



# Framework for Learning from Home – Year 5 2021 Term 4 Week 1

For some of the below activities you may need your parents help. Show each completed activity to your parents to check.

	Monday 4 <sup>th</sup> October	Tuesday 5 <sup>th</sup> October	Wednesday 6 <sup>th</sup> October	Thursday 7 <sup>th</sup> October	Friday 8 <sup>th</sup> October
Morning	 <p>公众假日</p>	 <p>Today is a Collaborative planning day for teachers – so there will be minimal answering questions online but we have set some great activities for you today.</p> <p>We look forward to welcoming you back tomorrow!</p> <p>教师备课日。</p>	<p>English 英文</p> <p><b>Viewing/Reading:</b> have a look at the stimulus below 'Jurassic Age' and continue the story using the story starter below.</p> <p>观看/阅读: 细看“侏罗纪时代”下面的图片, 使用下面的故事开头并将故事写下去:</p> <p><i>The dinosaurs all gave a simultaneous roar. It was coming...</i></p> <p><i>Moments before, the lake had been quiet and peaceful. As the golden sun rose above the shadowy, jagged mountains on the horizon, creatures came from far and wide to enjoy their early morning drink from the tranquil pool. All they could hear was the gentle lapping of</i></p>	<p>English 英文</p> <p><b>Spelling:</b> complete a task from the spelling choice board week's soundwaves word list.</p> <p>拼写: 完成拼写选择板周声波单词列表中的一项练习。</p> <p><b>English - Reading:</b></p> <p>英语阅读</p> <p><b>Library ZOOM Session with Mr Philpott</b></p> <p>图书馆老师网课:</p> <p><b>11:30 am – Classes 5D, 5P, 5L and 5J</b></p> <p>Join Zoom Meeting</p> <p><a href="https://nsweducation.zoo m.us/j/68251668283?pwd =WE00dUY4eEV3enFKeWJ 4VGlnQXY1Zz09">https://nsweducation.zoo m.us/j/68251668283?pwd =WE00dUY4eEV3enFKeWJ 4VGlnQXY1Zz09</a></p> <p><b>12:00 noon – Classes 5S, 5M and 5K</b></p> <p>Join Zoom Meeting</p>	<p>English 英文</p> <p><b>Viewing/Reading:</b></p> <p>Listen to podcast 查看/阅读: 收听播客</p> <p><a href="https://www.historystorytime .com">https://www.historystorytime .com</a></p> <p>Choose any episode which looks interesting to you.</p> <p>选择你觉得有趣的一集</p> <p><b>Response/ Writing:</b></p> <p>写作: 完成下列功课:</p> <p>Complete the following activities:</p> <ol style="list-style-type: none"> <li>1 Write the name of the podcast inc. episode name/number.</li> <li>2 Write down three facts you learnt from the podcast.</li> <li>3 Who would you recommend this podcast to? Why?</li> <li>4 Rate this podcast out of 10. Why have you given it this</li> </ol>

