YEAR 3 Term 3 Week 10 Learning Framework – MPS Stage 2 2021

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 may need help from a parent/carer for some of these activities.

	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	English	English	English	English	English
	Read a picture book or chapter from your current novel of your choice	Read a picture book or chapter from your current novel of your choice	Read a picture book or chapter from your current novel of your choice	Read a picture book or chapter from your current novel of your choice to a	Read a picture book or chapter from your current novel of your choice
	OR	OR	OR	family member	OR
	Follow the link to <i>Storyline Online</i> and choose a read aloud story to view. <u>https://storylineonline.net/</u>	Follow the link to Storyline Online and choose a read aloud story to view. <u>https://storylineonline.net/</u>	Follow the link to Storyline Online and choose a read aloud story to view. <u>https://storylineonline.net/</u>	OR Follow the link to Storyline Online and choose a read aloud story to view. https://storylineonline.net/	Follow the link to Storyline Online and choose a read aloud story to view. <u>https://storylineonline.net/</u>
	Reading Comprehension: Learn about Planets and the Solar System - read the text 'Shooting for the	Spelling: Complete the LSCWC grid on Google Classroom, or complete on the provided grid.	Spelling: Complete the LSCWC grid on Google Classroom, or complete on the provided grid.	Writing: Poetry-Haiku Write a Haiku poem about your favourite native Australian animal.Think about the colour, how it moves, sounds it makes?	Spelling: Complete the LSCWC grid on Google Classroom, or complete on the provided grid
	Stars' and complete the questions attached.	BTN:Watch 'Behind the News' at 10am on ABC Me. <u>https://www.abc.net.au/btn/</u> <u>classroom/</u>	Writing with Symbols Look at the Aboriginal Symbols page. Write your own story using Aborignal symbols.Write	Use those words to write your poem. Use beautiful descriptive words (adjectives & adverbs) in your writing.	Time capsule journal: Write a letter to your future self about what life has been like during lockdown. Remember to include things like how you feel,



	 Spelling: Complete the LSCWC grid on Google Classroom, or complete on the provided grid. Writing: Choose one of the following words: 'sun', 'moon' or 'star'. How many words can you think of that rhyme with your chosen word? Make up a rap song using these words. 	Choose your favourite BTN story. Write a summary of the story. Writing – Read the Aboriginal Dreaming story of Tiddalick the frog or watch the PowerPoint. Complete the worksheet. Complete the crossword. Complete the Tiddalick drawing activity.	your story under the symbols you draw. If you can find some flat stones outside you could paint the symbols on them too. Grammar: Synonyms for Said Read about what words you can use instead of said to make your writing more interesting. Complete the worksheet.	*Remember the 5/7/5 3 lines/syllable rule Spelling: Complete the LSCWC grid on Google Classroom, or complete on the provided grid.	what things you have been doing to keep active, what has been your favourite thing about staying at home, and what has been the most challenging thing about staying at home? When you are done maybe you could draw a picture. Don't forget to take a photo and send it to your teacher.
Break	Break	Break	Break	Break	Break
Middle	FITNESS: Choose an activity of choice or use the PE grid for some inspiration.	FITNESS: Choose an activity of choice or use the PE grid for some inspiration	FITNESS: Choose an activity of choice or use the PE grid for some inspiration	FITNESS: Choose an activity of choice or use the PE grid for some inspiration	FITNESS: Choose an activity of choice or use the PE grid for some inspiration
	Mathematics:	Mathematics	Mathematics	Mathematics	Mathematics
	Number of the Day:	Number of the Day:	Number of the Day:	Number of the Day:	Number of the Day:
	Go outside and explore your garden. Count and compare your flower petals, tree branches and leaves and insect legs.	Sort through objects in your house by colour, patterns, numbers etc. For example: Sort the pegs into colours, your lego into numbers of connections.	Find 3 different sized containers, first estimate how much water each will hold and then test your estimation.	Make a list of all the items in your kitchen that are used to measure. Containers, scales, spoons etc.	Time to be a designer and put your creative caps on! Your activity / challenge for today is to plan, design and build your own Maths board game. You may choose any mathematical topic you like.

