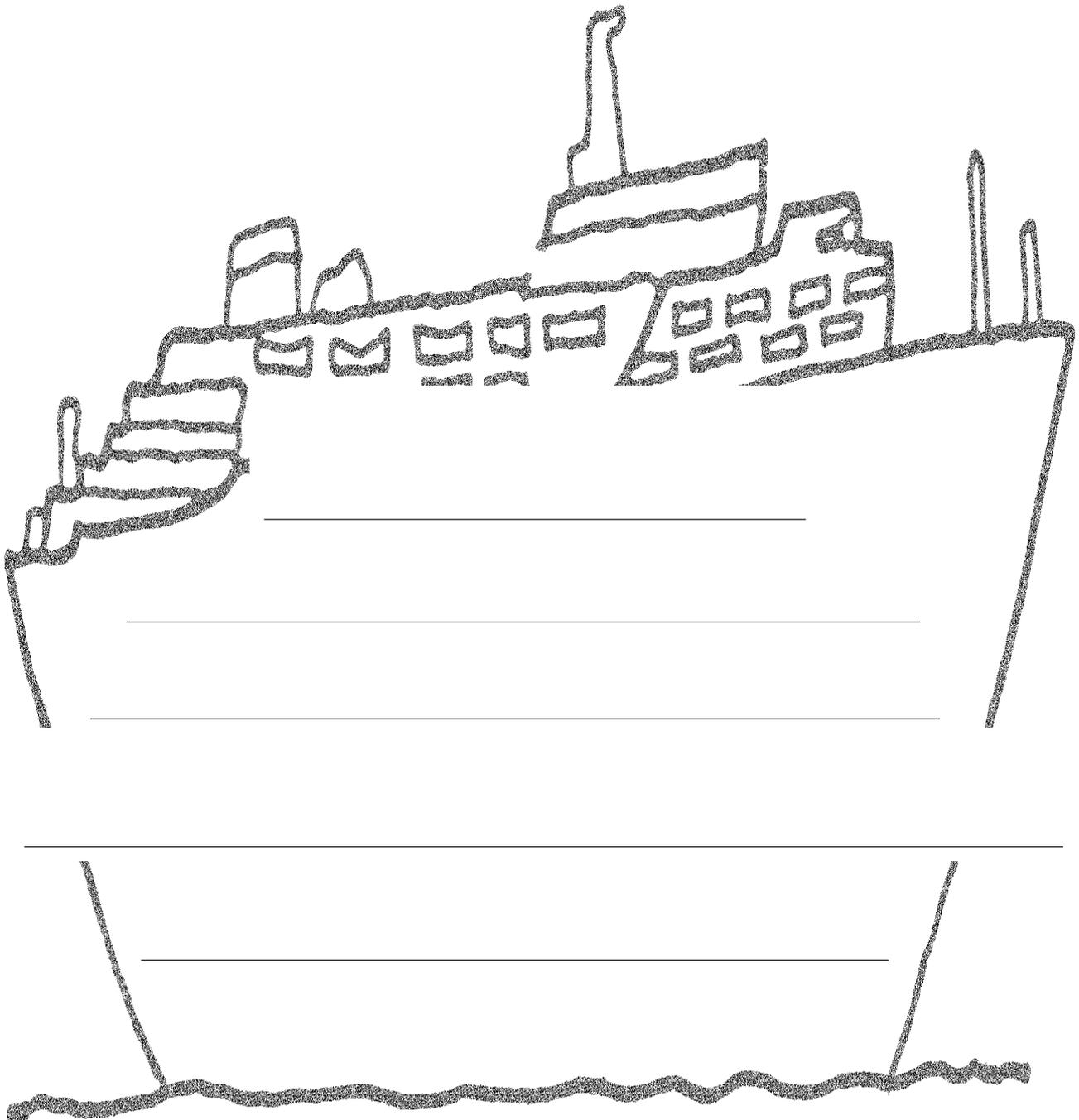
The first word is one word as a title.

The second line has two words describing the title.

The third line has three words describing some action.

The fourth line has four words telling about some feeling you have about the subject.

The fifth line has one word to sum up.

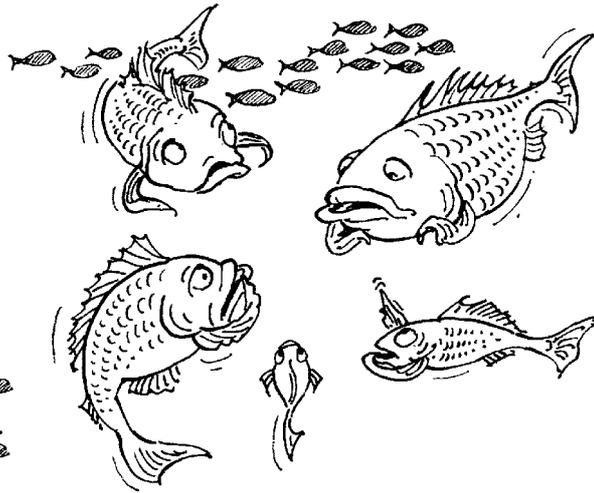
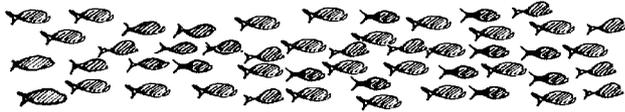


Name: _____

Aquarium visit

Many jobs at sea involve working with fish.

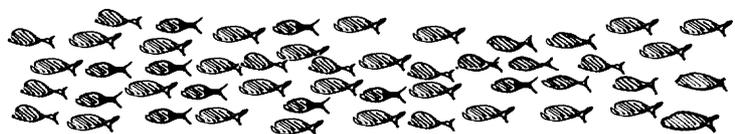
Take this with you on a visit to an aquarium.



See if you can find out more about fish by finding the following at an aquarium.

A fish with a body shape for swimming fast	A fish that can puff its body up	A fish that hides in seaweed
A fish swimming in a school	A fish that blends in with its environment	A big fish that eats smaller fish
A fish with a brightly coloured body	A flat fish that lives on a sandy sea bottom	A fish that is poisonous to people

When you find this fish, write its name in the box.



Name: _____

What equipment?

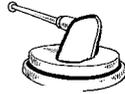
Match the equipment to help the person working at sea

Tank and mask



Ship's master

Ship's gun



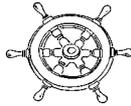
Fishers

Tools



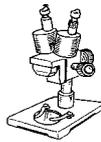
Diver

Ship's wheel



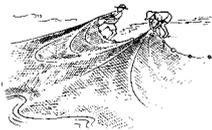
Engineer

Microscope



Navy

Net



Scientist

Use the book *Working at Sea* and write your own sentences

If I was an engineer

If I was a marine scientist

If I was a sailor

If I was a boating patrol officer

My favourite job
would be

Be Safe at the Beach

Book 6

Before reading the book

- Brainstorm things that could happen to us when we go to the beach that may be dangerous. Has anyone ever stubbed their toe on a rock, been dumped by a big wave or cut their foot on the road?
- Draw on the experiences of students.
- Use the title and discuss what being safe means. Use the picture on the cover in a discussion. What could happen here that may be dangerous?

While reading the book

- Relate to students' experiences. What could they have done to make sure they were safe or not hurt? How did they feel?
- Use the pictures in the book to emphasise a point about safety. For example, notice the children are wearing hats, not touching a strange dog but may need to wear trainers next time they go to the rock pools.

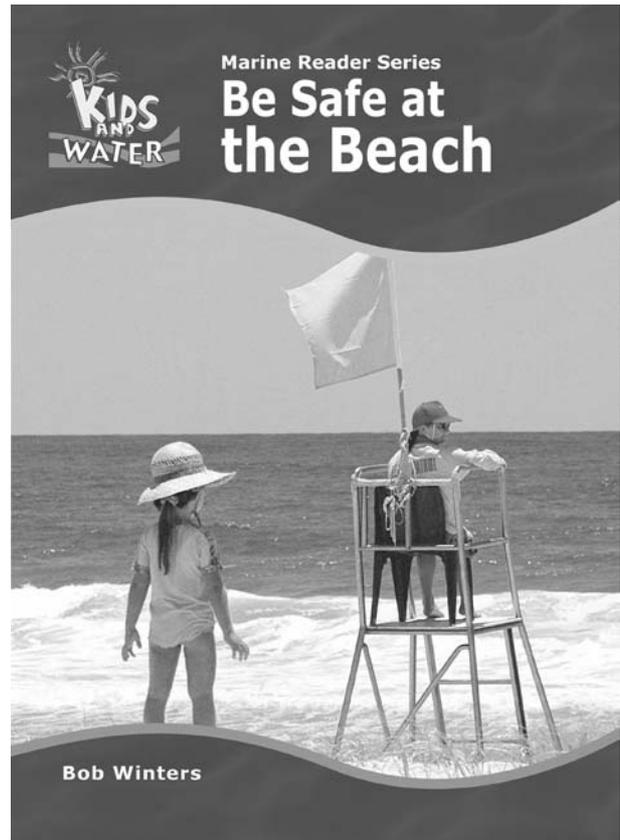
After reading the book

- Ask students if they can think of any other dangerous sea creatures. Where would we be most likely to see these?
- What other things could happen at the beach that may be dangerous.
- The students could think of short scenarios involving some of the dangers, and role-play these without using words. The other students have to guess what has happened.

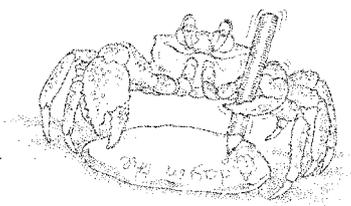


Other ideas

- Write some short stories answering how, why, where, when and what involving safety at the beach.
- Invite a lifesaver to speak at your school.
- Make a poster showing how we can stay safe at the beach.



