

Framework for learning – MPS **YEAR 4** 2021 T3 W10

You may need access to a digital device to complete some of the following activities. Your teacher may put some of the activities on Google Classroom for those who are able to access it. You will need help from a parent/carer for some of these activities.

	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	<p>English Reading Look for some different things to read in your house or at school. If you think you have nothing to read you may need to be a bit more creative in your search 😊! Try to read for 20 minutes each day. You can read to-</p> <ul style="list-style-type: none"> • Yourself • Your teddies or toys • Your brothers or sisters • Your pets • A plant or a tree • The big wide world 	<p>English Reading Look for some different things to read in your house or at school. If you think you have nothing to read you may need to be a bit more creative in your search 😊! Try to read for 20 minutes each day. You can read to-</p> <ul style="list-style-type: none"> • Yourself • Your teddies or toys • Your brothers or sisters • Your pets • A plant or a tree • The big wide world 	<p>English Reading Look for some different things to read in your house or at school. If you think you have nothing to read you may need to be a bit more creative in your search 😊! Try to read for 20 minutes each day. You can read to-</p> <ul style="list-style-type: none"> • Yourself • Your teddies or toys • Your brothers or sisters • Your pets • A plant or a tree • The big wide world 	<p>English Reading Look for some different things to read in your house or at school. If you think you have nothing to read you may need to be a bit more creative in your search 😊! Try to read for 20 minutes each day. You can read to-</p> <ul style="list-style-type: none"> • Yourself • Your teddies or toys • Your brothers or sisters • Your pets • A plant or a tree • The big wide world 	<p>English Reading Look for some different things to read in your house or at school. If you think you have nothing to read you may need to be a bit more creative in your search 😊! Try to read for 20 minutes each day. You can read to-</p> <ul style="list-style-type: none"> • Yourself • Your teddies or toys • Your brothers or sisters • Your pets • A plant or a tree • The big wide world

	<p><i>Choose one of the activities from the Reading Response Grid to complete in response to your reading.</i></p> <p>Narrative Writing Use the picture and story starter as a stimulus to write a short narrative.</p> <p>Spelling Write out your list and choose an activity from the Spelling grid.</p> <p>Biomes Project- Continue working on your project. When we return to school we will make time for everyone to present their work to their class.</p>	<p><i>Choose one of the activities from the Reading Response Grid to complete in response to your reading.</i></p> <p>BTN: Watch 'Behind the News' at 10am on ABC Me. https://www.abc.net.au/btn/classroom/ Write a summary of the story you found the most interesting. Write 3 facts that you learnt from watching today.</p> <p>If you are able to access your Google Classroom you can find some specific questions to answer about this week's episode.</p> <p>Spelling Write out your list and choose an activity from the Spelling grid.</p>	<p><i>Choose one of the activities from the Reading Response Grid to complete in response to your reading.</i></p> <p>Letter Writing Read the attached mock newspaper page on chimps. Then complete the following writing task- Of course, you all know how to use your manners. So, what would it be like if you didn't use good manners?</p> <p>Imagine you have forgotten your manners, and write a pretend letter to someone (a grandparent perhaps or a friend) for a gift they sent you for your birthday. This is not about being rude, but experimenting with how it feels if you are not being polite.</p>	<p><i>Choose one of the activities from the Reading Response Grid to complete in response to your reading.</i></p> <p>Comprehension Read the text about Humpback whales and complete the questions.</p> <p>Spelling Write out your list and choose an activity from the Spelling grid.</p> <p>Biomes Project- Continue working on your project. When we return to school we will make time for everyone to present their work to their class.</p>	<p><i>Choose one of the activities from the Reading Response Grid to complete in response to your reading.</i></p> <p>Writing Look at the picture from the NY Times 'What's going on in this picture?' section, it is at the back of this paper pack or on your Google Classroom. These are photos from the NY Times newspaper that have had their captions removed. What do YOU think is going on? What makes you think that? What else could be happening? Why is it happening? Discuss with someone nearby and write down your thoughts.</p> <p>Spelling Write out your list and choose an activity from the Spelling grid.</p>
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		<p>Biomes Project- Continue working on your project. When we return to school we will make time for everyone to present their work to their class.</p>	<p>Spelling Write out your list and choose an activity from the Spelling grid.</p> <p>Biomes Project Continue working on your project. When we return to school we will make time for everyone to present their work to their class.</p>		<p>Biomes Project- Continue working on your project. When we return to school we will make time for everyone to present their work to their class.</p>
Break	Break	Break	Break	Break	Break
Middle	<p>FITNESS: Choose an activity of choice or use the PE Grid for some inspiration. For a change, you might like to use the Superhero Yoga Poster this week.</p> <p>Mathematics</p> <p>Number Busting: our number for today is 27. Draw and write everything you know about 27 (you can use any operations you like).</p>	<p>FITNESS: Choose an activity of choice or use the PE Grid for some inspiration. For a change, you might like to use the Superhero Yoga Poster this week.</p> <p>Mathematics</p> <p>Number Busting: our number for today is 36. Draw and write everything you know about 36 (you can use any operations you like).</p>	<p>FITNESS: Choose an activity of choice or use the PE Grid for some inspiration. For a change, you might like to use the Superhero Yoga Poster this week.</p> <p>Mathematics</p> <p>Number Busting: our number for today is 62. Draw and write everything you know about 62 (you can use any operations you like).</p>	<p>FITNESS: Choose an activity of choice or use the PE Grid for some inspiration. For a change, you might like to use the Superhero Yoga Poster this week.</p> <p>Mathematics</p> <p>Number Busting: our number for today is 81. Draw and write everything you know about 81 (you can use any operations you like).</p>	<p>FITNESS: Choose an activity of choice or use the PE Grid for some inspiration. For a change, you might like to use the Superhero Yoga Poster this week.</p> <p>Mathematics</p> <p>Number Busting: our number for today is 99. Draw and write everything you know about 99 (you can use any operations you like).</p>

Barrier Game

What you need:

- * a partner
- * piece of paper each
- * pencils/textas/crayons

1. Sit back to back with a family member.
2. Draw a picture/design on your paper using shapes.
3. Describe your picture so that the other person can recreate it.
4. Describe your design by stating the shapes you used and their location (for example, next to, on top of, between).
5. Check to see how they went.
6. Swap roles with your partner.

* Questions to think about:
Do you need to rethink how you explain your drawing?

* Repeat the game a few times. Do the results improve?

*** Take a photo of your work and send it to your teacher or Google Classroom.**

Pasta Maths

Measure out one cup of pasta and then complete nine of the activities on the attached Mathematics sheet.



*** Take a photo of your work and send it to your teacher or Google Classroom.**

Pasta Maths

Measure out one cup of pasta and then complete the other eight listed activities on the attached Mathematics sheet.



*** Take a photo of your work and send it to your teacher or Google Classroom.**

Many Hands Measuring

Use your hand (from the wrist to the top of your tallest finger) to complete seven of the listed activities on the attached Mathematics sheet.



*** Take a photo of your work and send it to your teacher or Google Classroom.**

Many Hands Measuring

Use your hand (from the wrist to the top of your tallest finger) to complete the other seven listed activities on the attached Mathematics sheet.



*** Take a photo of your work and send it to your teacher or Google Classroom.**

Break	Break	Break	Break	Break	Break
Afternoon	<p>Science</p> <p>Follow the instructions on the Science sheet for the activities on materials.</p>	<p>Library</p> <p>Read the attached text 'Matthew Flinders-adventures on leaky ships' and then complete the 'Match the voyage' worksheet.</p>	<p>CAPA - art and music</p> <p>Follow the instructions on the CAPA sheet for the following activities.</p> <ul style="list-style-type: none"> * Desktop drumming * Sketching <p>If you are able to share your work to your Google Classroom, please do so.</p>	<p>PDHPE</p> <p>Do you know the definition of a stereotype?</p> <p>A stereotype is a generalized belief about a person. For example, only girls can like the colour pink, or only boys can play football.</p> <p>Fill out the sheet 'Stereotypes' and see what stereotypes we assume about boys and girls.</p> <p>If online watch: https://www.youtube.com/watch?v=8q7_aV8eLUE https://www.youtube.com/watch?v=AVKglkBye7I</p> <p>What is the definition of a stereotype? Do you think we should stereotype boys and girls? Write down two examples of a stereotype</p>	<p>Geography</p> <p>A carbon footprint is a measure of the impact your activities have on the amount of carbon dioxide (CO2) produced through the burning of fossil fuels which add to global warming.</p> <p>If online you can watch the following videos to help you gain a better understanding.</p> <p>WATCH: https://www.youtube.com/watch?v=8q7_aV8eLUE https://www.youtube.com/watch?v=AVKglkBye7I</p> <p>Measure your own carbon footprint impact by completing the Measure Your Impact sheet and if online calculate your own carbon footprint using the interactive calculator by clicking the link below: https://www.wwf.org.au/get-involved/change-the-way-you-live/ecological-footprint-calculator#gs.dOOqeWc</p>

Reading Response Grid

<p><u>3, 2, 1</u> After reading your text write... 3 interesting ideas 2 questions you have 1 favourite part</p>	<p><u>Traffic Lights</u> In your book respond to the following traffic lights... Green= My favourite part Orange= a question or wondering Red= something you didn't understand.</p>	<p><u>Diary entry</u> Choose a character in the story and write a diary for one day in their life.</p>	<p><u>Timeline</u> Make a timeline of important events in the story.</p>	<p><u>Letter</u> Write a letter to the author and tell them why you did or didn't like the book.</p>
<p><u>Write your own ending</u> Write a new ending for the book. Decide what you would change and write at least two to three paragraphs.</p>	<p><u>Character description</u> Draw a picture of a character in your book and write down all the words the author used to describe them.</p>	<p><u>Book Review</u> Write a review of your book. Give a brief description without giving away the ending. Talk about your favourite part/ characters and give the book a rating out of 5 stars.</p>	<p><u>Synonyms</u> Find at least 5 interesting word in your text and think of a synonym for each word. Rewrite these words into a new sentence.</p>	<p><u>Questioning</u> Before reading your text write down 5 questions. Read the text and then write 5 more questions you have. Were you able to answer any of your questions?</p>
<p><u>Text Connections</u> Write at least 3 paragraphs to explain the text to self, text to text and text to world connections you made when reading your text.</p>	<p><u>Predicting</u> Before reading, make a prediction about your text. What do you think will happen and why? After reading, write down if your prediction was correct and if not what really happened.</p>	<p><u>Word hunt</u> Find the following types of words and write them in your book (include the sentence and underline the word) 5 nouns, 5 verbs, 5 adjectives and 5 adverbs.</p>	<p><u>Be Persuasive!</u> Write a persuasive piece to convince someone else that they should read this text. You could do this in the form of a letter, an advertisement and more. Use your imagination!</p>	<p><u>Glossary</u> Choose 8 words from the text, write them in alphabetical order and write down what they mean. Can you put them into a new sentence?</p>
<p><u>PMI Chart</u> Plus- What did you like and why? Minus- What didn't you like and why? Interesting- What did you find interesting and why?</p>	<p><u>Alphabet</u> Write the alphabet down the side of your page. Next to each letter, write a word that relates to your text beginning with that letter. E.g. S = Surprise ending, I = informative</p>	<p><u>Answers</u> Think of at least 5 questions that are answered in your book. Write at least 3 questions which are not answered in your book.</p>	<p><u>Objects</u> Think of something you read about in your book. Write what you think this object looks like, feels like and sounds like. Can you think of a new way this object could be used?</p>	<p><u>Conversations</u> Write a script the follows you and a friend talking about the text. Draw yourself and a friend having the conversation. Use captions, thought/ speech bubbles to tell each other what you thought of the text and why.</p>
<p><u>Music</u> Make up a song/poem/ chant about the book. Include things that happened in the book. Use sounds for effect, e.g. 'Bang' or 'Ouch'.</p>	<p><u>Television Script</u> Imagine you are on the television telling people about this text. Write a script of what you would say to help the audience know what the book is about and what it is like.</p>	<p><u>Character connections</u> Write 5 things about the main character. Write 5 things about you. Were any of them the same? Present this information in a Venn diagram.</p>	<p><u>Board Game</u> Design a board game based on the book.</p>	<p><u>Word Search</u> Choose 10 tricky words from your text and put them into a word search. Make sure you check your spelling before you do!</p>

Story starter!