		<p><b>Reading 阅读理解</b> <b>Comprehension</b> Please complete the reading comprehension activity that is assigned as a separate assignment for today. 完成今天作为另外布置的阅读理解作业。</p> <p><b>Spelling:</b> Complete one page of Unit 29 below and the online activities for this week's unit. 完成在线拼写作业 <a href="http://www.soundwaveskids.com.au">www.soundwaveskids.com.au</a> Access code: sit815</p> <p><b>Extension:扩展</b> Please note, there is an extension word list. Write a paragraph with at least 10 words from this Extension list. Find the dictionary meaning of at least 10 words. 请注意，从扩展列表中写一个至少包含 10 个单词的段落。找出至少 10 个单词的字典含义。</p>	<p><i>water and contented grunts as thirsts were quenched.</i> <i>Then they heard them: footsteps in the distance. Thump.. Thump.. Thump.. It could mean only one thing.. A T-Rex....</i></p> <p><b>Responding 阅读回应</b> View the Jurassic Age stimulus and answer the following questions. 查看侏罗纪时代的图片并回答以下问题。 1. How do you think the dinosaurs feel when they hear the T-Rex coming? 2. What do you think the T-Rex is thinking? 3. Which of the dinosaurs do you think is the safest? 4. Can you see any similarities between dinosaurs and animals that live on the planet today? 5. How has our world changed since the dinosaurs lived here?</p> <p><b>Spelling:</b> complete a task from the spelling choice board week's soundwaves word list. 拼写：完成拼写选择表里其中一项作业。</p>	<p><a href="https://nsweducation.zoosm.us/j/68406478658?pwd=MHE4dCtOQ2MwV2ozNzdJT1BUN25iZz09">https://nsweducation.zoosm.us/j/68406478658?pwd=MHE4dCtOQ2MwV2ozNzdJT1BUN25iZz09</a></p> <p><b>Reading 阅读理解</b> <b>Comprehension</b> Please complete the reading comprehension activity that is assigned as a separate assignment for today. 完成今天另外布置的阅读理解作业。</p>	<p>rating?</p> <p><b>Soundwaves:</b> 字词练习 Complete one page of Unit 29 below and the online activities for this week's unit. 完成下面第 29 单元的一页和本周单元的在线练习。 <a href="http://www.soundwaveskids.com.au">www.soundwaveskids.com.au</a> Access code: sit815</p> <p><b>Optional Extension</b> 选做题：“侏罗纪时代”</p> <p><b>Activity ‘Jurassic Age’</b> Draw a particular type of dinosaur. Can you think of adjectives that describe what it looks like? Write a descriptive paragraph to go with your image. 画一种特定类型的恐龙。你能用形容词形容它的样子的吗？ 写一个描述性的段落来描述你的想象。</p>
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Break	Break 小憩	Break 小憩	Break 小憩	Break 小憩	Break 小憩
<b>Middle</b> 中段		<p><b>Mathematics: 数学</b> Complete the <b>HotMaths</b> activities set by the teacher, including one HotSheet. 完成老师布置的 <b>HotMaths</b> 作业</p> <p><b>Languages: please complete any Languages work set by your Languages teacher on your Languages Teams account.</b> 完成中文作业</p> <p><b>Wellbeing Activity: 福祉活动</b></p> <p><b>Picture your name</b> Take a photo of each letter of your name by finding them in books or signs. Put them together to spell out your name in a colourful collage. 通过在书籍或标志中找到你名字的每个字母，拍下它们的照片。将它们放在一起，拼出彩色拼贴画你的名字。</p> <p><b>Get started:</b> Crop the letters in the Photos app, then add each photo to a PowerPoint file in the right order. Upload to Teams for your teacher to see.</p>	<p><b>Mathematics: 数学</b> <b>Position Focus</b> Complete the worksheet <b>MG11 Map References.</b> <b>完成数学作业</b></p> <p><b>Optional Extension Activity: Interactive Spinners 选做题</b> Please use the link below to complete the Interactive Spinners task. 请使用下面的链接完成 Interactive Spinners 作业 <a href="https://nrich.maths.org/6033">https://nrich.maths.org/6033</a> Be sure to write down your hypotheses before you use the interactive spinner. 在使用交互式微调器之前，先写下你的假设。</p> <p><b>Wellbeing Wednesday 12:00 – 2:00pm</b> <b>福祉星期三</b></p> <p><b>Try these activities with your family... 尝试以下活动</b> Make a 'Fab File' to collect work and pictures that you are proud of. Look through your work from last term and find three pieces that you really think was your best work, you could also</p>	<p><b>Mathematics: 数学</b> Complete the <b>HotMaths</b> activities set by the teacher, including one HotSheet. 完成数学作业</p> <p><b>Optional Extension Activity: Probably a Code? 选做题</b> Please use the link below to complete the '<b>Probably A Code?</b>' task.请使用下面的链接完成“是代码吗？”作业 <a href="https://nrich.maths.org/6450">https://nrich.maths.org/6450</a> See if you can do the challenge and crack the code, regardless of who is right! This task card is also below. 看你是否挑战并破解密码，不管谁是对的！这张任务卡也在下面。</p> <p><b>Wellbeing/P.E-Fitness DANCE 体育活动</b> Follow these dance routines that are different from the ones you know at school. Then dance to one of your own favourite songs. 跟着这些与学校所学不一样的一套舞蹈动作。然后随着你自己最喜欢的一首歌跳舞。</p>	<p><b>Mathematics: 数学</b> <b>Chance Focus</b> Complete the worksheet <b>SP1 Probability.</b> 完成数学作业</p> <p><b>Optional Extension 选做题 Activity: Same Number!</b> Please use the link below to complete the interactive '<b>Same Number!</b>' task. 使用下面链接完成作业 <a href="https://nrich.maths.org/same-number">https://nrich.maths.org/same-number</a> Use the online simulation to experiment with your theories. 使用在线模拟来试验你的理论。</p> <p><b>Languages: Please complete any Languages work set by your Languages teacher on your Languages Teams account. 完成所以中文作业</b></p> <p><b>Creative Arts: 美术</b> Create an image of a peacock using shapes and patterns. First you will need to draw the outline of the peacock's body in black. Then you will need to draw rhombuses to fan out for the tail. The rhombuses need to be close together near the</p>

开始使用：在“照片”应用中裁剪字母，然后按正确顺序将每张照片添加到 PowerPoint 文件中。上传到 Teams 给老师查看。



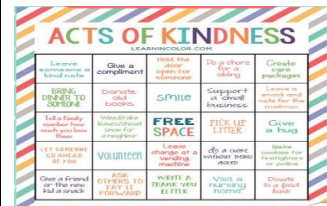
include certificates that celebrate your achievements and cards from people that you care about. You could then look at it whenever you might be feeling low.

