

Unit Outline: Stage 2

Unit Overview

Beach and Ocean and Inland Waterways Primary School Series

The beach, coastline and inland waterways are a source of inspiration, a place of discovery and at times generating myths and uncertainties that can alter the confidence and ability to make informed safety decisions by those who are using the beach and waterways. Students will conduct daily investigation of the conditions of the beach to create a Beach Report for the class by collecting, analysing and recording data that is used by lifesavers to inform visitors to the beach of the forecasted and current conditions. The shared text of "Annie and the Waves" by Louise Lambeth and complimentary texts gives students to the opportunity to uncover key water safety messages through sharing of story in a range of modes. The creation of informative text will put key water safety messages into context.

Your students will discover how river systems form and how they reach the coast. Using "real-world" water safety scenarios depicted in different parts of a river system

or coastline; students will need to create a strategy to manage the situation, remove the danger or risk and make the situation safe. Students will create a water safety prevention strategy for the "real-world" scenario. The class exemplar will explicitly unpack the concept of "The Think Line" and view real life scenarios where this could have been executed.

This unit uses artefacts to give students to explore the scientific and mathematical knowledge of aquatic environments. The artefacts form the foundation of creating the class "Beach and Waterways Encyclopedia". This inquiry-based task allows students to discover the amazing and complex intricate features of aquatic flora and fauna. They will learn how to create scientific line drawings their artefact, conduct a measurement investigation and writing informative text in the style of a scientific document.

Focus: Beach, Ocean and Inland Waterways

Duration: 3 weeks

Key Messages

✓ FLAGS+

- F Find the red and yellow flags and swim between them,
- Look for and read the safety signs,
- A Ask a lifesaver or lifeguard for safety advice,
- G Go swimming with an adult,
- S Signal for help when you get into trouble in the water
- + Dangers of rip currents
- ✓ If you are not sure if a marine creature or plant is a hazard, look from a distance and don't touch it
- ✓ Humans can use the aquatic environment to inspire research, creativity and innovation.
- ✓ The aquatic environment needs to be looked after so future generations can enjoy it.

Supplementary Learning

This unit can be delivered with Surf Lifesaving NSW incursion & virtual session programs. Further information on these programs is available here

About Surf Life Saving NSW

Surf Life Saving New South Wales (SLSNSW) is the peak water safety, drowning prevention and rescue organisation in NSW and one of the largest volunteer-based community service organisations in Australia. Today the organisation encompasses a range of diverse activities – lifesaving services, community education, surf sports, member development and training, all which contribute to the primary purpose to save lives and meet our target of zero preventable deaths and injuries on NSW beaches.

Why have we created this resource?

Our mission is simple; save lives, create great Australians and build better communities. In order to do this, we want to provide you, our schools, teachers and students with the best possible programs, resources and opportunities to engage with us and learn about water safety, the beach and coastal environments. This resource has been created to help you integrate beach and coastal safety information and broader water safety activities and our programs into your lesson plans in an easy and simple way. We want to ensure our communities understand beach and ocean safety, but we also want to make sure that we provide opportunities to do so in a fun, engaging and relevant way. We hope that this resource will support our mission to equip all communities with the confidence, knowledge, resources & tools to prevent drownings & create safe, fun, welcoming & enjoyable beach side experiences.

Creating a quality teacher resource

We understand the unique challenges that our teachers face and the difficulty in finding quality resources and content in line with the curriculum. In order to bring our teachers a quality resource that they can easily integrate into their classrooms we have utilized the expert skills of highly trained and experienced teachers to develop and build this resource. We will continue to annually review, amend and add to this resource and as part of this process we will value the feedback from all teachers. If you would like to provide your feedback, recommendations or comments regarding this resource please contact us at community@surflifesaving.com.au Thank you.



Opportunities to engage with SLSNSW (Stage 2)

This unit outline includes opportunities to bring the content to life by engaging with one of our offered programs, depending on your school location and your availability, you can choose from a number of programs to suit your needs. For further information and assistance with any of the below please contact us at community@surflifesaving.com.au

Incursion Lifesaver at my School

Bring a lifesaver to your school via our "Lifesaver @ my school" incursion. Our primary school program will focus on keeping safe at the beach and near inland waterways through fun and interactive games and activities.

Virtual Session Beach & Ocean Explorers

Bring a lifesaver into your classroom via our virtual sessions. Our stage 2 virtual session "Ocean Myth Busters (3-6)" invite your students to come and explore the ocean and beach with a real lifesaver and learn about the amazing creatures that live within. We will explore the animals from within the deep ocean along with creatures that lurk inside our coastal rock pools.

Find out more about these session by visiting https://beachsafetyhub.org.au/resources-sub-type/primary-schools/

Engage with your local SLSNSW area program

If your school is located in a coastal area there may be a local run program by one of our SLSNSW Clubs or Branches. You can always contact your local club to find out more or contact us and we can put you in touch with the right person.



Contact the Community Education Team



Beach & Coastal Safety Resource Hub Home - Surf Life Saving NSW

- ✓ Primary School education programs and resources https://beachsafetyhub.org.au/resources-sub-type/primary-schools/
- ✓ Virtual sessions: further information and to make a booking https://beachsafetyhub. org.au/resources-&-program/ocean-myth-busters-3-6/

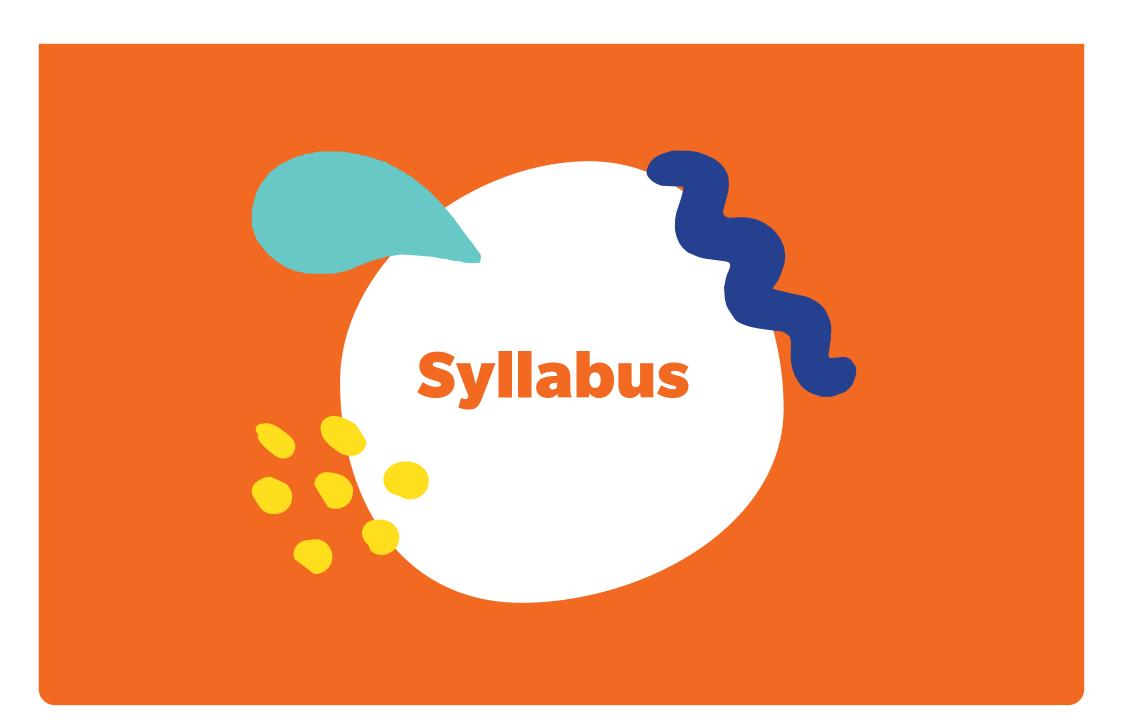


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Outcomes

EN2 1A communicates in a range of informal and formal contexts by adopting a range of roles in group, classroom, school and community contexts

