

# Plattsburg Public School

## Learning from Home

2/3B

# Group 2



**This booklet belongs to**

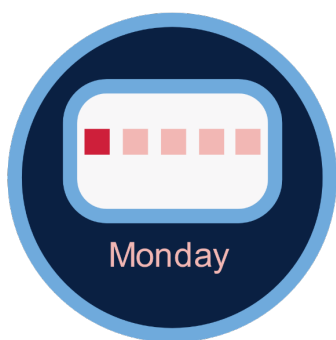
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**Year 2 Focus:** The Prefixes – mis/anti as in (misbehave, misfire, antibody, anticlockwise)













**Year 3 Focus:** The split digraph- i\_e as in (pile, time, strive)

**Choose ten words to practise daily.**

Say the word, write the word	Monday	Tuesday	Wednesday	Thursday
<b>Red Spelling Words</b>				
mistake				
misplace				
antibiotic				
antibody				
prize				
inside				
<b>Orange Spelling Words</b>				
misfortune				
misbehave				
mistake				
while				
knife				
stripe				
<b>Green Spelling Words</b>				
antisocial				
anticlockwise				
miscalculate				
white				



## Things you need

Activity	You will need
<b>Most activities</b>	 workbook  paper  lead pencil and coloured pencils
<b>Brain break</b>	 Timer
<b>Physical activity</b>	 A medium-sized ball that bounces (like a basketball)  Timer Water bottle
<b>Maths activities</b>	 2 sheets of paper per player  different coloured pencils or markers  spinner- tenths and hundredths (included in maths section)  1 six-sided dice or spinner  paper clip for the spinner
<b>Creative Arts</b>	 paper or cardboard A camera An object from around the house with pattern of lines or shapes

During the day make sure you take time to

- do a care and connect
- take a brain break
- do some physical activity



## Care and connect – Friends

Friends are one of the greatest gifts of life. One of the best bits about them is you get to choose your friends. Some friends you have known your whole life. Others you will meet along the way - at school, at sport or through other friends. A good friend makes you happy. Good friends have lots of qualities, like being kind, supportive, a good listener and someone you can have fun with. Close your eyes. Think of a good friend, maybe even your best friend. Your good friend might be living with you, or it might even be your pet. Think about how much fun you've had together.

Think of a time you were together and what you got up to. Sometimes it's hard to stay connected with our friends because they live far away, or we are in lockdown. You can still connect with your friends. You could write them a letter, call them on the phone, make them a card, draw them a picture or organise a video chat.



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## Brain break – I spy

How many things can you find around the house that starts with the same letter as your first name in one minute?



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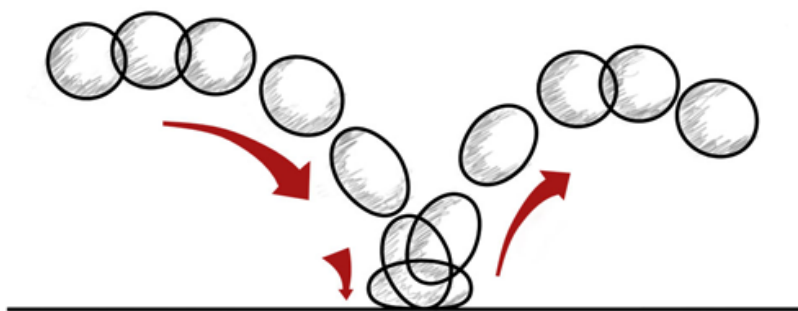
# Physical activity – Bouncing and Dribbling

Scan the QR code to watch the teaching video Bouncing and Dribbling or read the instructions below.



Today you are working on your bouncing and dribbling skills.

1. Collect the items you need (see the things you need list).
2. Warm up your body – Run on the spot for 30 seconds, star jumps for 30 seconds, squats for 30 seconds, jumping side to side for 30 seconds. Spend 3 minutes stretching your muscles.
3. Hold the ball with 2 hands. Bend your knees slightly. Having control is very important. When you are bouncing the ball make sure the ball bounce comes back up to your hip height. Choose one hand to bounce the ball with. Bounce the ball 5 times. Swap hands and do another 5 bounces with your other hand. Can you keep control and bounce the ball for 30 seconds? If you can, try swapping hands after every 5<sup>th</sup> bounce.
4. Try keeping control of the ball doing low bounces. Can you bounce the ball for 30 seconds?
5. Try keeping control of the ball doing high bounces. Can you bounce the ball for 30 seconds?
6. Bounce the ball from your right hand to your left hand (like a V shape). It's called a crossover dribble. Practice bouncing the ball from your right to left and back again. Can you crossover dribble for 30 seconds?



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7. Can you do a crossover dribble with 1 hand? Bounce the ball in a v shape using just 1 hand. How long can you bounce it like this?
8. Make up your own bouncing and dribbling challenge. Challenge someone at home to do it too!

# English – Activity 1 – Listening: Sounds Outside



Scan the QR code for the lesson or read the following instructions.

Sit outside for 2 minutes and listen carefully. What sounds can you hear?

Can you hear birds? Can you hear cars or trucks? Can you hear dogs barking? Can you hear the washing machine in the laundry?

You may hear human and natural noises.

List everything you can hear in your workbook. To challenge yourself, you may like to write descriptions of the sounds, for example the high-pitched twitter of the bird; the rumbling, swishing sound of the washing machine.



"A couple of lawn chairs" by Riley Pitzen is licensed under [CC BY 4.0](#)

## Challenge

If you lived somewhere else in NSW, what do you think you would hear? For example, if you are from the city, what might you hear if you lived on farmland?

Create a Venn diagram, comparing your area to the other area you just thought of and include the similarities and differences.

## English – Activity 2 – Reading and viewing: 'Mr Kessel's Bush Tucker Garden'



Scan the QR code to listen to and read 'Mr Kessel's Bush Tucker Garden' by Sally Dixon.

As you listen to the story, try to visualise the setting (where the story takes place). What does the house look like? What does the garden look like?

In your workbook, draw and label a diagram showing what the house and garden look like. Include adjectives (describing words) in your labelling. Look for clues in the text to help you. For example, the author writes that the greenhouse is a 'small building half-hidden by trees', so you would need to draw a little building poking out from between the trees.

## English – Activity 3 – Writing Descriptions



Look at your labelled diagram of Mr Kessel's house and garden.

You are going to write your own description about the house OR the garden. In your description, remember to include the clues in the text. For example, if you write about the house, you might like to include the creaking floorboards, the red-bricked exterior, or the smell of musty books. If you are writing a description of the garden, you could include descriptions of the rectangular wooden trough or the greenhouse.

Try and include adjectives in your description. Use your five senses. What could you see? What could you hear? What could you smell?

## Challenge

Use figurative language in your description such as similes and metaphors.

Write a description of both the garden and the house.

# Mr Kessel's Bush Tucker Garden

Story by Sally Dixon, illustrated by Gabriel Evans  
Published by The School Magazine. Issue 6, 2019



OLD MR KESSEL LIVED next door. He lived alone in a red brick house with a backyard that Josh thought must go on forever. Mr Kessel's yard was filled with trees, and the trees were often filled with wrens, magpies, cockatoos or galahs. It reminded Josh of the Australian bush. One day last summer his family had left town and driven to the mountains where they'd embarked on a three-hour bushwalk. Josh remembered the grey-green leaves, the warbled voices of birds and the smell of lemony eucalyptus baking in hot sun.

Every day without fail Mr Kessel dug, raked or weeded his garden, and occasionally he just stood quietly underneath a scribbly gum with a tin cup of coffee in his hand. In those moments he stared at his garden with a gleam in his eye and a crooked smile on his face.

Mum sometimes made friendly chitchat with Mr Kessel over the fence. But Josh and his little brother, Matty, never did. They were fascinated, and also a little terrified, of the old man. He spoke with an unfamiliar accent—not an Australian one like their family did. He seemed as tall as a giant, and his skin looked as tanned and wrinkled as an old leather shoe.

But the most incredible thing about Mr Kessel was his right leg. It wasn't real. Josh and Matty had discovered this fact by accident. There was a gap in the wooden fence between their backyard and Mr Kessel's, which the boys sometimes peeked through. One day while peeping through the crack, they saw the old man hoist up his trouser leg. There should have been soft hairy skin underneath the fabric. But there wasn't. Instead, the boys glimpsed some black and silver metal. Matty squealed, and Mr Kessel looked towards the fence with surprise. The brothers jumped up and ran as fast as they could back inside the house.

Josh wondered how a big man like Mr Kessel could lose a leg.

\* \* \*

One Saturday afternoon Josh and Matty were playing cricket out in the backyard. Josh was batting; Matty was bowling, and Lola, their Silky Terrier, was fielding.

They played fast and hard. Matty was a reasonable bowler and Josh an exceptional batsman. Little Lola ran back and forth endlessly with her nose in the air and her eyes on the ball.

Matty rubbed the red cricket ball against his thigh, the way he'd seen players do on television. He looked his brother up and down and ran towards him. With a powerful overarm throw, he released the ball. It arched through the sky. Lola quivered with excitement, and Josh held his bat in position, never taking his gaze away from the oncoming ball.

SMACK! The bat whacked against the ball and sent it soaring high into the blue sky. Up, up, up it went, and then with an elegant curve began its descent. The boys held their breath, their eyes growing wider and wider with horror as they watched the ball fall. It wasn't going to land in their backyard. It was headed straight for Mr Kessel's garden!

Lola raced to and fro like a doggy ping-pong ball, but Josh and Matty stood like statues. They heard the tinkle of breaking glass. And then there was silence. Josh groaned. What should they do?

The boys raced towards the fence and peeped through. What had they broken?

They glanced towards Mr Kessel's house, but the windows were all intact. They gazed the other way and noticed a small building half-hidden by trees; it was a greenhouse. See-through walls glistened in the sunshine—except in one spot where there was a jagged new hole.

Josh and Matty looked at each other with guilty faces. They realised it was only a matter of time until Mr Kessel came outside. They were too scared to retrieve their ball in case they bumped into the one-legged giant. Instead, the boys pulled up their stumps and disappeared inside the house. They thought it wise to lay low. They settled themselves in beanbags in front of the television and switched on a favourite movie.

About a half-hour later the doorbell sounded. Lola yapped her way down the hallway, but the boys looked at each other and didn't say a word. Josh felt heavy inside, as if he'd swallowed ten cricket balls all at once.

They heard their mum's voice, and in between her speaking, they heard the accented voice of Mr Kessel. Several minutes later, the front door clicked shut. Footsteps marched down the hallway and Mum appeared before them. She was holding their cricket ball. With a hand on one hip she asked, 'Anyone care to tell me what happened?'

Josh looked down and kicked at a crumb on the carpet. 'It was an accident,' he muttered.



Matty remained mute.

‘I thought I’d raised two honest boys. I’m disappointed. You should’ve come and said something right away.’ Mum paused. ‘It’s going to cost Mr Kessel a lot of money to fix his greenhouse.’

‘Sorry, Mum,’ said Josh with a remorseful voice.

‘Sorry, Mum,’ echoed Matty.

‘It’s not me you need to apologise to. It’s Mr Kessel.’

The boys looked at each other with panic in their eyes. Were they going to have to speak directly to the old man?

‘Tomorrow afternoon both of you will go next door and apologise. Mr Kessel and I have talked and decided that you will help pay for the cost of fixing the greenhouse.’

Josh and Matty looked at each other again with even more panic in their eyes.

Mum continued. ‘Mr Kessel will have to get the greenhouse fixed straightaway, but every Sunday afternoon you’ll earn money by helping him in his garden. He won’t give you the money directly, but he’ll keep a tally of how much you earn. That money, plus pocket money from home, will go towards the cost of replacing the glass.’

Josh now felt like he’d swallowed twenty cricket balls.

\* \* \*

The next day the boys walked over to the red brick house and timidly knocked on Mr Kessel’s front door. Floorboards creaked as heavy steps drew close. The door swung open and Mr Kessel himself towered over them.

The old man looked down at the boys and there seemed to be a twinkle in his eyes. ‘Welcome, Joshua. Welcome, Matthew,’ he greeted them. He used their full names, not their nicknames like everyone else did.