制作文件夹，收集你的作品和图片。查看你上学期的作业，找三个你认为是最好的，包括你获得的证书和别人送你的卡片。你可以在心情低落时看看它。



Complete a 'random act of kindness' by doing something nice for a friend or a stranger anonymously (if possible).

匿名（如果可能）为朋友或陌生人做些好事来完成善举。



[Pharrell Williams - Happy \(Lyrics & Dance Video\) - YouTube](#)  
[The Cha Cha Slide Dance - YouTube](#)

Get your family to join in and follow along with your dance routine.

Grab some water and find a space free from any hazards when exercising.

Have Fun dancing!

让家人随你一起跳。

运动时多喝水，找一个没有危险的地方跳。玩得开心！

body and fan out further apart, as they are further away from the body. Create different patterns in each rhombus. Finally create a rainbow effect on the tail by colouring with cool colours close to the body and warm colours closer to the ends of the tail. Use any medium you like (pencil, textas, paper collage) Get creative.

使用形状和图案创作孔雀图像。首先，需要用黑色绘制孔雀身体的轮廓。然后需要画菱形来扇出尾巴。菱形需要互靠近身体的附近。在每个菱形中创作不同的图案。最后在尾巴上创造出彩虹色效果。使用你喜欢的画画工具（铅笔、文本、纸拼贴画）发挥创意。



Break


Break

Break

Break

Break

Break

<p><b>After-noon</b></p>		<p><b>BTN:</b></p> <p>Watch this week's BTN episode</p> <p>观看本周 BTN episode</p> <p><a href="https://www.abc.net.au/btn/">https://www.abc.net.au/btn/</a></p> <p>Complete the online quiz at the bottom of the episode page.</p> <p>完成在线测验。</p>	<p>Listen to some relaxing sounds (e.g. rainfall, beach sounds, rainforest soundtracks). How do they make you feel? <a href="#">This Youtube channel</a> has lots of examples.</p> <p>听一些轻松的声音（例如降雨、海滩声音、雨林音轨）。你感觉如何？下面的 Youtube 频道有很多例子。</p> <p><a href="https://www.youtube.com/channel/UCjzHeG1KWoonmf9d5KBvSiw">https://www.youtube.com/channel/UCjzHeG1KWoonmf9d5KBvSiw</a></p> 	<p><b>Geography:</b> 地理</p> <p>This term, we are looking at the topic “Global Connections”. To start the term off, we are having a closer look at the United Nations. We have looked at ‘The Rights of the Child’ written by the United Nations. But today we will look at the other aspects the United Nations cares for as well.</p> <p>本学期，我们学习“全球连接”主题。这个学期开始，我们将仔细研究联合国。我们看过联合国撰写的《儿童权利》。但今天先看联合国所关心的其他方面。</p> <p>Please complete pages 2, 3 and 4 of “The United Nations” booklet from Inquisitive. It is attached to the bottom of this framework but please visit this link for accompanying videos and digital pages: <a href="http://inq.co/class/spz">http://inq.co/class/spz</a> Password : 3297</p>	<p><b>Activities:</b> 活动</p> <p>Complete an activity from the “activities and ideas for home for parents of primary learners” sheet on the back page of this booklet.</p> <p>完成“小学生家长在家的活动和想法”表中的一项练习。</p> <p><b>Catch-up:</b></p> <p>Finish any unfinished tasks from Monday – Thursday</p> <p>完成周一至周四所有未完成的作业</p> <p><b>Optional Extension Activity:</b></p>
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**Tick the box each time you do an activity**