EN2 2A plans, composes and reviews a range of texts that are more demanding in terms of topic, audience and language

EN2 4A uses an increasing range of skills, strategies and knowledge to fluently read, view and comprehend a range of texts on increasingly challenging topics in different media and technologies

EN2 8B identifies and compares different kinds of texts when reading and viewing and shows an understanding of purpose, audience and subject matter

EN2 10C thinks imaginatively, creatively and interpretively about information, ideas and texts when responding to and composing texts

EN2 11D responds to and composes a range of texts that express viewpoints of the world similar to and different from their own

Key Enquiry Questions

- How do we develop and apply contextual knowledge?
- ✓ How do we respond to, read, view and compose texts?
- ✓ How do we develop and apply language forms and features?

Content

Speaking and listening 1

Develop and apply contextual knowledge

- ✓ interpret ideas and information in spoken texts and listen for key points in order to carry out tasks and use information to share and extend ideas and information (ACELY1687) ❖

Respond to and compose texts

- ✓ interact effectively in groups or pairs, adopting a range of roles
- use interaction skills, including active listening behaviours and communicate in a clear, coherent manner using a variety

- of everyday and learned vocabulary and appropriate tone, pace, pitch and volume (ACELY1688, ACELY1792)
- demonstrate understanding of ideas and issues in texts through dramatic representation, role-play and simulations
- ✓ adapt language to suit familiar situations, e.g. giving instructions to a younger child
- ✓ respond appropriately to the reading of texts to demonstrate enjoyment and pleasure

Writing and representing 1

Develop and apply contextual knowledge

✓ identify key elements of planning, composing, reviewing and publishing in order to meet the demands of composing texts on a particular topic for a range of purposes and audiences

Respond to and compose texts

- ✓ plan, compose and review imaginative and persuasive texts
- discuss aspects of planning prior to writing, eg knowledge of topic, specific vocabulary and language features
- ✓ plan and organise ideas using headings, graphic organisers, questions and mind maps
- ✓ reread and edit texts for meaning, appropriate structure, grammatical choices and punctuation (ACELY1683)
- ✓ reread and edit for meaning by adding, deleting or moving words or word groups to

Content continued

improve content and structure (ACELY 1695)

Reading and viewing 1

Develop and apply contextual knowledge

discuss how a reader's self-selection of texts for enjoyment can be informed by reading experiences

Respond to, read and view texts

- ✓ use comprehension strategies to build literal and inferred meaning to expand content knowledge, integrating and linking ideas and analysing and evaluating texts (ACELY1680, ACELY1692) °
- ✓ summarise a paragraph and indicate the main idea, key points or key arguments in imaginative, informative and persuasive texts

Reading and viewing 2

Develop and apply contextual knowledge

- ✓ identify the audience and purpose of imaginative, informative and persuasive texts (ACELY1678) ♂
- understand how texts vary in complexity and technicality depending on the approach to the topic, the purpose and the intended audience (ACELA1490)
- interpret how imaginative, informative and persuasive texts vary in purpose, structure and topic

Respond to, read and view texts

- ✓ respond to a wide range of literature and analyse purpose and audience
- ✓ identify and interpret the different forms of visual information, including maps, tables, charts, diagrams, animations and images ■

Thinking imaginatively, creatively and interpretively

Engage personally with texts

- ✓ share responses to a range of texts and identify features which increase reader enjoyment
- respond to texts by identifying and discussing aspects of texts that relate to their own experience
- identify and analyse the different organisational patterns and features to engage their audience

Understand and apply knowledge of language forms and features

✓ identify and discuss how vocabulary establishes setting and atmosphere

Respond to and compose texts

- ✓ use visual representations, including those digitally produced, to represent ideas, experience and information for different purposes and audiences

 □

Expressing themselves

Develop and apply contextual knowledge

Understand and apply knowledge of language forms and features

✓ understand differences between the language of opinion and feeling and the language of factual reporting or recording (ACELA1489)

↑

↑

Respond to and compose texts

- ✓ consider and discuss ideas drawn from their world and the worlds of their texts
- ✓ experiment with visual, multimodal and digital technologies to represent aspects of experience and relationships <</p>
- ✓ respond to short films, documentaries and multimedia texts that express familiar and new aspects of the broader world
- ✓ discuss literary experiences with others, sharing responses and expressing a point of view (ACELT1603)
- ✓ describe and discuss ethical issues encountered in texts ♣ ♣

Outcomes

PD2 2 explains and uses strategies to develop resilience and to make them feel comfortable and safe

PD2 3 explains how empathy, inclusion and respect can positively influence relationships

PD2 7 describes strategies to make home and school healthy, safe and physically active spaces

PD2 9 demonstrates self-management skills to respond to their own and others' actions

PD2 10 demonstrates a range of interpersonal skills that build and enhance relationships and promote inclusion in various situations

Key Enquiry Questions

- ✓ How does who I am influence others?
- ✓ How can we manage change?
- Why are empathy, inclusion and respect important in our relationships?
- ✓ How can I take action to enhance my own and others' health, safety, wellbeing and participation in physical activity?
- ✓ What skills and strategies do we need to be healthy, safe and empowered?

Content

Health, Wellbeing and Relationships

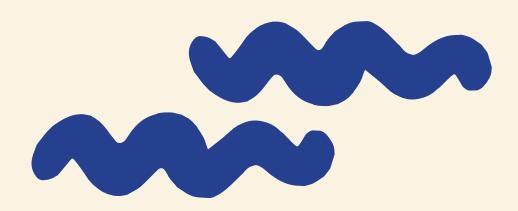
How does who I am influence others?

- explore how success, challenge and overcoming adversity strengthens identity, for example: (ACPPS033)
 - explain how persistence and meeting challenges strengthens identity \$ ii
 - propose ways to respond positively to challenge and overcoming adversity, eg positive self-talk, optimistic thinking and help-seeking behaviours, appropriate expression of feelings S of the

How can we manage change?

- ✓ investigate how emotional responses vary in depth and strength, for example: (ACPPS038)

 - describe strategies they can use to predict and manage their emotions before making a decision, eg calm down before responding, walk away from an emotional situation, consider the alternatives for the situation S of in



Content continued

Healthy, Safe and Active Lifestyles

How can I contribute to promote healthy, safe and active communities?

- describe how their own and others' skills and strategies contribute to healthy and safe outcomes in a variety of situations, for example:
- ✓ recognise their responsibility to contribute to a healthy, safe and active environment for themselves and others, for example:
 - identify problem situations in the playground and classroom and suggest ways to improve their environment I of The III

How can I take action to enhance my own and others' health, safety, wellbeing and participation in physical activity?