“Hmmm. Where shall we go this time?” Jeremy asked his brother.

“How about there!?” replied Max excitedly. “We’ve always talked about going there!”

The brothers both put their fingers on the part of the world they had chosen, and waited for the magic to happen.

“I wonder if it will be as fun as our last trip,” mused Jeremy, as the globe began to glow...



Spelling Term 3 Week 10

Name: _____

Words	Monday	Tuesday	Wednesday	Thursday	Friday
describe					
scribble					
scribes					
inscribe					
script					
description					
postscript					
prescription					
subscription					
inscription					

35 HANDS-ON SPELLING ACTIVITIES















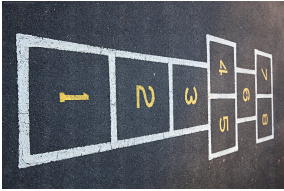
to use with any word list

Make each word with Scrabble tiles.	Make each word using short lengths of yarn.	Paint the words onto paper.	Write the words outdoors with chalk.	Make the letters of each word with your body as you spell the word aloud.
Build the words with Lego bricks.	Stamp the words onto paper with letter stamps.	Stamp the words into playdough with non-inking letter stamps.	Paint each word with a Q-tip/ cotton bud.	Make the words with letter stickers.
Spell the words aloud as you star jump - one jump for each letter.	Spell each word with letters made from chenille stems/ pipe cleaners.	Type your words on a computer.	Thread the words with letter beads.	Write each word with a stick in damp sand.
Write each word with your finger in a shallow tray of sand or salt.	Write the words on a window with a whiteboard marker.	Clap once for each letter as you spell aloud each word.	Make each word with alphabet stones.	Write your words onto paper plates and make up a jumping game.
Write your words in a fun way of your choice.	Draw a hopscotch grid, add your words. Spell each word as you play.	Spell each word aloud as you jump on the spot - one letter per bounce.	Make up a clue about each of your words and quiz a family member.	Write each letter of your words onto a craft stick. Mix them up and unjumble
Make each word with magnetic letters.	Play Hangman - choosing the words to guess from your spelling list.	Use a laser pointer or flashlight to 'write' each word on the wall.	Write each word and then make it into a picture that illustrates the word.	Spell each word aloud in a funny robot voice.
Play tic tac toe with spelling words instead of 'o' and 'x'.	Make each word from playdough or plasticene snakes.	Write your words onto two sets of cards. Play a memory game.	Write each word on your palm with the pointer finger of your writing hand.	Squeeze paint into a Ziploc bag. Seal. Write the words on the bag with your finger.



P.E. Grid- Term 3, 2021

- Select an activity below for P.E. Try to do a different one each session or day. There are spaces for you to write and do your own activity.

Skip with or without a rope.	Ride your scooter. Remember your helmet and watch for traffic.	Go for a bike ride. Remember your helmet and watch for traffic.
P.E. with Joe * Click on the blue words above to get to the videos.	Just Dance Kids * Click on the blue words above to get to the videos.	Cosmic Kids Yoga . * Click on the blue words above to get to the videos.
Kick a ball around.	Go for a walk.	Go for a run.
Jump on the trampoline.	Fly a kite.	Clean your bedroom.
Sweep/vacuum the floor.	Take the dog for a walk.	Play catch with a family member.
<div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center; margin: 5px;"> Do 5 squats</div> <div style="text-align: center; margin: 5px;"> Lunge</div> <div style="text-align: center; margin: 5px;"> Do a push up</div> <div style="text-align: center; margin: 5px;"> Stand on one foot and count to 10</div> </div> <p>Do as many repetitions as you can.</p>	<div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center; margin: 5px;"> Hop 3 times!</div> <div style="text-align: center; margin: 5px;"> 5 star jumps!</div> <div style="text-align: center; margin: 5px;"> Run on the spot!</div> <div style="text-align: center; margin: 5px;"> Jump 6 times!</div> <div style="text-align: center; margin: 5px;"> Creep on the spot!</div> <div style="text-align: center; margin: 5px;"> Crouch up and down!</div> </div> <p>Do as many repetitions as you can.</p>	<div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center; margin: 5px;"> Do 5 jumping jacks</div> <div style="text-align: center; margin: 5px;"> Can you do a split?</div> <div style="text-align: center; margin: 5px;"> Stretch to the side</div> <div style="text-align: center; margin: 5px;"> Do 5 Leg Lifts</div> </div> <p>Do as many repetitions as you can.</p>
Play Hopscotch. 	Do some gardening e.g. weeding, mulching, planting.	Play Handball with a family member.
* Free choice-	* Free choice-	* Free choice-

SUPERHERO YOGA



I am brave.
WARRIOR 1 POSE



I am strong.
WARRIOR 2 POSE



I am peaceful.
PEACEFUL WARRIOR POSE



I am kind.
WARRIOR 3 POSE



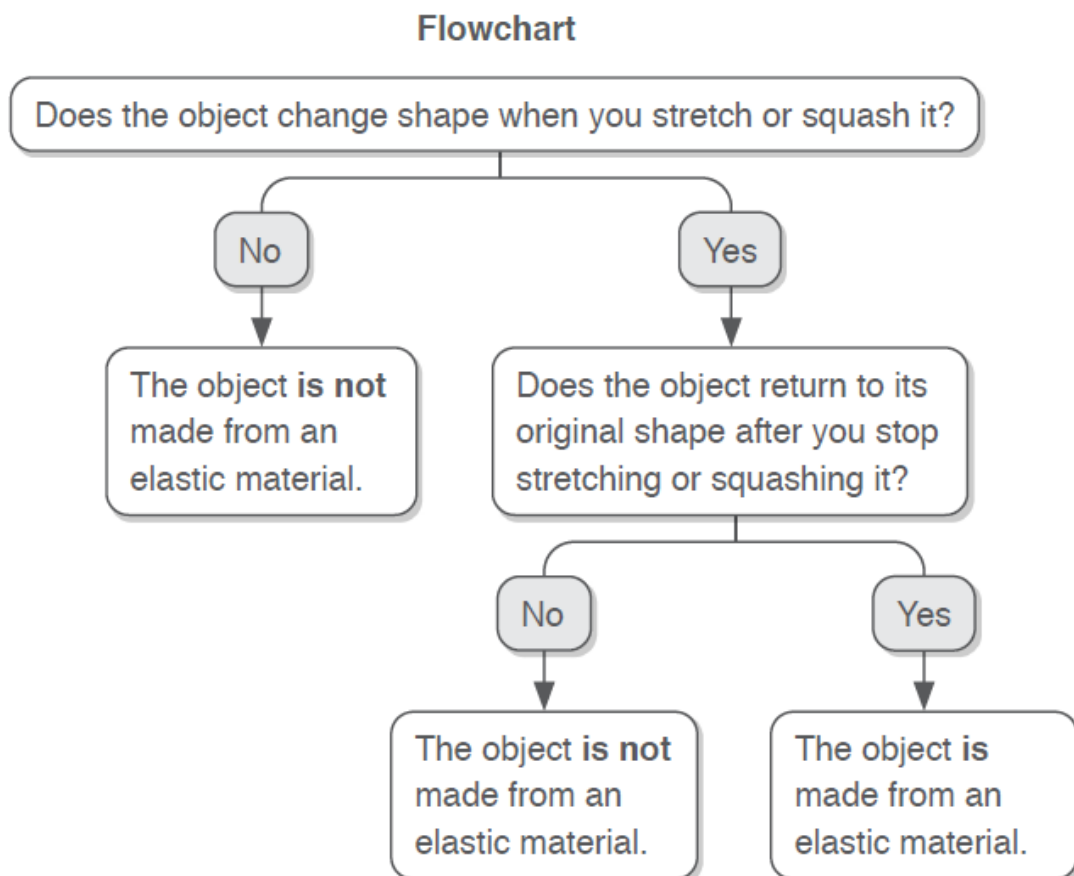
I am a superhero!
HALF MOON POSE

Year 4 Science - Term 3 Week 10 (September 13-17)

This week's Science has two activities. The first activity is using a flowchart to determine which objects are made from elastic materials. The second activity is an experiment. Please try to complete both activities.

Some objects are made from elastic (stretchy) materials. If an object returns to its original shape after you stretch or squash it, it is made from an elastic material (for example – a rubber band; tennis ball; a hair tie).

Use the flowchart below to work out which of these objects (on the next page) are made from an elastic material. Circle the products or write which products are elastic below.



The objects are on the next page.

Objects



Which objects are made from elastic material? You can either circle them or type them underneath.

Science experiment on the next page...

Science experiment

You are going to conduct an experiment to find out which ball has the highest elasticity (the one that bounces the highest).

What you will need:

- Three (3) different types of balls. Some examples of different types of balls include: hard ball/rubber ball; ping pong/table tennis ball; foam ball; tennis ball; hockey ball; golf ball; cricket ball; soccer ball; a footy.
- A ruler/tape measure.
- A hard surface (wooden floor/concrete floor).
- A recording device to record in slow motion.

Procedure:

1. Put the ruler/tape measure against the wall.
2. Set up your recording device or have someone hold your device for you. Make sure you press record.
3. Drop a ball from the height of your waist.
4. Repeat Step 3 for your other balls.
5. You will need to do this test three times, so that means each ball is going to be dropped three times.
6. Watch your video and record how high each ball reached in the results below.