# Spelling Choice Board

<p><b>Even and Odd</b> Write all of your spelling words that have an odd number of letters in one color and the spelling words that have an even number of letters in another color.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Scratch Words</b> Create a one page <b>Scratch Jr.</b> animation using as many spelling words as you can. Save your Scratch and upload to <b>Showbie</b>.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Bubble Letters</b> Write each of your spelling words in bubble letters. Example: SPELLING</p> <p><b>SPELLING</b></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Poplet</b> Create a <b>Poplet</b> of 5 of your spelling words using definitions and photos to illustrate your words meaning. Take a snapshot and upload to <b>Showbie</b>.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Stair Spelling</b> Write your words in stairs. It may help to use graph paper. <b>Example:</b></p> <p>s st sta stai</p> <p>stair <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
<p><b>Spelling Train</b> Write your spelling words in one long line with no spaces in between. Use a different color for each word. You can make your line curvy so that all the words will fit on a page.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Photo Words</b> Take a photo of a page in a book and using <b>Mark Up</b> highlight any spelling words you find. Then upload the photo to <b>Showbie</b>.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Oh the Spelling You'll Learn!</b></p>	<p><b>Parts of Speech Sort</b> Sort your spelling words by parts of speech:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> nouns</li> <li><input type="checkbox"/> verbs</li> <li><input type="checkbox"/> adjectives</li> <li><input type="checkbox"/> adverbs</li> </ul> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Add 'Em Up</b> Vowels are worth 8 points, Consonants 3 points. Write each spelling word and make a number sentence to show its point value. Eg. Spell = 3+3+8+3+3 = 20</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
<p><b>Syllable Count</b> Write each of your spelling words. Then divide each word into syllables and write the total number of syllables in each word. Eg: spelling spell/ing 2</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Story Creator</b> Use <b>Story Creator</b> app to write a story using as many spelling words as possible. Be sure to illustrate it and record your voice reading it.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>		<p><b>Roll the Dice Forward &amp; Backward</b> Write your spelling words forwards, then write them backwards. Example: spelling - gnilleps</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Secret Code</b> Create a secret code by assigning a symbol, number, or letter to each letter of the alphabet. Then write your spelling words once the normal way and once in code.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
<p><b>He Said, She Said</b> Write a sentence for each of your spelling words. Each sentence must contain quotation marks. Don't forget to underline the spelling words.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Word Parts</b> Color code your words: prefixes = red suffixes = blue bases = green eg. prescription - <b>prescription</b></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Even and Odd</b> Write all of your spelling words that have an odd number of letters in one color and the spelling words that have an even number of letters in another color.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Other Hand</b> Write your spelling words with the hand you normally write with. Then write them again with the other hand.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>Double Word Sentences</b> Write sentences with two spelling words in each sentence. Don't forget to underline the spelling words.</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>

**Semester Two**

## Jurassic Age



# Unit 29



**oo ew ue u\_e u** boot screw glue flute ruler

### List Words

dew  
due  
lose  
choose  
prove  
groove  
approve  
canoe  
juicy  
pure  
cure  
secrete  
endure  
excuse  
amuse  
enthuse  
bruise  
usually  
conclude  
distribution  
genuine  
humour  
humorous  
enthusiasm  
community

### Grapheme Chart

grapheme	word

- 1 Colour the graphemes that represent **oo ew ue u\_e u** in the List Words.
- 2 Go to the List Words for Unit 29. Count the sounds and identify all the graphemes in each List Word.
- 3 Write any other letters that can represent **oo ew ue u\_e u** on the Grapheme Chart. Write one word example for each.
- 4 Colour the grapheme, shown at the beginning of each row, in the words in each row if it represents **oo ew ue u\_e u** or **y**.

<b>oo</b>	tooth	loose	woollen	groovy	choosy	blood	floor
<b>ew</b>	fewer	screw	sew	threw	rewire	firewood	bewildered
<b>ue</b>	due	guest	argue	oblique	fluent	value	continue
<b>ui</b>	juiciest	suitable	liquid	disguise	equipment	bruised	
<b>o</b>	approval	lose	obtuse	improvement	whom	stove	discover
<b>oe</b>	canoe	shoe	poem	potatoes	does	canoeist	toe
<b>u</b>	during	column	incurable	conclusive	endurance	truly	

- 5 Write List Words to rhyme.
 

shoe _____	Lucy _____
cruise _____	include _____
confuse _____	rumour _____
move _____	contribution _____
lure _____	mature _____
- 6 Write words from the brackets to finish the sentences.
 

The \_\_\_\_\_ on the grass had dried by the time our bus was \_\_\_\_\_. (dew, due)  
 I have a \_\_\_\_\_ tooth. I don't want to \_\_\_\_\_ it when it falls out. (loose, lose)  
 Sue \_\_\_\_\_ an orange juice. Now I will \_\_\_\_\_ a milkshake. (choose, chose)  
 Bruce got a huge \_\_\_\_\_ when he hit his elbow on the edge of the stove where he \_\_\_\_\_ his cup of tea each day. (brews, bruise)

- 7 Colour the blocks blue where you hear a blend of the two sounds **oo**. Colour the other blocks red, to see what shapes are revealed.

dew	choose	due	lose	humour	amuse	drew	excuse	obtuse		
cure	canoeing	pure	shoe	huge	do	fewer	tooth	stew	to	argue
usual	unusual	distribute	threw	humorously	cubic	loose	genuinely	new		
groovy	canoeist	secure	enthuse	enthusiastic	conclusion	conclusive				
juicy	conclude	endure	include	exclusive	enthusiasm	juiciest	cruel			
endurance	inexcusable	prove	approve	approval	improvement	bruise				

- 8 Colour Code one word part from each column to form List Words.

hu	thuse	_____
con	noe	_____
en	dure	_____
ex	mour	_____
en	cuse	_____
ca	clude	_____