	Maths Revision:	Maths Revision:	Maths Revision:	Maths Revision:	
	Complete the maths revision worksheets , the best you can.	Complete the maths revision worksheets , the best you can.	Complete the maths revision worksheets , the best you can.	Complete the maths revision worksheets , the best you can.	You do not need special equipment and you should be able to make your game using bits and pieces you find around the home.
					Once completed, you should have:
					A game board
					 Items to play your game such as dice, counters, playing cards, or tokens.
					 Instructions and rules for how to play your game.
Break	Break	Break	Break	Break	Break
Afternoon	Geography: Aboriginal	Science	Library: Read the Library	Art	Use this afternoon to fine
	Perspective-Elcho Island When we listen to the song 'My Island Home' by the Warrumpi band. Many	the bome' by J. Many the blanks	information from Mrs Vitnell. Complete the activities on the Library worksheets.	Follow the instructions on the worksheet to make some Wild Art! Take a photo, if possible,	tune your game. Have a practice run with a family member - maybe the whole family could join in. Give your game a rating score 1 - 5. What worked
	people think the island they are singing about is Australia but it is not! It's called Elcho Island.	Then try a simple experiment about the effects of gravity - follow the steps on the Getting a Grasp on Gravity experiment worksheet.		and send it through to your teacher.	well? What could be changed to improve the player's experience? What did you enjoy most about this challenge?

Read the fact sheet or click on the link to learn about Elcho Island and write the answers to these questions on a piece of paper:	Time to switch off from school. Happy Holidays!
Where is Elcho Island?	
What is the population?	
Who were the original inhabitants of the island?	
How long and wide is the island?	
What is the name of the sea on the western side of the island?	
If you're on a computer go to Google Earth and find Elcho Island.	

Shooting for the Stars

Our Planet

We live on planet Earth, which is one of eight planets in our solar system. All of the planets in our solar system rotate (spin around) and it takes Earth one whole day to spin around once on its axis.



The other 30% of the Earth's surface is covered in land. This includes all of the mountains, valleys and deserts that can be found around the world. Many of these areas are inhabited (lived on) by people but there are still some remote areas that are untouched by humans.

Our Solar System

The Sun is at the centre of our solar system. Our solar system is believed to have formed around 4.6 billion years ago! The eight planets orbit (travel around) the Sun, some closer to the Sun than others.





Earth is the third closest planet to the Sun.

The planet nearest to the Sun is Mercury, which is very hot.





The planet furthest from the Sun is Neptune, the coldest planet in the solar system.



The Moon

The Moon is a natural satellite that orbits the Earth. It has a massive impact on our planet as it controls the tides in our oceans.

Astronauts have been fascinated by the Moon for many years. Several missions have taken place to travel to the Moon, the first of these being in 1969, when Apollo 11 landed on the surface

of the Moon. Astronauts Neil Armstrong and Buzz Aldrin were the first people to ever set foot on the Moon. They walked on the surface, conducted some experiments and planted a flag. Footprints

> and tyre tracks left behind by astronauts on the Moon will stay there forever as there is no wind to blow them away.

Did You Know?

Scientists are still investigating whether there is water on the surface of the Moon. Water is essential in order for plants and animals to live and grow. If enough water was found on the Moon, plants could possibly grow and people may be able to visit or even live there! However, this would be a very long way in the future.





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Questions

1. What does the word 'rotate' mean? Tick one. turn upside down

flip over

spin around

2. What is 70% of the Earth's surface covered with? Tick one.

soil

water

sand

- 3. When did our solar system form? Tick one.
 - 4.6 billion years ago
 - 4.6 million years ago
 - 4.6 years ago
- 4. What does the Moon control?