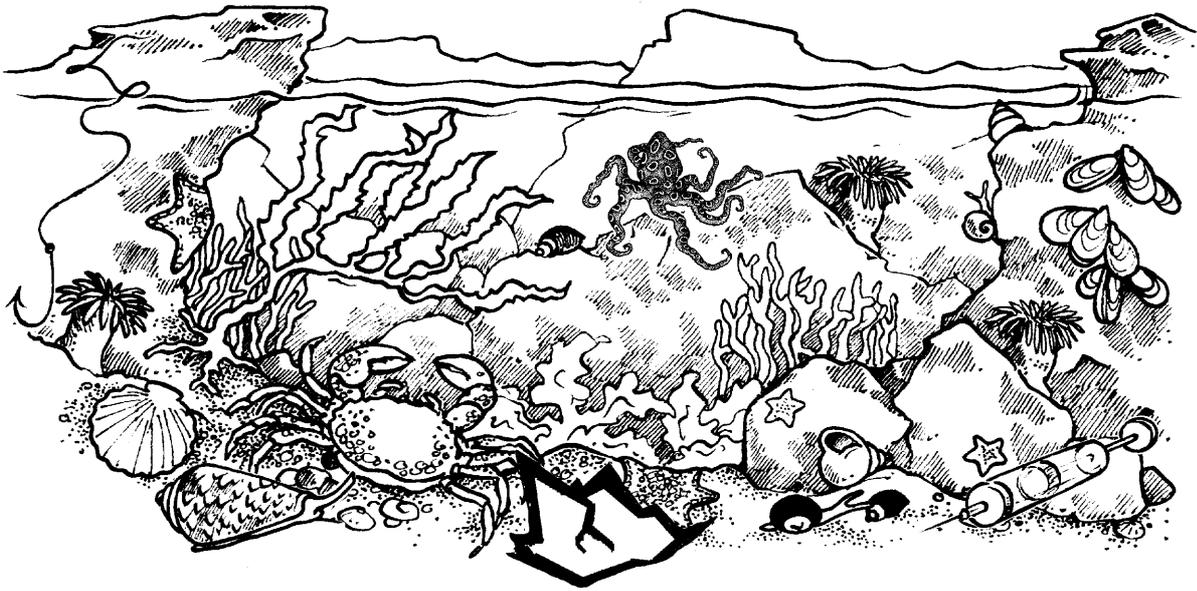
Learning outcomes



Activity	KLA	Outcome
1 Risky rock pools - p23	English Health & PE	WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics. SAFETY – 2.12 Explains and demonstrates options to improve personal safety and the safety of others.
2 Beach detectives - p24	Mathematics Health & PE	MEASUREMENT – 2.21 Locates and sequences events in time, beginning to read familiar clocks and calendars. SAFETY – 2.12 Explains and demonstrates options to improve personal safety and the safety of others.
3 Mixed messages - p25	English Health & PE	READING AND VIEWING – 2.5 Constructs and retells meanings from visual texts with predictable narrative structures. SAFETY – 2.12 Explains and demonstrates options to improve personal safety and the safety of others.
4 Guess what happened - p26	Health & PE The Arts	SAFETY – 2.12 Explains and demonstrates options to improve personal safety and the safety of others. DRAMA – 2.6 Uses experience and imagination to make drama. 2.7 Makes choices about drama elements and organises them in expressive ways.
5 Safe sentences - p27	English Health & PE	WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics. SAFETY – 2.12 Explains and demonstrates options to improve personal safety and the safety of others.
6 Why? - p28	English Health & PE	WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics. SAFETY – 2.12 Explains and demonstrates options to improve personal safety and the safety of others.
7 My ocean pledge - p29	English SOSE	WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics. PLACE AND SPACE – 2.6 Identifies how people can cooperate to care for places in a community.
8 Learn how to read the beach! - p30	Health & PE SOSE	SAFETY – 2.12 Explains and demonstrates options to improve personal safety and the safety of others. PLACE AND SPACE – 2.5 Describes choices people make in their use of places.

Name: _____

Risky rock pools



1. Can you find the two creatures in the rock pool that are dangerous to touch?

Draw a circle around them. Draw a circle around anything else that could be dangerous.

2. Write the name of the two dangerous rock pool creatures.

A c_____e shell can sting you with tiny darts if picked up.

A blue-r_____ed oct _____ has a poisonous bite if touched.

3. If I saw a _____ I would not _____

4. If I saw a _____ I would _____

5. If I saw a _____ I would not _____

6. I would leave these creatures in their _____

7. Rock pools are places where these sea creatures _____

Name: _____

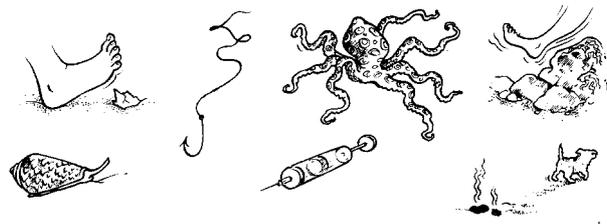
Beach detective

Take this record sheet with you to the beach.
Record all things that you can see that are unsafe!
Walk along the beach, look, read signs and watch
what is happening!



Beach detective sheet

Date: _____

Time:	What is unsafe?
Time:	What is unsafe?
Time:	What is unsafe?
Time:	What is unsafe? 

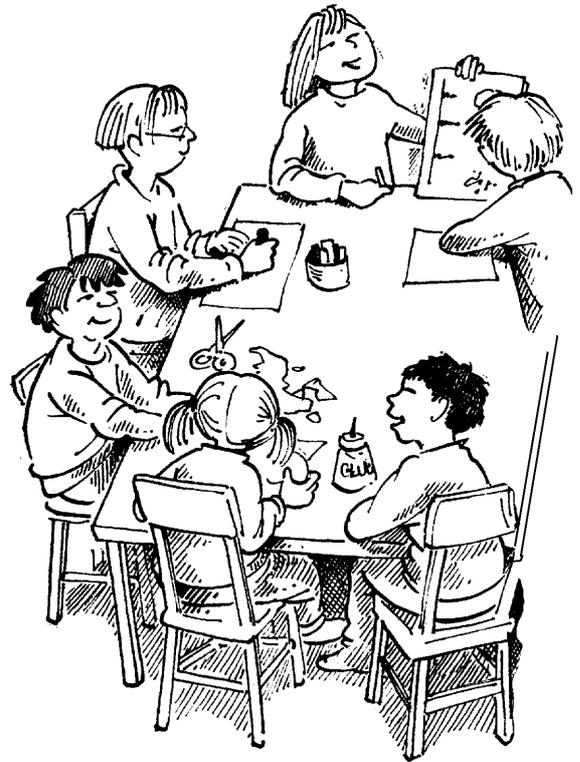
Discuss what you found to be unsafe back at school. How could we make the beach safer?

Name: _____

Mixed messages

Cut out all the safe messages below and match them to the unsafe message.

- Using sunscreen 
- Swimming between the flags
- Lying in the shade
- Wearing shoes
- Wearing shoes with good grip
- Looking, not touching
- Wearing a hat
- Staying together
- Listen to the lifesavers
- Not touching dangerous sea creatures
- Not collecting shells
- Take rubbish home and save sea creatures



Unsafe messages	Safe messages
• Getting bitten by a dog	
• Sunburnt ears and face	
• Taking sea creatures home	
• Leaving rubbish on the beach	
• Slipping over on the rocks	
• Swimming in a rip or strong current	
• Swimming where there are no flags	
• Standing on broken glass or a needle	
• Touching a blue-ringed octopus	
• Exploring on your own	
• Lying in the hot sun	
• Getting sunburnt	

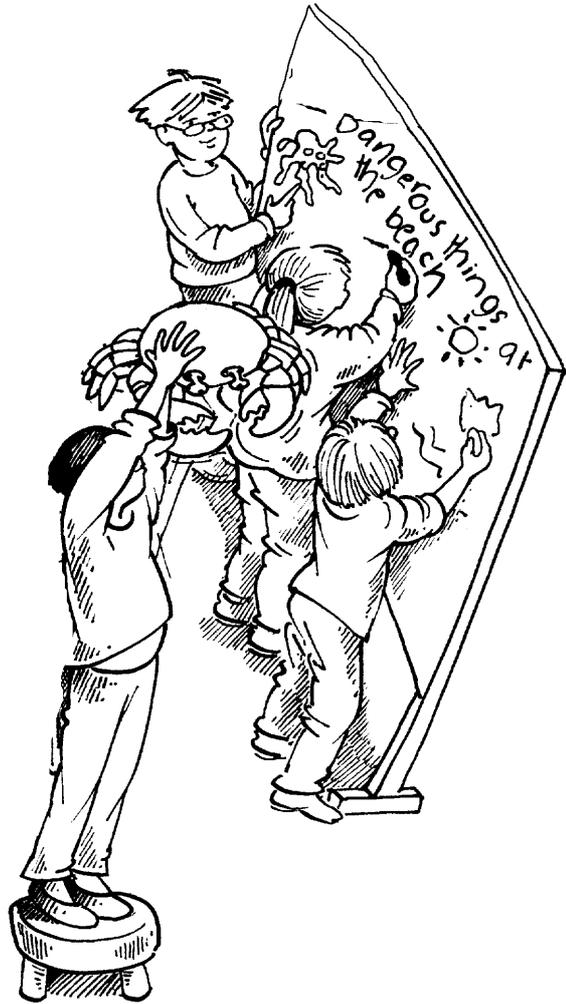
Name: _____

Guess what happened!

Charades

As a class, brainstorm some of the dangerous or unsafe things that could happen whilst at the beach.

Write this list up on a board for all to see.



Sitting in a circle each student chooses one activity from the list on the board to act out in the middle of the circle (without making a noise).

The student who guesses correctly gets to go next.



Name: _____

Safe sentences

Write some sentences about being safe at the beach.

S

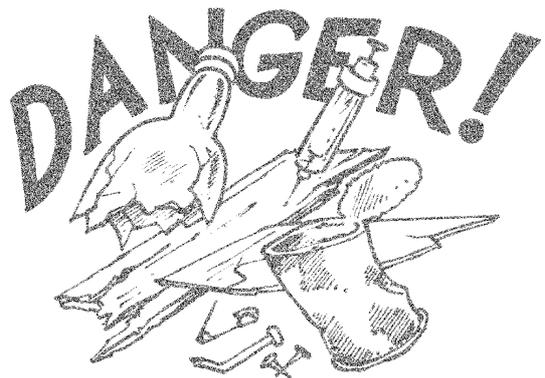
*A*fter I come out of the water I put
on more sunscreen.

F

E

T

Y

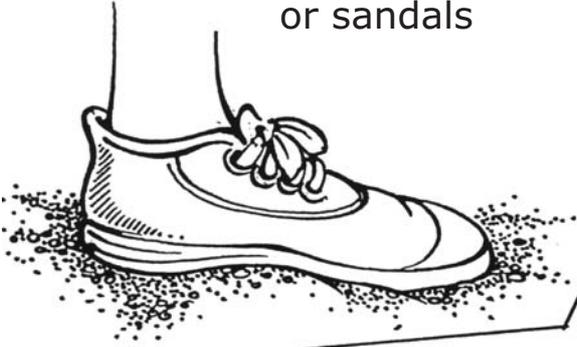


Name: _____

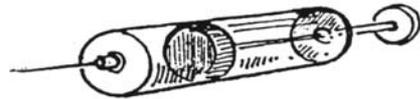
Why?

Paste these pictures into your workbook. Write a reason for each one.