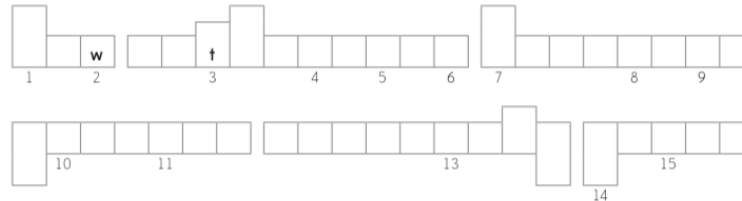
gen	u	rous	_____
us	trib	ity	_____
hu	mmun	iasm	_____
co	thus	ine	_____
dis	mo	ally	_____
en	u	ution	_____

- 9 Circle the List Words from which these words have been built.  
 dewy insecure bruised unusually amusement disapproved concluded  
 impure unamused canoeist genuinely humorously improvement redistribution
- 10 Write the List Words from the same word families as these words.  
 choosy \_\_\_\_\_ incurable \_\_\_\_\_ communities \_\_\_\_\_  
 groovy \_\_\_\_\_ inexcusable \_\_\_\_\_ enthusiastic \_\_\_\_\_  
 juiciest \_\_\_\_\_ conclusive \_\_\_\_\_ distribute \_\_\_\_\_
- 11 Write the words in the box under the Latin root words and meanings from which they have developed. Use your dictionary to help.

lunar	fugitive	unity	insular	luminous	refugee	illuminate	peninsular	lunatic	unite
fugio	means I flee	insular	means an island	lumen	means a light	luna	means moon	unus	means one

### Challenge

- Write List Words to fit in the word shapes. Write the letters from the numbered boxes below to get the answer to the riddle.



Why was the steam train, Chew Choo, confused?

11 3 2 5 4 13 3 4 9 8 10 2 7 10 3 7 10 8 11 3 7 5 1  
 f  
 3 15 4 3 10 5 6 14 9 12 12 4 15 8 14 9 12 12 4 3 10 5 6



SLW28



dew																				
due																				
lose																				
choose																				
prove																				
groove																				
approve																				
canoe																				
juicy																				
pure																				
cure																				
secure																				
endure																				
excuse																				
amuse																				
enthus																				
bruise																				
usually																				
conclude																				
distribution																				
genuine																				
humour																				
humorous																				
enthusiasm																				
community																				

Sound Waves 5 Printables © 2012 Firefly Education Pty Ltd

ISBN 978 1 74135 153 8

SXW32



approval																				
avenue																				
canoist																				
conclusion																				
endurance																				
enthusiastic																				
Europe																				
genuinely																				
humorously																				
improvement																				
inclusive																				
incurable																				
inexcusable																				
insecure																				
juiciest																				
manoeuvre																				
module																				
rheumatism																				
superintendent																				
unusually																				

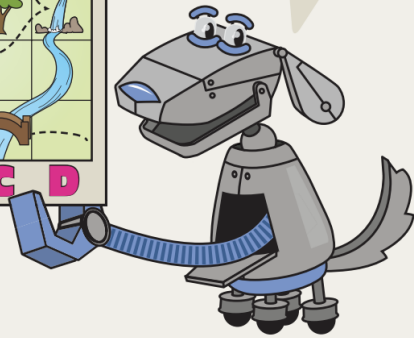
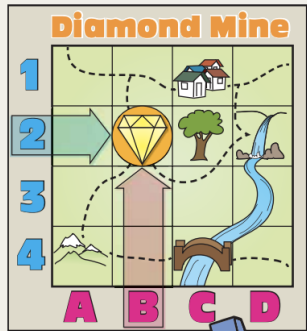
Sound Waves 5 Printables © 2012 Firefly Education Pty Ltd

ISBN 978 1 74135 153 8



## MG11 Map references

Maps are often criss-crossed with horizontal and vertical lines—a grid. This grid is labelled at the edges of the map using letters and numbers. The letters and numbers can be used to locate the **position** of an object on the map. For example, **B2** is the square that contains the diamond mine on the map left.



### Try this

1 Write the map reference for each of these places on the map above. Remember to write the letter first.

- a Village       b Bridge       c Big tree   
 d Waterfall       e Mountains

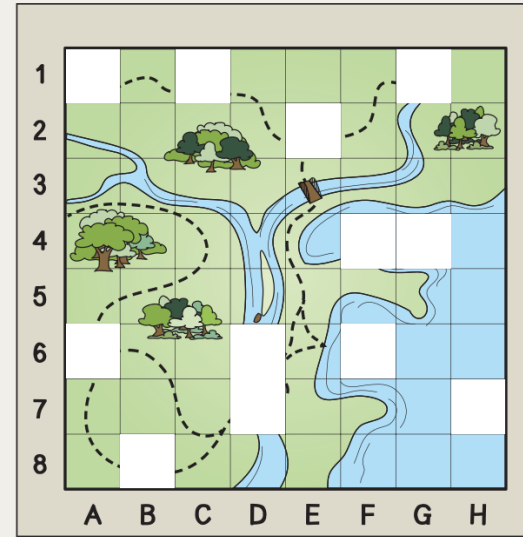
2 Name the place found at these map references.