5. Name two things that Neil Armstrong and Buzz Aldrin did on the Moon.



Shooting for the Stars

6. If you were an astronaut heading to the Moon, what would you like to do when you got there? Why?



Year 3 Spelling Words Week 10 Term 3

Black= topic words, red = high frequency words, orange = phonics words- the letter 'c' saying /s/ sound , & green = rule words. Rule: Words that end with a consonant + 'y', keep the 'y' when adding 'ing'.

e.g. try - trying dry - drying

carry - carrying

	Monday	Tuesday	Wednesday	Thursday
gravity				
shadow				
orbit				
satellite				
answer				
know				
slice				
cycle				
copying				
crying				

Additional orange words: can you think of words that use the letter c saying the /s/ sound? E.g. cent, celery.	Additional green words: can you think of additional words ending with a consonant + 'y' that are changed to a verb when 'ing' is added? E.g. fly-flying, try-trying

Descriptive sentences- type an interesting sentence below using the spelling word, adverbs and adjectives.

gravity	
shadow	
orbit	
satellite	

	mber and						
	int forward s Continue the			, 8, 50 and 1	.00.		
	4, 8, 12, 16, _						
	24, 32, 40, _						
	c. 900, 800, 700,,,,						
	d. 150, 200, 250,,,,						
	d 10 or 100 What numb			given number	.		
3.	What numb	er is 100 le	ss than 340?				
	•		•	git in a three ving numbers:	-digit number.		
	562	58	34	703	821		
	npare and o Write a num		•	000. ce makes sense	2:		
α.	345 <						
b.	294 >						
6.	Order the fo	llowing nu	mbers from l	argest to smal	lest:		
	77	86	78	84	74		
Larg	gest					Smallest	
7.	Order these	numbers fr	om smallest	to largest:			
	289	298	258	247	293		
Smo	allest					Largest	



Year 3 Maths Revision Booklet

Identify, represent and estimate numbers using different representations.

8. What number is shown:







	 /	/	/	/	/	/
٦,						
J						



Read and write numbers up to 1000 in numerals and in words.

- 9. Write 357 in words.
- 10. Write two hundred and seventy-four in numerals.

Solve number problems and practical problems.

- 11. What needs to be added to the following number to make 234?
 - 204 + _____
- 12. Cross out the Dienes that are not needed to represent the number 162.









Addition and Subtraction

Add and subtract numbers mentally.

13. Calculate the following:

- a. 286 + 4 = _____
- b. 256 30 = _____
- c. 172 + 300 = _____





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.
Image: Do 5 squatsImage: Do 5 squatsDo 5 squatsLungeImage: Do a push upImage: Stand on one foot and count to 10Do as many repetitions as you can.	Image: Hop 3 timesImage: Star Jumps, Image: Star Jump 6 timesImage: Run optic fillImage: Star Jump 6 timesImage: Run optic fillImage: Star Tump 6 timesImage: Run optic fillImage: Star 	Do 5 jumping jacks Do 5 jumping jacks Can you do a split? Can you do a split? Do 5 Leg Lifts Do as many repetitions as you can.
Play Hopscotch.	Do some gardening e.g. weeding, mulching, planting.	Play Handball with a family member.
* Free choice-	* Free choice-	* Free choice-

Geography: Elcho Island

- Elcho Island is approximately 60 kilometres long and 6 kilometres across at its widest point.
- It is bounded on the western side by the <u>Arafura Sea</u> and on the east by the Cadell Strait. Elcho Island is a short distance away from the mainland and Howard Island.
- Galiwin'ku, located near the island's southern tip, is the main community on the island. It is the largest and most remote Aboriginal community in northeast Arnhem Land.
- There are 60 *mala* or hereditary tribal groups, with up to 22 different dialects being used in the community.
- The people of Galiwin'ku, approximately 2,000 residents, retain their traditions and culture. These are passed to future generations by adherence to strict traditional methods and education, including a means to help them embrace the wider Australian community.

• The island has a base population of 2,200 people, including 70 non-Aboriginal people. It was the home of the late Aboriginal folk musician <u>Geoffrey Gurrumul Yunupingu</u>.



The following story is based on a traditional Aboriginal Dreamtime story about a frog called Tiddalick.

Once upon a time in the Dreaming, there lived a frog called Tiddalick. Tiddalick lived in the Wollombi Valley in the Creation era. He was a greedy frog. He wanted to be the biggest frog in all the land. One very hot day, Tiddalick became very thirsty. He wandered down



to the billabong, where there was plenty of water. Tiddalick was so thirsty that he began to drink and drink and drink until all the water in the billabong was gone.