‘You can call me Benjamin,’ he said.

The inside of his home was simple and neat, and the air smelled like a mixture of musty books, sausages and sweet-scented flowers.

Benjamin Kessel led them through the house and into his backyard.

‘Welcome to my bush tucker garden,’ he said.

Josh and Matty looked around. They didn’t know what a bush tucker garden was, but felt too shy to ask. They stood beside a rectangular wooden trough where spinach-like leaves sprouted. Matty stroked one with his finger.

‘That plant’s called Warrigal greens,’ said Mr Kessel. ‘It’s delicious cooked in omelettes or stir-fried with other vegetables.’

Matty wrinkled his nose. It looked like spinach, and he hated spinach.

‘Don’t turn your nose up at food until you try it,’ said Benjamin, as the twinkle returned to his eyes.

Throughout the next hour, Benjamin gave the boys a guided tour of his garden. He showed them flowers, bushes and many varieties of trees: macadamia, lemon myrtle, Illawarra plum and pepper leaf.

He pointed to a wattle-tree. ‘Wattle seeds are delicious in cakes and desserts,’ he said. ‘One day I’ll make you pancakes with wattle seed ice cream.’

Matty forgot to be shy and responded with a loud ‘Yum!’ The old man smiled at him.

‘And you can try some of my lilly pilly jam with the pancakes,’ he said, pointing to a slender branch laden with unripe berries.

They came near the small greenhouse where they could see a big hole in a window. It was time. Josh pressed his lips together, took a deep breath and forced the words out of his mouth. ‘Sorry, Mr Kessel—I mean Benjamin—for breaking the glass,’ he said in an almost-whisper.

‘I’m sorry too,’ mumbled Matty.

Now the hole with its sharp, nasty edges was right before them, but Benjamin only smiled and said, ‘These things happen.’ Then he added, ‘It’ll be fixed this week, and all will be well.’ He said nothing more about it and led the boys inside the greenhouse.

Rows of tiny germinating seedlings surrounded them. Plastic markers identified the plants. Josh read some of the names: *bush tomato*, *rosella flowers*, *hibiscus*, *saltbush* ... and there were many more.

‘Have you guessed yet what bush tucker is?’ asked Benjamin.

Josh had become so interested in the plants that for a moment he also forgot to be scared.

‘Is it ... um ... plants you get food from?’ he asked hesitantly.

‘Yes,’ said Benjamin. ‘And where do you think the plants come from?’

The boys looked blank, until Josh finally guessed: ‘Australia?’

‘You’re right. All these plants are native to Australia.’

Josh wondered why a man with a foreign accent would grow nothing but Australian plants. He felt so curious he asked with more confidence, ‘Are you from Australia?’

The old man looked at Josh with a thoughtful expression. ‘I was born in a country called the Netherlands, but twelve years ago my precious wife, Annika, died. It was a difficult time. My son had moved to Australia several years before and wanted me to come here. So I did.’ He paused. ‘At first I missed home ...’

Josh thought Benjamin's blue eyes looked a bit watery.

'Gardening gave me something to do when I felt sad about Annika. And growing bush tucker plants helped me settle into my new home. Now, I'm thankful to live here, to be near my son and family. The garden reminds me of how lucky I am.'

Benjamin took them to a shaded garden bed where smooth green tips poked through the soil. 'All my plants are Australian, except for these. They're from the Netherlands. Like me, they've learnt to grow in foreign ground.'

'What are they?' asked Matty.

'Tulips,' said Benjamin. He said no more.

Throughout the next weeks, the boys lost all fear of their neighbour and looked forward to Sunday afternoons. Benjamin taught them to remove weeds to plant new seeds in little containers and to transplant seedlings into the outside garden. But Josh's favourite job was picking berries, pods or leaves from the garden.

\* \* \*

One Sunday, when colourful tulips bloomed in the bush tucker garden, Benjamin invited Josh's whole family, including Lola, for afternoon tea. Fat pancakes were placed on each person's plate, and on top of these Benjamin scooped wattle-seed ice cream and dolloped lilly pilly jam. Even Lola gobbled down a doggy-sized pancake on the ground.

Josh tucked into the creamy treat, and wondered why he'd ever been afraid of his neighbour. He took a spoonful of speckled ice cream, but before bringing it to his lips, he had a thought. He'd been thinking about gardens so much lately he'd forgotten something.

'Can I ask you something, Benjamin?' he said.

'Of course,' answered the old man.

'How did you lose your leg?'

Mum looked at Josh with an I-can't-believe-you-just-asked-that expression.

But Benjamin didn't seem to mind. 'It was a car accident,' he said simply.

'Oh,' said Josh.

An awkward silence followed; no-one knew quite what to say next, but then Benjamin's face crinkled with a crooked grin.

'Want to have a look?'

The boys eagerly nodded their heads. They watched their neighbour lift his trouser leg, revealing the metal limb. He unstrapped it and held it in his hands for all to see.



'You could use it like a cricket bat,' shouted Matty with excitement. Everybody laughed.

Josh looked around Benjamin's bush tucker garden and decided he was lucky. Even though Benjamin was old, Josh knew they were lucky to live next door to him

Between mouthfuls of ice cream and admiring glances at Benjamin's leg, Josh felt a warm sensation growing inside his chest. It was the sort of feeling that comes when you know you've made a new friend. A friend does something kind for you.

# Maths – Activity 1 – Colour in the decimats- part 2

Adapted from Anne Roche (Australian Mathematics Primary Classroom, 2010)

This activity has a game board broken up from a whole into tenths and hundredths. You can find it on the pages following these instructions. Have a look at it now. You will notice the tenths are green and the hundredths are yellow. You may need to add more hundredths in as you play the game by diving you rectangle up. You can also draw up your own board as they have in the pictures



## Set up.

This is a 2 or more player game.



To play this game you will each need the decimat and scoring sheet (found in this booklet)

You will need one copy of each of the spinners or you could use a dice instead of the 1-6 spinner.



If you can access a device to scan the QR code and watch the instructions do that now.

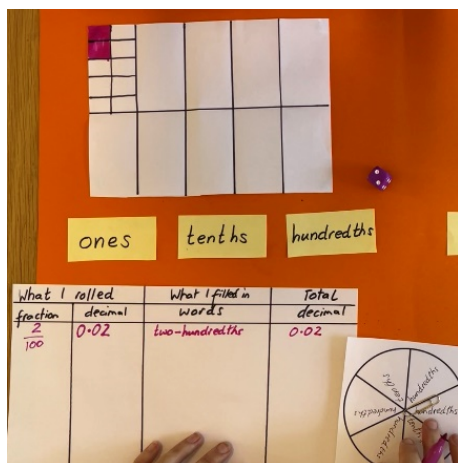
If you do not have access to a device the instructions are below.



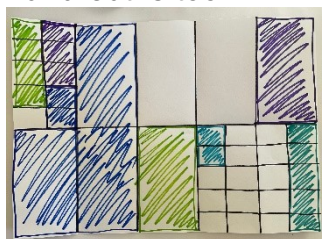


## How to play

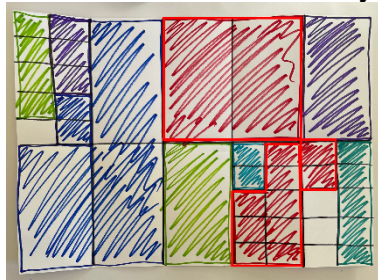
- Take turns to roll the dice and spin the spinner and fill in the game board. For example:
  - If a 2 is rolled and 'hundredths' are spun, we record our move as a fraction ( $\frac{2}{100}$ ) and as a decimal (0.02)
- Colour in on the game board.



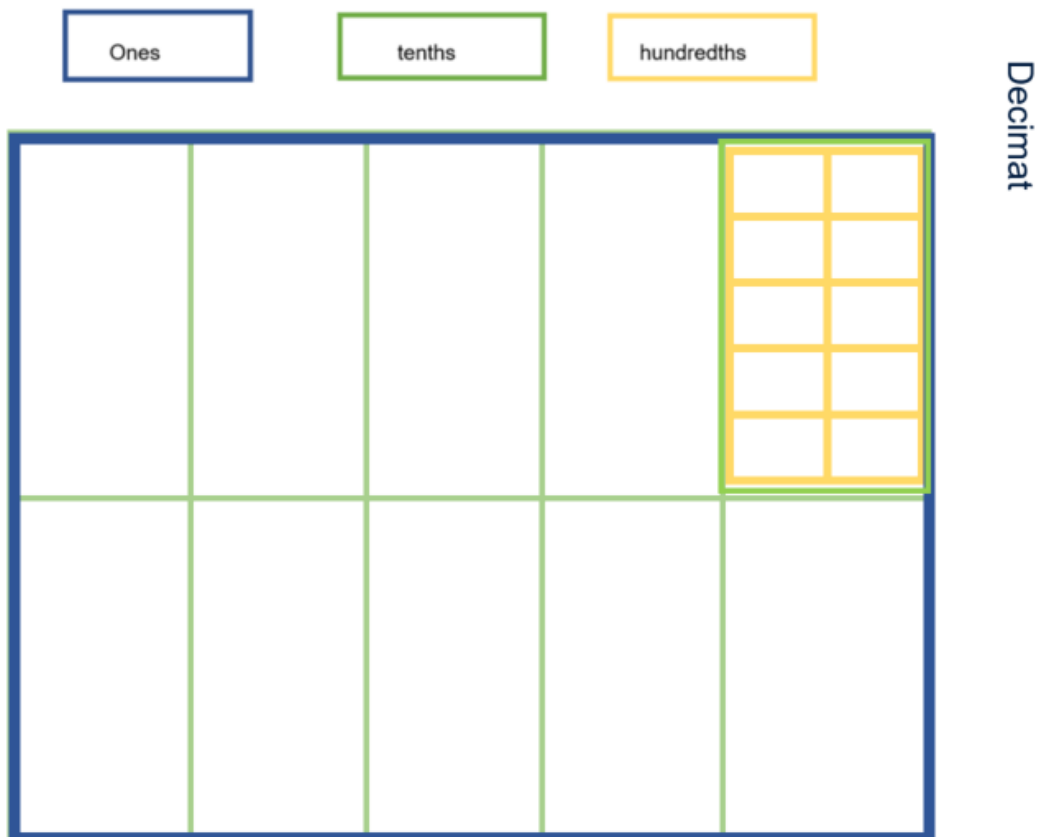
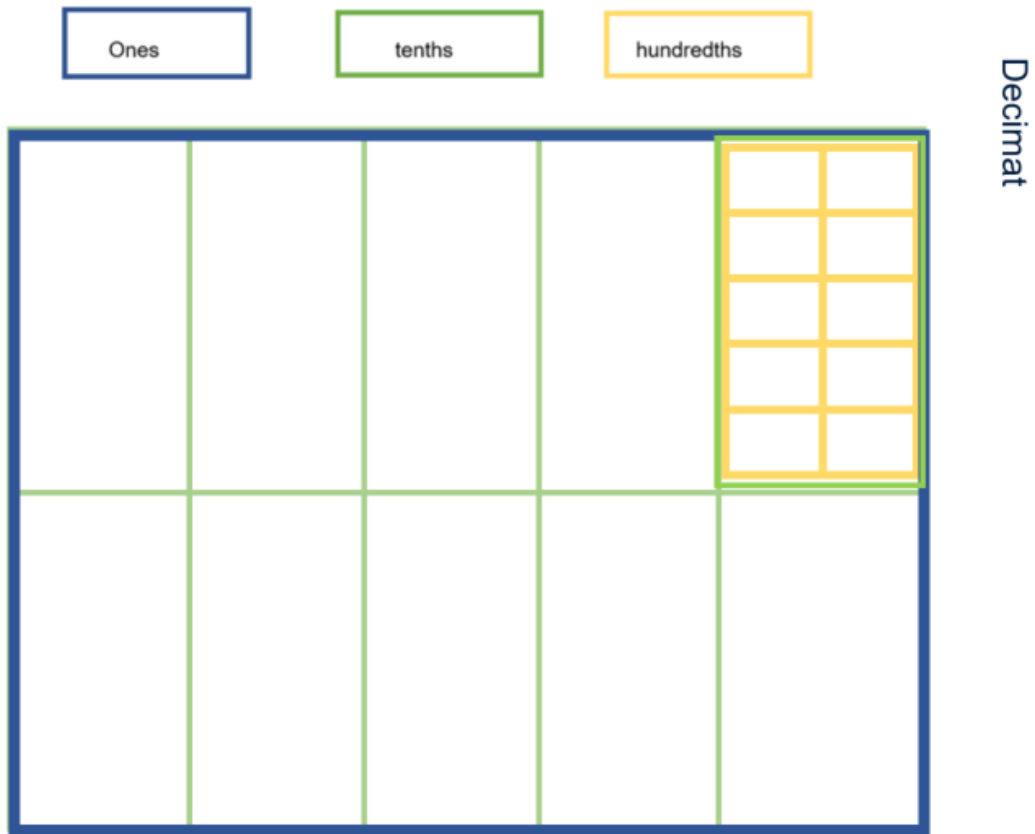
- Complete the 'What I filled' column in words (2-hundredths)
  - Calculate the total and record as a decimal.
- Use a different coloured marker or pen to fill in the game board for each turn.
- The winner is the first player to fill in 1-whole (their entire game board) or the player with the game board is closest to 1-whole after 10 spins.
- If a player spins a fraction that won't fit into the available space, they miss their turn.
- You can partition a roll in equivalent ways.
  - For example, I rolled 3-tenths but I only have 2-tenths left empty, and some hundredths too.