Must wear shoes or sandals

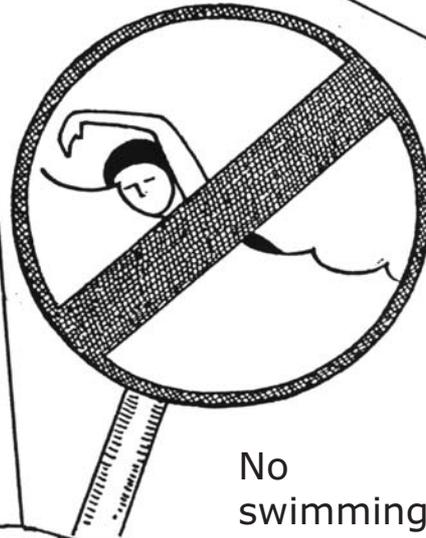
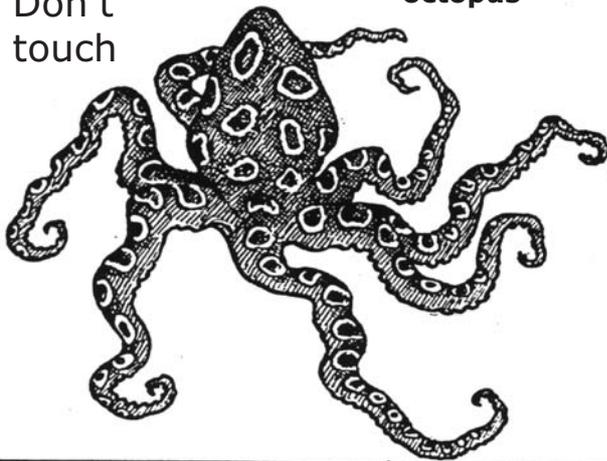


Don't touch



Don't touch

Blue-ringed octopus

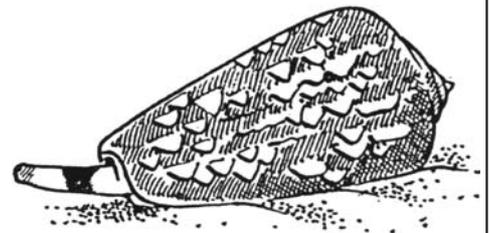


No swimming



Stay together

Cone shell



Don't touch

Name: _____

My ocean pledge

The ocean is a home for all sea creatures.

Sometimes things that we do can harm the sea creatures in their homes. We need to make sure the sea creatures are safe too.

Write your own pledge below in the special ocean pledge certificate. Colour this in, cut it out and paste it in a place where you will often see it.



My ocean pledge

I will care for the ocean by ..

Teacher ideas (to black out when copying)

- not wasting so much water
- learning more about the ocean
- recycling and reducing my rubbish
- making sure my rubbish goes into a bin
- picking up litter and putting it in the bin
- taking rubbish home from the beach
- joining a club to learn more about the ocean
- using environmentally friendly detergents
- not pouring oil and chemicals down the sink

Learn how to read the beach!

Organise to meet a surf lifesaver, the water police or a water safety spokesperson at the beach as part of your day. They will be able to tell you how to read the beach so you can be safe!



Alternatively have someone visit your school to speak to the students.

- Learn how to see a rip in the water; learn about waves and how they can be dangerous; find out what red and yellow flags are for and when the best time to go swimming is!
- People who use the beach regularly know a lot about water safety.
- Take a trip to the beach for a fun day out!

Do a search on the internet about water safety and have the students put together a large water safety poster for display in the school for the other students to learn about beach safety.



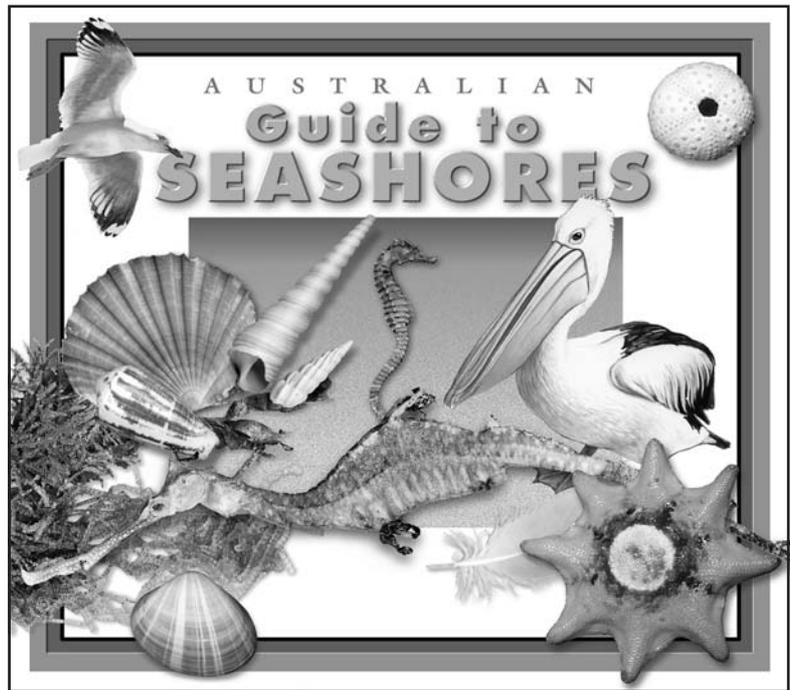
Australian Guide to Seashores

Use this book in the classroom and take it on an excursion to the beach. This book identifies the most common rock pool creatures.

Students can use this book to learn about some sea creatures and beach treasures that are most commonly seen along Australian rocky shores.

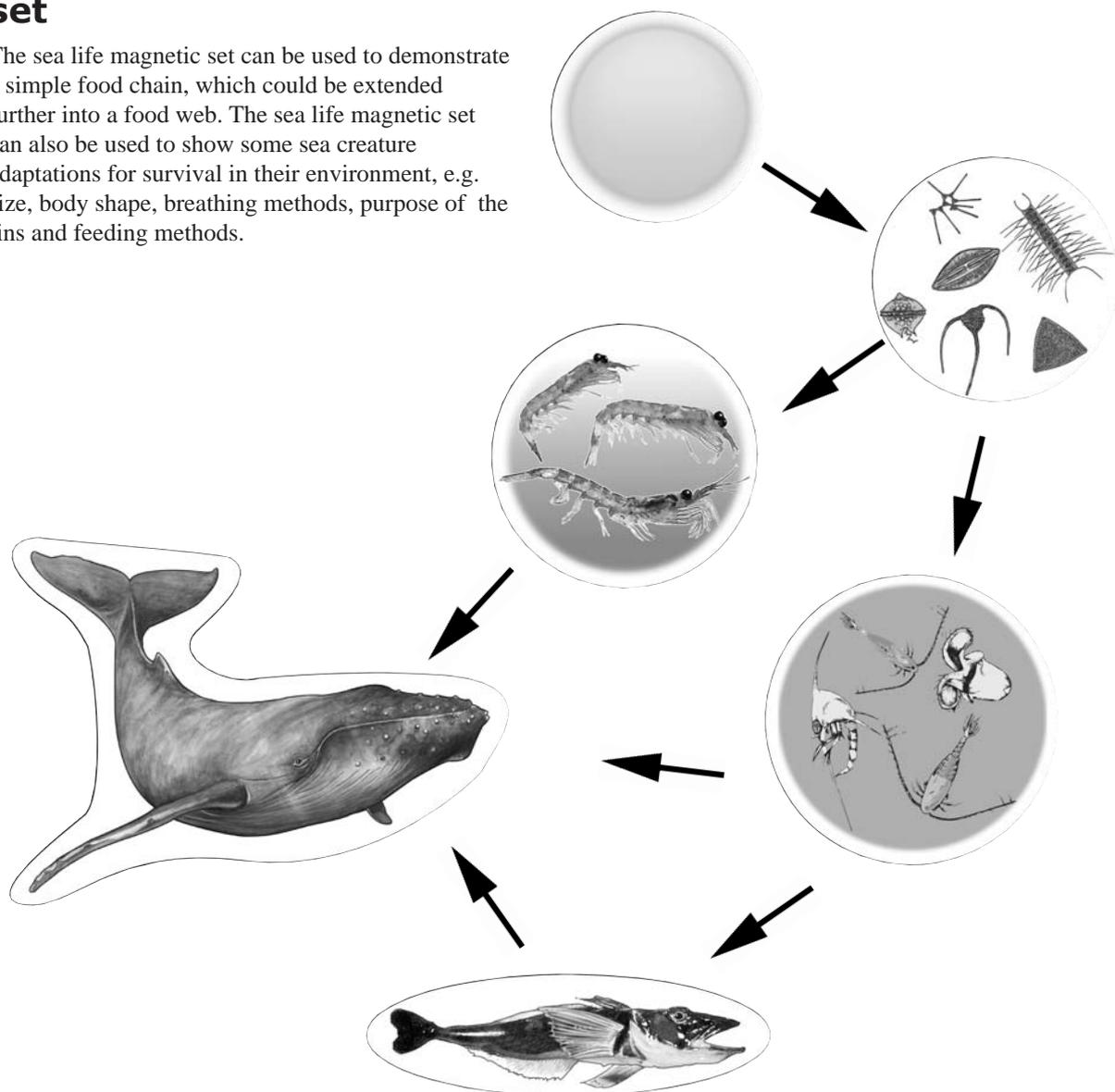
The following activities are designed to be carried out in the classroom or taken on an excursion to the beach.

Students will need a copy of the book to answer some of the questions.



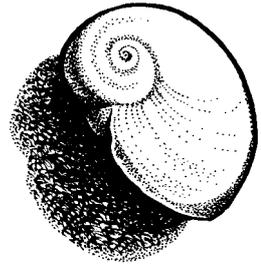
Whiteboard magnet set

The sea life magnetic set can be used to demonstrate a simple food chain, which could be extended further into a food web. The sea life magnetic set can also be used to show some sea creature adaptations for survival in their environment, e.g. size, body shape, breathing methods, purpose of the fins and feeding methods.



Before reading the book

- Ask the students if they like going to the beach? What do they like to do at the beach?
- Ask them if they like to explore. What sort of things have they found on the beach before?
- Discuss rock pools. What are they? They are pools of water left behind when the tide goes out. We find smaller creatures surviving in rock pools. What sea creatures might we find in a rock pool?
- Explain that the sea washes up many interesting things that we can find. When people explore along the beach it is called beachcombing.
- Students may have some photos or objects to bring in and talk about from their visit to the beach.
- Start a beach treasure table in the classroom with things connected to the sea in some way. For example items from beach holidays or objects washed onto the beach.