When all the other animals came to the billabong for a drink, they discovered that there wasn't any water left. They were so hot and thirsty too. They knew that it was the greedy frog, Tiddalick, who had drank all the water. They became very

angry at him. The animals knew that they had to get the water back somehow. If they wanted to get all the water out of Tiddalick and back onto the billabong, they would have to make him laugh. The wise owl suggested that if he laughed, all the water would come out.



First, the echidna tried to make him laugh. The echidna rolled down the hill into the dried up billabong. Tiddalick didn't laugh.





Next, the kookaburra, who was perched high up in the gum tree, pretended to fall out. Tiddalick still didn't laugh.



After that, the wombat started dancing some very funny moves. But still Tiddalick didn't laugh.

Tiddalick the Frog

The animals were so confused that they didn't know what to do. They were still very thirsty.

Finally, the eel decided to give it a try. He danced and danced and danced until he tied himself into a big knot.

Suddenly, Tiddalick's mouth started to move. He could not stop laughing at the eel. He laughed so much that all the water came out, and ran back into the dried up billabong.

From that day, Tiddalick was never greedy again and he only drank what he needed.





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Use the following words to fill in the missing information. You have been given the beginning letter of each of the missing words.

kookaburra	thirsty	Tiddalick	dried	danced
needed	hot	greedy	echidna	move
knot	Dreaming	owl	laugh	wombat
eel	water	angry	drank	rolled

Once upon a time in the D	, there lived a frog
called Tiddalick. Tiddalick lived in the Wollor	nbi Valley in the
Creation era. He was a g frog.	He wanted to be the
biggest frog in all the land. One very hot day	, Tiddalick became
very thirsty. He wandered down to the billab	ong where there
was plenty of water. Tiddalick was so t	that he began to
drink and drink and drink until all the w	in the billabong was gone.

When all the other animals came to the billabong for a drink, they discovered that there wasn't any water left. They were so h_____ and thirsty too. They knew that it was



the greedy frog, T______ who drank all the water. They became very a______ at him. The animals knew that they had to get the water back somehow. If they wanted to get all the water out of Tiddalick and back onto the billabong, they would have to make him l______. The wise o______ suggested that if he laughed, all the water would come out.

First, the e______ tried to make him laugh. The echidna r______ down the hill into the dried up billabong. Tiddalick didn't laugh.

Next, the k______ who was perched high up in the gum tree pretended to fall out. Tiddalick still didn't laugh.

After that, the w______ started dancing some very funny moves. Still, Tiddalick didn't laugh.





Fast-Finisher Activities

- 1. Use the word 'Tiddalick' and create an acrostic poem. Illustrate your poem.
- 2. Create a word search using all the words that are associated with this story.
- 3. Draw Tiddalick giving back the water. Make sure that you include the other characters in the story.
- 4. What do you think the main message of the story is? Write your ideas in one sentence.





Tiddalick the Frog Clues

Across

- 2. When there's too much rain this happens. (5)
- 4. The snake tied himself into one of these. (4)
- 5. A large marsupial that lives on the ground. (6)
- 7. You become this if you take too much of something. (6)
- 10. An ant-eating mammal covered in sharp spikes. (6)
- 11. The body part where all the water ended up. (7)
- 15. You see this happen when something is funny. (8)
- 16. A type of reptile that can be poisonous. (5)

Down

- 1. A bird with a call that sounds like laughter. (10)
- 3. Tiddalick was this type of amphibian. (4)
- 6. Where the story of Tiddalick came from. (9)
- 8. Another word for giant or big. (8)
- 9. A type of waterhole found in the outback. (9)
- 12. The name of the greedy frog. (9)
- 13. When you really want a drink, you must be this. (6)
- 14. This is what happens when no rain falls. (7)

Tiddalick the Frog Answers



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Draw Tiddalick





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Draw Tiddalick







Draw Tiddalick







Learn to Draw Tiddalick







Year 3 Maths Revision Booklet

c.