- identify and practise strategies to promote health, safety and wellbeing, for example: (ACPPS036)
 - discuss the accuracy of information about health and safety provided to them by external sources S of €
 - practise responses and strategies that promote personal safety in unsafe situations, eg No-Go-Tell, seek assistance
 To Political P
 - recognise and rehearse water safety strategies and skills, eg entry and exit, check for underwater obstacles, never swim alone, look for safety signs M of file
- ✓ suggest and apply strategies that help to create a healthy, safe and active environment for themselves and others, for example:

What skills and strategies do we need to be healthy, safe and empowered?

- discuss the contextual factors influencing personal choices and decisions around health, safety and physical activity, for example:
- analyse physical and emotional responses that indicate when they and others feel safe or empowered, for example:

 - recognise emotional and behavioural warning signs associated with unsafe situations, eg secrets, bribes, threats, jealousy, power and control, negative feelings \$ 0°

 - explain how accomplishing challenges makes them feel good about themselves and builds confidence to try new things, eg positive risk-taking in

PDHPE Prepositions

Focus on educative purposes
Take a strengths-based approach
Value movement
Develop health literacy

- ✓ functional dimension
- ✓ interactive dimension
- ✓ critical dimension

Include a critical inquiry approach

PDHPE Content Strands

Health, Wellbeing and Relationships

This strand focuses on students developing the knowledge, understanding and skills important for building respectful relationships, enhancing personal strengths and exploring personal identity to promote the health, safety and wellbeing of themselves and others.

Healthy, Safe and Active Lifestyles

This strand focuses on the interrelationship between health and physical activity concepts.
Students develop the knowledge, understanding and skills to empower them to make healthy and safe choices and take action to promote the health, safety and wellbeing of their communities.

PDHPE Skill Domains

Self-management Interpersonal skills Movement skills

Outcomes

GE2 1 examines features and characteristics of places and environments

GE2 3 examines differing perceptions about the management of places and environments

Key Enquiry Questions

- ✓ Why are places similar and different?
- ✓ How does the environment support people and other things?



Content

Places are Similar and Different

The Australian continent

- ✓ investigate Australia's major natural and human features for example: (ACHGK014, ACHGK015)
 - description of natural features of Australia eg deserts, rivers, mountains ST VR

Perception and protection of places

- ✓ investigate how the protection of places is influenced by people's perception of places, for example: (ACHGK018)
 - description of how and why people perceive places differently 44 iii
 - discussion of how people's perceptions influence the protection of places in Australia eg sacred sites, national parks, world heritage sites

The Earth's Environment

- ✓ investigate the importance of natural vegetation and natural resources to the environment, animals and people, for example: (ACHGK021, ACHGK022, ACHGK024)
- identification of types of natural vegetation eg forests, grasslands, deserts **VR**
- discussion of the importance of natural vegetation and natural resources to people

eg provision of food, medicine, fuel, timbers, fibres, metals **F** ♥ ★

Perception of environments

- ✓ investigate the ways people, including Aboriginal and Torres Strait Islander Peoples, value environments, for example: (ACHGK022, ACHGK023, ACHGK024) ₩
 - discussion of why people value environments differently eg cultural, agricultural, commercial, recreational values
 - description of how custodial responsibility for Country/Place influences Aboriginal and Torres Strait Islander Peoples' views of the environment \$\square\$ \cdot\{\phi}\$

Protection of environments

- ✓ investigate sustainable practices that protect environments, including those of Aboriginal and Torres Strait Islander Peoples, for example: (ACHGK023, ACHGK024, ACHGK025)
 - examination of how environments can be used sustainably eg sustainable agricultural, commercial and recreational practices
- ✓ examination of how the practices of Aboriginal and Torres Strait Islander Peoples support the sustainable use of environments eq use of resources
 ♦ ♦ ♦

Outcomes

MA2 1WM uses appropriate terminology to describe, and symbols to represent, mathematical ideas

MA2 2WM selects and uses appropriate mental or written strategies, or technology, to solve problems

MA2 9MG measures, records, compares and estimates lengths, distances and perimeters in metres, centimetres and millimetres, and measures, compares and records temperatures

MA2 10MG measures, records, compares and estimates areas using square centimetres and square metres

MA2 11MG measures, records, compares and estimates volumes and capacities using litres, millilitres and cubic centimetres

MA2 14MG makes, compares, sketches and names three-dimensional objects, including prisms, pyramids, cylinders, cones and spheres, and describes their features

MA2 18SP selects appropriate methods to collect data, and constructs, compares, interprets and evaluates data displays, including tables, picture graphs and column graphs

Key Enquiry Questions

- How do I measure, order and compare objects using familiar metric units of length, area, weight and temperature?
- ✓ How do I compare the areas of regular and irregular shapes?
- ✓ How do I select and trial methods for data collection, including survey questions and recording sheets?
- How do I construct suitable data displays, with and without the use of digital technologies, from given or collected data?

Content

Length 1

Measure, order and compare objects using familiar metric units of length (ACMMG061)

- measure lengths and distances using metres and centimetres
- ✓ record lengths and distances using metres and centimetres, eg 1 m 25 cm < ?
- compare and order lengths and distances using metres and centimetres
- estimate lengths and distances using metres and centimetres and check by measuring
 - explain strategies used to estimate lengths and distances, such as by referring to a known length, eg 'My handspan is 10 cm and my desk is 8 handspans long, so my desk is about 80 cm long' (Communicating, Problem Solving)
- ✓ recognise the need for a formal unit smaller than the centimetre to measure length
- ✓ recognise that there are 10 millimetres in one centimetre, ie 10 millimetres = 1 centimetre
- ✓ use the millimetre as a unit to measure lengths to the nearest millimetre, using a ruler
 - describe how a length or distance was measured (Communicating)
- ✓ record lengths using the abbreviation for millimetres (mm), eg 5 cm 3 mm or 53 mm
- ✓ estimate lengths to the nearest millimetre and

Content continued

check by measuring

Length 2

Use scaled instruments to measure and compare lengths (ACMMG084)

- ✓ use a tape measure, ruler and trundle wheel to measure lengths and distances
 - select and use an appropriate device to measure lengths and distances (Problem Solving)
 - explain why two students may obtain different measures for the same length (Communicating, Reasoning)
- select and use an appropriate unit to estimate, measure and compare lengths and distances
- ✓ recognise the features of a three-dimensional object associated with length that can be measured, eg length, height, width, perimeter
- convert between metres and centimetres, and between centimetres and millimetres
 - describe one centimetre as one-hundredth of a metre and one millimetre as one-tenth of a centimetre (Communicating)
 - explain the relationship between the size
 of a unit and the number of units needed,
 eg more centimetres than metres will
 be needed to measure the same length

(Communicating, Reasoning) 💣

✓ record lengths and distances using decimal notation to two decimal places, eg 1.25 m

Use scaled instruments to measure and compare temperatures (ACMMG084)

- ✓ identify temperature as a measure of how hot or cold something is <a>
- ✓ use everyday language to describe temperature, eg 'cold', 'warm', 'hot'
- ✓ recognise the need for formal units to measure temperature
- ✓ use a thermometer to measure and compare temperatures to the nearest degree Celsius
- ✓ record temperatures to the nearest degree Celsius using the symbol for degrees (°)
 - use a thermometer to take and record daily temperature readings (Communicating)