- I can partition my 3-tenths as 2-tenths, 8-hundredths and 2-hundredths more to colour in 3-tenths of my gameboard in total.



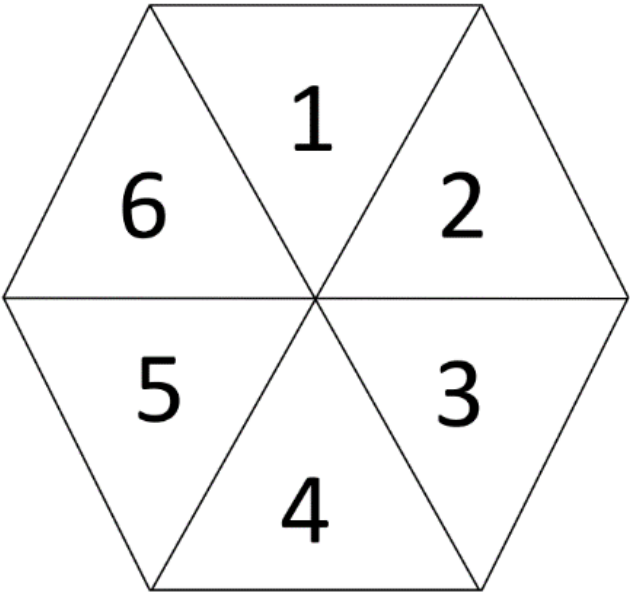
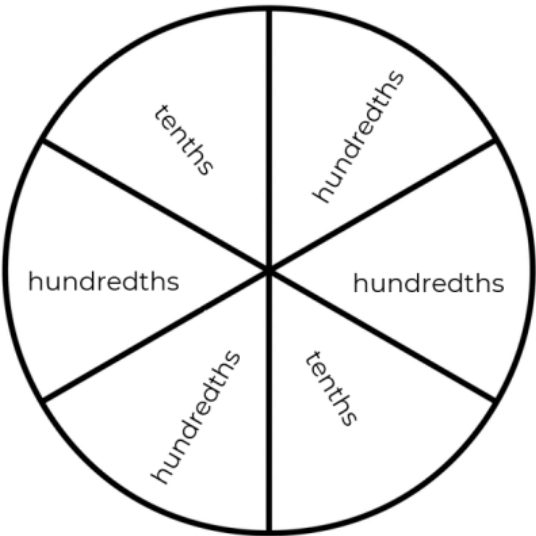
- Don't you love the magic of partitioning?



**Recording Sheet-** Each player will need a copy- you can draw them up to look like this

What I rolled		What I filled in	
Fraction	Decimal	Words	Total as decimal
E.g. $\frac{2}{100}$	0.02	2 hundredths	0.02
$\frac{5}{10}$	0.5	5 tenths	0.52

**Spinners**



## Creative arts – Activity – Line up Part 2

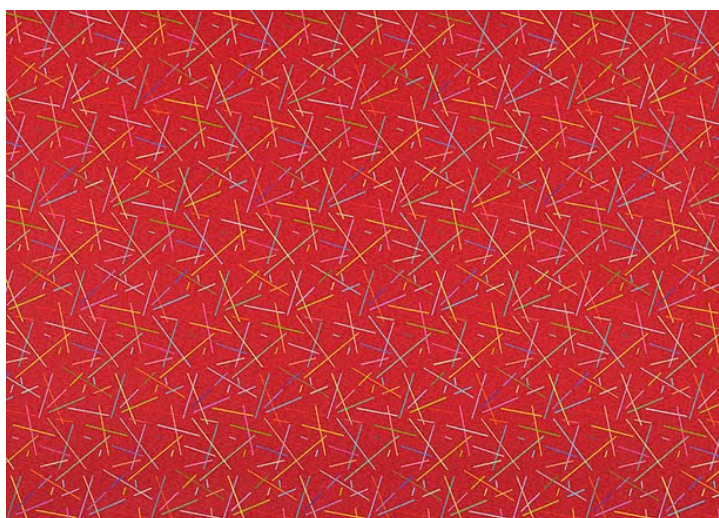


Scan the QR code to watch the teaching video Line up, or read the instructions below.

Today we are learning more about 'optical art' (or 'op art').

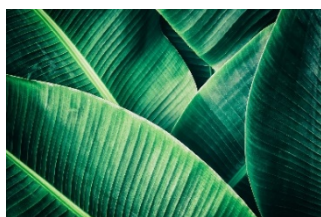
Last week, you learnt about Australian artist Lesley Dumbrell. She loves to combine patterns with lines, shapes and repetition in a style called 'optical art'. Optical art is often nicknamed 'op art' and it usually makes an optical illusion. Optical illusions happen when our brain and eyes try to speak to each other in simple language but the interpretation gets a bit mixed-up. For more information about op art visit: <https://edu.nsw.link/tX4MSd>

In her artwork 'Spangle', Dumbrell uses patterns with shapes, colours, lines and intersections with dots and dashes.



To access the artwork 'Spangle' from the art gallery of NSW visit: <https://edu.nsw.link/rqNNoo>

Activity: Identify op art around your home.



Find something in your home or outside that has repeated patterns like op art. The photographs above are some examples.

Choose one of the following options

Option 1: Take a photo of it

Option 2: Draw it on a piece of paper

Musicians also use line and pattern in their works. Draw some lines on a piece of paper to represent melodies. The pitch of music rises and falls with the lines on the notes. If the line goes up, so does the pitch and when it goes down, so does the melody (or pitch). Some of the longer lines represent long notes, and the dots are short notes.

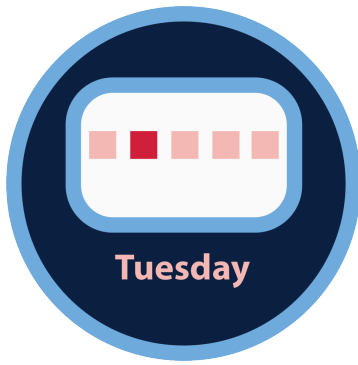


Activity: Drawing musical melodies







Listen to or sing a song that you know. Draw the lines of the melody to show the way the music rises and falls.

Optional Challenge:

Turn your musical melody drawing into an artwork.



## Things you need

Activity	You will need
<b>Most activities</b>	 workbook  paper  lead pencil and coloured pencils
<b>Maths activities</b>	 3 cups or 3 of the same objects (forks, spoons, markers or lego blocks, etc.)  paper  three different coloured markers, pens, or pencils to record your moves



During the day make sure you take time to

- do a care and connect
- take a brain break
- do some physical activity

## Care and connect – What I miss most

Think about someone you miss seeing or something you miss doing.

Option 1: Draw a picture of you, and the person you miss, doing something fun. It might be something you would like to do the next time you see them.

Option 2: Draw a picture of something you miss doing. It might be a sport you play or a place you like to visit.



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## Brain break – Indoor Mountaineering

\*Check with someone at home before completing this activity.

Mountain climbers use their feet and hands to push and pull themselves up mountains. Pretend the floor of your house is the side of a steep mountain. You cannot stand up to move from one place to another. Can you use your feet and hands to push and pull yourself around the floor of your house? Mountain climbers use rock cracks and ledges to grab hold of to push and pull themselves. You might be able to use walls and furniture to push and pull yourself around. (Check with someone at home before using walls and furniture to push and pull yourself around.)



## Indirect and direct quotations

### Grade 4 Punctuation Worksheet

Rewrite the indirect quotations as direct quotations. Add punctuation as needed.

1. Mitchell said that his bike is broken.

---

2. Abe Lincoln said that everyone should be free.

---

3. Martha explained that her favorite color is blue.

---

4. The actor said to always remember to smile on stage.

---

5. My teacher demanded that we study our spelling words every night.

---

6. Principal Rogers told the students to arrive to school on time.

---

7. The kids yelled that recess is the best part of the day.

---

**Direct quotations:** Quotation marks surround the actual exact words said by the speaker.

**Indirect quotations:** Sentences that tell what someone said, but not in their exact words. No quotation marks are used.



## English – Activity 1 – Speaking: Describe the setting



Look at the picture of the jungle treehouse. You are going to describe this treehouse aloud.

To plan what to say, brainstorm words that you could use to describe the treehouse. You could include:

- adjectives (describing words). For example, shadowy, well-hidden
- adverbs or adverbial phrases (a word or group of words that describes a verb). For example, high in the treetops
- figurative language (for example, similes) – Carefully balanced like a tower made of cards.

Don't forget to include descriptions about colour, size and shapes. Remember to use your five senses. What can you see, hear and smell? What are the textures you can feel? Would the treehouse be fragile or strong?

Once you have planned words you could use, describe the treehouse to someone in your home. You may also like to record your description on a recording app on a phone or computer.



["Treehouse"](#) by WildOne is licensed under [CC BY 4.0](#)

### Challenge

Describe the jungle treehouse using similes and metaphors.

# English – Activity 2 – Reading and viewing: ‘Mr Kessel’s Bush Tucker Garden’



We will use the story we read yesterday, ‘Mr Kessel’s Bush Tucker Garden’, to help us with our activity.

In the text, we are going to look for verbs and adverbs.

A verb is a doing or an action word. For example, snuggled, listened, danced.

An adverb is a word that tells us more about the verb. Adverbs tell us how, where, when, to what extent and how often things happen. For example, endlessly, hesitantly, afterwards.

In the story, you will look for adverbs. Record them in this table. Then write the verb that goes with the adverb. Two examples have been done for you.

Complete the verbs and adverbs table.

Verbs	Adverbs
ran	endlessly
ask	hesitantly

## English – Activity 3 – Writing: Character profile



Scan the QR code for today's lesson or read the following information.

Look at the image of the jungle treehouse from Activity 1. Imagine this is the setting for your next story. You are going to develop some characters for your story.

Who do you think might live in your treehouse? Why do they live here? What are some things your characters like to do?

Complete a character profile for two characters in your story.

Character 1	What is this character's personality? What do they look like? How old are they?	What does this character do? What activities do they participate in?
Where do they live? Who do they live with??	Who are their friends? What do they do with their friends?	Do they work or go to school? Where?

Character 2	What is this character's personality? What do they look like? How old are they?	What does this character do? What activities do they participate in?
Where do they live? Who do they live with?	Who are their friends? What do they do with their friends?	Do they work or go to school? Where?



# Maths – Activity 1 – MathXplosion Magic cups



If you have access to a device watch the MathXplosion Magic cups episode from ABC iView to assist you complete the task below.

It demonstrates how we can flip cups 2 at a time to end up with them all facing down in three moves and explains the mathematics behind it.