- a C2       b A4       c D2   
 d C4       e C1

3 Cut out the 12 missing pieces of map at the bottom of this page. Carefully glue them in the correct places on the map.  
 The location of each square is shown by the letter and number on each of the pieces.

4 Play *Find Joe Blake*, a game of map references.

- How to play:
- In the **My snake** grid, draw any snake made from 10 joined squares. (Keep your snake secret!)
  - Take turns to call map references, trying to find out where your opponent's snake is hidden.
  - The first player to find all 10 squares of their opponent's snake wins.



This grid is for you to draw your snake before the game begins. Keep this snake a secret!

My snake	
1	
2	
3	
4	
5	
6	
7	
8	
	A B C D E F G H

This grid will help you find your opponent's snake.

Mark  
 ■ hit or  
 ✕ miss  
 when your opponent replies to each guess you make.

My guesses	
1	
2	
3	
4	
5	
6	
7	
8	
	A B C D E F G H

### Challenge

**Jungle journey:** Use map references to describe the journey along jungle paths from Cactus Flats to the Gold Mine at A6. Give the map reference of each place along the path. A1 to C1 to...





# SP1 Probability

Probability is the measure of chance. The range of probability of an event happening extends from zero to one.



Measures of probability between 0 and 1 are written as fractions. To calculate the probability of an event occurring, the formula used is:

$$\text{Probability} = \frac{\text{Number of favourable outcomes}}{\text{Number of possible outcomes}}$$

Examples: The probability that, in one trial –

- you toss a coin for a head =  $\frac{1}{2}$  (number of favourable outcomes / number of possible outcomes)
- the spinner stops on number 7 =  $\frac{1}{12}$
- the spinner stops on an even number =  $\frac{6}{12}$
- you roll a six-sided dice for a 5 =  $\frac{1}{6}$



### Language reminder

An *experiment* is an activity where the results are unknown.  
 A *trial* is one performance of an experiment.  
 An *outcome* is the result of a trial.  
 A *favourable* outcome is an outcome you want to occur.

### Try this

1 Write the probability of the following events.

a You toss a coin for a tail.

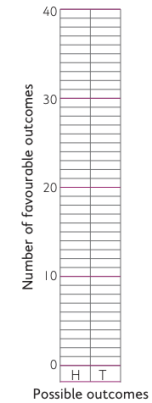
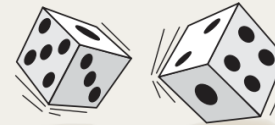
b The spinner above stops on 8.

c You roll a six-sided dice for a 3.

d The spinner above stops on a multiple of 3.

e You roll a six-sided dice for an odd number.

Here are some experiments to test the probability of three well-known chance events. The first two experiments should show an even and fair chance of each outcome. Beware of 'Two-up' where it looks as though there are only three possible outcomes! Try them and see!



### 3 Dice roll

Roll a single six-sided dice 50 times and record each outcome on the column graph. Colour one stripe above each number every time you roll that number.

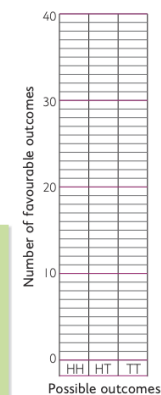


#### Tip

If you haven't enough dice for this activity, number some wooden cubes.

### 4 'Two-up'

Toss two coins at the same time, 50 times, and record each outcome on the column graph. Colour one stripe above HH, HT or TT as they occur.



#### Tip

There are actually four possible outcomes (HH, TT, HT and TH) but we record HT and TH in the same column. Do your results show HT as the most favourable outcome?

### Challenge

**Roll 'em:** Return to the Dice roll and continue to record your results until one of the outcomes reaches 40 on the graph.

## Mathematics Optional Extension: Tuesday

### The Hair Colour Game

#### The Hair Colour Game

Mrs Bunting's class was playing a game using interlocking cubes. All the boys took a red cube and all the girls took a green cube.

Then the children took a black cube if they had dark coloured hair and a yellow cube if they had light coloured hair. They stuck their two cubes together.

The pairs of cubes looked like this:



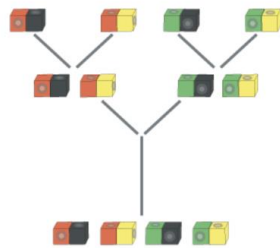
The children then got into four groups according to their pair of cubes. Can you explain what these pairs of cubes stand for?

Mrs Bunting showed them a way of recording the way they had sorted themselves into different groups, called a tree diagram.