Area 1

Recognise and use formal units to measure and estimate the areas of rectangles

- ✓ recognise the need for the square centimetre as a formal unit to measure area
- ✓ use a 10 cm × 10 cm tile (or grid) to find the areas of rectangles (including squares) that are less than, greater than or about the same as 100 square centimetres
- ✓ record area in square centimetres using words

- and the abbreviation for square centimetres (cm2), eq 55 square centimetres, 55 cm2
- estimate the areas of rectangles (including squares) in square centimetres
 - discuss strategies used to estimate area in square centimetres, eg visualising repeated units (Communicating, Problem Solving)
- ✓ recognise the need for a formal unit larger than the square centimetre to measure area
- ✓ record areas in square metres using words and the abbreviation for square metres (m2), eg 6 square metres, 6 m2

Area 2

Compare the areas of regular and irregular shapes by informal means (ACMMG087)

- measure the areas of common twodimensional shapes using a squarecentimetre grid overlay, eg measure the area of a regular hexagon
 - compare how different placements of a grid overlay make measuring area easier or harder, eg (Problem Solving)



13 whole units and 12 partial units to be counted



16 whole units and 10 partial units to be counted

Content continued

- develop strategies for counting partial units in the total area of the shape, eg determine two or more partial units that combine to form one whole unit (Communicating, Problem Solving)
- measure the areas of irregular shapes using a square-centimetre grid overlay, eg



- compare two or more areas by informal means, eg using tiles or a square-centimetre grid overlay
 - explain why two students may obtain different measurements of the area of the same irregular shape (Communicating, Reasoning)

Compare objects using familiar metric units of area (ACMMG290)

✓ estimate the larger of two or more rectangular areas (including the areas of squares) in square centimetres and then measure in square centimetres to compare the areas

Data 1

Identify questions or issues for categorical variables; identify data sources and plan methods of data collection and recording (ACMSP068)

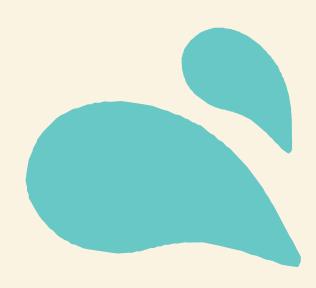
- ✓ recognise that data can be collected either by the user or by others [♠]
- pose questions about a matter of interest to obtain information that can be recorded in categories

Collect data, organise it into categories, and create displays using lists, tables, picture graphs and simple column graphs, with and without the use of digital technologies (ACMSP069)

- use computer software to create a table to organise collected data, eg a spreadsheet (Communicating)

Interpret and compare data displays (ACMSP070)

- ✓ describe and interpret information presented in simple tables, column graphs and picture graphs
- make conclusions about data presented in different data displays, eg 'Football is the most popular sport for students in Year 3 at our school' (Communicating, Reasoning)
- represent the same data set using more than one type of display and compare the displays



Outcomes

ST2 1WS S questions, plans and conducts scientific investigations, collects and summarises data and communicates using scientific representations

ST2 2DP T selects and uses materials, tools and equipment to develop solutions for a need or opportunity

ST2 4L S compares features and characteristics of living and non-living things

Key Enquiry Questions

- ✓ How do natural processes and human actions change the earth's surface over time?
- ✓ How can we group living things?
- ✓ How are environments and living things interdependent?

Content

Earth and Space

Working Scientifically

Processing and analysing data

- use a range of methods to represent data, including tables and column graphs
- ✓ identify patterns and trends in gathered data (ACSIS057, ACSIS068)
- ✓ compare results with predictions
- ✓ suggest possible reasons for findings (ACSIS215, ACSIS216)

Communicating

✓ represent and communicate observations, ideas and findings, using formal and informal representations (ACSIS060, ACSIS071)

Content

How the Earth's surface changes over time

- ✓ investigate why the Earth's surface changes over time as a result of natural processes and human activity, for example: (ACSSU075) ScIT ♣
 - · characteristics of soils
 - identify evidence of natural changes in landforms, rocks or fossils
- ✓ identify that scientific knowledge helps people understand the effect of their actions, for example: (ACSHE051, ACSHE062)

- investigate how erosion is caused by human activity, eg walking on bush trails
- investigate how erosion can be minimised, eg constructing boardwalks

Digital Technologies

Working Scientifically

Processing and analysing data

- use a range of methods to represent data, including tables and column graphs
- ✓ identify patterns and trends in gathered data (ACSIS057, ACSIS068)
- ✓ suggest possible reasons for findings (ACSIS215, ACSIS216)

Living World

Working Scientifically

Planning and conducting investigations

- ✓ plan scientific investigations with guidance
- conduct scientific investigations to find answers to questions
- use appropriate materials and equipment safely (ACSIS054, ACSIS065)
- ✓ consider and apply the elements of fair tests
- collect and record accurate, honest observations using labelled observational drawings, basic formal measurements and digital technologies as appropriate (ACSIS055, ACSIS066)

Content

- ✓ reflect on investigations, including whether testing was fair or not (ACSIS058, ACSIS069)
- ✓ participate individually and collaboratively with clear roles and goals

Processing and analysing data

- ✓ use a range of methods to represent data, including tables and column graphs
- ✓ identify patterns and trends in gathered data (ACSIS057, ACSIS068)
- ✓ compare results with predictions
- ✓ suggest possible reasons for findings (ACSIS215, ACSIS216)

Communicating

✓ represent and communicate observations, ideas and findings, using formal and informal representations (ACSIS060, ACSIS071)

Classification of living things

- ✓ collect data and identify patterns to group living things according to their external features, and distinguish them from non-living things (ACSSU044) ScIT
- ✓ identify that science involves making predictions and describing patterns and relationships (ACSHE050, ACSHE061) ScIT of

Life cycles of living things

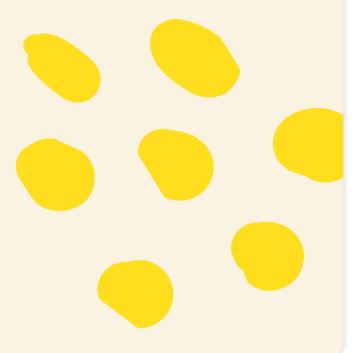
- ✓ identify that living things have life cycles (ACSSU072) *■
- ✓ conduct an investigation into the life cycle of plants and/or animals (ACSSU072) ScIT Ф ■

Survival of living things

✓ describe how living things depend on each other and the environment to survive (ACSSU073) ScIT

ACSSU073) ScIT

ACSSU073





Core Lesson 1 – 20 minutes

Shared Text: Annie and The Waves by Louise Lambeth

Class discussion: Before reading

Inference from title and cover

- Characters main character, other character
- ✓ mood
- activities
- ✓ Surf Life Saving Australia logo

Start reading from page 4 (where the story starts)

Resources

- ✓ Annie and the Waves
- Reading and Multimodal experience
- ✓ Book read by Louise Lambeth and NSW Surf Lifesavers Grace & Liam

Core Lesson 2 – 30-45 minutes

Shared Text: Annie and The Waves by Louise Lambeth

Class discussion: After reading - Think/Share/Pair

- ✓ What was the best bit?
- ✓ Worst bit?
- Describe 2 things you learned from this story

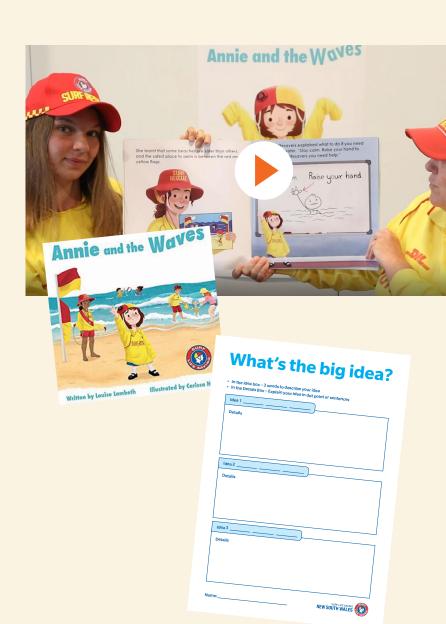
Report back to class and record on a class brainstorm

Task: What is the Big Idea?