For this task you will need

- 3 cups or 3 of the same objects (forks, spoons, markers or lego blocks, etc.)
- paper
- three different coloured markers, pens, or pencils to record your moves

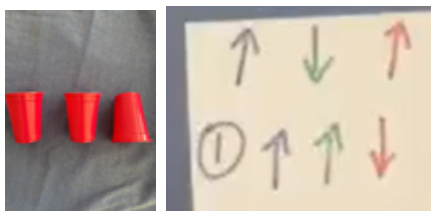


Instructions

1. Set up your three cups (or forks, spoons, etc.) So they are orientated like this:



- a. Notice how the middle cup/fork/spoon is facing down and the two outside cups/forks/spoons are facing up.
2. Your challenge is to flip pairs of cups, (you need to choose any 2 cups and turn them both over in exactly three moves) to have them all facing down
  3. Flip one pair of cups and record your move as they have here



4. Flip a second pair of cups and record your move
5. For the third time, flip a pair of cups and record your move!
6. Once you've found one way of flipping pairs of cups in exactly 3 moves, see if you can solve it starting with the cups like they are below?

Will it work in exactly 3 flips with the cups starting...



Like this?

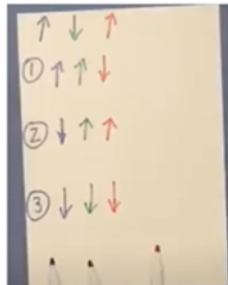
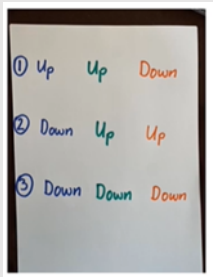


Or like this?

These instructions are explained in the video on the QR link here.



## Maths – Activity 2 – Magic cups – follow up (part 2)

How to record your steps	Images
Record your moves using arrows.	
Record it using words	

In this example it is recorded in a table. The pink shows the two cups flipped each time.

Starting position of cups	Down	Up	Down
After 1st flip	Up	Up	Down
After 2nd flip	Down	Up	Up
After 3rd flip	Down	Down	Down



### Challenge:

What does the starting position need to be to get the trick to work in exactly 4 moves using 4 cups? Or 5 cups in 5 moves? Draw the starting position here.

Create a table showing your moves to solve the task. You might do it here or in your workbook or on a computer.

# HSIE – Activity – Community and Remembrance



Scan the QR code to watch the teaching video on Community and Remembrance or read the instructions below.



Today we are learning to recognise the significance of Australian Celebrations and commemorations.

Do you know the difference between celebration and commemoration?

A Celebration is a happy event which could include birthdays or cultural celebrations such as Diwali, St Patrick's Day or Bastille Day. Culture is a word for the 'way of life' for groups of people, meaning the way they do things. A cultural celebration is the way they celebrate a particular event or the events which are important to their culture.

A Commemoration is an important time to remember a person or an event such as ANZAC Day.

- Can you list some Australian celebrations and commemorations that you have heard of? Write them in your workbook.
- Look at these photos. In your workbook, answer the questions for each photo:

Photo Number 1



[Wikimedia Commons. CC BY 2.0](#)

Clue – we celebrate this in our school every year. Do you recognise the picture behind the people?

1. What event is being celebrated or commemorated?
2. What do you see, think and wonder about the photos?
3. What symbols do you recognise that might give you a clue to what event is being celebrated or commemorated?

Photo Number 2



[Australian Navy. © Commonwealth of Australia 2018](#)

Clue – This event happens in cities and towns on a special day each year.

1. What event is being celebrated or commemorated?
2. What do you see, think and wonder about the photos?
3. What symbols do you recognise that might give you a clue to what event is being celebrated or commemorated?

Photo Number 3



Clue - This is a special cultural celebration which we celebrate in our school each year.



1. What event is being celebrated or commemorated?
2. What do you see, think and wonder about the photos?
3. What symbols do you recognise that might give you a clue to what event is being celebrated or commemorated?

Answers:

Photo Number 1 –

1. Harmony Day
2. If you wrote the things you can see and wonder about you are correct.
3. Orange is the colour of Harmony Day.  
“Everyone Belongs” is the phrase for Harmony Day.  
The people holding hands on the poster is a symbol of Harmony Day.

Photo Number 2 –

1. ANZAC Day or Remembrance Day.
2. If you wrote the things you can see and wonder about you are correct.
3. Soldiers march on ANZAC Day and Remembrance Day.  
People lay wreaths and flowers at the War Memorial Statues.

Photo Number 3 –

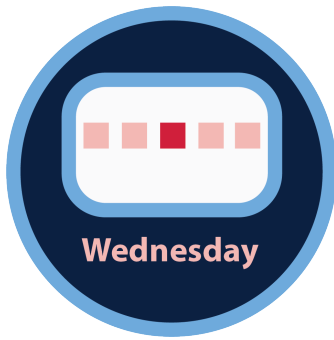
1. NAIDOC Week.
2. If you wrote the things you can see and wonder about you are correct.
3. A Didgeridoo being played by an Aboriginal man.  
A Man wearing body Paint.  
The Aboriginal Flag.

Optional Research Challenge:











Choose a significant event celebrated or commemorated in Australia.

Research:

1. When was the event first celebrated or commemorated?
2. Why is it significant to Australia?
3. What are the symbols or emblems for this celebration or commemoration?



## Things you need

Activity	You will need
<b>Most activities</b>	 workbook  paper  lead pencil and coloured pencils
<b>Care and Connect</b>	 Bucket  Post-it notes or small pieces of paper
<b>Brain Break</b>	 A4 piece of paper
<b>Maths activities</b>	 spinner (included)  paperclip  grid paper (included)  pencils or markers

During the day make sure you take time to

- do a care and connect
- take a brain break
- do some physical activity

## Care and connect – Be Kind Bucket

Today we are going to fill a bucket with kindness. When you say something nice to someone you make them feel special which fills up their bucket. Sometimes when someone's bucket is empty, they might feel sad or alone. Find a bucket, a bowl or a cup. Take 3 post it notes, or small pieces of paper and write one of these sentence starters on each piece.

Thank you for...

I like it when....

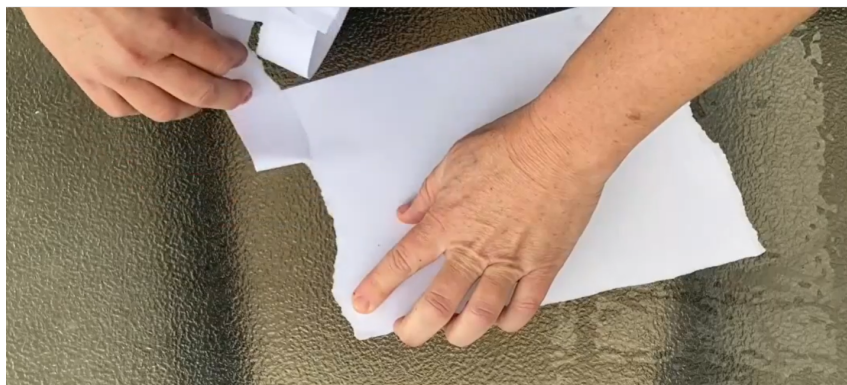
You're the best at ....

Think about a person in your house you could give these to. Finish each sentence with some kindness for that person. Place the 3 notes into the bucket, bowl or cup and give it to the person.

How did it feel to fill up someone's kindness bucket? How do you hope they felt reading the statements? It's important to keep everybody's bucket, including your own, filled with kind thoughts, good thoughts and happiness. Is there someone else you could do this for?

## Brain break – Rip-a-strip

You will need a piece of paper. How long we can rip it?



Starting at the top corner of the paper, carefully rip it down to the side of paper just before the corner and then turn the paper and do the same until you get to the middle. How long is your paper?

## English – Activity 1 – Vocabulary: Word chain

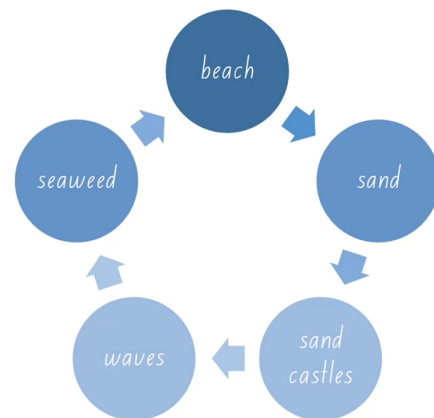


Scan the QR code for today's lesson or read the following instructions.

A word chain is a series of words which are linked together. Looking at this beach setting, think of five words you associate with the beach. An example has been done for you.



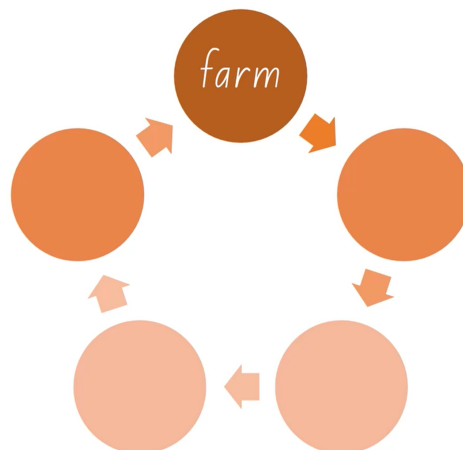
"Indiana dunes" by Pixabay is licensed under [CC BY 4.0](#)



Try to do the activity again, but this time with the word 'farm'. To push yourself, think of challenging vocabulary.



"Farm" by Wai Siew is licensed under [CC BY 4.0](#)



### Challenge

Complete a new word chain for a setting of your choice.

## English – Activity 2 – Reading and viewing: Characters and setting

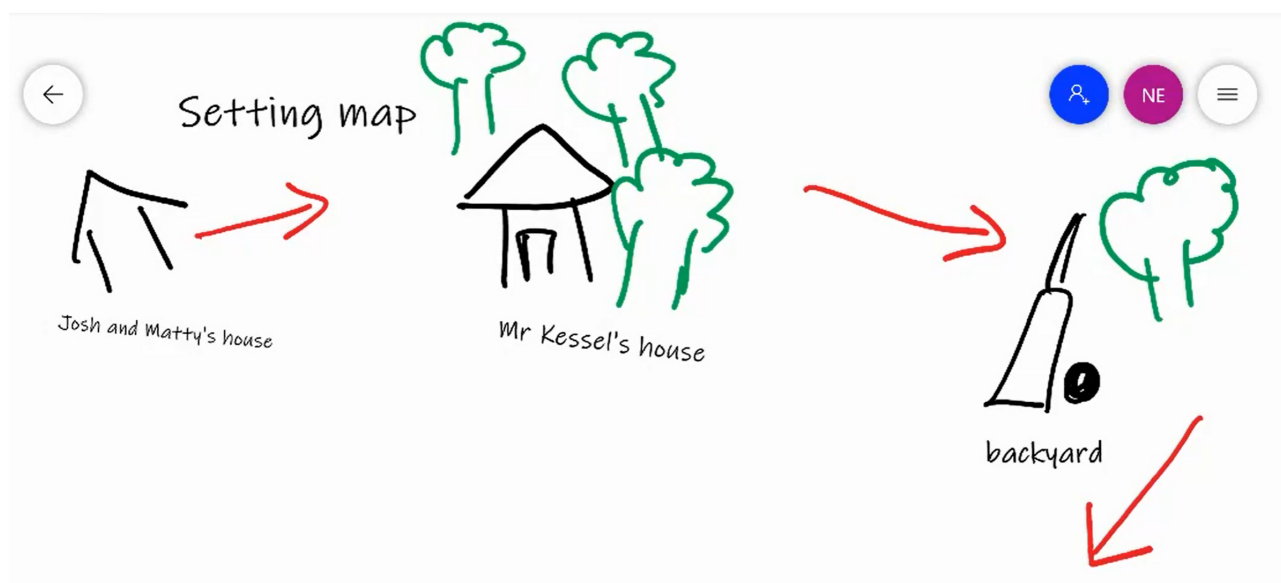


Return to the text 'Mr Kessel's Bush Tucker Garden' for today's lesson. Scan the QR code for the lesson or read on for instructions.



A setting map is a one-page diagram which shows us the places (settings) the author takes us to in the story. Think about where the story started. Draw a diagram of that location and label it. Then, where does the story go next? Draw a labelled illustration of this location and connect the two locations with an arrow.