While reading the book

- Use the pictures to discuss different parts of the sea creatures' bodies.
- Use the pictures to count the number of sea creatures on some pages.
- Introduce camouflage (page 10-11). Why would sea creatures camouflage themselves.
- Use the pictures to show how shells are animals' homes. These shells protect their soft bodies underneath. Sometimes we find shells washed up on the beach. Discuss if they would be dead or alive?
- Encourage students to leave sea creatures where they are. They are in their homes.

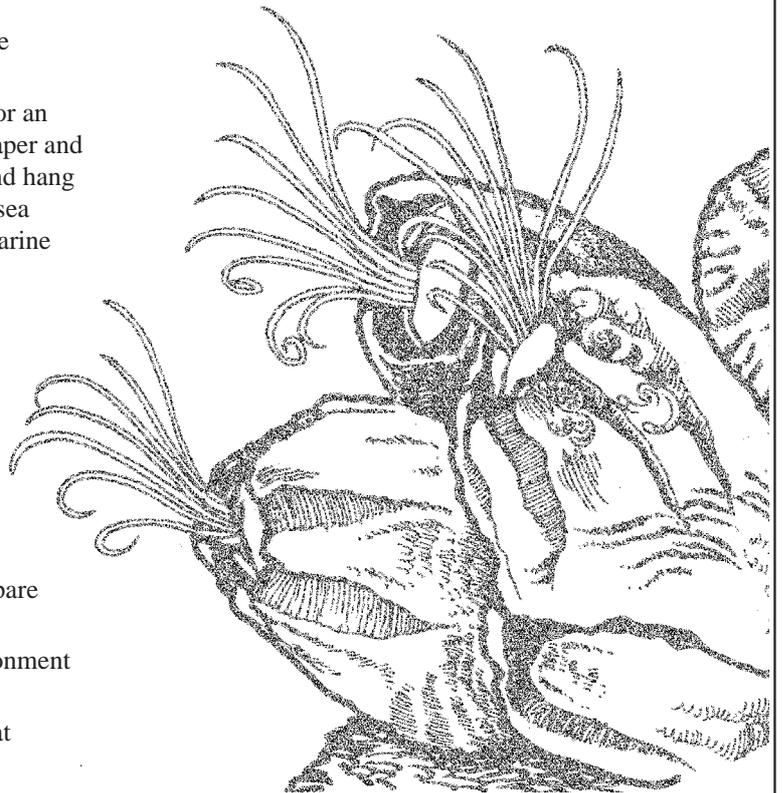
After reading the book

- Ask students to recall their favourite sea creature. What do they remember about it?
- Discuss camouflage further. Why is it important for the survival of some sea creatures? What things do we do when we don't want to be seen? Why do people in the army sometimes wear camouflage uniforms?
- Discuss any new or difficult words. Make up your own glossary of new words.
- Start a topic on food from the sea. Begin in the supermarket or fish shop.



Other ideas

- Create a list of local sea creatures in your area and make up a food chain.
- Make a sea creature collage. Have a theme like camouflage or sea mammals.
- Turn the classroom into an underwater world or an underwater corner. Make sea creatures with paper and paint their colours on or use coloured paper and hang them from the ceiling. Paint a window with a sea scene. Use the library and display books on marine life for a reading corner.
- Explore the internet for marine information. Some useful web sites to begin with are: ABC website "The Jewels of the Sea" at www.abc.net.au/oceans/jewel/default.htm and The Marine Education Society of Australasia at www.mesa.edu.au. You can also find out about SEAWEEK at this site which is held every year.
- Investigate some properties of seawater. Compare the taste of seawater and freshwater.
- Invite speakers who work in the marine environment into your school.
- Find out what marine programs are available at education centres and arrange a visit.



Learning outcomes

Australian Guide to Seashores

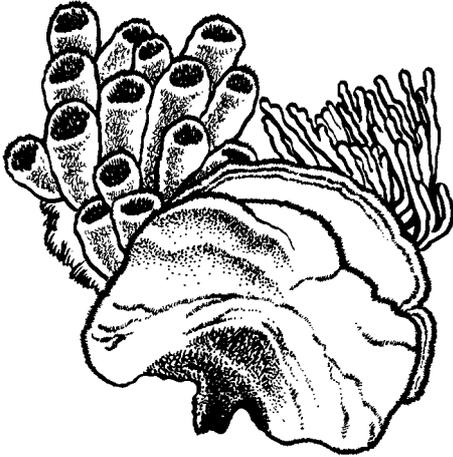


Activity	KLA	Outcome
1 How do they eat? - p34	English Science	WRITING – 2.9 Writes brief imaginative and factual texts which include some related ideas about familiar topics. LIFE AND LIVING – 2.8 Links observable features to their functions in familiar living things.
2 Snails that hide in the sun! - p35	Science	LIFE AND LIVING – 2.8 Links observable features to their functions in familiar living things. WORKING SCIENTIFICALLY – 2.14 Conducts simple tests and describes observations.
3 Do you know? - p36	English Science	READING AND VIEWING – 2.5 Constructs and retells meanings from visual texts with predictable narrative structures. LIFE AND LIVING – 2.8 Links observable features to their functions in familiar living things.
4 Molluscs - p37	Science	LIFE AND LIVING – 2.8 Links observable features to their functions in familiar living things. 2.9 Compares and contrasts similarities and differences within and between groups of familiar living things.
5 Tracks in the sand - p38	Science	LIFE AND LIVING – 2.9 Compares and contrasts similarities and differences within and between groups of familiar living things. WORKING SCIENTIFICALLY – 2.15 Identifies patterns and groupings in information to draw conclusions.
6 Sea scramble - p39	English	READING AND VIEWING – 2.5 Constructs and retells meanings from short written texts with familiar topics and vocabulary, predictable text structures and frequent illustrations
7 Sea life magnet food chain - p40	English SOSE	LIFE AND LIVING – 2.7 Describes the types of relationships between living things. NATURAL AND SOCIAL SYSTEMS – 2.13 Describes ways in which elements of natural systems form communities.
8 Filter feeders - p41	Science	LIFE AND LIVING – 2.8 Links observable features to their functions in familiar living things. 2.9 Compares and contrasts similarities and differences within and between groups of familiar living things.
9 How do they move? - p42	Science	LIFE AND LIVING – 2.8 Links observable features to their functions in familiar living things. 2.9 Compares and contrasts similarities and differences within and between groups of familiar living things.
10 Why is the sea salty? - p43	Science	NATURAL AND PROCESSED MATERIALS – 2.12 Distinguishes between changes that cannot be readily reversed and those that can. WORKING SCIENTIFICALLY – 2.14 Conducts simple tests and describes observations.
11 Sand sparkles - p44	Science	EARTH AND BEYOND – 2.2 Describes changes that occur in the local environment. WORKING SCIENTIFICALLY – 2.14 Conducts simple tests and describes observations.

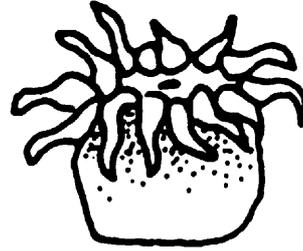
Name: _____

How do they eat?

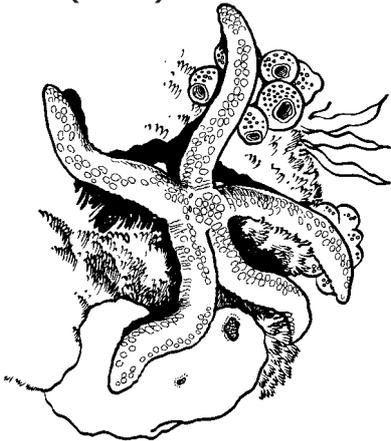
How does a sponge get its food? (P38)



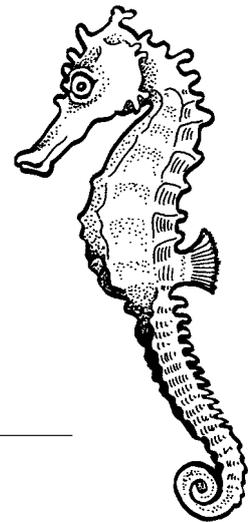
How does a sea anemone get its food? (P40)



How does a sea star get its food? (P24)



How does a seahorse get its food? (P30)



How do you get your food?



Name:

Snails that hide from the sun!

When you are at the beach look in the shallow water or in a rock pool. Search for some live sea snails.

Step 1: Collect a couple of them in your cup or bucket.

Be gentle when removing them off the rocks or seaweed.

Step 2: Place the snails on a flat part of the beach. What do they do?

Step 3: Examine the opening to their shell with the magnifying lens. What has happened?

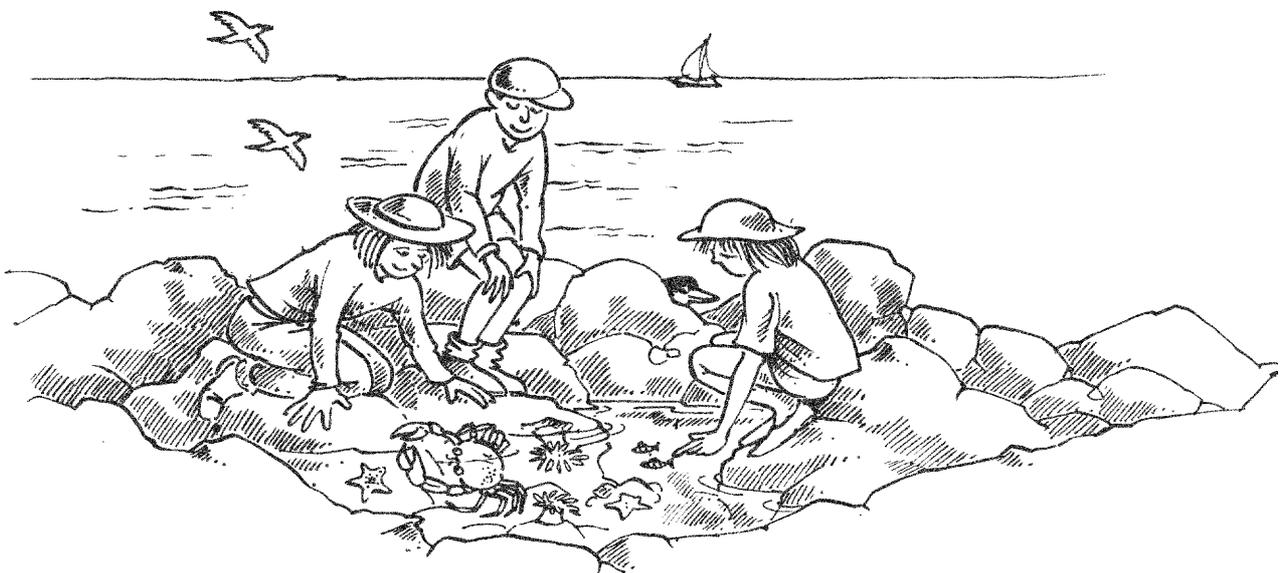
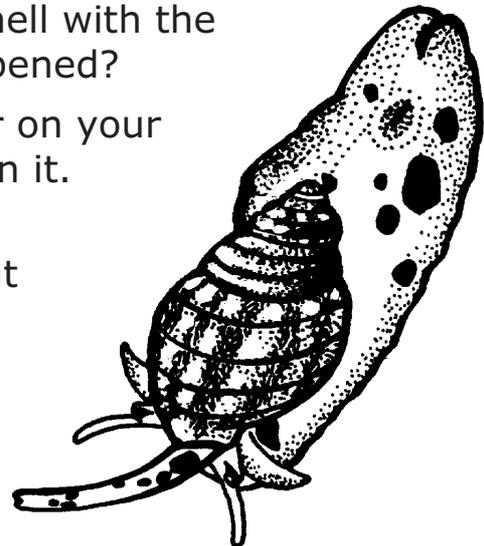
Step 4: Try putting some cool sea water on your hand and placing the sea snail in it. What happens?