- ✓ Complete the task What, Where, When, Who, How
- Reread from page 4 (where the story starts)

Resources

- ✓ What's the Big Idea Worksheet
- ✓ Book read by Louise Lambeth and NSW Surf Lifesavers Grace & Liam



Core Lesson 3 – 30-45 minutes

Shared Text: Annie and The Waves by Louise Lambeth

Task: Character Inference Chart

- ✓ Name of Character
- Facts: What do we know about the character?
- Quotes: What does the character say?
- Actions: What does the character actually do?
- Getting inside the Character's Head: What are some of the thoughts and feelings?
- ✓ Write 3 sentences about what you can infer about the character

Resources

- ✓ Character Inference Chart
- ✓ Book read by Louise Lambeth and NSW Surf Lifesavers Grace & Liam

Core Lesson 4 - 15 minutes

Play the Louise Lambeth (author) Reading

- ✓ Watch from 2:40min to 14:40min
- ✓ This could be done with PDHPE tasks

Class Discussion

- ✓ What did Annie learn from the lifesavers when they came to Annie's school? (Lifesavers are in red and yellow and there to help; swim between the flags, if you need help; stay calm and raise your hand if in trouble)
- ✓ Name the 3 types of waves. Which is the safest type? (Spilling, Surging, Plunging)
- ✓ Name the things Annie did to be sunsafe. (Slip, Slop, Slap, Seek, Slide) - Sid the Seagull advertisement

Resources

- ✓ Book read by Louise Lambeth and NSW Surf Lifesavers Grace & Liam
- ✓ Sid the Seagull



Core Lesson 5 - 45 minutes

Mathematics Marine Encounters (Pre - Beach Profile and Hazards Encyclopedia

Task): Students are given cut-outs from the "Mathematics Marine Encounters Resource Cut-outs".

There is a collection of species of marine life that could be used by students from a range of numeracy levels. There are 30 individual species (class set) for your students to investigate. The prints are NOT TO SCALE. You will need grid paper for this task.

- ✓ Draw an outline of each species on the grid paper
- Calculate the length, width and area of the artefact to one hundredth of a centimetre

Potential methods:

- Create compound regular shapes, calculate area of each shape
- Measure with tape measure/ruler and estimate area
- Create compound regular shapes, cut out each shape and combine them to make a rectangle. Calculate the area of the rectangle

Class discussion: Students compare their findings based on the methods used for calculation.

Why would the same object have different calculations and different results?

Teacher Preparation:

Cut the individual species of marine creatures out so students can complete the mathematics task.

You will need to label each marine creature on the back of the cut-out marine creature

To be supplied by the teacher: grid paper

Resources: "Mathematics Marine Encounters Resource Cut-outs

This is a cross KLA
Project- Mathematics,
English, Science, HSIE
and PDHPE task



Teachers need to cut out the marine creatures from the background for students to place on the grid paper to trace around to construct compound 2D shapes.

NOT TO SCALE: The marine creatures are purposely not to scale to cater for the range of numeracy levels in your class.



dati alian Pineapple Fish

Core Lesson 6 - 30-45 minutes

Working Scientifically Discussion - Beach Profile and Hazards Encyclopedia Task:

Explicit questioning:

- When calculating the length, width and area of the artefacts in the box. There were several different findings. Why is this so?
- ✓ What does the terms "accurate, predict, estimate, error, pattern" mean?
- ✓ How can we ensure that the findings of measurement are accurate and fair?
- ✓ How can we record our data?
- ✓ How can we display our findings?

Scientific Sketching Task (Pre -Beach Profile and Hazards Encyclopedia Inquiry Task):

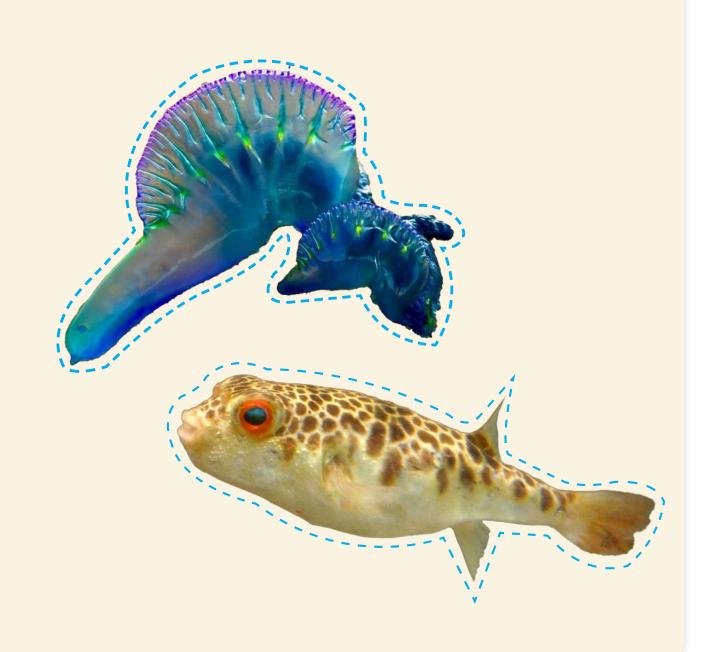
Using the same marine creature cut-out used for the Mathematics Marine Encounters task; Create a Scientific Sketch of your marine species. Watch the videos and PowerPoint to assist you

Resources

Students use same marine creature cut-out used for the Mathematics Marine Encounters task

Beach Profile and Hazards Encyclopedia Template

- ✓ PowerPoint <u>Scientific Sketching Practice</u>
- ✓ How to draw Scientific Drawings
- ✓ <u>Introduction to scientific sketching</u> California Academy of Sciences
- Scientific sketching practice California Academy of Sciences
- ✓ Introduction to scientific sketching <u>lesson plan</u>



Daily Beach Report

Create a Beach Report for your local or chosen beach. Make sure you use describing words.