Below you can see the example of a setting map. It has been started for you. Draw your own setting map of 'Mr Kessel's Bush Tucker Garden' in your workbook.





## English – Activity 3 – Writing: Description of settings



Scan the QR code if you would like to hear today's lesson or read the instructions below.

Look at the image of the beach. Today you will use this image to help you to gather ideas and write a description of this beach.



["Indiana dunes"](#) by Pixabay is licensed under [CC BY 4.0](#)

Use your senses and think about what you might be able to see, smell and hear. Complete the planning tool below with your ideas.

Sights	Sounds	Taste
e.g. water, waves crashing	e.g. birds squawking, lifeguards talking	e.g. salty air
Smells	Feels	Weather
e.g. sunscreen, fishy air	e.g. crunchy sand under my toes	e.g. gentle breeze

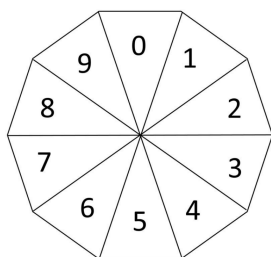
In your workbook, write a paragraph or two with your description of the beach. Use your ideas from your planning tool.

# Maths – Activity 1 – Multiplication toss

Adapted from Dianne Siemon, RMIT University



Scan the QR code for the instructions. If you don't have a device, follow the instructions below



Materials:

- Spinners ( on next page)
- Paperclip for spinner
- Grid paper ( on next page)
- Coloured pencils

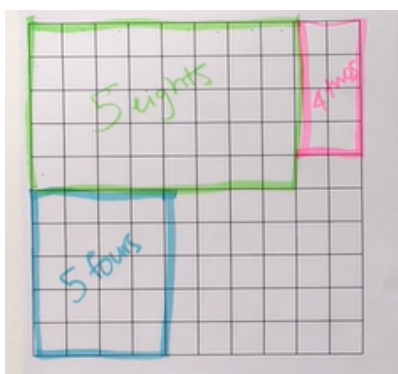
Either make a spinners or you could write the numbers 0-9 on slips of paper and put them in a bowl.



Instructions:

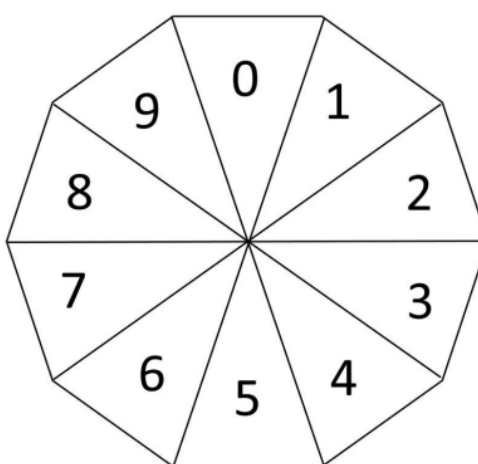
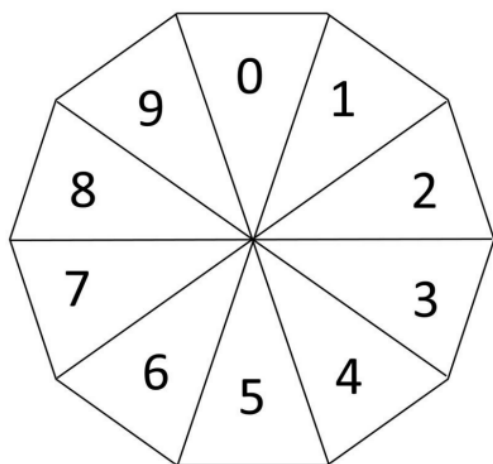
1. Spin or draw out 2 numbers.
2. These numbers will help you draw the region on the grid. For example, a 6 and a 4 could be recorded as 6 fours (6 rows of 4) or 4 sixes (4 rows of 6).
3. Draw your region onto the grid paper as shown. No overlaps.
4. You also need to record this on another piece of paper.
5. See how much area you can block out in 10 turns.

Eventually the space on the grid paper gets really small. Then, you have to think: What if my 3 sixes won't fit as 3 sixes or as 6 threes? You can partition (pull apart) the areas, for example, I can rename 6 sixes as 2 sixes and 1 six (if that helps me fit the block into my game board).



5 zeros	=	$5 \times 0 = 0$
0 twos	=	$0 \times 2 = 0$
5 eights	=	$5 \times 8 = 40$
3 zeros	=	$3 \times 0 = 0$
5 fours	=	$5 \times 4 = 20 = 10 \text{ twos} = 2 \text{ tens}$
4 twos	=	$4 \times 2 = 8$
0 sixes	=	$0 \times 6 = 0$

# Multiplication toss



## PDHPE – Activity – Being active at home



Scan the QR code to watch the teaching video on being active at home or read the instructions below.



Today we are learning about the different ways to be active at home and how we can be more active at home.

- What does being active mean?

The word active means moving your body. Being active can include actively playing with your family and friends, playing sport or other exercise. Examples include jumping, kicking, riding a bike, running, wheelchair basketball and playing tag.

- What are different ways to be active at home?

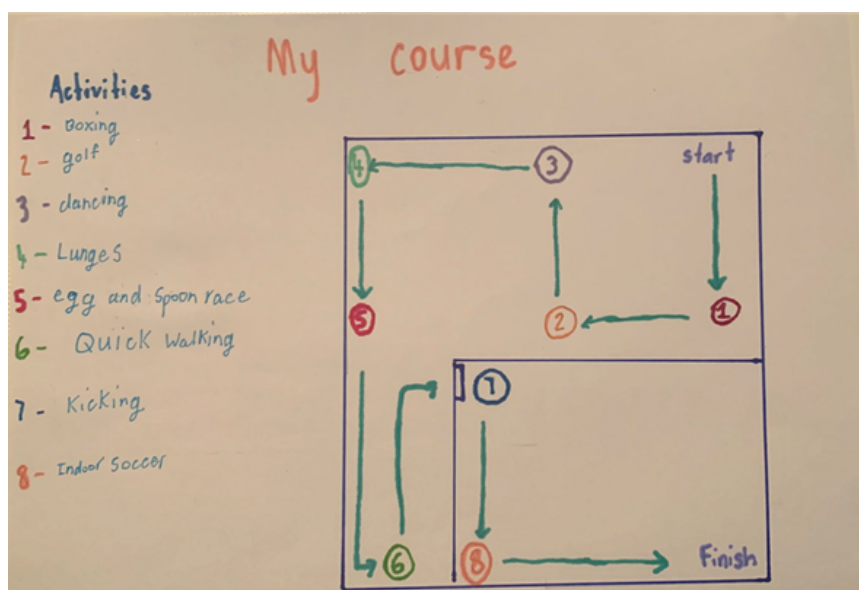
You can be active both inside and outside of your home. In your workbook record the letters A-Z down your page. You might need to make 2 columns

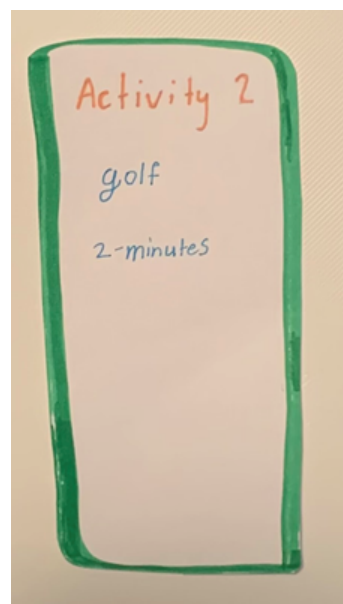
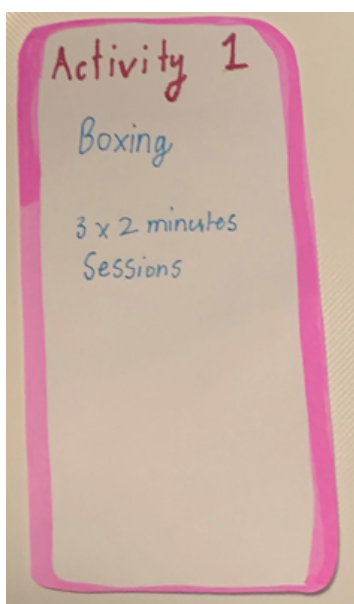
Write a way to be active at home next to each letter. For example, a way to be active starting with A is aerobics, a way to be active starting with B could be bowling.

Activity:

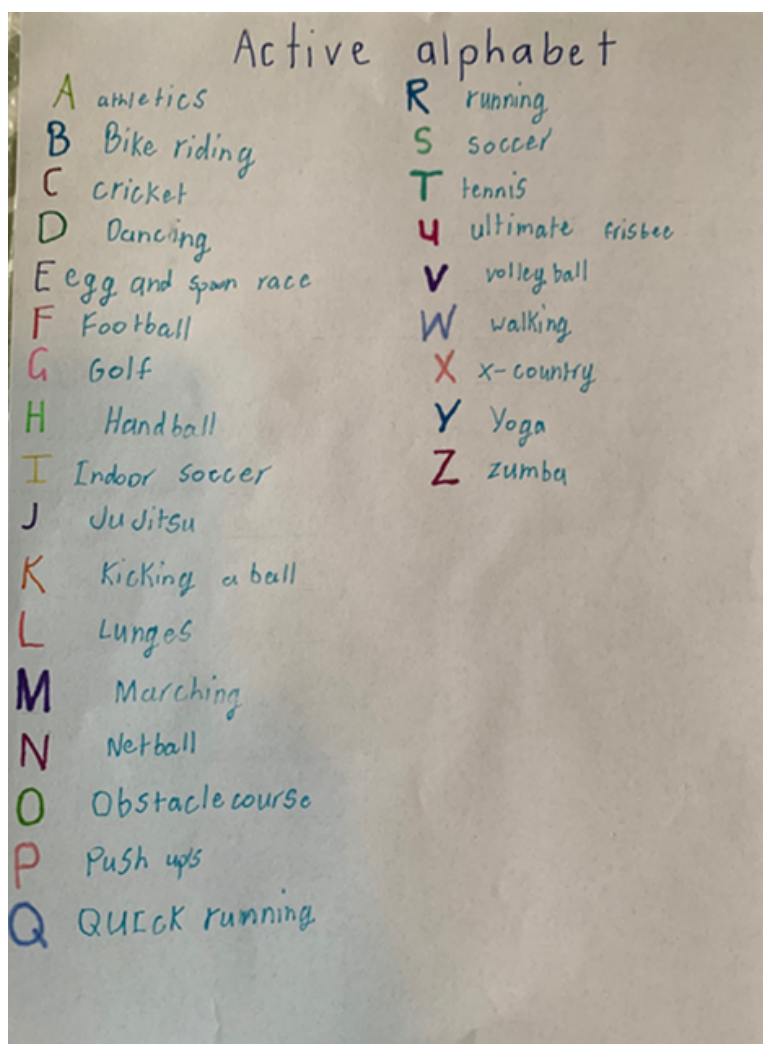
In your workbook - design an activity course with activity cards that your class could use to be more active at home. Before you start: decide if your course will be an inside or outside course.

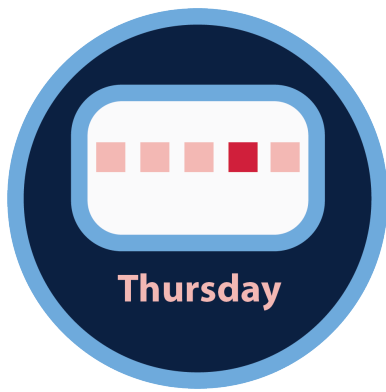
1. Plan the different activities in your course. You could include some ideas from the active alphabet activity.
2. Design and create each activity. Create an activity card for each activity. It might include a drawing or picture, any equipment needed and how many times the activity should be performed.
3. Test out your course. You could complete the course each day and ask someone in your family to do it with you.