Add and subtract numbers with up to three digits using formal written methods.

14. Calculate the following:

α.		6	7	8
	+	3	2	3

b.		6	8	3	
	-	2	5	1	

	3	6	4
-	1	2	9

Estimate the answer to a calculation and use the inverse operation to check.

15. Use the inverse to check the following calculations. Circle 'Correct' or 'Incorrect':

a. 328 + 126 = 456	Correct/Incorrect
b. 267 - 138 = 129	Correct/Incorrect

Solve problems including missing numbers.

- 16. Fill in the missing numbers to make these calculations correct:
- α.

4 7 2 + 3 6 = 3

b. There are 460 people on a plane. 125 of the passengers are British, 104 are American and the rest are French. How many French people are on board the plane?

Multiplication and Division

Recall and use multiplication and division facts for the 3, 4 and 8 times tables. 17. Use your knowledge of the 3, 4 and 8 times tables to complete these calculations:

a × 4 = 32	c. 8 × 6 =	e ÷ 12 = 4
b. 3 × = 27	d. 33 ÷ = 3	f. 40 ÷ = 8





Use known facts to solve multiplication and division problems including two-digit multiplied by one-digit numbers.

18. Partition these numbers or use a column method to calculate these:

a. 24 × 3 = _____ c. 56 ÷ 4 = _____

b. 18 × 4 = _____ d. 48 ÷ 3 = _____

Solve problems including missing numbers.

19. Find the missing numbers to complete the following calculations:



Solve problems including scaling and correspondence problems.

- 20. Solve the following problems:
 - a. There are 8 apples in one box. How many apples are there in 6 boxes?
 - b. Kangaroos have 2 legs and zebras have 4 legs. A zoo keeper counts 22 legs altogether. How many kangaroos and zebras could there be?
 - c. 18 cupcakes are shared equally between 3 boxes. How many cupcakes are in each box?

Fractions

Count up and down in tenths.

- 21. Fill in the missing numbers to complete the sequence:
 - $\frac{2}{10}$ $\frac{3}{10}$ $\frac{4}{10}$ $\frac{4}{10}$ $\frac{6}{10}$
- 22. Shade in the squares to represent the fraction $\frac{7}{10}$.

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1					
- 1					
1					





The Sun, Earth and Moon

The Sun, Earth and Moon belong to the Solar System, which includes all the planets, moons, comets and particles of dust that are in orbit around the Sun.

The Sun

The Sun is the largest object in the Solar System. The Sun is so massive that everything else in the Solar System is attracted to it by the Sun's gravity and revolves in orbit around it.



The Sun is constantly producing heat and light; enough to light up Earth's days and keep our planet warm enough to support life.

The Earth

The Earth is a planet in orbit around the Sun. It takes about 365 days or 1 year for the Earth to orbit the Sun.

The Earth also spins on its own axis, which causes us to experience night and day. The Earth makes one complete



rotation on its axis approximately every 24 hours or 1 day. The side of the Earth facing the Sun is in daylight, while the side facing away from the Sun is in the Earth's own shadow or at night.

Although the Sun appears to move across the sky during the day, it is actually the Earth rotating not the Sun moving.

The Moon

The Moon is a satellite of the Earth and is held in orbit by the Earth's gravity. It takes about 27 days for the Moon to go all the way around the Earth.



As the Moon orbits the Earth, it also

rotates around its own axis at the same rate.

The Moon itself does not produce light. We can see the Moon from the Earth because the Moon reflects light from the Sun.





The Sun, Earth and Moon

1. The Sun, Earth and Moon belong to the S S
2. The Sun is the object in the Solar System.
3. The Sun is constantly producing and
4. The Earth is a in orbit around the Sun.
5. The Earth also spins on its own axis which causes us to experience and
6. The Earth makes one complete rotation on its axis approximately every 24 or 1 day.
7. The side of the Earth facing the Sun is in
8. The side of the Earth facing away from the Sun is at
9. The Moon is held in orbit by the Earth's
10. It takes about 27 for the Moon to orbit the Earth.
11. The Moon itself does not produce
12. We can see the Moon from the Earth because the Moon
light from the Sun.