Step 5: Don't leave them in the sun; put your sea snails back where you found them.

Sea snails need to avoid drying out. Sea snails have a 'trap door' that seals moisture inside their shell and protects their soft bodies.

Materials

- Magnifying lens
- Cup or small bucket
- A rocky shore or rock pool



Name: _____

Do you know?

Use the seashores book to find the answers to the following questions.

1. (P42) How many different colours do seaweeds come in?

Write down the different colours

2. (P40) How does a sea anemone catch its food?

3. (P30) What is the long snout on a seahorse used for?

4. (P28) What is the name of a poisonous fish?

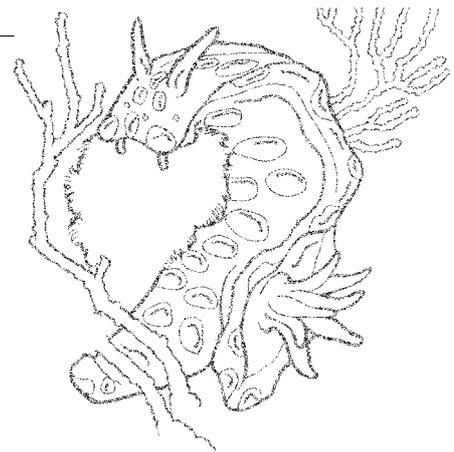
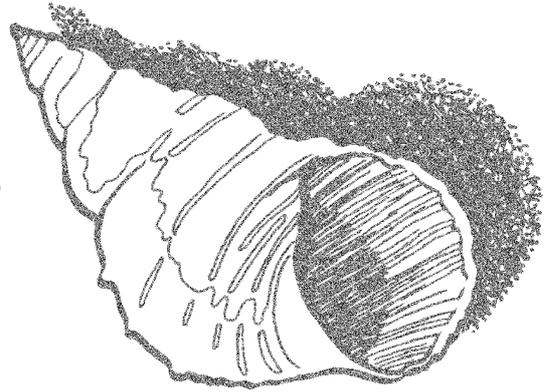
5. (P21) What are spirula?

6. (P20) Where does a nautilus shell come from?

7. (P22) What part of the cuttlefish do we sometimes find washed up on the beach?

8. (P44) Where do barnacles live?

9. (P18) What are the bright colours on a sea slug for?



Name: _____

Molluscs

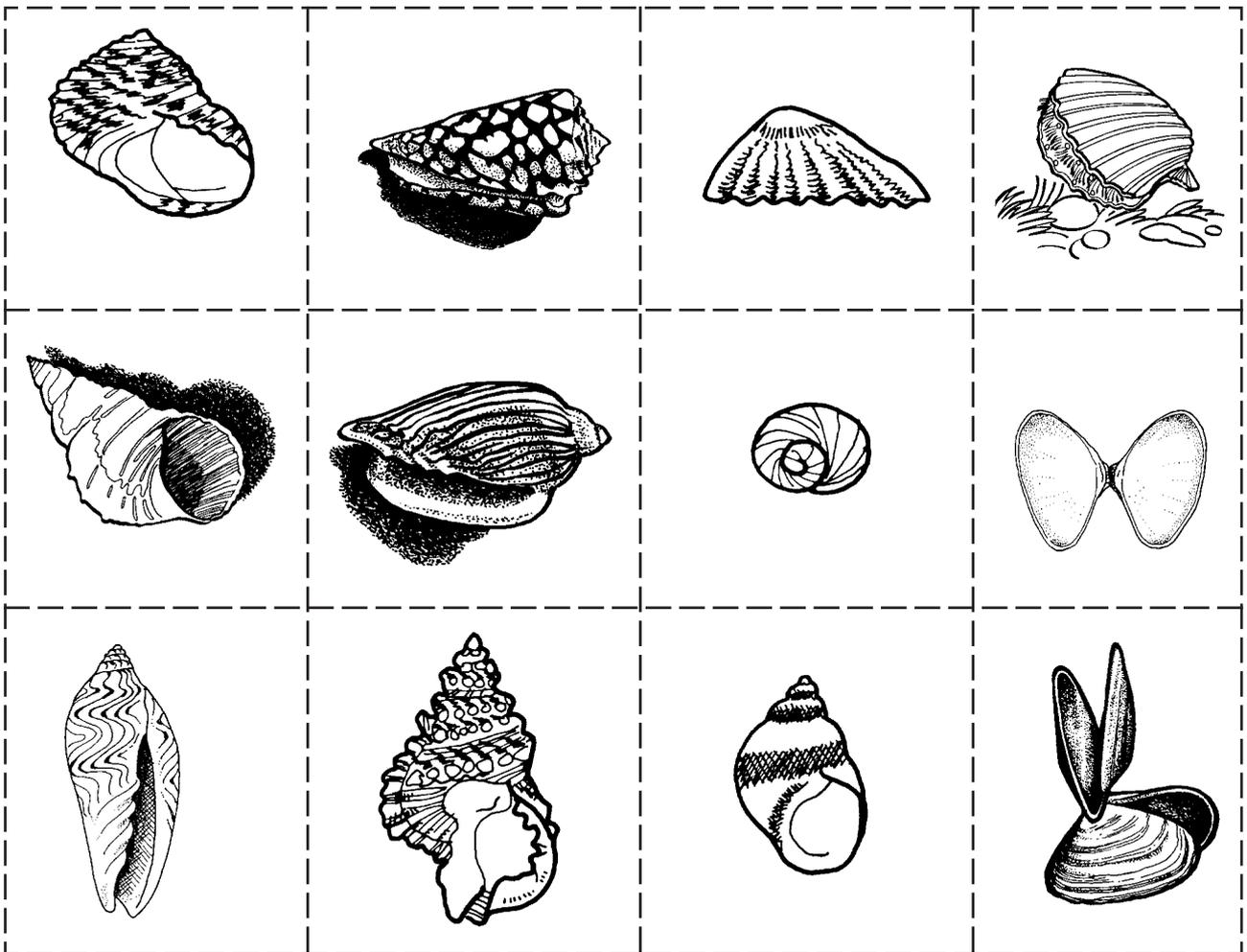
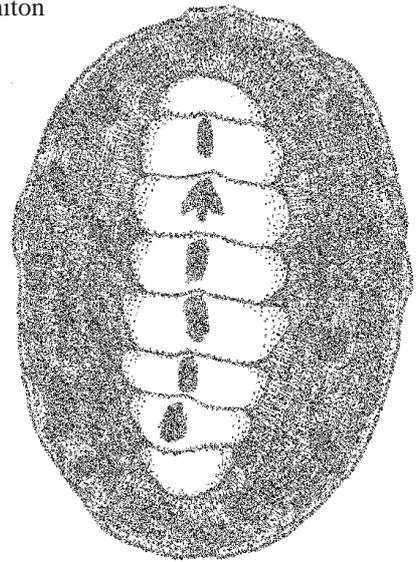
A chiton

Molluscs have soft bodies and a shell covering them.

- Cut out the different types of molluscs below and see if you can group similar types.

Stick them in your books with a description for each group.

- Hint: have a look at the openings for each shell and use the *Australian Guide to Seashores* book to help you.

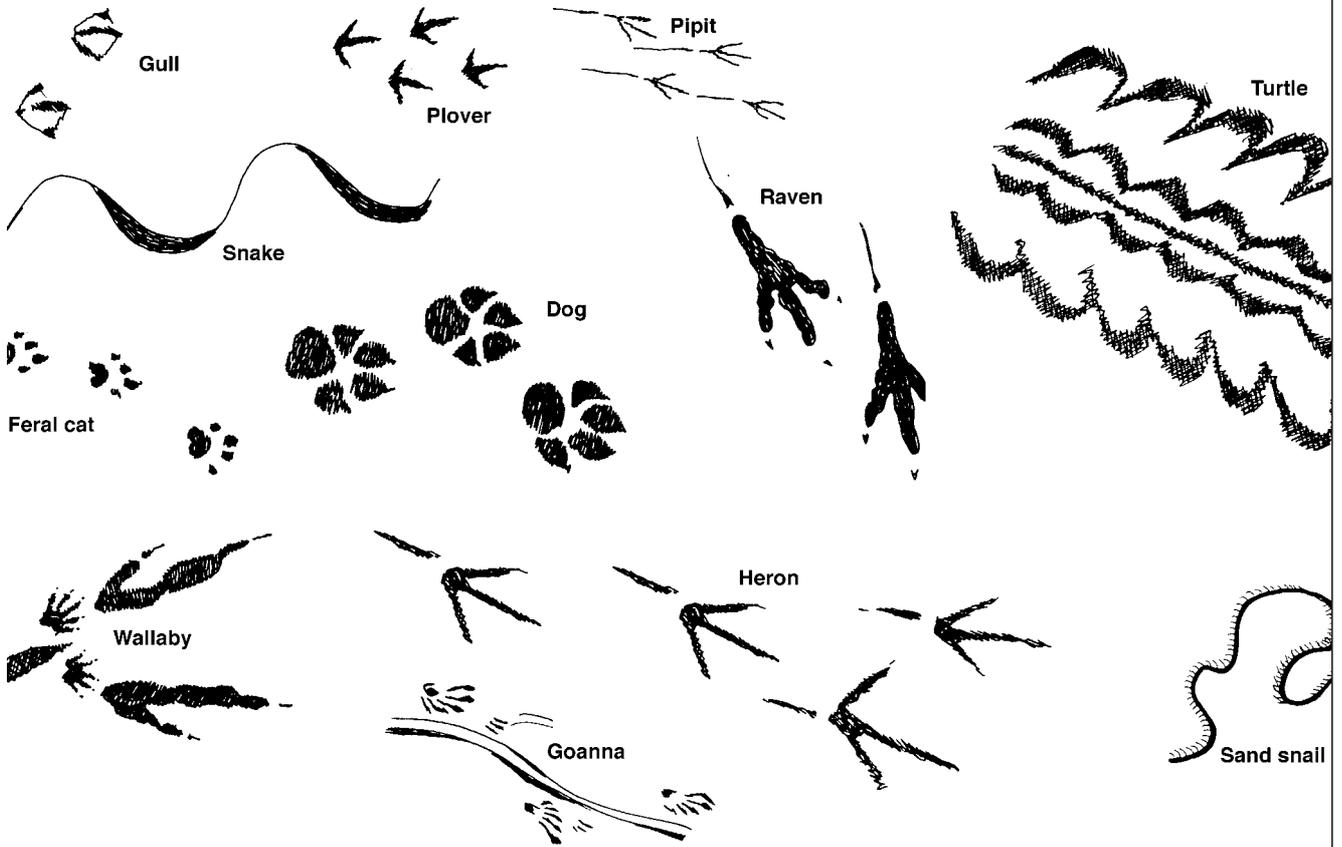


Mussels and scallops are molluscs! Can you think of any others?