Possible answers for A-Z being active activity:





## Things you need

Activity	You will need
Most activities	 workbook  paper  lead pencil and coloured pencils
Physical Activity	 A medium-sized ball that bounces (like a basketball)  Timer Water bottle
Maths activities	 Square grid paper ( included)  Triangular grid paper ( included)  4 different coloured highlighters, pencils, markers or pens

During the day make sure you take time to

- do a care and connect
- take a brain break
- do some physical activity

## Care and connect – Mindfulness Listening

Sometimes we forget to slow down and engage with the world around us. Today we are going to spend some time sitting outside and listening. Find a quiet spot, it may be in your garden, on your balcony or front porch or even next to an open window.

Close your eyes. And think about:

What noises do you hear?

Can you identify them?

Do they sound close by or far away?

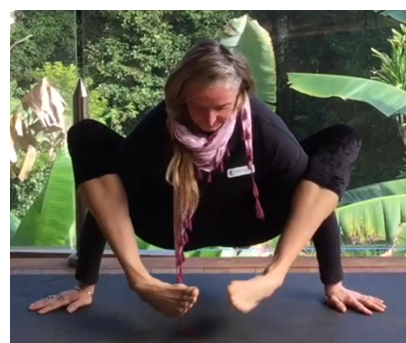
Do you often hear these noises? If not, why do you think you don't notice them?

What is your favourite sound you heard?

When you have finished go and tell one someone at home about the noises you heard.

## Brain break – Stretching – Balancing Poses

Try these balancing poses:



## Physical activity – Bouncing and Dribbling

Scan the QR code to watch the teaching video Bouncing and Dribbling or read the instructions below.



Today you are working on your bouncing and dribbling skills.

1. Collect the items you need (see the things you need list).
2. Warm up your body – Run on the spot for 30 seconds, star jumps for 30 seconds, squats for 30 seconds, jumping side to side for 30 seconds. Spend 3 minutes stretching your muscles.
3. Practice your one hand dribbling. Remember to control the ball and make the bounce come to waist height.
4. Using your 1 hand dribble walk forward and backward while bouncing the ball. Walk forward 5 steps and backward 5 steps. With each step bounce the ball (5 steps = 5 bounces).
5. Can you spell words while walking and bouncing? Spell your first name while walking forward and then spell your last name walking backwards? Think of some other words you can spell. How many words can you spell in 30 seconds?
6. Practice your crossover dribbling. Remember to bounce the ball in a V shape.
7. Using your crossover dribble take a large step and bounce the ball between your legs. Take another step and bounce the ball between your legs. Can you take 4 large steps forward and bounce the ball through your legs each step? How many crossover dribble steps can you take in 30 seconds?



8. Make up your own bouncing and dribbling walking/stepping challenge. Challenge someone at home to do it too!

## English – Activity 1 – Vocabulary: Predict the language



Scan the QR code if you would like to view the lesson.

Look at this image of a pretend book cover.



"Dragon cliffs" by Kellepics is licensed under [CC BY 4.0](#)

If this was a book, what words do you think might appear in the story?

- Nouns – naming words. These are usually things we can touch and see. What would you be able to see in the story?
- Adjectives – describing words. What words describe the cliffs and the dragons?
- Verbs – action words. What might the characters be doing?
- Adverbs – add more meaning to the verbs. How is the dragon flying?

Brainstorm words that you think may be found in this story.

Nouns	Adjectives	Verbs	Adverbs
e.g. dragons, cliff	e.g. steep, icy cold	e.g. fight, battle	e.g. magically, aggressively



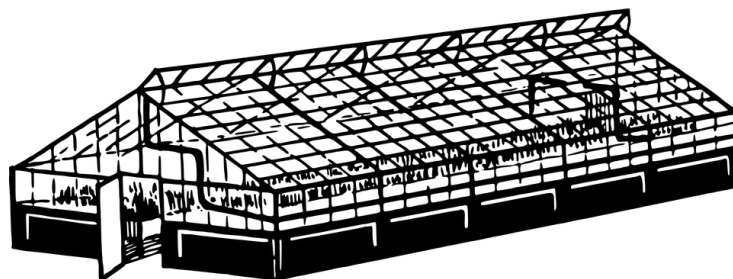
## English – Activity 2 – Reading and viewing: ‘Mr Kessel’s Bush Tucker Garden’



Scan the QR code to view the lesson or read the following instructions.

Today’s focus will be on the greenhouse you read about in the story ‘Mr Kessel’s Bush Tucker Garden’.

A greenhouse is a place where plants are grown. The roof is see-through to let in lots of light. It also keeps the plants warm and protects them from the weather.



"Image" by [OpenClipart-Vectors](#) is licensed under [CC BY 4.0](#)

What nouns and adjectives could you use to describe the greenhouse? Complete the table.

Nouns		Adjectives	
building		small	
walls		see-through	
markers		plastic	

In your workbook, use your ideas from the table to write a description of the greenhouse. You could include information about what it looks like. Where is it located? What will you find inside the greenhouse?

## English – Activity 3 – Story Ingredients



Scan the QR code to watch the 'Story ingredients' video featuring author Deborah Abela.

In this interesting video, Deborah shared her three story 'ingredients'.

- **Characters** – Who is in your story? Why are they interesting?
- **Settings** – Where does your story take place? Is it somewhere intriguing or interesting?
- **Problems** – find things to go wrong!

She suggested that the secret to writing interesting stories, is to be good at making trouble! You need to have interesting problems. You also need to think about what your characters want.

Today you will plan lots of great story ideas. In your workbook, create the following table. You need three columns with the headings - Character, Setting, Problem. Write down as many different ideas as you can under each of the headings.

You will use this plan for narrative writing so try to think of as many ideas as you can!

Different Character ideas	Interesting Setting ideas	Troubles/ Problems
Magical puppy Evil dentist.	Jungle treehouse Opera House	The school disappears. You lose your voice before your singing concert.

### Challenge

Think about a twist in your story. What is something that will take the reader by surprise?

# Maths – Activity 1 – Spirolaterals – part 1 and 2

Adapted from youcubed



Get ready to make your own spirolaterals! If you have a device scan the QR code to watch how we can make spirolaterals using paper, number some coloured markers. If you don't have access you can use the instructions and diagrams below.

Your grid paper is on the following pages.



## How to make a spirolateral

1. Pick a colour for each direction and draw it at the top of your page.
2. Choose the numbers you are going to use in your spirolateral.



Here is a list of numbers that you might like to try. You can see there are 3 sets of numbers with an odd amount of numbers and 3 sets of numbers with an even amount of numbers. We are looking for patterns.

Odd amount of numbers

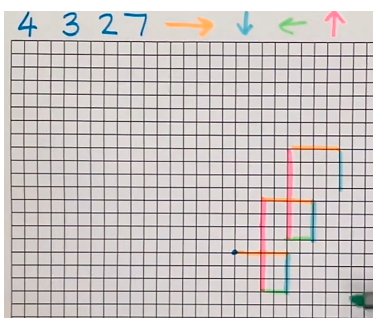
1, 4 and 2 3 numbers (odd)
7, 5 and 3 3 numbers (odd)
1, 5, 2, 4 and 3 5 numbers (odd)

Even amount of numbers

1 and 4 2 numbers (even)
5, 6, 1 and 2 4 numbers (even)
8 and 7 2 numbers (even)

3. Choose a point on your page to start and spiral through your first set of numbers. If you were doing the numbers above your first list would be 1,4 and 2
4. Continue and spiral through your list again. Make sure you keep using all four colours.
5. Continue until you return to the start or are convinced that your spirolateral will not return to the start.

This picture shows the numbers 4,3,2 and 7 being spiralled through over and over again.

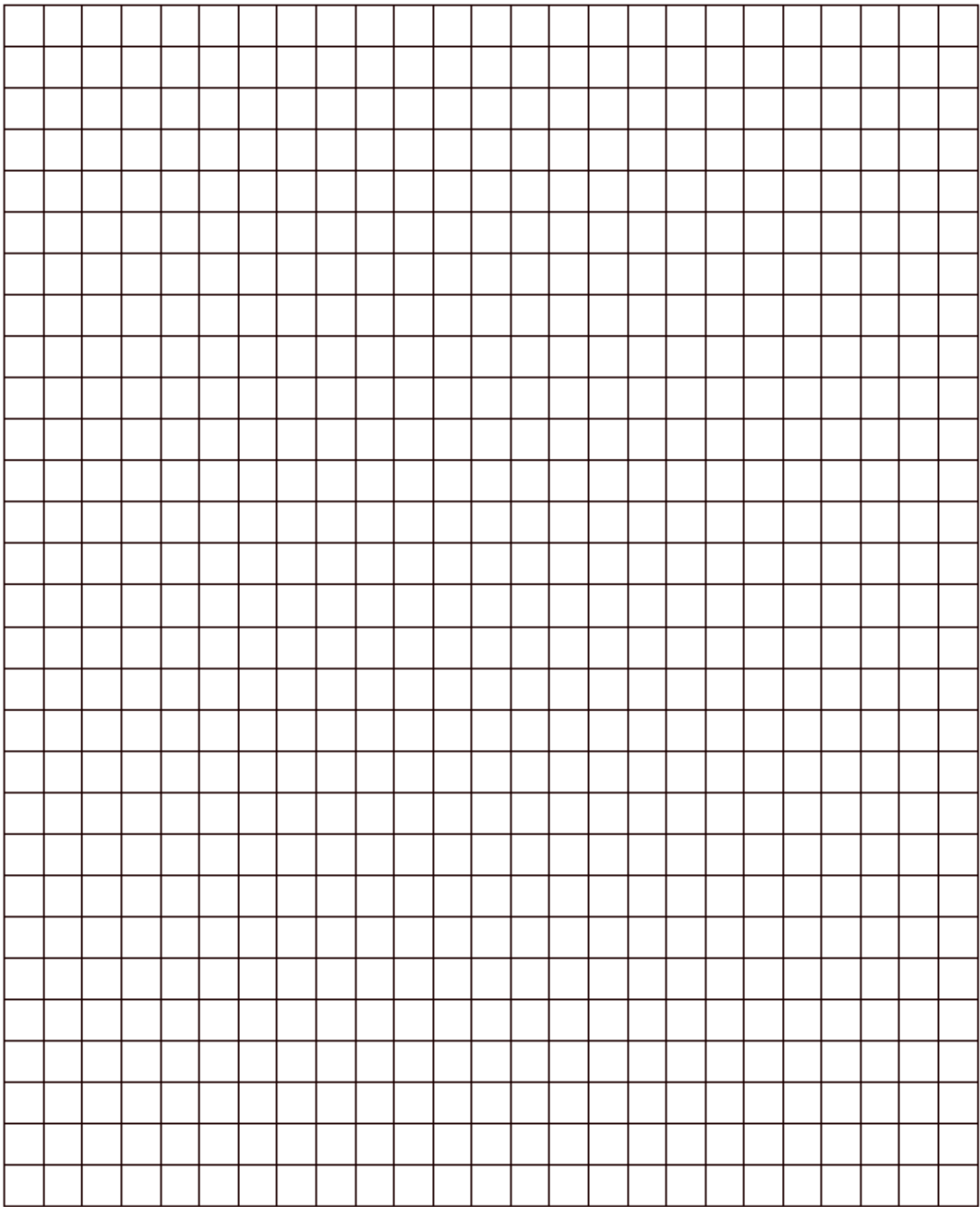


What do you notice about your spirolaterals? Record what are noticing.