Getting a Grasp on Gravity

Experiment with weight and the force of gravity.

Materials

- 2 similar/same objects eg 2 oranges, 2 tennis balls, 2 rocks of similar size, a basketball and soccer ball
- A lighter object eg a grape, a ping pong ball, a paper clip, a small pebble
- Chair placed outside on the grass

Steps

- 1. Carefully stand on the seat of the chair.
- 2. Hold the same/similar objects in each hand eg hold one orange in each hand. Each object must be at the **same height**.
- 3. Let go of the objects at the same time and observe which one lands first.
- 4. Repeat step 3 but this time hold a lighter object in one hand eg hold an orange in one hand and a grape in the other.
- 5. Observe which one lands first.

Results

- What happened when you dropped the 2 similar/same objects?
- What did you think would happen when you dropped a heavier and a lighter object? What did happen?
- Why did this happen?



Translating Dreaming Stories with Stones

Lesson Plan

Create and use story stones in a similar way to Indigenous Australians, who used them to recall oral histories, with your class. This activity lends itself to small group discussions as each group translates a Dreaming story into a series of stones and orally recalls key points of the story.

You Will Need:

- A collection of fairly flat and similar sized stones. Depending on your local environment you could gather them as a class or buy some from a hardware store.
- Aboriginal Symbols Key (attached) for each group of students.
- · Pencils, oil pastels or paint to put markings on the stones.
- · Dreaming story for each group of students.



Instructions:

Indigenous people passed down stories and important information from generation to generation. They did this by using symbols painted on stones. They believed that the stones promoted thinking and memory skills.

Display and discuss with students the different symbols some Indigenous Australians used. Talk about how these symbols might be used to recall parts of a Dreaming story.

Next, divide your class into groups. Give each group a Dreaming story, stones and materials to mark stones.

Their goal is to translate their story into a series of stones. That way, students wont need the book by the end of the lesson and can tell the rest of their class their story.

You could also try translating other stories onto story stones or use them as writing prompts for students to create their own stories.

Aboriginal Symbols Key



boomerang



digging or

clapping sticks



campfire

bush berry ants, fruits, flowers or eggs



human tracks

hunting boomerang



people sitting



star



sandhill or cloud

spear

moving

kangaroo tracks



E EEF

animal tracks



waterholes connected by running water

person





ε









+++

qoanna tracks



witchetty grub

resting place emu tracks



rain

kangaroo tracks

meeting place

emu

Finding Alternatives to 'Said'

Find interesting alternatives for these sentences:

- 1. "I love ice cream!" _____ Hannah.
- 2. "Where are you going?" _____ Mohammed.
- 3. "Bring a coat," _____ mum.
- 4. "Don't forget the bandages," ______ the paramedic.
- 5. "Stop that!" ______ the headmaster.
- 6. "Oh no!" _____ Kennith.
- 7. "Don't make a sound," ______ Sarah.
- 8. "I've lost my doll," _____ Susie.
- 9. "Where are the car keys?" _____ dad.
- 10. "There's nothing like a good hot bath," ______ Jimmy.
- 11. "What's in this?" ______ Ahmed.



Synonyms for 'said'

Sometimes a more interesting or descriptive word can be used instead of 'said'.

'Said' can be boring if it is over used. Also using a more descriptive word gives you a better feel of the way something is said.

The witch looked at him and said, "Come here." The witch looked at him and cackled, "Come here."

'Pick it up!' she said. 'Pick it up!' she shouted.

He looked at her and said, "Get out!" He looked at her and screamed, "Get out!"

Harry said, "I want to go home." Harry whispered, "I want to go home."





Word wall: some synonyms for said bellowed cried screamed screeched sobbed wailed mumbled asked murmured whispered pleaded shrieked



Can you think of any other words to use instead of 'said'?

Record time in hours, minutes and seconds.

- 42. A film lasted 2 $\frac{1}{2}$ hours. How long was the film in minutes?
- 43. James ran the 400m race in 1 minute and 40 seconds. Haamaad ran it in 85 seconds. Who was the fastest? Explain how you know.