Name: _____

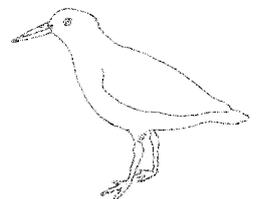
← ← ← ← *Tracks in the sand* ← ← ← ←

Have you ever seen any of these prints in the sand? Circle the ones you have seen.



On your next trip to the beach take this sheet with you. See if you can identify some tracks or prints in the sand. Draw the prints or tracks you saw in the space below.

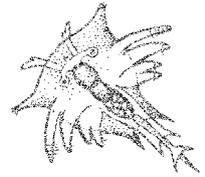
Don't forget to look into rock pools for trails left behind in the sand. Find trails on the rocks where snails have eaten off the algae.



Name: _____

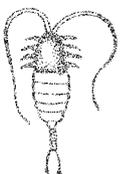
Sea scramble

Find the hidden words



W	A	T	E	R	B	O	F	A	P	L	E	K	W
D	I	U	Q	S	C	D	E	S	H	E	L	L	G
H	S	I	F	T	E	N	T	A	C	L	E	H	I
E	B	J	O	S	C	A	L	E	S	O	C	B	L
K	O	P	I	E	P	V	G	I	Y	F	M	A	N
U	U	N	W	A	R	P	O	S	E	Y	O	R	I
S	L	I	M	W	T	U	T	E	L	A	M	C	U
R	A	H	N	E	U	E	E	B	C	R	U	C	G
A	S	C	L	E	R	N	A	D	A	G	S	O	N
T	S	R	E	D	O	I	G	O	N	N	C	R	E
S	R	U	W	L	A	F	L	K	R	I	L	L	P
A	N	L	A	P	Q	E	A	H	A	T	E	F	U
E	P	B	S	E	V	A	W	I	B	S	D	A	G
S	A	N	D	L	I	F	O	W	H	A	L	E	S

- SCALES
- BARNACLE
- WHALES
- KRILL
- SHELL
- SQUID
- WAVES
- OCTOPUS
- FISH
- ABALONE
- SAND
- WATER
- SEA STAR
- TENTACLE
- PRAWN
- ALGAE
- PENGUIN
- FIN
- CRAB
- KELP
- STINGRAY
- OYSTER
- SEAWEED
- URCHIN

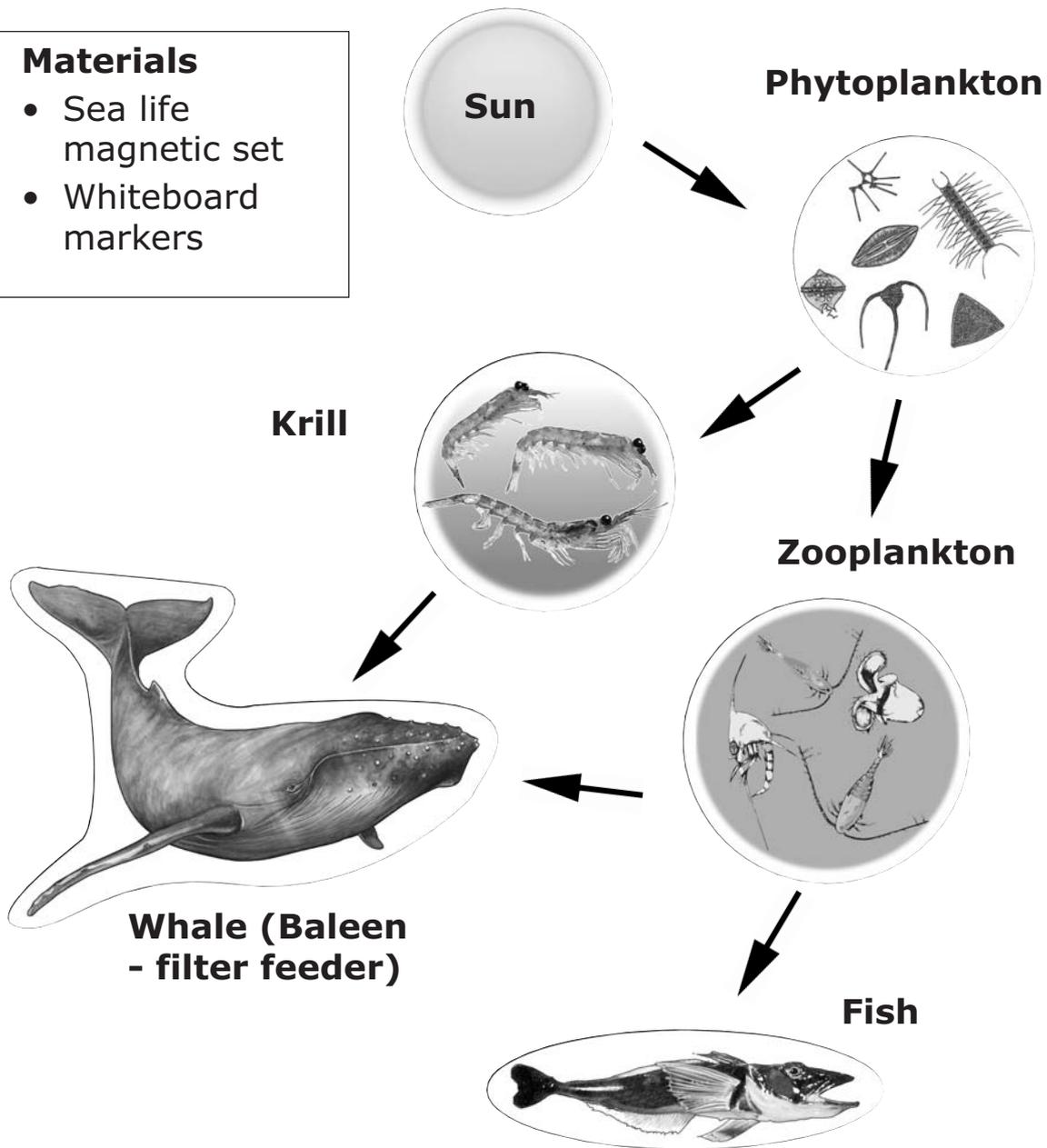


Name: _____

Sea life magnetic food chain

Materials

- Sea life magnetic set
- Whiteboard markers

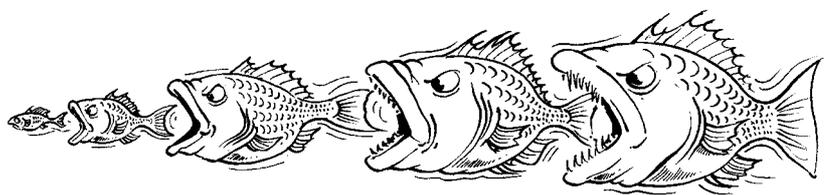


All animals must eat. Plants and animals are connected to each other in predator and prey relationships called food chains and food webs.

1. Stick the magnets onto a whiteboard and create a simple food chain (see example above). To make a simple food chain, connect these with arrows following the flow of energy (or more simply the arrow points to the stomach of the sea creature!)
2. Introduce the other magnets to make some more connections.
3. Introduce other sea creatures into the chain to make a web.

Questions

1. What would happen if there was no sun or no phytoplankton?
2. Where do people fit into this web?



Name: _____

Filter feeders

Many marine creatures including some whales filter their food from the sea.

Their filters work like a sieve, filtering out tiny pieces of food.

Filter feeders have special ways to filter their food from water.

Barnacles can wave their feathery filters in the water and can swivel them to meet the food that is being carried around.

Anemones can do the same.

Whales that are filter feeders are called baleen whales.

Do the following experiment to find out how a baleen whale gets its food.

What to do

Step 1: Sprinkle the pepper or parsley flakes on the top of the water.

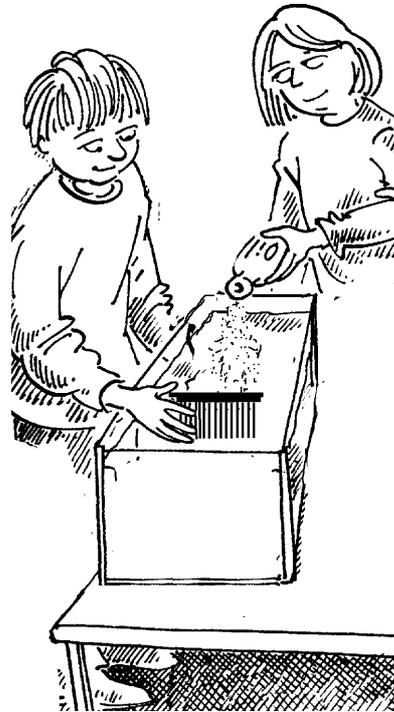
Step 2: Run your finger through the water.

How much "food" did you collect?

Step 3: Now sweep through with a fine toothed comb.