- www.coastalwatch.com
- www.willyweather.com.au
- www.magicseaweed.com
- www.bom.gov.au www.coastalwatch.com



					□ cool	
oday's conditions	°C	□hot	□ war		□cool	
ir Temperature (°C)	•C	□hot	□war		□still	
Vater Temperature (°C)	_km/hr	□gale	□wir	idy		
Wind Conditions (km/hr)	KIII/III					
Wind Direction						
Rainfall (Since 9am)	mm					
Wave Height (m) (To tenth metre/ 0.00m)	m					
Swell Height (m) (To one tenth of metre)	m		plunging		□ spilling □ choppy	_
Type of wave	□ surging		□ even waves		Chocks	
How does it look?	□flat					
LIV prediction						
Why would you go or not go to this beach today?						
Forecast for tomorrow	°C					
Temperature	km/hr					
Wind Speed	KIIVIII					
Wind Direction	mm					
Rainfall	m					
Wave Height	m					
Swell Height						
UV prediction						
Predict whether you would go to the beach						

NEW SOUTH WALES





30-45 mins





Daily Task

Daily Beach Report 5x10-15 minutes

This is a duplicate task with Mathematics, HSIE and Science. You may want to have each student or pairs collect beach conditions data on the "Daily Beach Report". Students may present a report each day. You may also want to record the beach conditions data on the "Beach Conditions Data Recording Sheet" to find patterns of beach conditions, create graphs, tables and infer patterns.

- ✓ Name of Beach
- ✓ Air Temperature
- ✓ Water Temperature
- Wind Conditions
- ✓ Wave Height
- ✓ UV prediction
- ✓ How does it look?
- ✓ Why would you go or not go to this beach today?
- Forecast for tomorrow

Extension for Mathematics: Using the school weather station, create a weather report for the school.

Resources

- www.bom.gov.au Bureau of Meteorology
- www.coastalwatch.com webcam of a beach. Search words: webcam (name) beach/river
- www.willyweather.com.au
- www.magicseaweed.com
- ✓ Daily Beach Task Instructions and Report Template
- ✓ Beach Conditions Data Recording Sheet
- Extension: purchase a school weather station; Teacher to create a spreadsheet to record school weather report data each day



Teacher Resources:

- ✓ Dr Rob Brander (UNSW) Where do Waves Come From?
- ✓ Dr Rob Brander (UNSW) How do Waves Form?
- ✓ Dr Rob Brander (UNSW)

 The Beach Survival Guide
- ✓ Surfing Online

 Types of Waves (for surfing)
- ✓ Beach & Coastal Safety Resource Hub
- ✓ SLS Beachsafe
- ✓ The Beach Rat 4 Simple Ocean Observations to Improve Your Surfing

Homework

Read supplementary texts from other books and media relating to this lesson such as being at the beach, being lost and dangerous animals.



Core Lesson 1 – 60 minutes

Task

Analysis of Beach Conditions Data Information Report

Each student receives a hard copy of the data collected. Students are to use different colours to categorise the data

- ✓ Windy, small breeze, still
- ✓ hot, warm, cool temperature
- ✓ cold or warm
- ✓ large, small, still waves
- ✓ choppy, slight swell, still water, current, flooded
- ✓ plunging, spilling, surging waves
- ✓ good or poor beach day

Teacher models generating data table, pie graphs, column graph on the class board using Excel or similar app.

Students to create an Informational Report using the beach conditions data, tables and graphs modelled by the teacher using Excel or similar app.

eg. At (Location) Beach between the dates of there were good beach days. (Location) had mainly conditions with waves etc.

Resources

- ✓ Teacher to generate hard copy of Beach Conditions Data Recording Sheet from core lesson 5 in week 1
- ✓ Teacher to give each student hard copies of the modelled tables and graphs
- ✓ Teacher to provide an Information Scaffold for each student



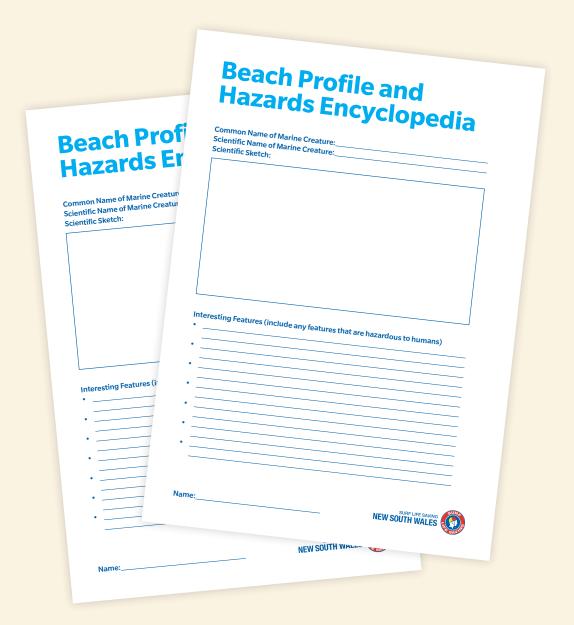
Core Lesson 2 – 30-45 minutes x 2

Beach Profile and Hazards Encyclopedia Inquiry Task: Students are to research the following information about the Marine Creature you have been working on:

- ✓ Scientific Drawing (Science Task)
- ✓ Common name
- ✓ Scientific name
- ✓ location of where the species is found (colour on the map)
- environment it is found (fresh/salt water, vegetation, type of waterway)
- ✓ interesting features
- ✓ features that may make it hazardous to humans

Resources

✓ Beach Profile and Hazards Encyclopedia Sheet

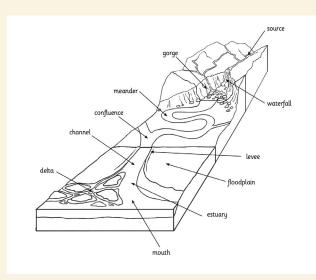


Core Lesson 3 – 60 minutes

Task: Features of a River System

Label the parts of the river system. Students will need to research these terms:

- ✓ channel
- ✓ confluence
- ✓ delta
- ✓ estuary
- ✓ floodplain
- ✓ levee
- ✓ meander
- ✓ mouth
- ✓ gorge
- ✓ source
- ✓ waterfall



Optional Task

Experiment-River Systems

Teacher to build up a mountain range to the coast profile with sand or similar material. You will be using watering can or similar to model the impact of rain on the mountain range.

You may want to film the class experiment for future reference

Explicit Direct Teacher Questioning and Discussion:

- Describe the shape of the landscape from the highlands to the coast - Highlands steep, flood plain and delta flat, and reaches coast
- ✓ Where is the source of the river? Highlands
- ✓ What do you think will happen to the river system if it rains in the highlands? - flows down the river system to the coast

Teacher puts a little bit of water on the highlands

- ✓ As the water moves down the river system from the highlands, what feature is created? tributaries form
- ✓ What is happening to the sand/dirt? being picked up in the current and washed downstream - erosion
- ✓ What is the water movement called? current
- ✓ What is happening to the current when it hits the flood plain? - current slows and forms meanders - deposition
- What is happening to the sand/dirt when it hits the flood plain? it stops and builds up on the flood plain
- What will happen to the water when it hits the delta? spreads out and little tributaries and creeks form to the coast
- ✓ Teacher to pour more water on the highlands.
- ✓ What will happen if the highlands get lots of rain? flooding

Teacher to pour bigger volume of water.