# Grid paper for Spirolateral activity

| NSW Department of Education

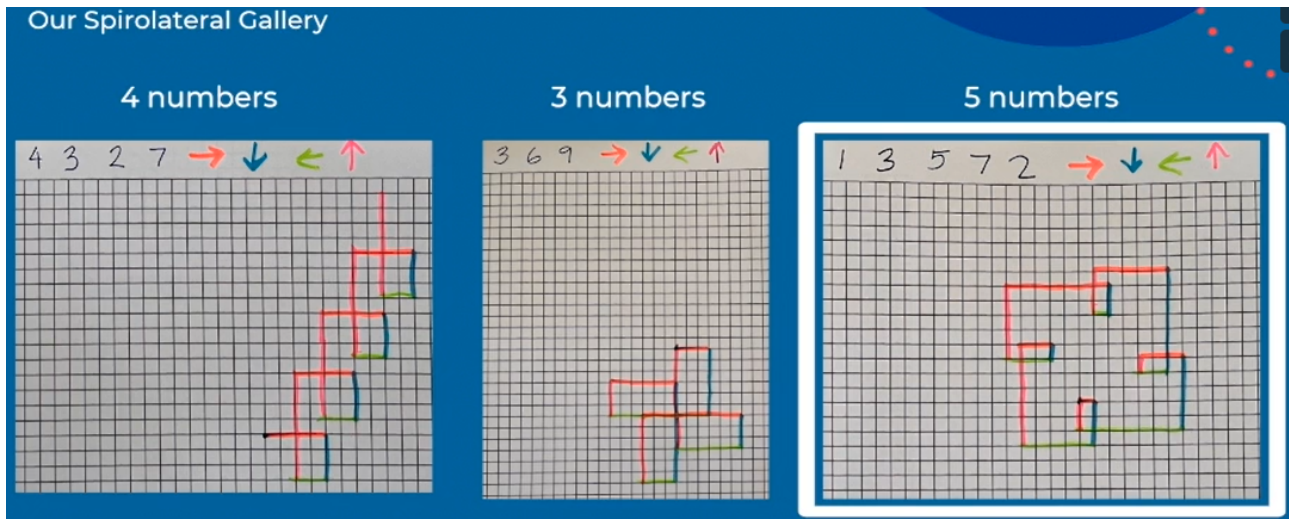
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Once you have completed your spirolaterals look at the images below.

Here are 3 different spirolateral using different amounts of numbers.



If I look at this I might notice that the spirolateral created with an even amount of numbers did not return to its starting point.

The spiorlaterals with an odd amount of numbers did return to its starting point.



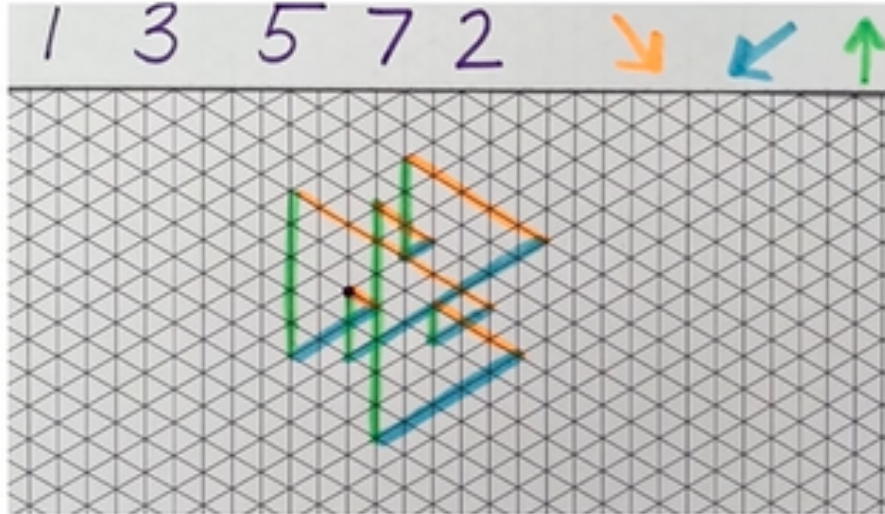
## Challenge:

- Can you find an example of where an odd amount of numbers forms a spiral that **doesn't** return to its starting point?

## Maths – Activity 2 – Spirolaterals – part 3 and 4

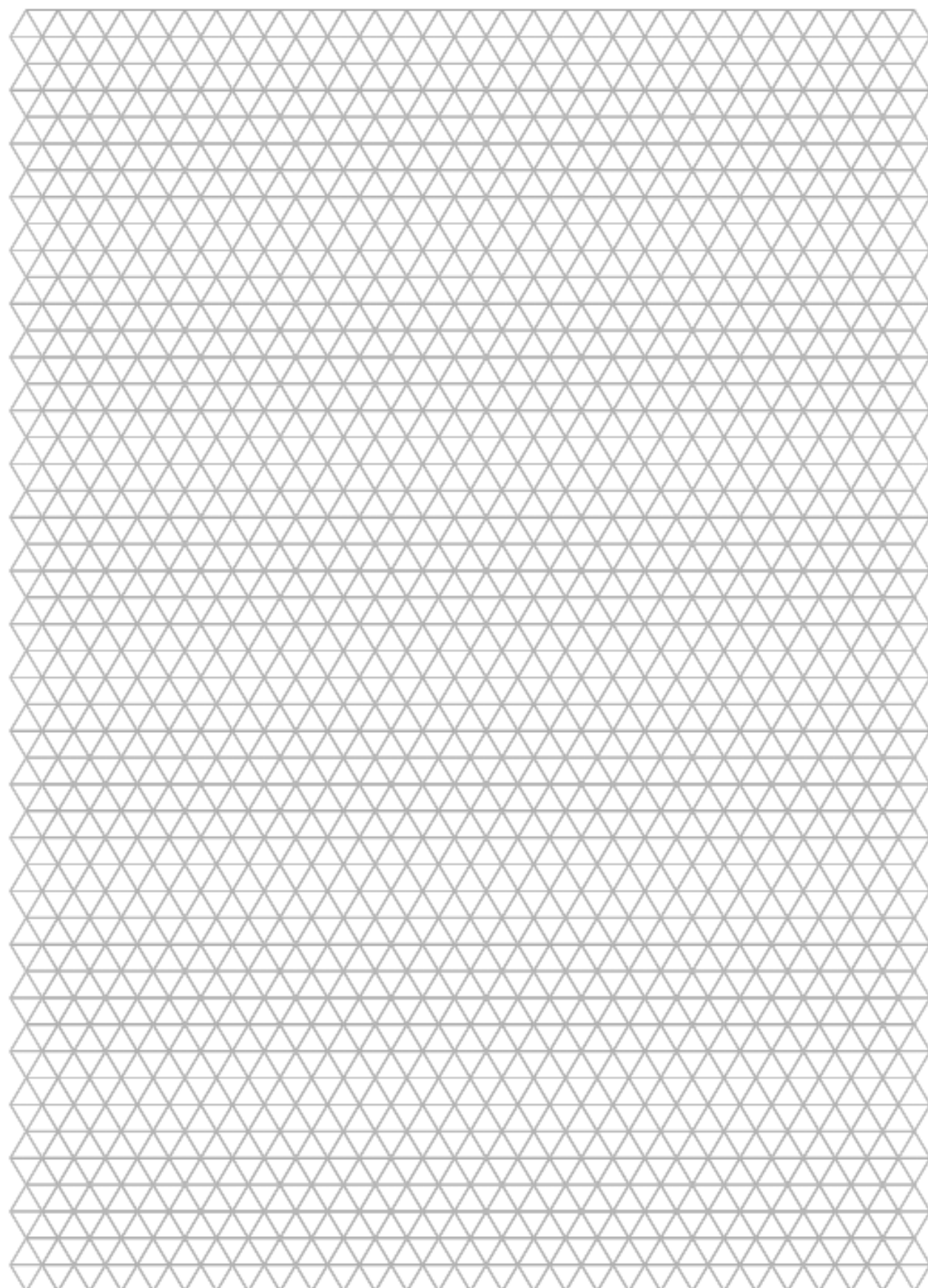
What happens if we use different paper to create spiorlaterals?

If we use triangular paper we will only need 3 coloured markers and can set it out like this picture looking at the different directions.



Experiment using odd and even amounts of numbers. Does our theory about odd and even amounts, and whether they make a spirolateral return to its starting point, hold true for triangular paper as well? Record your thinking.





# Science and Technology – Option 1 – Animal-plant relationships



Scan the QR code to watch the teaching video on animal-plant relationships or read the instructions below.

Today we are learning about how animals and plants rely on each other.

- Plants and animals depend on each other for survival. It's called interdependency.

Termites play such an important role in the environment. They help many different kinds of animals and plants. Termites eat wood. They eat non-stop, 24 hours a day, seven days a week! Most termites like to eat damp, dead wood. In the environment, termites eat through the centre of branches and tree trunks as this is usually the softest part of the wood. This hollows out trees and branches. It creates places for birds and possums to live. They also eat fallen tree trunks. Remember, what goes in must come out! Termites eat so much and after the wood passes through their bodies it is a rich fertiliser which helps to replace nutrients in the soil.

Activity: In your workbook answer these questions:

- How do tree hollows form?
- What types of animals use tree hollows?
- How do termites add nutrient to the soil?
- Where do trees find their nutrients?
- What would happen to dead trees if there were no termites in the environment?

Activity: Create a report - Choose one of the following options:

You might like to create a mind map, a poster or even video a short documentary style report.

Option 1: Create a report on how termites help animals and the environment.

Option 2: Create a report on how a different animal or insect helps other animals and the environment.

### Optional Challenge:

#### Termites in the hot climates of Australia:

- Research the termites of northern Australia, where the temperatures are so high that termites build their mounds in a very special way.
- How are these mounds different?
- How do these termites cool their mounds?
- You might like to create a mind map, a poster or even video a short documentary style report.

## Science and Technology – Option 2 – Seed dispersion



Scan the QR code to watch the teaching video on Seed dispersion or read the instructions below.



Today we are learning about how insects help trees with pollination.

- Plants and animals depend on each other for survival.

Plants rely on many animals, especially insects, to help fertilise their flowers through pollination. Insects, such as bees, feed on the sweet nectar in the flower. Pollen sticks to their legs and bodies while they are feeding and when they move to the next flower the pollen rubs off and fertilises the flower. The tree then produces seeds to continue its reproduction.

Birds and bats also help with tree reproduction. They eat the berries from trees and fly far away. The berry gives the birds and bats lots of nutrients for energy. The seed passes through their bodies and comes out in their droppings. The seed could land many kilometres away from the tree they were eating from. When seeds are spread this way, it is called seed dispersion.

Activity: In your workbook answer these questions:

- What kinds of insects are known for pollinating plants?
- What are some other kinds of insects that pollinate trees and shrubs?
- How do plants make their berries attractive to birds?
- How else do animals and plants help each other?

Activity: Create a report - Choose one of the following options:

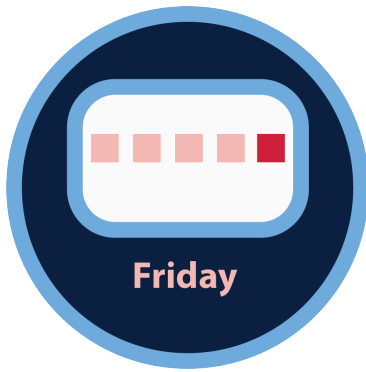
You might like to create a mind map, a poster or even video a short documentary style report.

Option 1: Create a report on how insects help pollinate plants and trees.








Option 2: Create a report on how birds and bats help with tree reproduction.

Optional Challenge:

Research the types of native plants that usually grow near you. Design a garden for your yard that includes these plants. Think about which animals and insects you might attract to your garden. You could even ask an adult if you can create the garden in your yard with those plants.



## Things you need

Activity	You will need
<b>Most activities</b>	 workbook  paper  lead pencil and coloured pencils
<b>Brain Break</b>	 Timer
<b>Maths activities</b>	 A book, magazine or newspaper with written text in it  paper  pens
<b>STEM</b>	20 sticks of spaghetti pasta tape string small toy, such as a LEGO person, to be at the top ruler scissors

During the day make sure you take time to

- do a care and connect
- take a brain break
- do some physical activity

## Care and connect – Tap and Wink

Can you wink with your right eye and tap your left shoulder?

Can you wink with your left eye and tap your right shoulder?

Can you do these one after the other?

Can you do 10 in a row?

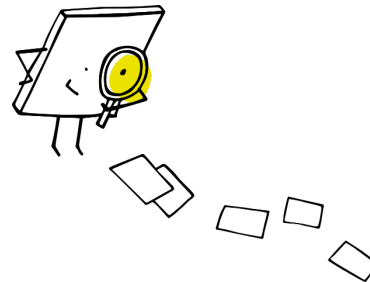


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## Brain break – Scavenger Hunt

Can you find all of these items in one minute?

- sock
- toothbrush
- piece of fruit
- spoon
- pencil



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## English – Activity 1 – Listening: KidsNews ABC



Scan the QR code and listen to the five stories on 'KidsNews ABC'. If you can't listen to these stories, listen to or read a different story. You could ask a family member to tell you a story, or you could listen to an audio book of your choice.