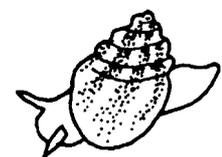
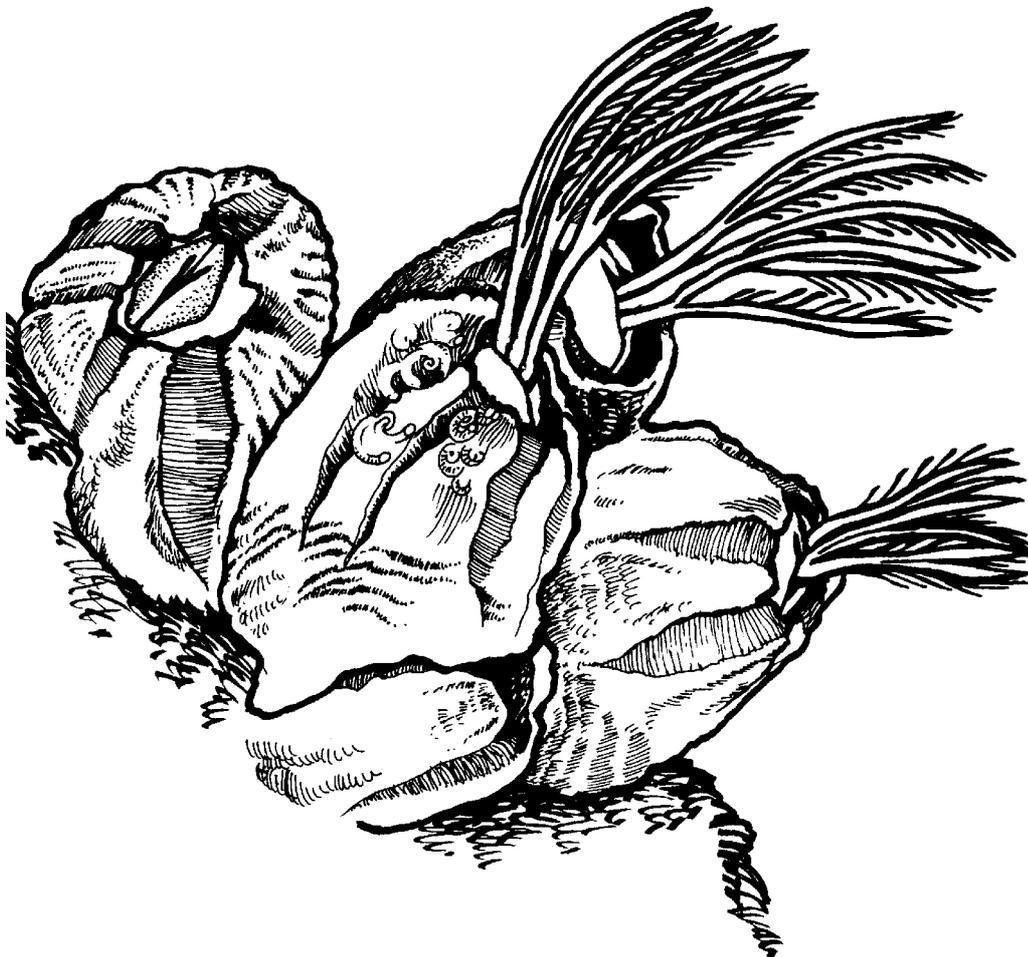
Compare how much "food" you collected this time.

The comb acts like the baleen inside a whale's mouth.



Materials

- A shallow pan of water
- A fine toothed comb
- Ground pepper or dried parsley flakes



Name: _____

How do they move?

Sea creatures move around in many different ways. Some may slide, crawl, walk, swim, burrow, fly or not move at all!

Can you think of a sea creature that moves these ways?

I am a sea creature that burrows. I am a _____

I am a sea creature that flies. I am a _____

I am a sea creature that crawls. I am a _____

I am a sea creature that slides.

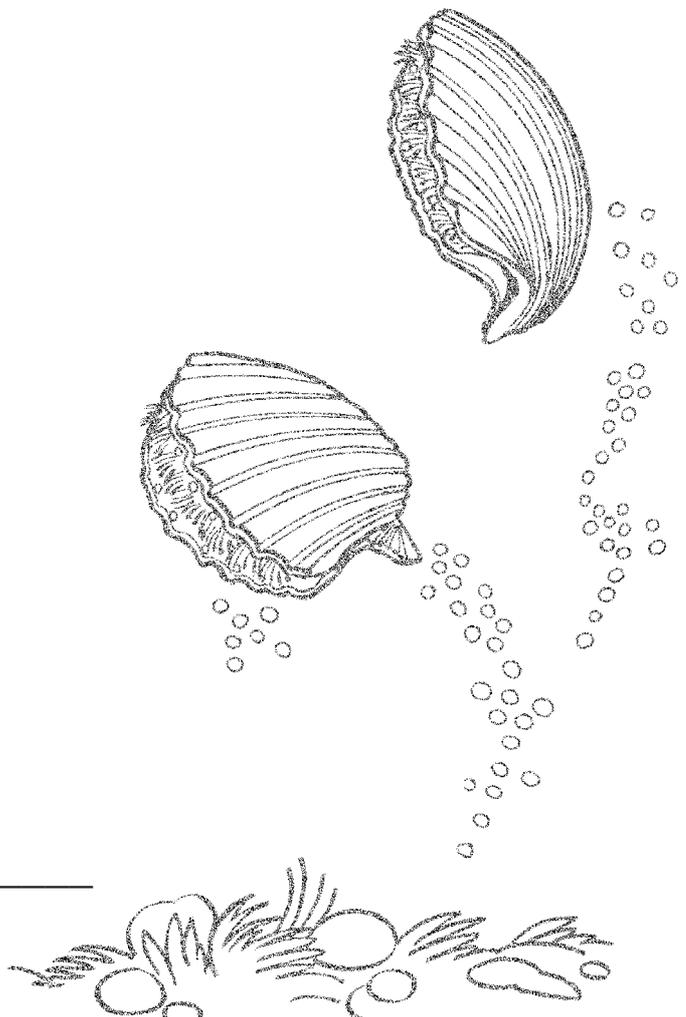
I am a _____

I am a sea creature that swims.

I am a _____

I am a sea creature that does not move at all.

I am a _____



Name:

Why is the sea salty?

Do the following simple experiment to find out!

Step 1: Cover the bottom of the baking tray with the black cardboard paper.

Step 2: Add the salt to the water and stir it through with a spoon until most of the salt has dissolved.

Step 3: Pour the salty water carefully over the top of the black paper into the baking tray. Allow the un-dissolved salt to stay in the bottom of the mug.

Step 4: Place the tray in a sunny place, like near a window, where it will not be disturbed for several days. Outside is OK if it is warm.

Step 5: Check the tray daily until the water has dried out.



Materials

- Large shallow baking tray
- Two sheets of black construction paper
- 2 tablespoons of salt
- 1 cup of tap water
- mug
- spoon

Results

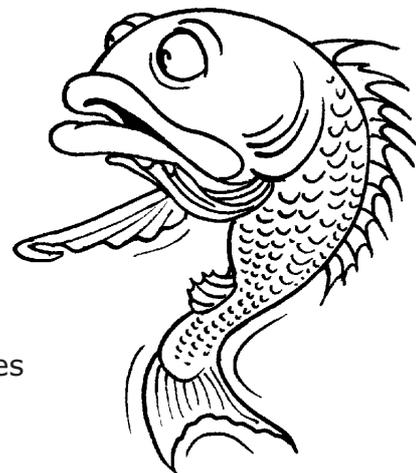
A thin layer of white crystals forms on the paper. After a few days, some small cubic crystals will form.

So why is the sea salty?

As the sun heats the salty water, the water evaporates and dry salt is left on the paper. This happens also in the oceans. The sun heats up the ocean and the water evaporates. The salt is left behind and does not evaporate and the concentration of salts in the water increases until it rains again!

Where does the salt come from in the first place?

Salt is washed out of the soil and rocks by rain. Water on the land continually moves towards the oceans. As the water moves across the land it picks up salts from the land and carries them to the sea. Some of these salts dissolve in the water and some settle to the bottom of the ocean. The water level in the sea does not rise even with rivers and rain pouring into them because water leaves the oceans by evaporation.



Name:

Sand sparkles

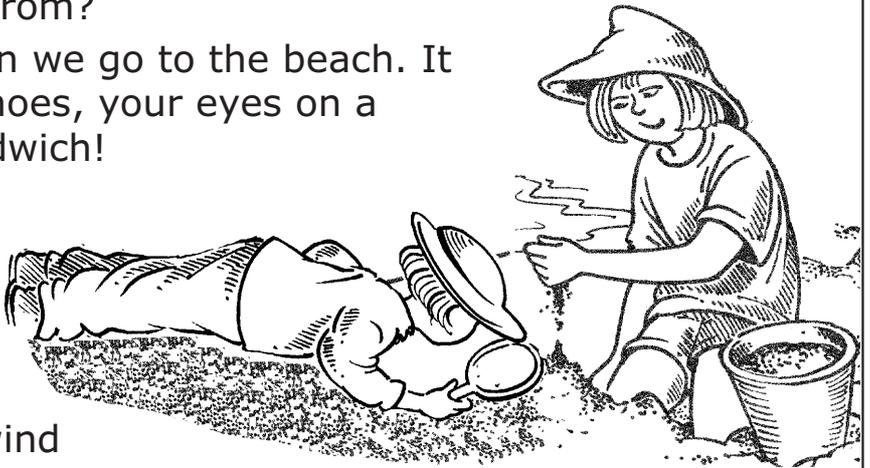
Where does sand come from?

Sand is everywhere when we go to the beach. It gets in your hair, your shoes, your eyes on a windy day and your sandwich!

Every beach has a fingerprint!

The type of sand on the beach can tell us about its source!

Some sand is made as wind and water wear away at mountains turning them into large boulders, pebbles and then grains of sand. Other bits of sand are pieces of shell and hard animal parts worn away by the water.



Simple sand study

1. Collect a sample of sand from your beach.
2. Use a magnifying lens to have a closer look.
What can you see? What shape are the grains?
Can you see different coloured rocks?
3. Draw what you see.
4. Try passing a magnet over the sand. Do any pieces stick?
5. Add a drop of vinegar to your sample - if it fizzes your sand has calcium carbonate in it - the stuff shells are made of. The bubbles are carbon dioxide.
6. Use sticky tape to stick a sample of your sand in your workbooks.
7. Collect some different types of sand samples from different areas to study. Stick these in your books with tape and compare the different types of sand grains.



Taking your class to the beach

Here are some fun activity ideas to motivate minds and create memories for when you next visit the sea.

Beachcomber

Go for a beachcomb, walking slowly along the beach. Collect any interesting objects that have been washed up by the sea. Draw a circle in the sand. Place all the objects into the circle to discuss and feel. Leave the beach treasures on the beach.

Alphabet sea

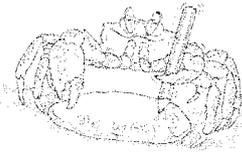
Have the alphabet written down on a piece of paper. The students could find something on the beach that begins with that letter. Write what you find next to that letter. Play with someone else and see if you can get the whole alphabet.