At the bottom were all the pairs of cubes. Then they divided into two branches. The red cubes went to the left and the green cubes went to the right.

Then they divided into whether they had black cubes or yellow cubes. Now there were four branches.

Here is the tree diagram:



The next day they did the same again except that this time, they had three cubes each. As well as having a green or red and a yellow or black, they took a brown cube if they had brown eyes and a blue cube if they had blue eyes.



How many different groups were there then? Can you draw the new tree diagram?

What happens if no one had dark hair and blue eyes? How could you show that?

# Mathematics Optional Extension: Thursday

## Probably a Code?

When cracking text-based codes, a first step is often to look for repeated strings of characters resulting from structure in the underlying cypher-text. This can give a way in to cracking the code.

Alison and Steve are considering the following coded message:

vrucsevffsrzpvkepqqmyfvfvarvfhfzecsxzvvorjbtlrkaqmcvbgysct  
nuznglyrkqsqewtauvzpievmbllcciacbfvofpymgrfnpkjuszcjrjuaur  
idgznelhpycaoljzjkrqcioguwavhlvfljbcuqkpkzsvmnpaxivovjtt  
lrqmyovtpjhfkzccrctgksiwoauvzgnvfuaabnitkfnpkjuziohqmpjv  
eopivaolnwwtlgravlbwbjvfvqefpcqolfzvuvvqlqsgvovjekuqfnr  
ybdqulzplcfqimctfsmevzvuyrwmcrebcuqmqqzbtvedcpak  
wldcvzubnumfaurbvorgwnlvbjlfvsvswzqzgrvfrjwnhgzwpvgv  
dgycimulakakafvthabdgktnxqphgzwpfhkpgyrxquubwjghkgcu  
qumnpbyvorimohexitlgkpgzhequmbimxlemqupocmkafszqhqu  
qurwlvaxzvpaxbjlufzkgebeipkqznhbzfvihcvszrlglinzccmpkblz  
orimhvenqvolctsrddgtljquariqypycxwaffugaelavpagzgruqna  
rdknnkwtzgymlfewyhauntvfkilorkzuvlcuqjksveoqcriehyda  
ghjvucfovecmgvlvncipkflzrhfjqpnevqquzvuhaupirrcvfrmm  
tfevokvayqvoribqkvjkqcrimfvakpgonsqvhocmisbsmkafgzqkhtb  
kvajipksvivbevaohlsmyppywwaroiowyviauuvxjlafugunfvorym  
ccretai buqgzhelqbokmflrzgppakqzrlvftwxlevluyzbwkrjejhg  
diaubkjglkgmearuqphfcpaepwhlgvzphycqioqrqohlkpgyruqjyb  
mmtauevquqiwwzcfegyyqeonkbthpkavoremgkyvipkzrgtltlcar  
rbjvhjipkpvgtzgzinvojmctnkqqufkpaevywpewpslkpkzifgcnrk  
wtlaumtauvqtzrvukutvkelakzkjvkqgzpfpvupfkmpasfzgcricuonct  
uhgzvzlpitkrebebezwupgekaukpgzvxpvvsrxcygfvnornwtsqem  
xlesmhvevdkzvkmfhaucfgimckncipkavdgyovnyrzuryvebgkop  
bjlsfvvvsdipaavaghevalakqelzvvvznelvorpitflnppzmpagfkq  
udlmthycnghefnhaxmtveumcaurvfabzvfbpvugabtwotrekgaug  
anhofzkvhjdqfnxmyppybjlwfjgczuftmrvtuduvjlrdjcyxjqphzyb  
vsrswcjzjbjovjppsvuiatnkmvarvgecvlkavfvqmzaevivzabcyqu  
unkqxlezdgyolbubcgwupaxinsgymulpfvllpkctfkwldsrullfchea  
ewvjbebgzkgpgpavavpzrjnlovvgmvkejppyquonctevawmtvartn  
tneskuqkwvorciuatvgykqquoplkzpfdyveocwnjacnremcygy  
mrvyvbqaufagjblvvyvavvevieojyqeonkxtlfvzvzbdipzfvvofrzg  
yrhckzvkmqyopiujribcpazviauvagjevbmgyomohtemvduzkjpsr  
bcsygwuzvstgjnewpslsmgmsvklvqsgcuhelgygrskutjceonjukur

Alison computes the frequency of each letter, finding these results:

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
85	55	72	22	73	77	85	48	61	58	90	77	61	55	55	87	80	78	41	58	94	166	44	21	53	80