Results:

Test 1

Type of ball	Height the ball bounced to

Test 2

Type of ball	Height the ball bounced to

Test 3

Type of ball	Height the ball bounced to

Conclusion

What did you find out?

Evaluate

What worked well about your experiment?

Why was it important to drop all the balls from the same height and on the same surface?

How many different ways can you make 15?



Maths with a cup of pasta



Measure the length of objects using your pasta pieces.



Estimate how many pieces of pasta were in your cup.



Make a repeating pattern with your pasta pieces.



Weigh your pasta pieces. Estimate the weight of 20, 30 pieces etc



Start with 12 pieces of pasta. Make an array - 4 rows of 3, is there another way? Try 4 different numbers and place in arrays.



Measure the capacity of different boxes e.g. 8 pieces of pasta fit in a match box



Tally your pasta pieces.



Put some pasta pieces into containers and write the number sentence.

$$10 + 8 = 18$$



Measure the area of 5 different items e.g. your lunchbox, book etc. Order in ascending order.



Count your pasta pieces by 1s.



Count your pasta pieces by 2s, 5s etc.



Group your pasta pieces by 5s (or any other number).



Can you make 4 symmetrical pictures?



Make the 6 different numerals e.g. 10, 201 etc.



Share your pieces equally (If you can!).



Make 2D shapes e.g. square, triangle, circle etc.





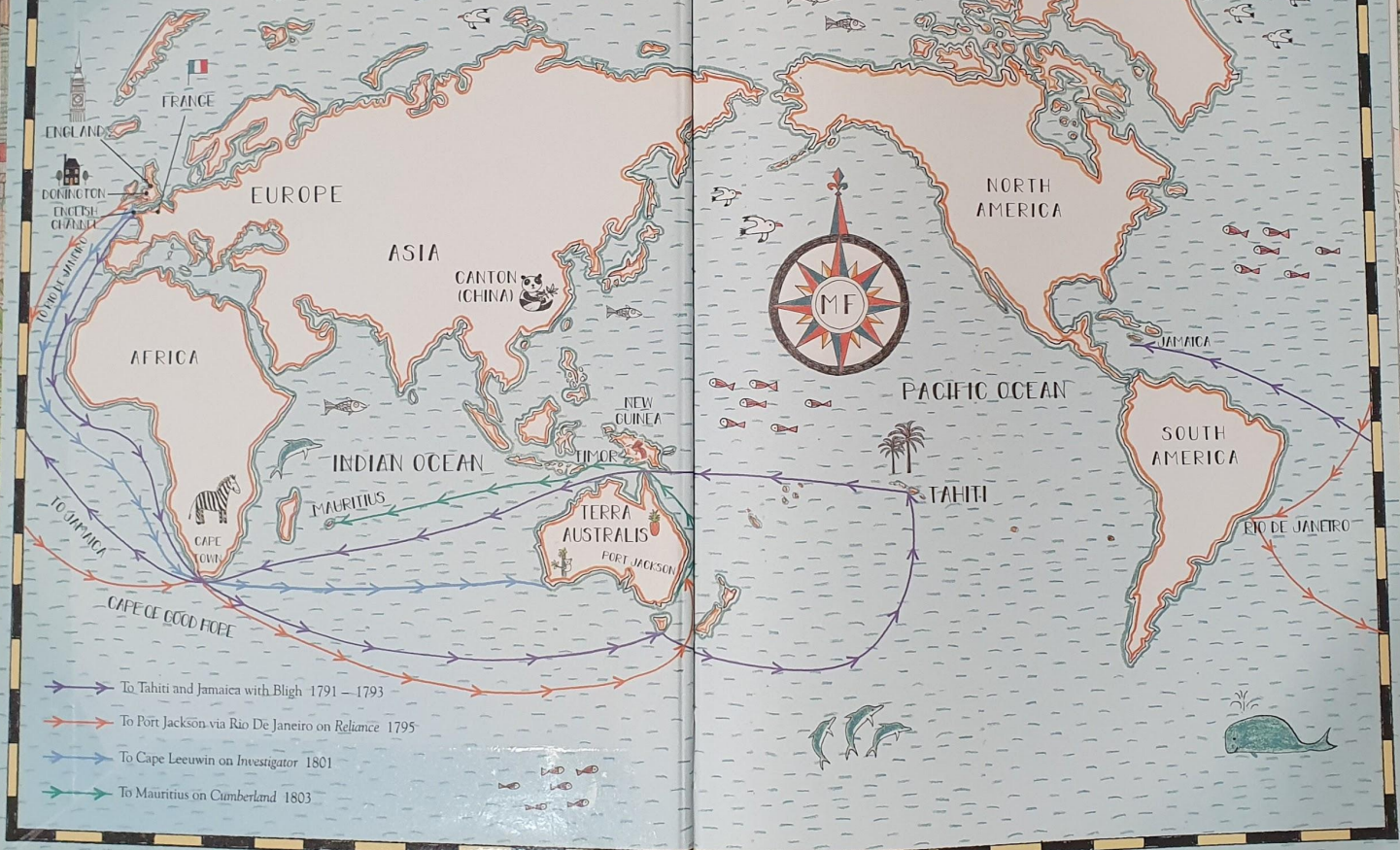
Mudgee Public School
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MATTHEW FLINDERS

ADVENTURES ON LEAKY SHIPS

CAROLE WILKINSON & PRUE PITTOCK

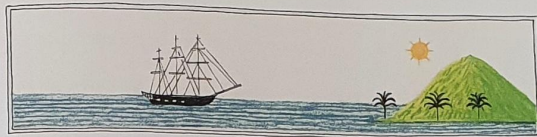
MATTHEW FLINDERS' VOYAGES



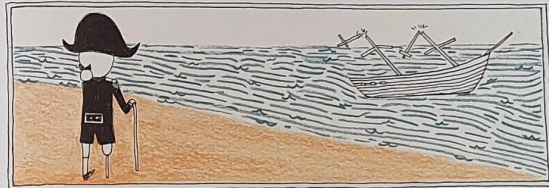
MATTHEW FLINDERS joined the British Royal Navy when he was sixteen. It was a shock to his father. His mother died when he was only nine. He was expected to become a doctor like his father and grandfather.



It wasn't Matthew's childhood in the quiet English village of Donington that made him long for adventures at sea, it was a book called *Robinson Crusoe*.



Matthew first sailed to Tahiti under Captain Bligh (famous for surviving the mutiny on the *Bounty*). He was then posted on a warship that took part in a battle with the French. The ship lost two masts, the captain lost a leg, but this experience didn't give Matthew a taste for war. His dream was to sail to unknown lands like his hero Captain Cook. Fortunately, exploration was part of the Royal Navy's work.



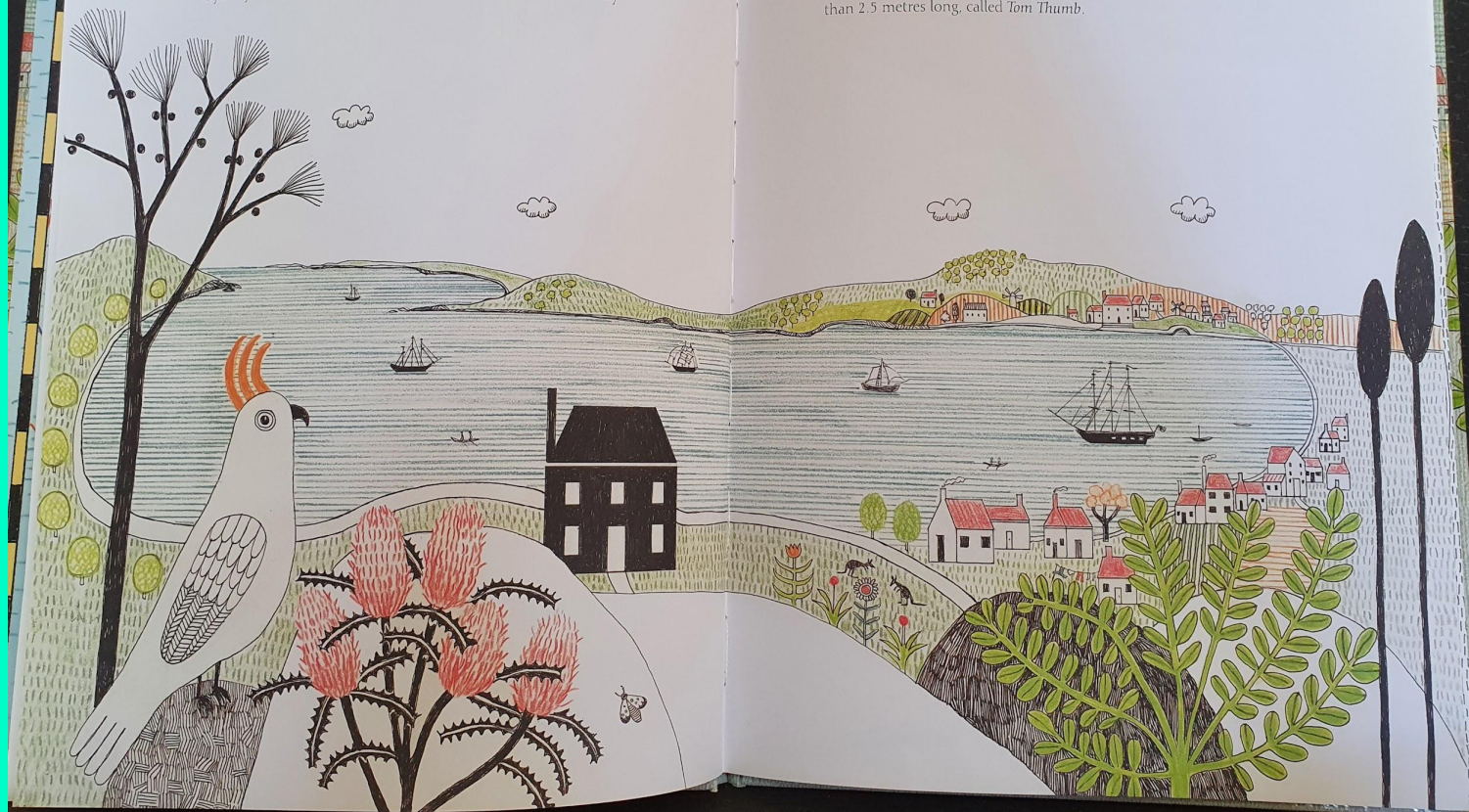
Matthew next served on the *Reliance*, a leaky old ship that was sailing to Britain's most distant colony, New South Wales. His brother Samuel, aged thirteen, was also on board.



On the seven-month voyage, Matthew became friends with ship's surgeon George Bass. They wanted to continue exploring the New South Wales coast that Captain Cook himself had left unfinished.