Resources

- ✓ An Amazing Discovery!
- www.mdba.gov.au amazing discovery
- www.mdba.gov.au sticker mapping activity
- ✓ Features of a River System Plan It, Twinkl



Core Lesson 4 – 30-45 minutes

Explicit Teaching: Flags and The Think Line

Explain the concept of:

- ✓ FLAGS acronym Write the meaning of FLAGS in students notes
- ✓ Watch the videos about rip currents and The Think Line
- ✓ Discuss the following points as a class
- ✓ List the ways the ways you can prevent getting caught in a rip current
- ✓ Options for returning to shore

Resources

- ✓ FLAGS acronym
- ✓ How to spot a rip
- ✓ How to survive a rip
- ✓ The Think Line



Core Lesson 5 – 60 minutes

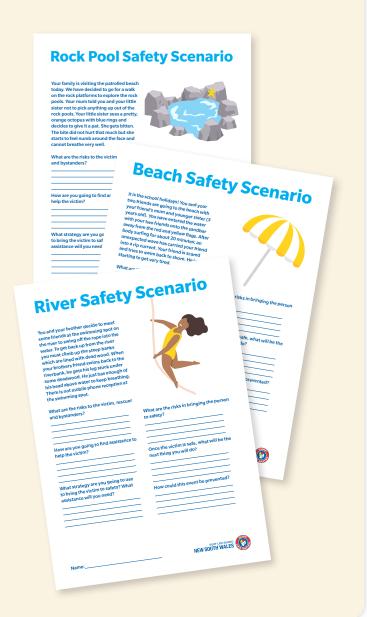
Inquiry Task: Use scenario planning sheets with a list of resources for each scenario.

In small groups; you will be given a scenario. You will need to present to the class in a format of your choice eg. presentation, make a video or podcast, create an infographic:

- ✓ A short description of the scenario
- What are the risks to the victim, rescuer and bystanders?
- How are you going to find assistance to help the victim?
- ✓ What strategy are you going to use to bring the victim to safety? What assistance will you need?
- ✓ What are the risks in bringing the person to safety?
- Once the victim is safe, what will be the next thing you will do?
- What other ways could you bring the person to safety?

Resources

Scenario planning sheets



Geography 45mins

Task: River System Experiment source (highlands) to the coast.

Introduce River Systems with the video – <u>An Amazing</u> Discovery! (Murray-Darling Basin Authority)

Resources

- ✓ An Amazing Discovery!
- Amazing discovery <u>resource</u>
- Sticker mapping activity good teacher resource

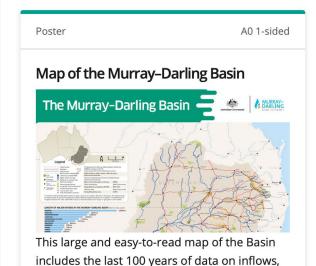
Homework

Read supplementary texts from other books and media relating to this lesson such as being at the beach, being lost and dangerous animals.

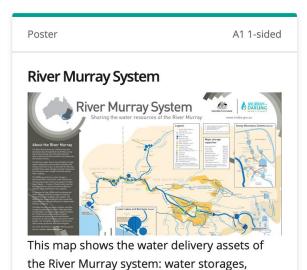


Posters & stickers

Solution ■ **Ordering:** You can order any of these items free-of-charge. Visit the ordering site to start an order.



floods, drought and rainfall.



rivers, irrigation channels and pumping

infrastructure.



Science, English, HSIE & Mathematics

Daily Task: Daily Beach Report 5x10-15 minutes

This is a duplicate task with Mathematics, HSIE and Science. You may want to have each student or pairs collect beach conditions data on the "Daily Beach Report". Students may present a report each day. You may also want to record the beach conditions data on the "Beach Conditions Data Recording Sheet" to find patterns of beach conditions, create graphs, tables and infer patterns.

- ✓ Name of Beach
- ✓ Air Temperature
- ✓ Water Temperature
- Wind Conditions
- ✓ Wave Height
- ✓ UV prediction
- ✓ How does it look?
- ✓ Why would you go or not go to this beach today?
- Forecast for tomorrow

Extension for Mathematics

Using the school weather station, create a weather report for the school.

Resources

- www.bom.gov.au Bureau of Meteorology
- www.coastalwatch.com webcam of a beach -Search words: webcam (name) beach/river
- www.willyweather.com.au
- www.magicseaweed.com
- ✓ Daily Beach Task Instructions and Report Template
- ✓ Beach Conditions Data Recording Sheet

Extension: purchase a school weather station; Teacher to create a spreadsheet to record school weather report data each day

Teacher Resources

- ✓ Dr Rob Brander (UNSW) Where do Waves Come From?
- ✓ Dr Rob Brander (UNSW) Where do Waves Come From?
- ✓ Dr Rob Brander (UNSW) The Beach Survival Guide
- ✓ Surfing Online Types of Waves (for surfing)
- ✓ Surf Lifesaving Queensland Waves
- ✓ SLS Beachsafe Rip currents
- ✓ The Beach Rat 4 Simple Ocean Observations to Improve Your Surfing



Core Lesson 1 – 20-30 minutes

Task

About/Point Chart

Give each student a copy of the lyrics or do the task on the class board.

- 1. Highlight the words that could be a title for each dot point
- 2. Highlight in a different colour; the advice that informs what the word refers to.

Complete the About/Point Chart

- ✓ The text is about...(15-20 words)
- ✓ The authors points are: (list 5 points)

Resources

- ✓ About/Point Chart
- ✓ Shared text: Watch You've Gotta Be SunSmart Jay Laga'aia
- ✓ You've Gotta Be SunSmart lyrics, Jay Laga'aia

Core Lesson 2 – 30-45 minutes

Task

Informative Text Brochure

Using the About/Point Chart; Create a brochure to explain "Slip, Slop, Slap, Seek, Slide" - Use the About/Point Chart to help

(Slip, Slop, Slap, Seek, Slide (pre-fold class set of A4/A3 into 3 columns) or 6 slides (Title slide + 5 slides for informative text)

Resources

- ✓ About/Point Chart
- ✓ A3 or A4 paper pre folded into columns or 6 Google slides
- ✓ (Slip, Slop, Slap, Seek, Slide) Sid the Seagull advertisement















Core Lesson 3 – 2x45 minutes

Task

Analysis of Beach Conditions Data Information Report

Each student receives a hard copy of the daily data that has been collected. Students are to use different colours to categorise the data

- ✓ Windy, small breeze, still
- ✓ hot, warm, cool temperature
- ✓ cold or warm
- ✓ large, small, still waves
- ✓ choppy, slight swell, still water, current, flooded
- plunging, spilling, surging waves
- ✓ good or poor beach day

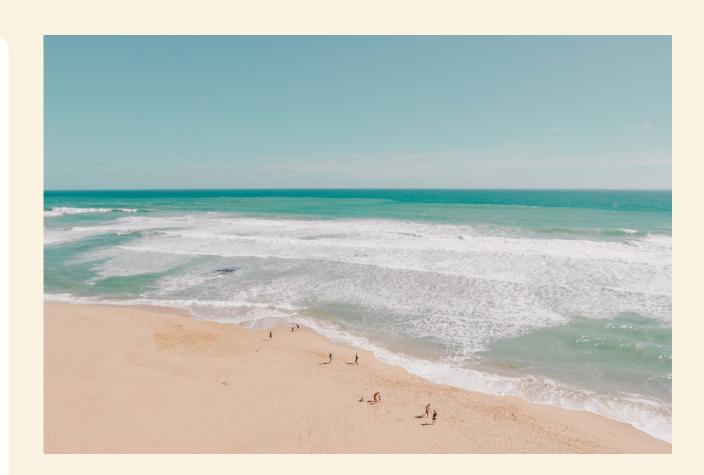
Teacher models generating data table, pie graphs, column graph on the class board using Excel or similar app.