Know the number of seconds in a minute and days in a year.

44. Tania spent 45 days of last year in Spain. How many days was she in the UK?

Geometry

Draw 2D shapes.

45. Draw a square which has sides of 6cm.






46. Draw a rectangle with a length of 8cm and a width of 2cm.

Recognise 3D shapes.

47. Draw lines to match the 3D shapes with their names.

Cuboid

Sphere

Cone

Square-based pyramid

Cylinder







Recognise right angles and related facts.

48. Mark any right angles on this rectangle with a \blacksquare .



49. Estimate the size of these angles in degrees (°).



Recognise horizontal, vertical, perpendicular and parallel lines.

50. Mark a pair of parallel lines on this shape:



51. Mark a pair of perpendicular lines on this shape:



- 52. Draw a horizontal line.
- 53. Draw a vertical line.











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 here 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

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ITALN

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*.

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Gin

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.

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Jo

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 faling 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 vife. Matthew was heartbroken, but the French expedition had diready left.



Matthew was in a hurry to set sail. He received his commission to command the *Investigatar*. 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.





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'.

16



The passport arrived from France. After three months of narriage, 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.







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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 Carpentarial



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.

Matthew was devastated, icrafter to be 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 Géagraphe* — one of the French ships commanded by Captain Nicolas Baudin! Matthew rowed across to meet his rival. Baudin had lost his ninemonth 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.

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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 Gidley King, who offered him any assistance needed to complete the voyage, including a second ship, the *Lady Nelson*. Matthew was the voyage, including a second again join him. While the crew prepared pleased that Bungaree could again join him. While the crew prepared pleased that but worked on his charts.

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When *le Glographe* 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

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

On Great Sandy Island, now called Fraser Island, Bungarce 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 oo nervous to sail as close to the coast as Matthew did. Sometimes Matthew lost sight of her and had to wait for her to atch up.

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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

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. 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 (or 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.

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.



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, we twhitewood 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 yeas 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 Jiarrhoea. 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 beyon epair and Matthew and his crew were sick.

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.

But as soon as his health

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 *Parpoise* 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 *Parpoise'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.

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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 *Hape*. Matthew gave orders for the men left behind to build two boats from the wreckage of the *Dripoise*. If he didn't return within two months, they were to use them to sail to Port Jackson.

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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 Finders 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 (1588 kilometres) in 12 days.

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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 related.

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. Governo King told him not to stop at the French island of Mauritius.

WILL.



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 greyhaired 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 couldreread 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.

TIMIN TITE



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.



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GLOSSARY

Admiralty, the

The British government department that

bearings

The position of a ship at sea measured in degrees

Bungaree

A Kurringgai man born in the Broken Bay area

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.

dysentry

An infectious disease that causes inflammation

fife

monsoon

A large wind system that changes direction from

mutinous

nautical leagues

Port Jackson

sauerkraut

scurvy

sea chart

ship's biscuit

spar

strait

survey

Terra Australis

Van Diemen's Land

whaleboat



Use this timeline to help you with the worksheet.



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.



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5	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.

Writing a Haiku Poem

A haiku is a type of poem from Japan. Haiku poems have three lines and a total of 17 syllables. The first and third lines of the poem have five syllables each. The middle line has seven syllables. Usually, a haiku does not rhyme.

Think about a particular object, topic or theme, like the weather, the sea, an animal, etc. Then, jot down different adjectives about your chosen object, topic or theme.

Object, topic or theme: _____

Adjectives: _____

Now, have a go at writing your haiku:

Why not see if you can read your haiku aloud to an audience?





Wild Art!

Collect some things from the garden and create a piece of art. A picture or sculpture from twigs, sticks, leaves, flowers, rocks or anything else you find outdoors.

You do not need paper, cardboard or glue for this artwork just a wild imagination! (Although you can glue it together or stick it onto paper or cardboard if you would like to.)

Some ideas to make might be: animals, insects, faces, your family, an Australian landmark (for example, the Sydney Harbour Bridge out of sticks) or anything you like.



Take a photo and if possible, share the photo of your creation on Google Classroom or send the photo through to your teacher.