When the *Reliance* docked at Port Jackson in 1795, the town of Sydney was just seven years old. The 3400 inhabitants, mainly

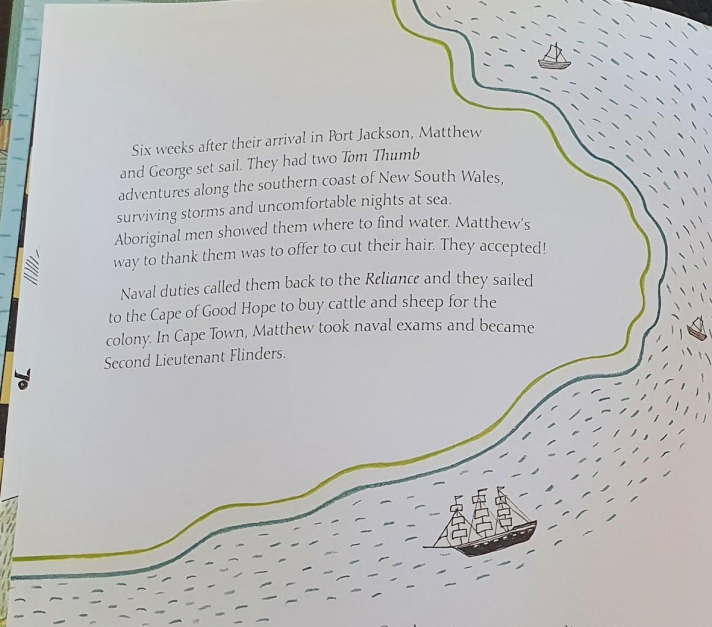
convicts, were struggling to grow crops in a strange land. They relied on food shipped from England to survive. Many things were in short supply — including ships. No one was about to offer two young men a vessel for exploration. Luckily, George Bass had come prepared. As well as his medicines and doctor's equipment, he'd brought with him a small boat, less than 2.5 metres long, called *Tom Thumb*.



Six weeks after their arrival in Port Jackson, Matthew and George set sail. They had two *Tom Thumb* adventures along the southern coast of New South Wales, surviving storms and uncomfortable nights at sea. Aboriginal men showed them where to find water. Matthew's way to thank them was to offer to cut their hair. They accepted!

Naval duties called them back to the *Reliance* and they sailed to the Cape of Good Hope to buy cattle and sheep for the colony. In Cape Town, Matthew took naval exams and became Second Lieutenant Flinders.

On the return voyage, a litter of kittens was born on board the ship. Matthew adopted one and called him Trim. A fearless kitten, he was soon climbing the masts ... and falling overboard. Matthew rescued him and Trim became his special companion.



While Matthew had duties on the *Reliance*, George Bass had another adventure. He sailed a whaleboat around the coast and discovered a large bay (in present-day Victoria), which he named Western Port.

When he had free time again, Matthew volunteered as a crew member on the *Francis*. This ship sailed to the Furneaux Islands off the north-eastern tip of Van Diemen's Land (Tasmania) to salvage cargo and rescue men from a shipwreck. Matthew drew a sea chart of the area. He named one group of tiny islands the Chappell Isles. This was a clue to where his thoughts were wandering while he worked.





Back in Port Jackson, Matthew and George compared notes. They'd been sailing on opposite sides of a narrow stretch of water. Earlier sailors had decided that Van Diemen's Land was joined to New South Wales, but Matthew and George were sure they'd been sailing in a strait. Governor Hunter allowed them to use the 25-tonne *Norfolk* to prove their theory. She leaked, but Matthew and George didn't care.

They set sail, Matthew in command, a crew of eight and George Bass to record the plants and animals they saw. They also took a man named Bungaree to help communicate with Aboriginal people they met. Trim went too.

High seas threatened to sink the *Norfolk*. Ferocious gales drove her backwards. Eight weeks passed, and they were still struggling to make headway along the top of Van Diemen's Land.

When the coast started to curve north, it looked as if Van Diemen's Land was joined to the mainland after all. But the next day, the *Norfolk* sailed into the Indian Ocean. It was 28 years since Cook had landed in Botany Bay, 10 years since the First Fleet arrived. At last Matthew and George had proved Van Diemen's Land was an island.

The discovery of the strait was important as it shortened voyages from England to Port Jackson by at least a week. Matthew suggested it be called Bass's Strait in honour of his friend.



NAVIGATION EQUIPMENT



Sailors have to know their precise position at sea. Latitude is the position north or south of the equator. Longitude is the position east or west, usually measured as the distance from Greenwich in England. Flinders used the stars and the exact time of day to calculate the longitude.



He needed:

a *sextant* to measure the angle between the horizon and the stars, planets, sun or moon when at sea;



a *theodolite* for measuring horizontal and vertical angles on land;

an *azimuth compass* to locate a particular star or other object in the sky; and

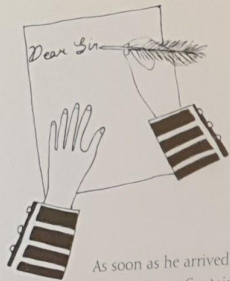


a *marine chronometer*, which was a clock that lost no more than a fraction of a second per day, even on a rocking ship. Sailors have been able to measure latitude for centuries.

Accurate measurement of longitude wasn't possible until 1761 when Englishman John Harrison invented the first marine chronometer. They were still unreliable when Flinders was sailing, so he had six chronometers on board.

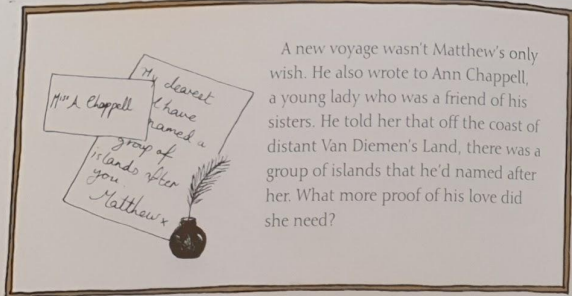
George Bass had enjoyed these adventures, but he hated navy life. He left the navy and went in search of his fortune, trading goods around the world. Matthew's best friend disappeared from his life.





It was time for the *Reliance* to return to England. On the long voyage home, Matthew thought about his own future. His passion for exploration and discovery hadn't diminished. He didn't need a fortune. He wanted to complete the map of *Terra Australis*, leaving nothing for other explorers to discover.

As soon as he arrived in England, Matthew wrote to Sir Joseph Banks, the botanist on Captain Cook's first voyage. Matthew asked him to convince the Admiralty that another voyage of exploration to *Terra Australis* was necessary.



A new voyage wasn't Matthew's only wish. He also wrote to Ann Chappell, a young lady who was a friend of his sisters. He told her that off the coast of distant Van Diemen's Land, there was a group of islands that he'd named after her. What more proof of his love did she need?

Sir Joseph agreed that a new voyage of discovery to *Terra Australis* was essential — and urgent. The French were planning a similar expedition. They could be planning to stake a claim on the continent.

With England at war with France, the only ship available was a coal carrier that needed repairing before it was fit for exploration. Matthew hardly noticed her shortcomings. He thought she was exactly the sort of ship that Captain Cook would have chosen. She was renamed the *Investigator*.



Matthew visited Ann. Her father had been a sailor. She did not want the lonely life of a sailor's wife. Matthew was heartbroken, but the French expedition had already left.

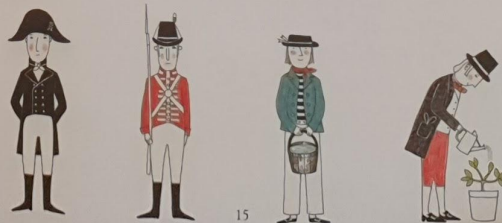
Matthew was in a hurry to set sail. He received his commission to command the *Investigator*. Captain Flinders was in charge of 82 men—the officers and crew including his brother Samuel as second lieutenant and the men Matthew called his scientific gentlemen: an astronomer to assist with navigation, a botanist to study plants, two artists to paint pictures of what they saw, and a gardener to look after living plant specimens.

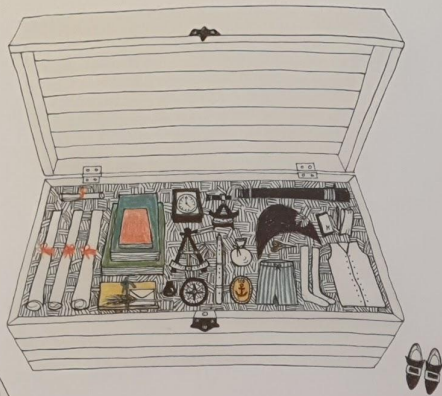
There were also 12 marines for protection.



Top row left to right: astronomer John Crosley, botanist Robert Brown, landscape artist William Westall, botanical artist Ferdinand Bauer.

Bottom row: Second Lieutenant Samuel Flinders, a marine, a ship's boy, gardener Peter Good.





Charts
Compass
Telescope
Sextant
Journal
Chest

To help him guide his ship across the world, Matthew took charts of the southern seas, the journals of other explorers, and 15 volumes of the *Encyclopaedia Britannica*, borrowed from Sir Joseph.

The *Investigator* needed a passport allowing her to stop at French ports, even when England and France were at war. While he waited for it to arrive, Matthew had time to think. He couldn't bear the thought of leaving Ann behind. He told her she could sail with him on the voyage. Ann relented. They were married in secret.

They needed to set sail before the Admiralty found out Ann was on board. But luck wasn't on their side. An officer came to inspect the ship. He found Mrs Flinders in Matthew's cabin.

Sir Joseph told Matthew he must choose between his wife or the voyage. Ann knew what his choice would be. In a hidden place in Matthew's cabin she painted some flowers. In tiny letters, she wrote 'Forget me not'.



The passport arrived from France. After three months of marriage, Matthew set sail, leaving Ann behind. Trim went with him.

As soon as they left the English Channel, the *Investigator* started to leak. When they reached the Cape of Good Hope, she already needed recaulking. Matthew was disappointed that there were no letters from Ann waiting for him.

To keep his crew healthy, Matthew ordered them to regularly scrub the decks and sprinkle them with vinegar. He bought fresh meat, fruit and vegetables at ports. The men were given lime juice or sauerkraut every day to prevent them from getting scurvy. To keep them happy, music and dancing were allowed in the evenings.





As they sailed across the Indian Ocean, there was good weather. The pumps coped with the small amount of leakage. After five months at sea, they reached Cape Leeuwin, the south-west tip of *Terra Australis*.