Make a sand painting

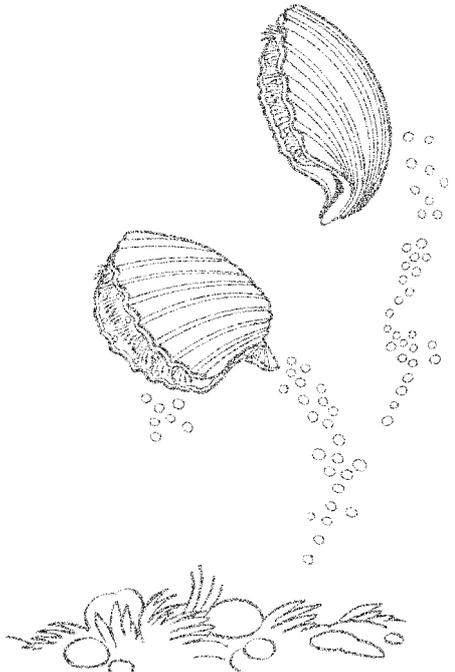
Use some glue to make a design on some dark coloured paper. While the glue is still wet gently sprinkle a handful of sand over your design. Let it sit for a while then tip the paper and all the extra sand will spill off and your design will now stand out!



Learning outcomes



Activity	KLA	Outcome
Taking your class to the beach -p46	Health	SAFETY – 2.12 Explains and demonstrates options to improve personal safety and the safety of others.
	Science	LIFE AND LIVING – 2.8 Links observable features to their functions in familiar living things.
		WORKING SCIENTIFICALLY – 2.14 Conducts simple tests and describes observations.
		EARTH AND BEYOND – 2.2 Describes changes that occur in the local environment.
	SOSE	PLACE AND SPACE – 2.6 Identifies how people can cooperate to care for places in a community.
	The Arts	VISUAL – 2.21 Uses experience and imagination to make art works.
Technology	DESIGNING, MAKING AND APPRAISING – 2.3 Plans production processes and makes products and processes using resources safely.	



Beach dress up

Make sea costumes to highlight sea creature adaptations. Have students write a play.

Sea songs

Students sit on the beach and think what they would write a song about. What smells, sounds and feelings inspire you? Work in small groups and try to write a short song or poem.

Beach wrecked!

Pick up something off the beach and try to make a story about it. Join with a few others and see if you can make a small play using the things you found.

Salty water

Have some samples of fresh and salty water available to experiment with floating and sinking. What items will float and what items will sink? Which type of water would be easier to swim in? Try using cuttle bones and sea snail shells. Experiment with different types of seaweeds.

Sand sculpture

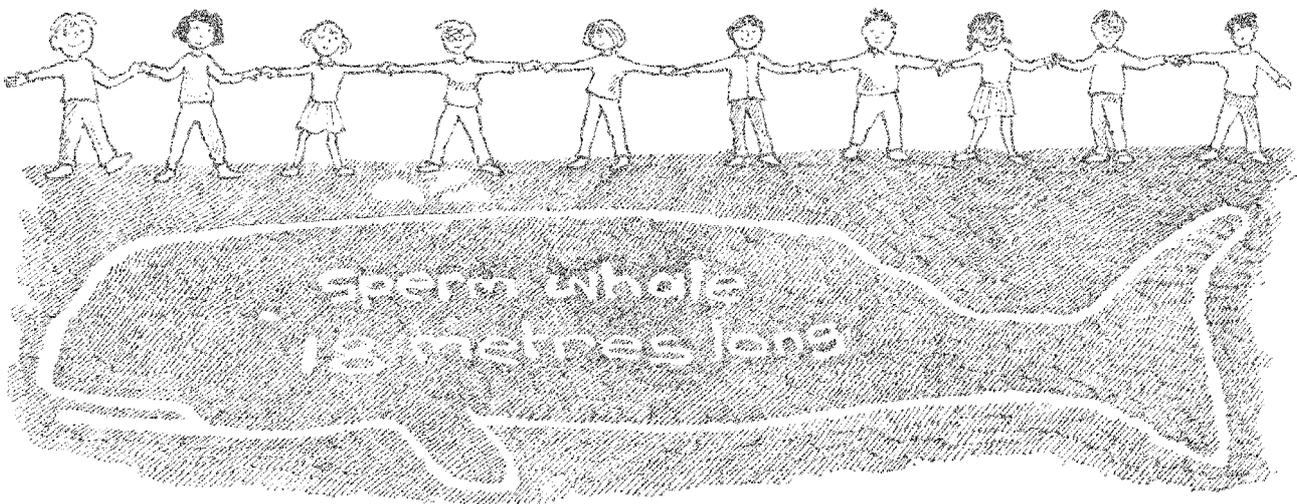
Before the visit make up some words that describe a sea creature's body, e.g. large head, spikes, tentacles, long tail. Take these words to the beach. Let the students choose some words and make a sea sculpture in the sand.

How big?

Making marine measurements on a rope gives the students an idea of the size of some of the sea creatures in comparison to people.

Once the rope is extended, students can walk next to the rope to count the number of steps that equal a blue whale's length. Have the students lie end to end to see how many students long a blue whale is.

See also page 28, Level 4 Teacher Resource Book for measurements.



Sand study

Mark out a small area of sand on the beach with sticks or shells.

Take a close look at the sand in your plot.

Pick up a handful of sand.

How many different colours of sand are there?

Use a magnifying lens to look up closer at the many different shapes of the grains.

Can you see any tiny creatures living between the grains?

What other things are in your sand plot?

What happens when you blow on the sand or when you pour some water onto the sand in your plot?

Sand casting

Students can make a sand cast of their hand or foot or make a shape of a sea creature. Teachers will need some buckets (to mix the sea water with the plaster) and some dry plaster. Have the students make their shape in the sand (slightly damp sand is best).

Make sure the shape is deep enough to pour some plaster mix into so it forms a small pool. Pour the plaster into the shape and leave it to set about one hour (longer is better).

Dig your cast out and brush off any excess sand with a paintbrush or a toothbrush.

Safety hint

Have an adult make up the plaster and read all the safety precautions on the packet first.

Sand scoop

Each person takes a turn burying an object in the sand. Once it is buried, the others take turns guessing what it is by asking questions about it. With every question that gets a YES answer a handful of sand is scooped out. Whoever guesses what the object is or digs it up first wins. (Do not bury rubbish or valuable things!)





Sand skyscrapers

Build tall sand skyscrapers. Try this tip. Scoop out the very wet sand and drip it slowly through the palm of your hand to make a skyscraper. To go even higher, pack wet sand into a bucket then continue building one on top of the other! Measure the sand skyscraper against your own height.

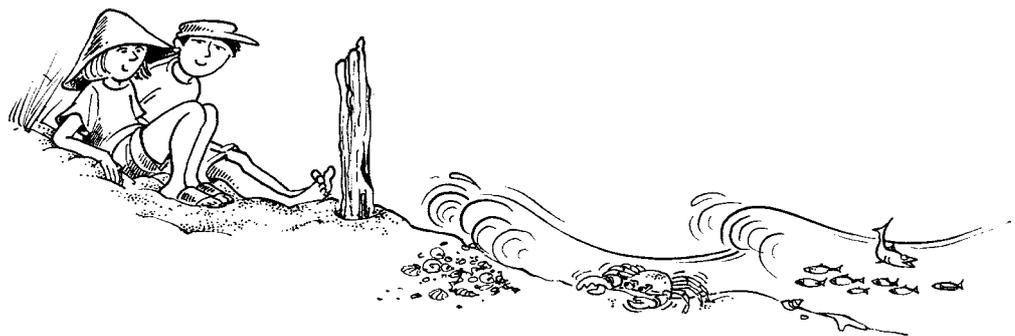
Sand sizzle

Investigate how hot the beach is by taking its temperature. Where is the hottest spot? Leave the thermometer there for a few minutes and write down the temperature. Where is the coldest spot? Where is the best spot to sit on a hot day?

Sand sticks

Whilst you are at the beach find out which way the tide is going. Is it coming in or out? At the beginning of the day put a piece of driftwood stick into the sand at the highest point on the beach that the waves can reach. At the end of the day is it covered by water or is it stuck out of the water?

How do rocky shore sea creatures survive this?





Sand prints

Students draw animal prints in the sand. Draw a border to frame your prints and have others guess what might have happened. What would the prints of a hopping lizard look like? Did the creature come out of the water then fly away? Are there any babies following?

Sea music

The beach is full of wonderful things just waiting to make music. Collect some small pebbles, put them in a jar and shake them, collect some sticks and tap them together, tap some shells together or pop some seaweed! See how many tunes you can make. Leave your music items on the beach as they are the homes for many sea creatures.

Classification collector

Have the students collect as many sponges, shells or other items that there are plenty of on your beach. The students then place all items into a marked out area on the sand and attempt to group the items according to similar features, structure, colour etc. (Ensure that all items collected are not alive and are not pieces of rubbish).

Sand portraits

Make a self portrait in the sand. Take turns with one person "posing" by lying on the sand in any position while another person traces an outline. Now decorate the outline with things found on the beach. Try some seaweed hair, shells for finger and toe nails or make a crown.



Reading recovery level information



Method

Books 1-18 were read with a small sample of children (about 150) from a Primary School during March - June of 2001. Sample ages ranged from 5-10 years and were both boys and girls.

Results

The following reading recovery levels are only to be used as a guide until a more extensive sample size and test is conducted. The comments are from the reading specialist who has volunteered her time to Wet Paper

Level 1 Readers

Book 1 Everyone likes the sea:	Minimum level 10/11
Book 2 Sea Creatures:	Approximate level 13
Book 3 At the beach:	Minimum level 10 - 12

Level 2 Readers

Book 4 Fun by the sea:	Minimum level 12/13
Book 5 Working at Sea:	Approximate level 15
Book 6 Be safe at the beach:	Minimum level 12/13

Level 3 Readers

Book 7 Tourists and the Sea:	Approximate level 24/25
Book 8 All Kinds of Boats:	Approximate level 19
Book 9 Rock Pool Life:	Approximate level 30
Book 10 Creatures of the Deep:	Approximate level 20
Book 11 Shipwrecks:	Minimum level 26/27
Book 12 Our Day on a Research Boat:	Approximate level 28 Δ

Level 4 Readers

Book 13 Let's Go Sailing:	Approximate level 20
Book 14 Food from the Sea:	Minimum level 26/27
Book 15 Classification and Survival:	Approximate level 30
Book 16 Sea Creatures at Risk:	Approximate level 29
Book 17 Better Boating Behaviour:	Minimum level 21
Book 18 Don't Mess with the Sea:	Approximate level 28/29 Δ

Some comments

- The book contains lots of text changes with some complex vocabulary and a lot of visual analysis of unknown words is required, For example book 1.
- Language is easily accessible, however vocabulary makes it harder. For example book 2
- Although the pictures are good and give some support, they do not assist in working out with some complex vocabulary - Example: Many children may have difficulty with "squarking". For example book 3

Further information

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