"KidsNews ABC" by KidsNews ABC is licensed under [CC BY 4.0](#)

In your workbook, write down two interesting facts from each story.

### Challenge

Think of a story that could be told on ABC KidsNews and write it.

## English – Activity 2 – Reading and viewing: ‘Mr Kessel’s Bush Tucker Garden’ Predictions



We will re-visit the text ‘Mr Kessel’s Bush Tucker Garden’ for today’s lesson.

Predict what you think will happen to each of the characters in 10 years’ time. What do you think they will be doing? Where do you think they will be living? What jobs will the boys have? Draw or write your predictions.

For example:

- Mr Kessel – will have set up a free weekend workshop to teach people how to grow and cook from the garden.
- Matty – he will be a gardener running his own business

If you can, justify your answers by explaining why you have made those predictions.

Character	Predictions
Mr Kessel	
Josh	
Matty	
Mum	
Lola	

### Challenge

Write a story about one of the characters’ lives in 10 years’ time.

## English – Activity 3 – Writing: 3 Box Selection



Scan the QR code to view today's lesson or read the following information.

Yesterday you completed a table with ideas for characters, settings and problems. Today you will write a narrative using your ideas. From yesterday's list, choose a main character, where you would like your story to be set and the problem in your story.

Before writing, you need to plan your ideas. Remember that narratives include an orientation, complication and a resolution (beginning, middle, end).



In your workbook, complete a planning table with your ideas

Orientation	Complication	Resolution
<ul style="list-style-type: none"><li>• When (time)</li><li>• Where (setting)</li><li>• Who (characters)</li></ul>	<ul style="list-style-type: none"><li>• Event or events that start the action</li><li>• Event or events that happen when the character tries to solve the problem</li></ul>	<ul style="list-style-type: none"><li>• How is the problem solved?</li><li>• How does the story end?</li></ul>

You are now ready to write your narrative in your workbook. Remember to include:

- Different types of sentences - simple, compound and complex. Try to use a range of sentence beginnings.
- Adjectives and similes - help your reader get a clear picture in their mind.
- Dialogue - can your characters speak? Include interesting spoken text.
- Paragraphs – remember to group your ideas.
- Range of punctuation – full stops, exclamation marks and speech marks.
- Interesting vocabulary – use attention-grabbing words. Can you use a different word to explain your character walking? For example, dawdled, sauntered, and ambled.

Re-read your writing to ensure you have included detail. Don't forget to check your spelling and punctuation are correct.

### Challenge

Try and include figurative language in your narrative - similes, metaphors, alliteration and onomatopoeia.



# Maths – Activity 1 – Scrabble stats – part 1



Adapted from reSolve

In this activity you are going to investigate the game of Scrabble, which was developed in 1933 by Alfred Butts. The scoring system was developed based on the number of times a letter was used in text. Letters that occur frequently are worth less points than letters which do not occur often.

image" by Dariusz Sankowski is licensed under [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)

Do you think the frequency of letters may have changes since the 1930s?

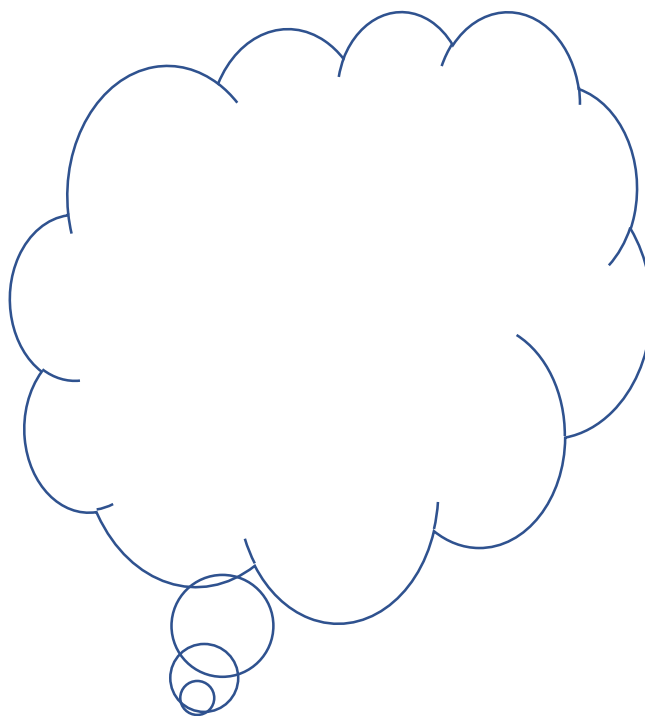
If you have access to a device scan the QR code to watch the video or you can read the instructions below.



Here is a table showing the current point scoring system in Scrabble. In the thought bubble write in some of the things you notice and wonder. Which letters score highest and which lowest. Why do you think this is?

Tile	Point Value
BLANK	0
A	1
B	3
C	3
D	2
E	1
F	4
G	2
H	4
I	1
J	8
K	5
L	1
M	3

Tile	Point Value
N	1
O	1
P	3
Q	10
R	1
S	1
T	1
U	1
V	4
W	4
X	8
Y	4
Z	10



To complete this task we will need to see how often letters are used in today's texts.

- Find a recent newspaper, magazine or book. Choose a paragraph or page to analyse.



Create a table to record your findings. Here is a picture of how to set it up. You will need a column for letters. A column to tally and finally a column to count the end result.

letter	frequency (how often?)	total
A		
B		
C		
D		
E	1	
F		
G		
H	1	
I		
J		
K		
L		
M		
N		
O		
P		
Q		
R		
S		
T	1	
U		
V		
W		
X		
Y		

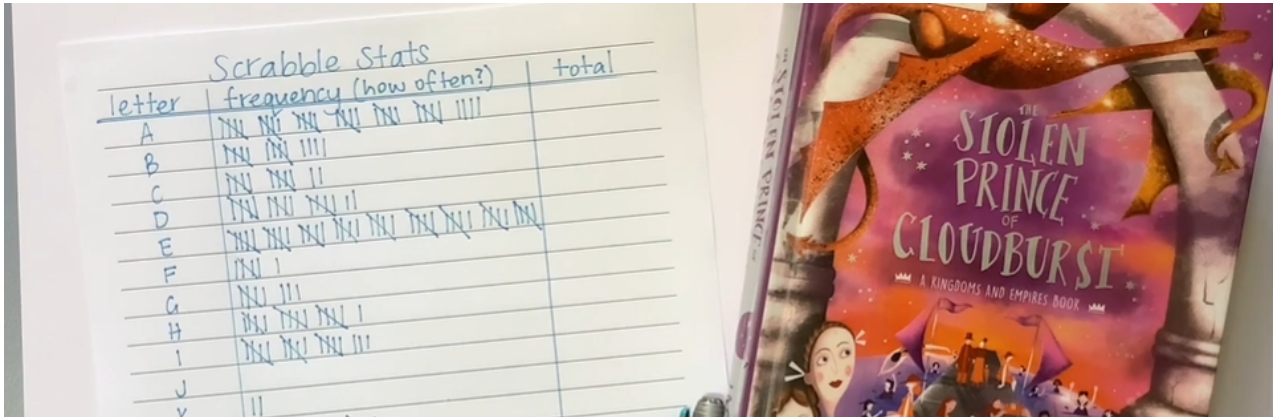
You can see here the first word is "The" so there is one tally in the t, one in the h and one in the e column.

- For each letter in the text you are analysing, record the frequency in your table using tally marks.
- How many times was each letter used in the text you investigated?



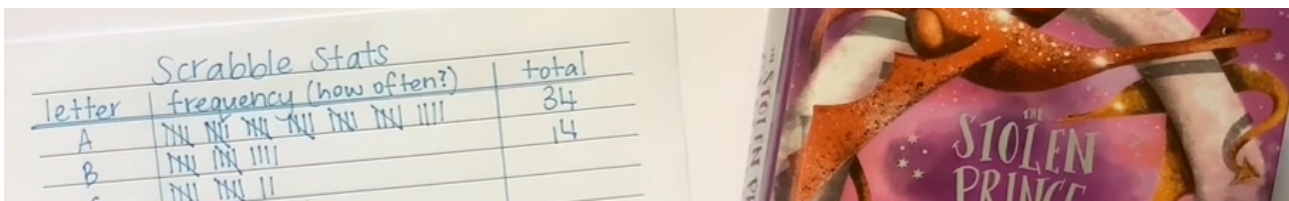
## Maths – Activity 2 – Scrabble stats – part 2

For this activity you will need the table you created in the last activity. This will be used to help you update the scoring system for the 21<sup>st</sup> Century.



letter	frequency (how often?)	total
A		
B		
C		
D		
E		
F		
G		
H		
I		
J		
V		

Once you have a tally write the total in the final column



letter	frequency (how often?)	total
A		34
B		14
C		
D		
E		
F		
G		
H		
I		
J		
V		



Next you need to compare your results with the original scoring system. Complete the questions below;

- What do you notice about the frequency of the letters on your tally sheet?
  - Does anything surprise you?
  - Which letters were you expecting to be used most? Or least?
- Look at the letters that are most frequent (have the highest number) and least frequent (have the lowest number). Compare your data with the original Scrabble scoring system.
  - Are there any similarities?
  - Are there any differences?
- Using your Scrabble Stats findings, identify which letters you think should now be given the highest and lowest scores.
- Add a column to the right of the Classic Scrabble scoring system. In this column use your tally to decide which letters you think should be allocated which points.



Scrabble Stats		
letter	frequency (how often?)	total
A		84
B		14
C		12
D		17
E		45
F		6
G		8
H		16
I		18
J		0
K		2
L		20
M		5
N		31
O		27
P		3
Q		0
R		21
S		16
T		32
U		5
V		3
W		6
X		0
Y		15
Z		0

	Classic Scrabble
1 point	A E I L N O R S T U
2 points	D G
3 points	B C M P
4 points	F H V W Y
5 points	K
8 points	J X
10 points	Q Z

re(Solve) 3

This activity demonstrated how to pose questions and make predictions. Using tables and tally marks helped to efficiently collect and organise data. Conclusions about which letters were most and least frequent were able to be made.

## Challenge activities

- Represent the data you collected in a column graph or a different data display. You may like to use Excel.
- You can also repeat your investigation with a different text.
  - Does the type of text we select change the letter frequencies?
  - What are some similarities and differences between both data sets?

# STEM – Pasta Tower Challenge



## Challenge

Design and build the tallest free-standing tower out of pasta, tape and string. The tower must be able to hold a small toy at the top.

## Rules

1. You can only use the materials on the list
2. Your tower needs to be able to stand up by itself
3. The ruler is only for measuring and cannot be used in the tower structure
4. The toy needs to be at the top of the tower

## Materials allowed

- 20 sticks of spaghetti pasta
- tape
- string
- small toy, such as a LEGO person, to be at the top
- ruler and scissors



## Instructions

- Read the rules.
- Collect materials and think about how they could be used for the challenge.
- Record your ideas and results in your workbook.

## Step 1: Brainstorm and design your tower

- Sketch some designs in your Workbook
- Think about how you are going to attach the toy to the top of the tower
- Does your design meet the challenge rules?
- Which solution are you going to trial? Why did you choose that solution?

Tip: think about ways to get pasta to stand up by itself and to support weight of the toy. Remember, triangles are a strong shape.



## Step 2: Time to build! Make and test your tower

- Build your tower
- Make your design and test it. Does it stand up? Can it hold the weight of the toy?
- Draw or take a photo of your design
- Why do you think it did/did not work?
- What else could you try?

Step 3: Test, improve and present

- Redesign your tower. What improvements did you make?  
Note this on your drawing
- How many times did you test your design?
- Did you meet the challenge?

Optional Challenge:

Too easy?

How much weight can your tower hold? Keep adding weights until it collapses!

Use more pasta and see how tall you can make the tower

Like building?

Architects are people who plan and design buildings. They think about where the building is being made, what materials to use and how the building will be used. Watch this clip about architecture Kid Architects - Classroom - BTN - <https://edu.nsw.link/IM9jgk>