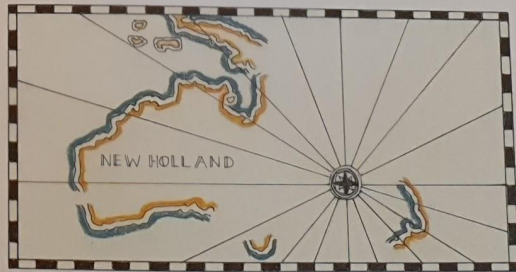
They headed east along what was called the Unknown Southern Coast, even though three other European ships had already sailed that way. Following a 150-year-old Dutch map, Matthew began making his own detailed chart of that coast.

While ashore searching for fresh water, they met some Aboriginal men who were friendly and inquisitive about the strangers. The navy had provided Matthew with gifts for Aboriginal people he met — mirrors, beads, combs, simple tools. The Nyungar weren't interested in the trinkets, but they all wanted one of the tomahawks. To impress the Aboriginal men, Matthew brought ashore his marines and marched them along the beach. The Nyungar men were very interested in the soldiers' red coats crossed with white belts, and the music made by fife and drum.



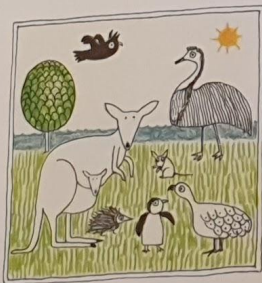
Matthew sailed the *Investigator* as close to shore as possible without risk of running aground or crashing into rocks. He took measurements using his navigation equipment. He often went ashore to take bearings. John Thistle, the ship's master, accompanied him. Mr Thistle was a reliable man who had been Matthew's shipmate since the *Reliance*. Every evening, Matthew made a rough chart of the coastline. With future sailors in mind, he recorded dangerous reefs and sandbanks, as well as safe harbours and places where fresh water could be found.

Halfway round the Great Australian Bight, the Dutch chart came to a sudden end. Matthew would be the first to survey the rest of the southern coast. There was a theory that *Terra Australis* couldn't possibly be one big island, that it must be divided by a strait. Matthew wanted to be the one to discover it. There was great excitement when a gap in the coastline more than 6 kilometres wide came into view. They couldn't see an end to it. Surely this was the strait that would lead all the way through to the Gulf of Carpentaria!



Mr Thistle went ashore to search for much needed fresh water. He never returned. A search party found his wrecked boat, but not the ship's master or his crew. That evening, one of the sailors told the tale of Mr Thistle visiting a fortune teller just before they set sail. The man had told him he was about to go on a long sea voyage. And he would drown.

Matthew was devastated. To add to his misery, there was no strait, just an enormous gulf. He named it Spencer's Gulf.



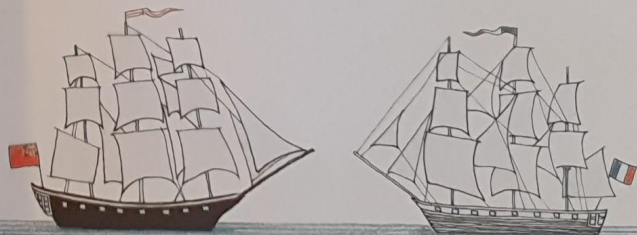
They spent time on Kangaroo Island studying the teeming wildlife. Matthew also shot kangaroos for food. Their stores were dwindling, and he had 74 men to feed.



Soon after, they sailed into a sheltered bay, a sailor on lookout duty called out that there was a white rock ahead. As they drew closer, they realised it was actually a sail.

Matthew was astonished. This was the first ship they had encountered since the Cape of Good Hope. It was *le Géographie* — one of the French ships commanded by Captain Nicolas Baudin! Matthew rowed across to meet his rival. Baudin had lost his nine-month lead. His crew was mutinous. More than 50 men had left the ship. Baudin had just sailed around Van Diemen's Land, but didn't realise that Matthew had drawn up the chart he'd been following!

Matthew named the meeting place Encounter Bay. He continued east, pleased he'd beaten Baudin to the Unknown Southern Coast.

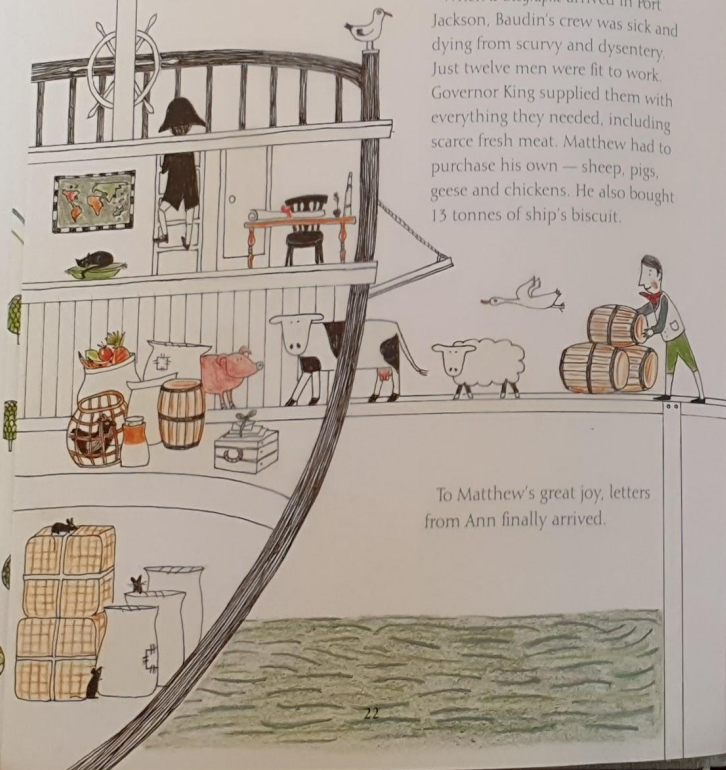


A month later, the *Investigator* dropped anchor in Port Jackson. Matthew had sailed his ship halfway around the world, making accurate charts as he went. His crew was healthier than when they'd left England — and just as happy.

Matthew reported to the new Governor of New South Wales, Philip Gidley King, who offered him any assistance needed to complete the voyage, including a second ship, the *Lady Nelson*. Matthew was pleased that Bungaree could again join him. While the crew prepared the ships, Matthew worked on his charts.

When the *Géographe* arrived in Port Jackson, Baudin's crew was sick and dying from scurvy and dysentery. Just twelve men were fit to work. Governor King supplied them with everything they needed, including scarce fresh meat. Matthew had to purchase his own — sheep, pigs, geese and chickens. He also bought 13 tonnes of ship's biscuit.

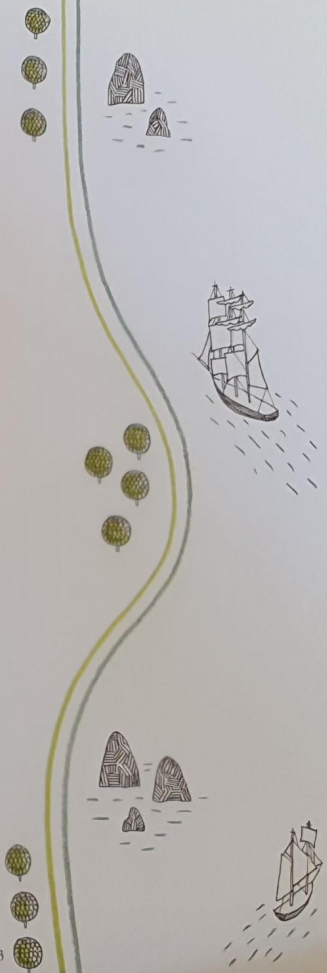
To Matthew's great joy, letters from Ann finally arrived.



The two ships set sail. Matthew's plan was to circumnavigate the entire continent, mapping 35,000 kilometres of coast. First he retraced Captain Cook's journey up the eastern coast, filling in the gaps left by his hero.

On Great Sandy Island, now called Fraser Island, Bungaree was frustrated that the Butchulla people couldn't understand him. He needed them to trust him, so he took off his European clothes so they could see he was like them.

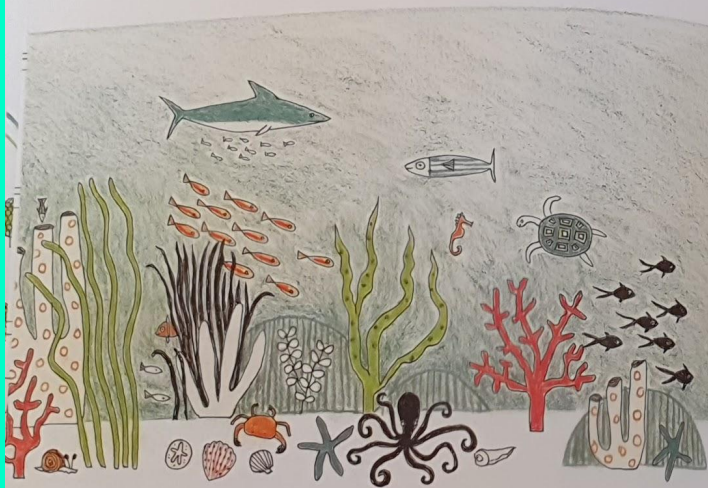
The *Lady Nelson* was slow, her captain too nervous to sail as close to the coast as Matthew did. Sometimes Matthew lost sight of her and had to wait for her to catch up.



The monsoon season was approaching. Matthew decided to cut short his coastal survey and head straight to the Gulf of Carpentaria.

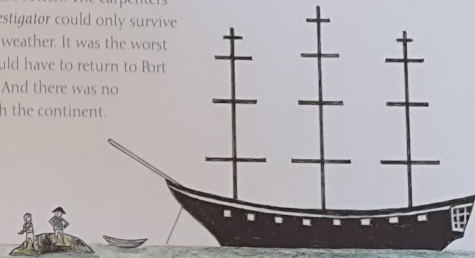
The *Investigator* became trapped in coral reefs. High on the masthead, peering through his telescope, Matthew searched for a way through the coral maze. They were sailing so close to the reef, Matthew and his scientists could climb down and walk across it, admiring the colourful coral and fish.

It took two weeks to find a way out to open sea. Matthew named that impenetrable obstacle the Great Barrier Reef. The *Investigator* was undamaged, but the *Lady Nelson* had struck a reef. She'd proved to be more of a nuisance than a help, so Matthew sent her back to Port Jackson.



As the *Investigator* sailed through Torres Strait, Matthew corrected errors on Cook's chart and found a safer, quicker passage between the dangerous reefs and islands.

The ship was leaking badly and needed urgent repairs. In the shelter of the Gulf of Carpentaria, the ship's carpenters examined her hull. Many of the wooden planks were rotten. The carpenters told Matthew the *Investigator* could only survive for six months in fair weather. It was the worst possible news. He would have to return to Port Jackson immediately. And there was no sign of a strait through the continent.