Students to create an Informational Report using the beach conditions data, tables and graphs modelled by the teacher using Excel or similar app.

eg. At (Location) Beach between the dates of there were good beach days. (Location) had mainly conditions with waves etc.

Resources

- ✓ Teacher to generate hard copy of Beach Conditions Data Recording Sheet
- ✓ Teacher to give each student hard copies of the modelled tables and graphs
- ✓ Teacher to provide an Information Scaffold for each student



Core Lesson 4 – 30-45 minutes

Task

Explicit Teaching: Rescue Safety

Shared Text Literacy task: Read the Rescue Safety Information Sheet

Model "Chunking" the text into manageable sections. Put copy on the class board and work through chunking strategy

- ✓ Highlight unfamiliar terms and find definition/ synonym for each word
- ✓ For each paragraph, highlight in a different colour; key points and write the key wpoint in the margin
- ✓ Using the key points in the margin; write a summary of the text

Write the Acronym for the "4 P's of a Rescue" in your notes. This will be important for the next task.

In your book; Answer the following questions in full sentences:

- ✓ What does "self-preservation" mean?
- ✓ Why wouldn't you perform a "swimming" rescue?
- ✓ If it is not safe to perform a rescue: list some strategies you could use to bring the victim to safety.
- ✓ Once the victim is safe; how could you help the situation?

Resources

- ✓ Shared Text: Rescue Safety Information Sheet
- "Chunking" instructions
- www.royallifesaving.com.au watersmart





FACT SHEET No.18

Rescue Safety

Q. When should I attempt a re-

A. In any rescue situation, your personal safety should remain paramount. There are many types of rescues which do not involve the rescuer entering the water. Assess the situation to determine which rescue is most suitable. Remember, if you enter the water without first assessing the situation and get into trouble, you will not be able to assist anyone and may even need rescuing yourself.

Q. What should I do if I see someone in trouble?

Aftercare: giving an aid until medical help arrives

A. Royal Life Saving encourages people who find themselves in a rescue situation to follow the 4 A's of rescue: Awareness: recognising an emergency, accepting responsibility Assessment: making an informed judgement Action: developing a plan, effecting the rescue

Q. How do I attempt a rescue?

A. When assessing a rescue situation there are a number of means by which the rescuer can try to assist the person in trouble, before they undertake a swimming rescue themselves. These include: Talk, Reach, Throw, Wade, Row and Tow rescues. Before entering the water, assess the situation - is there something on hand which you could use to reach the person, such as a rope, stick, or towel? Is there something you could throw to the person to aid their buoyancy, such as a life jacket, kickboard, or esky lid?

Q.Is there a risk in undertaking a rescue?

A. Yes. On average, 5 people lose their lives each year while attempting to rescue people in trouble. Often when you approach a person in difficulty they may be in a state of panic, and can easily drag you under in their attempt to stay afloat. It is important not to put yourself in danger; reassure the person whilst encouraging them to kick in themselves. Or if the person requires towing, you should take an aid out to them, and use this to tow them back.

O Where can I learn more about undertaking rescues

A. Depending on how old you are you can participate in Swim and Survive and/or Bronze Medallion educational programs. More information about these can be found at www.rovallifesaving.com.au.

Real Life Story - Teenager drowns trying to save mate

A teenage boy has drowned in rough seas after trying to save a friend. A group of teenagers were playing at the ocean when one boy got into trouble. Two friends jumped in to save him but one did not emerge from the water. His body was found by police when the tide went out later that evening.

ROYAL LIFE SAVING HAS DEVELOPED A NUMBER OF FACT SHEETS ON WATER SAFETY ISSUES IN AUSTRALIA.

Contact Royal Life Saving on: 1300 737 763 or download them from:

www.keepwatch.com.au

Rescue Safety Checklist:

- Practiced performing a reach rescue with a branch, stick. umbrella, towel etc
- Practiced performing a throw rescue using a kickboard, esky lid, PFD, bucket, rope, or even the
- Assessed the situation before performing a rescue
- When performing a rescue calmed person down, explained to them what you are doing and what they should do to help. Stayed away from them to maintain own safety



Rescue Safety Checklist

- rescue with a branch, stick, umbrella, towel etc
- Practiced performing a throw rescue using a kickboard, esky lid, PFD, bucket, rope, or even the
- Assessed the situation before performing a rescue
- person down, explained to them what you are doing and what they should do to help. Stayed away

PRESERVATION IS IN ANY RESCUE

tralian Government

Proudly Supported by

Australian Government

SELF PRESERVATION IS

KEY IN ANY RESCUE.

Core Lesson

- ✓ Build a diorama of a river system 2-3 hours
- ✓ Analysis of beach condition data information report from an extra beach 2 x 45 minutes





Lambeth, L (2018) Annie and the Waves Publicious Pty Ltd Australia (endorsed by Ocean Beach SLSC and Surf Life Saving Australia)



<u>Annie and the Waves</u> - Reading and Multimodal experience



<u>Annie and the Waves - book read by Louise</u> <u>Lambeth</u>



Sid the Seagull advertisement



You've Gotta Be SunSmart - Jay Laga'aia



You've Gotta Be SunSmart <u>lyrics</u> - Jay Laga'aia



www.bom.gov.au - Bureau of Meteorology



<u>www.coastalwatch.com</u> - webcam of a beach - Search words: webcam (name) beach/river



Dr Rob Brander (UNSW) – Where do Waves Come From?



Dr Rob Brander (UNSW) – <u>How do Waves</u> <u>Break?</u>



Dr Rob Brander (UNSW) – <u>The Beach</u> Survival Guide



Surfing Online – <u>Types of Waves (for surfing)</u>



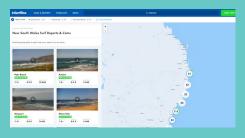
Beach & Coastal Safety Resource Hub



beachsafe.org.au - rip currents



The Beach Rat - <u>4 Simple Ocean</u>
Observations to Improve Your Surfing



www.coastalwatch.com - webcam of a beach - Search words: webcam (name) beach/river



www.willyweather.com.au



Magic Seaweed



www.facinghistory.org – How to "Chunk" text



Royal Lifesaving - water smart



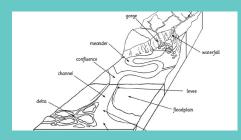
An Amazing Discovery! – Murray-Darling Basin Authority



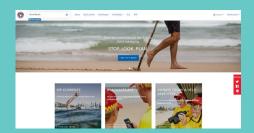
Murray-Darling Basin Authority



Murray-Darling Basin Authority - <u>sticker</u> mapping activity



<u>Features of a River System – Plan It – Twinkl</u>



www.beachsafe.org.au

Exercise #1: Blind Contour Drawing

- >> Choose a specimen from the table
- >> Sketch the specimen without looking at your paper or lifting your pencil from the paper
- » 1 MINUTE



<u>PowerPoint - Scientific Sketching Practice</u>



How to draw Scientific Drawings



Scientific sketching practice – California Academy of Sciences



<u>Introduction to scientific sketching</u> – California Academy of Sciences



<u>Scientific sketching lesson plan</u> – California Academy of Sciences



FLAGS acronym



How to spot a rip – Beachsafe.org



How to survive a rip – Beachsafe.org



<u>The Think Line – Beachsafe.org</u>