After some fiddling around on a spreadsheet, Steve notices that there are seven repeated strings of 5 letters, highlighted as shown below:

vrucsevffsrzpvkepqqmyfvfvarvfhfzecsxzvvorjbtlrkaqmcvbgysct  
nuznglyrkqsqewtauvzpievmbllcciacbfvofpymgrfnpkjuszcjrjuaur  
idgznelhpycaoljzjkrqcioguwavhlvfljbcuqkpkzsvmnpaxivovjtt  
lrqmyovtpjhfkzccrctgksiwoauvzgnvfuaabnitkfnpkjuziohqmpjv  
eopivaolnwwtlgravlbwbjvfvqefpcqolfzvuvvqlqsgvovjekuqfnr  
ybdqulzplcfqimctfsmevzvuyrwmcrebcuqmqqzbtvedcpak  
wldcvzubnumfaurbvorgwnlvbjlfvsvswzqzgrvfrjwnhgzwpvgv  
dgycimulakakafvthabdgktnxqphgzwpfhkpgyrxquubwjghkgcu  
qumnpbyvorimohexitlgkpgzhequmbimxlemqupocmkafszqhqu  
qurwlvaxzvpaxbjlufzkgebeipkqznhbzfvihcvszrlglinzccmpkblz  
orimhvenqvolctsrddgtljquariqypycxwaffugaelavpagzgruqna  
rdknnkwtzgymlfewyhauntvfkilorkzuvlcuqjksveoqcriehyda  
ghjvucfovecmgvlvncipkflzrhfjqpnevqquzvuhaupirrcvfrmm  
tfevokvayqvoribqkvjkqcrimfvakpgonsqvhocmisbsmkafgzqkhtb  
kvajipksvivbevaohlsmyppywwaroiowyviauuvxjlafugunfvorym  
ccretai buqgzhelqbokmflrzgppakqzrlvftwxlevluyzbwkrjejhg  
diaubkjglkgmearuqphfcpaepwhlgvzphycqioqrqohlkpgyruqjyb  
mmtauevquqiwwzcfegyyqeonkbthpkavoremgkyvipkzrgtltlcar  
rbjvhjipkpvgtzgzinvojmctnkqqufkpaevywpewpslkpkzifgcnrk  
wtlaumtauvqtzrvukutvkelakzkjvkqgzpfpvupfkmpasfzgcricuonct  
uhgzvzlpitkrebebezwupgekaukpgzvxpvvsrxcygfvnornwtsqem  
xlesmhvevdkzvkmfhaucfgimckncipkavdgyovnyrzuryvebgkop  
bjlsfvvvsdipaavaghevalakqelzvvvznelvorpitflnppzmpagfkq  
udlmthycnghefnhaxmtveumcaurvfabzvfbpvugabtwotrekgaug  
anhofzkvhjdqfnxmyppybjlwfjgczuftmrvtuduvjlrdjcyxjqphzyb  
vsrswcjzjbjovjppsvuiatnkmvarvgecvlkavfvqmzaevivzabcyqu  
unkqxlezdgyolbubcgwupaxinsgymulpfvllpkctfkwldsrullfchea  
ewvjbebgzkgpgpavavpzrjnlovvgmvkejppyquonctevawmtvartn  
tneskuqkwvorciuatvgykqquoplkzpfdyveocwnjacnremcygy  
mrvyvbqaufagjblvvyvavvevieojyqeonkxtlfvzvzbdipzfvvofrzg  
yrhckzvkmqyopiujribcpazviauvagjevbmgyomohtemvduzkjpsr  
bcsygwuzvstgjnewpslsmgmsvklvqsgcuhelgygrskutjceonjukur

Steve dismisses this as coincidence, saying "I would guess that these repeated 5-letter sequences are consistent with randomly generated text based on these frequencies of letters". Alison is not convinced and thinks that this structure of 5 letter sequences would not likely occur randomly for these frequencies of letters.

Investigate.

Challenge: Crack the code, regardless of who is right!

# How are indigenous peoples and other groups around the world protected and supported?



# How are indigenous peoples and other groups around the world protected and supported?

- 1 Watch the video **Kid President visits the UN**.
- 2 Complete the Think, Puzzle, Explore matrix.



### Think

What do you think you know about the UN?

### Puzzle

What puzzles or questions do you have about the UN?

### Explore

How can you explore more about the UN?

- 3** Use your exploration ideas to find answers to your puzzles and questions. Record your findings in the olive wreath below.



The United Nations General Assembly is a place where global issues are discussed by diplomats from each country. This group also passes resolutions, declarations and conventions which support the UN's goals of peace and security.

- 4** Give these UN declarations a 1–5 rating for how important you think they are. (1 is not really that important, 5 being very important).

- Human rights
- Rights of Indigenous Peoples
- International co-operation in the exploration of outer space
- Human cloning
- The prevention of a nuclear catastrophe
- The Indian Ocean as a zone of Peace

- 5**

- a** Find out which year each of the declarations in question four was made. Draw an arrow from each declaration to its place on the timeline.



- b** What do you notice about when the declaration of the rights of indigenous peoples was made?

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- c** What is your opinion about this?

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