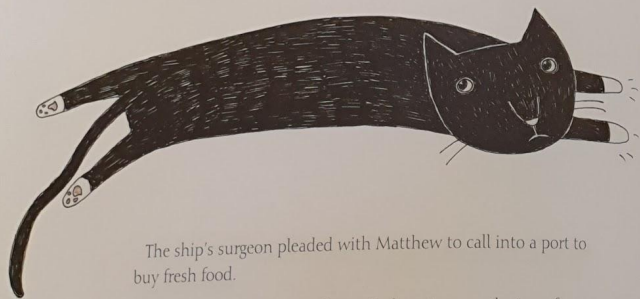
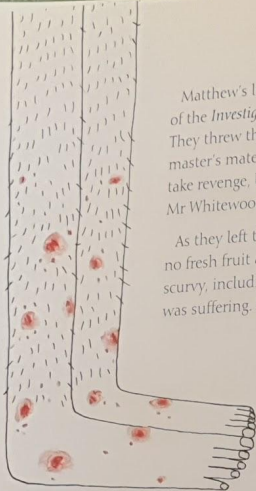


LEAKY SHIPS

Leaking was a constant problem for sailing ships. Ships were made from planks of wood and the small gaps between them were plugged with caulk (strands of old rope mixed with tar) to stop the boat leaking. Rough seas could knock the caulk out. Then it had to be replaced, a process which was called recaulking. On long voyages the planks often rotted. To expose the hull of the ship for repair, if there was no dry dock nearby, the ship had to be run aground on a beach and tilted sideways. This was called *careening*.

Matthew's luck was running out. While collecting wood, some of the *Investigator's* crew startled a group of Aboriginal men. They threw their spears at the strangers, and Mr Whitewood, the master's mate, was wounded. Matthew ordered his men not to take revenge, but some ignored him. An Aboriginal man was shot. Mr Whitewood survived.

As they left the gulf, the weather was hot and humid. They had no fresh fruit and vegetables. Twenty-four men had symptoms of scurvy, including Matthew, who had ulcers on his feet. Even Trim was suffering. His claws were falling out.

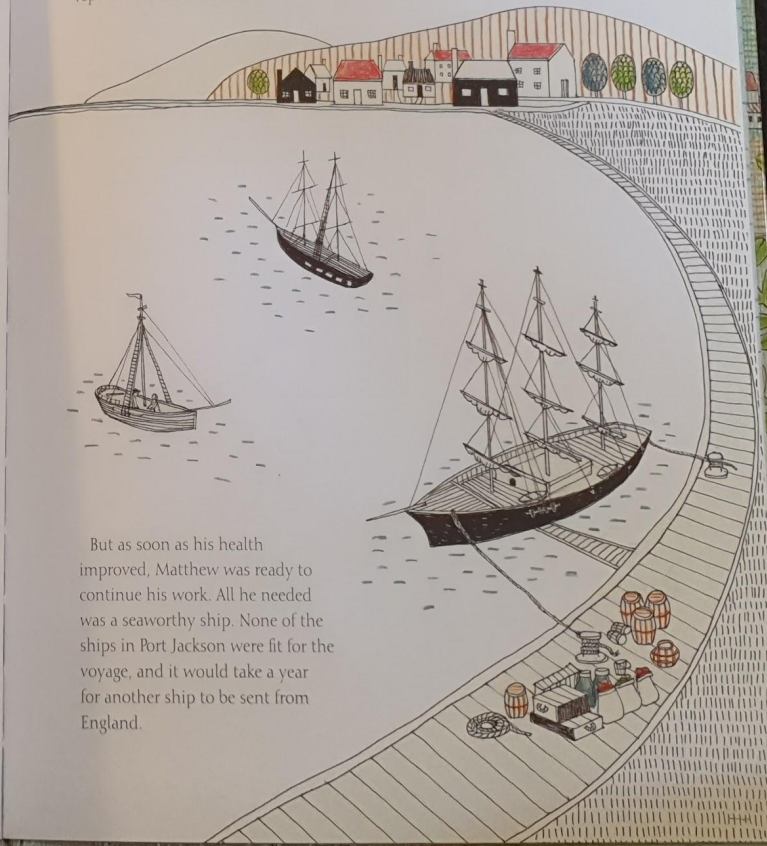


The ship's surgeon pleaded with Matthew to call into a port to buy fresh food.

Avoiding the monsoons, they sailed west across the top of the continent. It was a longer route, but safer. They stopped at the Dutch settlement on Timor. Matthew bought bananas, oranges, limes and cucumbers for his crew. The local people were unhealthy, and Baudin's crew had got sick there. But Matthew still allowed their water casks to be filled.

Not long after they set sail again, some of the crew became ill with diarrhoea. The bad water from Timor was to blame. Men started to die. Dysentery was sweeping the ship.

When they arrived back in Port Jackson, the *Investigator* was beyond repair and Matthew and his crew were sick.



But as soon as his health improved, Matthew was ready to continue his work. All he needed was a seaworthy ship. None of the ships in Port Jackson were fit for the voyage, and it would take a year for another ship to be sent from England.

The *Porpoise* was about to leave for England, so Matthew decided to join her as a passenger, present his charts to the Admiralty himself and request the best ship they had.

Some of the *Investigator*'s crew stayed in Port Jackson. Some were taken on as crew for the *Porpoise*, while others boarded as passengers. The ship's captain set course well away from the treacherous Great Barrier Reef. Two other ships, the *Bridgewater* and the *Cato*, sailed with the *Porpoise* so they could follow Matthew's safer passage through Torres Strait.

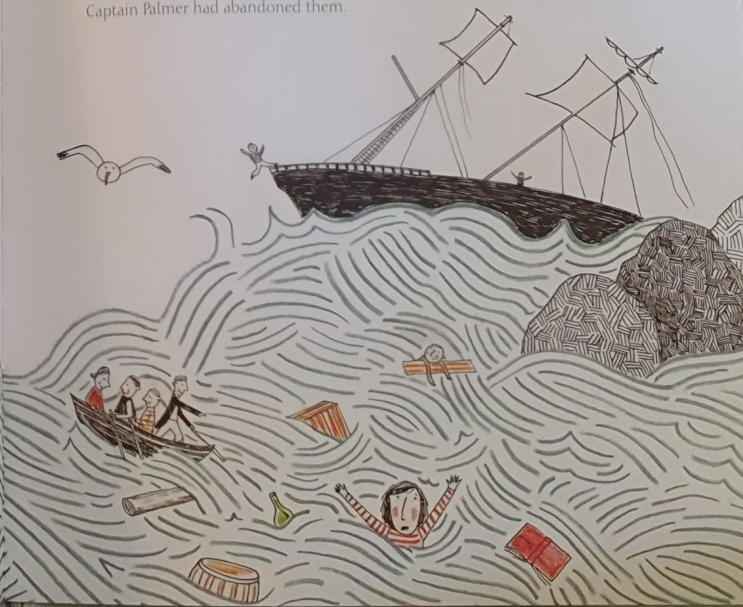
Seven days out from Port Jackson, the *Porpoise* hit a reef and keeled over. One of her masts broke off. The *Bridgewater* and the *Cato* were both trying to avoid the reef. If they were wrecked too, there would be no one to rescue them. In fading light, the *Cato* swerved to avoid colliding with the *Bridgewater* and crashed into the reef. Waves swamped her decks. Her masts disappeared beneath the sea.



The wrecked *Porpoise* lay on her side, waves breaking over her keel, but she stayed in one piece throughout the night. At dawn, Matthew surveyed the disaster. The *Bridgewater* was standing at a distance, unharmed. Matthew assumed her commander, Captain Palmer, was waiting for calmer seas before sending boats to rescue them. He saw a sandbank not far away. Two of the *Porpoise*'s cutters were still afloat. Matthew sent one to rescue the men who had clung to the wreck of the *Cato* all night. Three young boys drowned in the rescue attempt. Matthew took the other boat to inspect the sandbank. It was about one-and-a-half kilometres wide. He saw birds' nests in the sand containing eggs, which convinced him the sandbank stayed dry at high tide.

The sailors salvaged all the provisions they could from their wrecked ship, including some pigs and sheep. They made tents from sails and broken spars. A mast became a flagpole and the British flag was raised upside down — a signal of distress.

The *Bridgewater* had disappeared. They waited four days, but she didn't return. Captain Palmer had abandoned them.

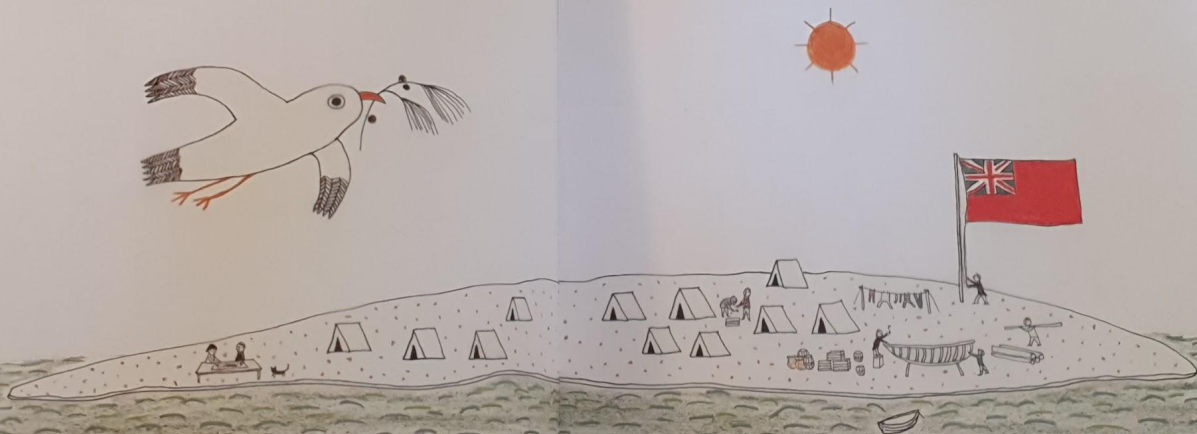


Ninety-four survivors stood on the bleak sandbank, 500 kilometres from shore, with no hope of rescue. Matthew took control of the panicked men. With strict naval discipline, he soon had the island running as smoothly as one of his ships.

He told the men he would sail the ship's cutter to Port Jackson and bring back a ship to rescue them. The cutter was little more than a large rowing boat with a sail, but there were plenty of volunteers to make the dangerous voyage. They named her *Hope*. Matthew gave orders for the men left behind to build two boats from the wreckage of the *Porpoise*. If he didn't return within two months, they were to use them to sail to Port Jackson.

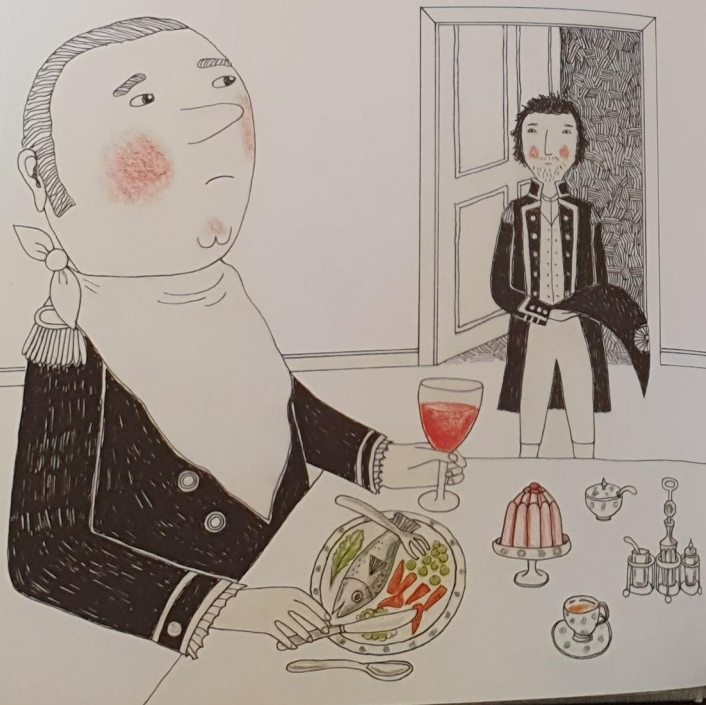
To prove that he wouldn't abandon them, Matthew left behind his brother, his precious charts — and Trim. He set sail in the *Hope*, with an officer and a crew of 12. Those left behind trusted Captain Flinders completely. They turned their flag the right way up.

The first part of the journey was across open sea. The tiny *Hope* plunged through huge waves day and night. If the wind was favourable, they raised the sails. If not, six men rowed. It took three days to reach the east coast of *Terra Australis*. Then they sailed as close to shore as possible, reaching Port Jackson after an epic journey of 250 nautical leagues (1388 kilometres) in 12 days.



Matthew, windblown and unshaven, burst in on Governor King while he was eating dinner. King ordered three ships to be made ready for a rescue mission. One was about to sail to China and would take survivors to Canton, where they could board a ship to England. Another would bring more survivors back to Port Jackson. After the rescue, Matthew would sail the third ship, the *Cumberland*, straight to England. He hadn't given up his plan.

The *Cumberland* was a fraction of the size of other ships Matthew had sailed across oceans, just 29 tonnes. But he was confident he could sail her halfway around the world. Governor King told him not to stop at the French island of Mauritius.



Meanwhile, the shipwrecked sailors were busy building boats. Only six weeks after *Hope* had left, a sail was spotted on the horizon. Captain Flinders had returned as promised! Matthew stepped ashore to smiling faces and rousing cheers.

The *Cumberland* didn't sail well. In a strong wind, she leaned over so far it was impossible to alter the sails. She was infested with fleas, cockroaches and mice. And, of course, she leaked. Of all the leaky ships Matthew had sailed on, the *Cumberland* was the worst. The pumps could barely cope. But Matthew wasn't turning back. With a crew of just 10 men, he set sail for England.

The *Cumberland's* pumps kept breaking down. In the middle of the Indian Ocean, only one still worked. Matthew had no choice but to sail to Mauritius for repairs. Soldiers with guns greeted them. Matthew was angry that the island's Governor, Captain-General Decaen, kept him waiting for two hours. Decaen was insulted when Matthew didn't take off his hat. The French passport was useless. It was made out to the *Investigator*, not the *Cumberland*. Decaen accused Matthew of being a spy.





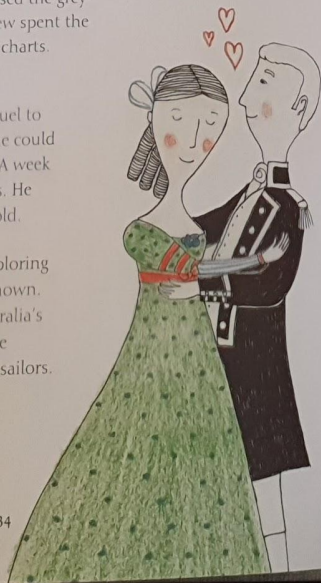
Matthew was a prisoner of the French. Weeks turned to months. He taught himself French and wrote long letters to Ann. Eventually, he was allowed to work on his charts and wander around the island. His crew were freed. His beloved Trim disappeared. It was more than six years before Matthew was released.



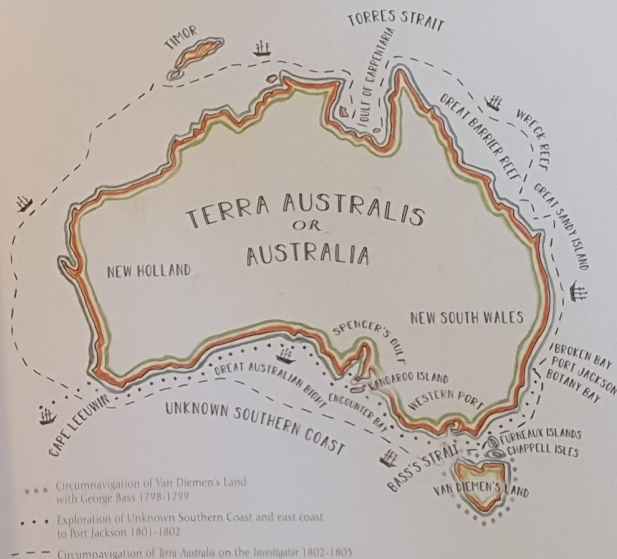
After 10 long years, Ann hardly recognised the grey-haired man who returned to her. Matthew spent the next four years finishing his journal and charts.

His job done, he asked his brother Samuel to order a new copy of *Robinson Crusoe* so he could reread it. But Matthew was very unwell. A week later his journal arrived from the printers. He died the next day. He was only 40 years old.

Matthew Flinders devoted his life to exploring the world, fearlessly sailing into the unknown. He created the first complete map of Australia's coastline and an atlas of sea charts, for the knowledge of the world and the safety of sailors. And he gave Australia its name.



FLINDERS' CIRCUMNAVIGATION OF AUSTRALIA



- Circumnavigation of Van Diemen's Land with George Bass 1798-1799
- Exploration of Unknown Southern Coast and east coast to Port Jackson 1801-1802
- Circumnavigation of Terra Australis on the Investigator 1802-1805

NAMING AUSTRALIA

Dutch explorers had named the western half of the country New Holland in the 1600s, but didn't form a colony here; Captain Cook called the eastern half New South Wales. But after the First Fleet arrived, the country was under British rule, and needed one name. In his journal, Flinders refers to the country as *Terra Australis*, which is Latin for Southern Land. That was what Sir Joseph Banks wanted to call it. Matthew preferred Australia. When he finished his map of the country he called it General Chart of Terra Australis or Australia. Matthew got his way. Australia was a much more popular name, and it became the official name of the country in 1824.

FLINDERS TIMELINE



GLOSSARY

Admiralty, the

The British government department that managed the Royal Navy until 1964.

bearings

The position of a ship at sea measured in degrees of latitude and longitude.

Bungaree

A Kurrigal man born in the Broken Bay area about 1775, who acted as interpreter for Flinders and later Captain Phillip Parker King. He and Flinders became friends. Flinders called him "worthy and brave".

cape

A large piece of land jutting out into the sea.

cutter

A small sailing ship used to carry goods and people between a larger ship and the shore.

dysentery

An infectious disease that causes inflammation of the bowels. It results in bloody diarrhoea. In earlier times it could be fatal.

fife

A small high-pitched flute.

monsoon

A large wind system that changes direction from summer to winter, usually accompanied by heavy rain and strong winds.

mutinous

Not obeying orders.

nautical leagues

A measurement of distance travelled in a ship at sea. One nautical league equals five and a half kilometres.

Port Jackson

The port now called Sydney Harbour.

sauerkraut

Fermented raw cabbage, which is prepared by shredding it and covering it with salt.

scurvy

The first signs of this disease are sores on arms, legs and feet. Then gums start to bleed, wounds won't heal. Someone with untreated scurvy can die from infection or internal bleeding.

In 1755, it was discovered that eating citrus fruit and sauerkraut cured scurvy. 1930s scientists learned that scurvy was caused by a lack of Vitamin C. Citrus fruit and sauerkraut both contain Vitamin C.

sea chart

A map for sailors, showing such things as the depth of the sea around coasts, hazards such as rocks and sandbanks, and information about tides and currents.

ship's biscuit

Hard, tasteless biscuits made with just flour and water that were a large part of a sailor's diet in the 17th and 18th centuries.

spar

A horizontal pole mounted on a ship's mast from which sails are hung.

strait

A narrow passage of water connecting two seas.

survey

To measure the exact dimensions of a piece of land (particularly coasts and islands) in order to draw a sea chart.

Terra Australis

One of the names given to Australia by early explorers.

Van Diemen's Land

Present-day Tasmania.

whaleboat

A long rowing boat that is pointed at both ends so that it can move fast, steered by a long oar.



Use this timeline to help you with the worksheet.




Match that Voyage

Based on **Matthew Flinders: Adventures on Leaky Ships** by Carole Wilkinson and Prue Pittock



Matthew Flinders sailed many boats during his voyages. Use the table to sort out which ship sailed where and when. The information has been included at the bottom of the page so you can cut it up and rearrange it in the table.

Ship	Place	Dates
Providence		
Reliance		
Tom Thumb		
Francis		
Norfolk		
Investigator		

	Furneaux Islands	Tahiti	1st February – 9th March 1798
	4th August 1791 – 7th August 1793	Circumnavigation of Australia	NSW Coast
	7th October 1798 – 11th January 1799	15th February – 7th September 1795	England to Port Jackson
	Circumnavigation of Tasmania	22nd July 1802 – 9th June 1803	26th October – 4th November 1795 and 25th March – 2nd April 1796

****Write the information on another sheet of paper if you are not able to cut and paste.****



Animals and the environment



Chimpanzees grooming each other.

UNIQUE HOME
Bonobos are found only in the Democratic Republic of Congo.

A brilliant bonobo

A 40-year-old captive bonobo called Kanzi can communicate with humans using a book of lexigrams – symbols that correspond to words but are not pictures of them. He can also use basic grammar. Dr Sue Savage-Rumbaugh, of Georgia State University in the US, has worked with Kanzi all his life. She tells a story of going to the forest with him. Kanzi touched the symbols for fire and marshmallow. When given marshmallows and matches, Kanzi broke some twigs, made a fire and toasted the marshmallows.

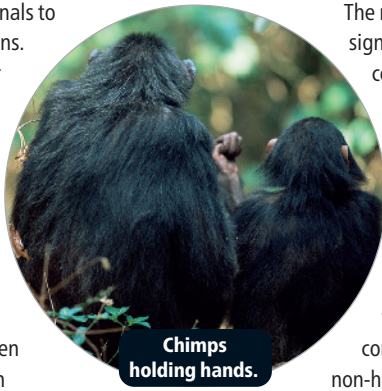


Kanzi the bonobo.

Chimps have good manners

Just as humans say "hello" and "goodbye" to each other before and after get-togethers, researchers have found that some apes use signals to start and end their social interactions.

An international team led by Dr Raphaella Heesen, of Switzerland's University of Neuchâtel, studied more than 1,200 interactions involving chimpanzees and their close relatives, bonobos, in captivity. They focused on how the apes began and ended activities like grooming and play, and found that just before, they often exchanged a look or made a certain



Chimps holding hands.

noise. Sometimes they would butt heads, touch each other or hold hands as a way to break the ice.

The researchers say these signals are the start of a "joint commitment" – an agreement to co-operate towards a common goal of some sort. In humans, an exchange of "hellos" can signal a willingness to have a conversation, and something similar seems to happen among apes. It is the first time signs of this joint commitment have been seen in non-human species.

On the whole, bonobos were more "polite" than chimps, swapping "hello" signals or grooming before play 90% of the time (chimps said "hello" in about two thirds of cases). Both species were careful about the end of interactions, though, exchanging "goodbye" signals nine times out of 10.

Chimps usually go through a full greeting ritual with whoever they are interacting with. Bonobos are more likely to shorten their greeting with close pals. Dr Heesen pointed out that this is another similarity to humans. "When you're interacting with a good friend, you're less likely to put a lot of effort into communicating politely," she said. Bonobos have fewer "social ranks" than chimps, and this may be why friendships allow them to behave more casually.



ECO TIP OF THE WEEK

PRACTISE SMART RECYCLING

A new report by the charity Keep Britain Tidy has revealed that many people are contaminating recycling bins by mistake. It's important to throw only recyclable objects into recycling bins, otherwise all recyclable objects will be wasted at a large cost. The worst problem, says the report, comes from food, including leftover yoghurt in yoghurt pots and pizza crusts in cardboard boxes.

The charity says that people should wash out their yoghurt pots and throw any food into

a general waste or compost bin before recycling containers. Make sure plastic bottles are empty of liquid before recycling them and keep the lid on as it's too small to recycle on its own. Wooden corks from bottles cannot be recycled but can be used as compost. Remove sticky tape from cardboard boxes and flatten them. It's a good idea to check on the council website for your area to see what it can and can't recycle, or visit the website recyclenow.com for more information.



Keep your recycling clean.

Chimps have good manners

Once you have read the article, try any of the following activities...



Hold a debate

It's all very well signalling the beginning or the end of a conversation but what about some of the other strange rules and rituals we call 'good manners'? Are they really necessary? What difference does saying please or thank you really make? Do you actually mean it when you use these largely pointless words? Sometimes, it feels like they are just an excuse for artificial outrage when someone forgets to use them. Or are these little habits and traditions an important part of what holds us together as society? Do they perform a useful function in reducing the risk of conflict? Is life just nicer when we use good manners? What do you think?

Writing challenge!

Choose one of the following writing warm-ups.

1 Of course, you all know how to write beautifully polite thank you letters. So what would it be like if you didn't use good manners? Imagine you have forgotten your manners, and write a pretend letter to a grandparent for a gift they sent for your birthday. This is not about being rude, but experimenting with how it feels if you are not being polite. You still need to use the basic layout of an informal letter, however.

or

2 Write an imagined diary entry about a day on which someone – or a number of people – were not polite to you. As well as describing what happened, explain how each instance made you feel. Remember to use the first person and past tense.

Investigate

Where do all these manners-related words come from? What did they originally mean? Research and write a sentence or two for each of the following words, explaining their derivations (origins). **Please, Thanks, Polite, Manners, Rude**

Week 10 Art and Music

Desktop Drumming

<https://www.youtube.com/watch?v=2-MpzjxEVBU>

If you are able to use the above link, watch and learn how to do the desktop drumming pattern. You will need to take it very slow, and practice carefully. When you feel like you have mastered it, get someone to video it and upload to your Google Classroom.

If you are using a paper pack and cannot view the clip, have a go at making up a hand drumming pattern on a table.

Hint, you can use both hands, one hand at a time, clap your hands together, use the side of your hands. There are lots of different ways to invent a pattern.

Still Art Sketching

1. Ask permission before starting this activity.
2. Use the fruit or vegetables that you have in your house.
3. Place them in a bowl
4. Sketch the bowl as you see it.
5. Use your knowledge of the Elements of Art to add tone and shading to give depth to the shapes you have drawn. Take a photo of your work and share it with your class.



Humpback Whales

Humpback whales are enormous and adults can grow to lengths of up to 19 metres. They are famous for their haunting, magical songs which can be heard from over 20 miles away. Despite their large size, humpbacks are friendly and inquisitive and are a popular species for whale watchers to observe. Sadly, due to an increase in the whaling industry during the 20th century, humpback whales are still considered to be an endangered species. However, numbers have been growing in recent years and it is thought that there are currently 80,000 humpbacks alive today!

Appearance

Humpback whales have a distinctive and unique appearance. They have a large, knobby head, a black **dorsal** and long **pectoral fins**. In fact, they have the longest fins of all marine mammals and their scientific name is 'megaptera noveangliae' meaning 'giant wings'. As is the case with most whales, female humpbacks are larger than males and can weigh up to 36,000kg; this is six times as heavy as some elephants!



Life Cycle

The **gestation** period of humpbacks is just under 12 months and when calves are born, they measure approximately 6 metres in length. Humpback whales tend to live alone or in small groups (pods) with the exception of mothers and their calves who stay together for up to one year. Humpbacks live for approximately 50 years although they have been known to live to almost double that age. Humpback whales are found in oceans around the world. They tend to feed in colder, polar waters and then migrate to warmer, tropical seas in the winter in order to breed and give birth. Their diet consists mostly of krill (small crustaceans) and small fish and they feed by swallowing large mouthfuls of water which contain their prey.

Behaviour

Humpbacks are famous for their acrobatic and playful behaviour and one of the most awe-inspiring sights is that of a humpback whale **breaching**. Male humpbacks sing songs that last for up to 20 minutes and differ depending on what ocean they are in. Scientists are not entirely sure why they sing but one theory is that they do it to attract female whales. Humpbacks have been observed interacting with other species and they have even been seen protecting other **cetacea** from predators such as sharks and killer whales.

Glossary

Dorsal: The upper side of an animal or mammal.

Pectoral fins: Fins on the side of a fish/whale used to control movement and speed.

Gestation: The period during which a baby grows inside its mother.

Breaching: When a whale jumps out of the water and splashes its fin and tail back down on the surface.

Cetacea: A group of aquatic mammals including whales, dolphins and porpoises.



Questions

1. How many humpbacks are thought to be alive today? Tick one.

- 800
- 8000
- 80,000
- 8

2. Fill in the missing word in this sentence.

Humpbacks are friendly and _____ and are a popular species amongst whale watchers.

3. What other heavy animal is the humpback whale compared to?

4. Tick true or false for the following statements.

	True	False
Male humpbacks are lighter than females.		
Baby humpback whales are called colts.		
Humpbacks eat mostly small fish.		
Humpbacks are famous for 'breaching'.		

5. For what length of time can a humpback's song last? Tick one.

- 36 minutes
- 12 minutes
- 20 minutes
- 20 hours

6. Why do you think that the scientific name for humpback whales is 'megaptera noveangliae'?

Humpback Whales

7. How do we know that humpback whales are friendly and sociable mammals? Use evidence from the text to support your answer.

8. What are humpback whales famous for? Tick one.

- their playful behaviour
- their diet
- their age
- their predators

How many hands **long** is it from your front door to the letterbox?



How many hands would you need to cover your coffee table?



How many hands **long** is your bath?



How many hands **tall** is your fridge?



Throw a ball, **measure** how far it went using your hands.



Measure how **tall** your family members are using your hands.

Who is the tallest,



Many Hands Measuring



How many hands **wide** is your driveway?



Find five things that are **shorter** than your hand. Order them from shortest to tallest.



*** You could trace around your hand and cut it out to use for your measuring, When you have finished measuring you could decorate your hand ***

Find five things that are **longer** than your hand. Order them from shortest to tallest.



How many hands would you need to **cover** your towel?



How many hands **long** is your dining table?



What is the **total** number of hands in your family?

How many fingers?

How many toes?

How many ears?

How many noses?

How many paws?

How many hands **long** is your bed?



How many hands would you need to **cover** your pillow?





STEREOTYPES

For the following statements write down whether you think the answer is Sally or Thomas.

Statement	Sally or Thomas?
Plays with insects	
Has a boy as their best friend	
Likes to play dress ups	
Plays with dolls	
Loves football	
Likes to climb trees	
Plays with their baby sister	
Plays in the mud	
Has pink as their favourite colour	
Is scared of spiders	



NOW ... watch this video and then answer the following questions.

WATCH:

<https://www.youtube.com/watch?v=G3Aweo-74kY>

What is the definition of a stereotype? Do you think we should stereotype boys and girls?

Write down two examples of a stereotype.

We all have these images or ideas that come to mind – it is not a bad thing, as long as we do not let these stereotypes affect our behaviour or attitudes towards others.



Stereotypes

Meet Sally and Thomas!

For the following statements, write down whether you think the answer is Sally or Thomas.



Statement

Sally or Thomas?

Plays with insects

Has a boy as their best friend

Likes to play dress ups

Plays with dolls

Loves football

Likes to climb trees

Plays with their baby sister

Plays in the mud

Has pink as their favourite colour

Is scared of spiders



What is a Stereotype?

What is the definition of a stereotype?

.....

.....

Write down two examples of a stereotype.

We all have these images or ideas that come to mind – it is not a bad thing, as long as we do not let these stereotypes affect our behaviour or attitudes towards others.



Lets Draw!

Under each of the headings on your worksheet, draw a picture that represents the person.

A Scientist

A Farmer

A Netball Player

A Doctor

A Dancer

A Football Player



Measure Your Impact!

1. List 7 activities commonly done each week in the first column, e.g. brushing teeth, getting dressed, eating lunch, playing sport, etc.
2. Record what resources were used when doing the activity, e.g. water, energy, waste produced.
3. Estimate how much of the resource needed and score the usage accordingly (1=low: <10min, 2=medium: 11min-1hr, 3=high: >1hr)

Activity	Resources Used	Usage Score
brushing teeth	water	1
<i>Add up the usage scores to get a total and see how you rate</i>		

Score	8-15	16-20	21-25
Rating	Friendly Flea	Careful Kangaroo	Dumping Dinosaur

How can you improve your score? List changes you can make in each area...

Use less energy Use less water Create less waste

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