

# Merriwa Primary School

Daily Learning Routine

Year 5 and 6

Term 2

Week 2

	Monday	Tuesday	Wednesday	Thursday	Friday
		Brain Break - eg. Breath	Brain Break - eg. Breathing exercise, stretches, core practice	practice	
9.00 - 9.30	FITNESS: jog around block	FITNESS : obstacle course	FITNESS : Music and dance	FITNESS : ball game	FITNESS : scoot/ride
	Spelling Word Work	Spelling Word Work	Spelling Word Work	Spelling Word Work	Spelling Word Work
9.30 - 10.00	Reading comprehension	Reading comprehension	Grammar	Reading comprehension	Reading: Book Review
	o the state of the	See and the second seco			
	SHOCK OND BIGINE	snack and brain bleak - eg. breathing exerc	g exercise, yoga moves, outdoor stretches, core practice, dance	etches, core practice, danc	•
10.30 - 11.00	Times Tables Grid	Times Tables Grid	Times Tables Grid	Times Tables Grid	Times Tables Grid
11.00 - 11.30	Maths	Maths	Maths	Maths	Maths
	Lunch and Brain B	reak - eg. Breathing exerc	Lunch and Brain Break - eg. Breathing exercise, yoga moves, outdoor stretches, core practice, dance	etches, core practice, danc	•
12.00 - 12.30	Read for pleasure	Read for pleasure	Read for pleasure	Read for pleasure	Read for pleasure
	Own book or Lexile eBook	Own book or Lexile eBook	Own book or Lexile eBook	Own book or Lexile eBook	Own book or Lexile eBook
12.30 - 1.00	WRITING	WRITING	WRITING	WRITING	WRITING
	Diary writing	Write based on prompt	Handwriting	Editing	Comic Strip
1:00-1:30	SCIENCE	ITALIAN	HE.	HASS	MUSIC
			Get active		Practice recorder
					Make up dance routine to favourite song

		with the time date you completed each activity on the line provided.	
Syllable Words Group your spelling words according to the number of syllables.  Date:	Working Out Words Group your spelling words into nouns, adjectives, verbs, adverbs etc. Date:	Search for spelling Search Search for spelling words or words within words in your class novel/book you are currently reading.	Rhyming Wheels Write down of as many word as you can that rhyme with your spelling words
Alliteration	Define It!	Sentence Smart	Date:
Write a sentence for each of your spelling words using as much aliteration as possible.	Use a dictionary to find the definition and write a sentence for each of your spelling words.	Write a sentence for each of your spelling words.	Write out your spelling words in your very best cursive handwriting.
· · · · · · · · · · · · · · · · · · ·		Date:	Date:
Write each of your spelling words, jumbled up, on the left side of your page. Swap with a partner and see if they can unscramble each of the words and write the correct word on the right side of the sheet.	Texting Words  Translate your spelling words into numbers using the phone keypad on the Texting Words Worksheet. Write the number that represents each word.  Date:	Look, Cover, Write, Check Look at each word, cover it up and write it down. Then check it is correct.  Date:	Word Search Create your own word search using all the words on your spelling list. Date:

### **Texting Words**

 $\begin{array}{c} 1 \\ \end{array} \begin{array}{c} 2 \\ \text{abc} \end{array} \begin{array}{c} 3 \\ \text{def} \end{array}$ 

4 5 6 mno

T e x t i n g 8+3+9+8+4+6+4 = 42 ☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

公

☆

☆

☆

☆

☆

会

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

\$

pqrs

☆

☆

☆

☆

☆

☆

☆

公

☆

☆

☆

☆

会

☆

☆

☆

☆

☆

☆

会

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

☆

於

☆

公

☆

☆

A

☆

☆

公

\$

☆

☆

公

**8** 

wxyz

\*\*\*\*\*

### Spelling Word List

☆

☆

\$

À

☆

☆

 $\triangle$ 

\$

A

N

\$

☆

☆☆

A

☆

\$

 $\checkmark$ 

S

 $\Delta$ 

 $\stackrel{\wedge}{\simeq}$ 

 $\stackrel{\wedge}{\simeq}$ 

 $\Delta$ 

 $\stackrel{\wedge}{\mathbb{Z}}$ 

\$

公公公

\$

公

公

公

À

N

\*

S

A

☆

☆

☆

公公公

☆

☆

☆

☆

A

☆

☆

☆

W

☆

☆

☆

☆

☆

☆

☆

☆

 $\triangle$ 

公

☆

☆

☆

A

公公

☆

☆

公公

☆

☆

公公

		~
magic		
conducted		
simplest		
productive		
creative		
regardless		
designer		
she'll		
discourage		
tragic		
	<u> </u>	

\*



Majestic and proud,
He elegantly stalks through the jungle.
Fur as orange as the blazing sun,
Striped like a prison cell.

Silent and alone,
He dutifully guards his territory.
Eyes like tiny balls of gold,
Piercing through darkness.

Muscular and powerful,
He effortlessly captures his prey.
Teeth bared like daggers,
A warning to others.

Strong and lean,
He spreads himself on a silent rock.
Sleep embracing him like a blanket,
His hunger quenched.

Year 5 Reading Practice — Questions	
Name	Date
Read Tiger and answer questions 6-10 below.	
<ul> <li>Write the numbers 1 to 4 in the boxes to show the order of events in to 1.</li> <li>The tiger falls asleep.</li> <li>The tiger stalks through the jungle.</li> <li>The tiger captures his prey.</li> <li>The tiger guards his territory.</li> </ul>	he text.
<ul> <li>7. Silent and alone, He dutifully guards his territory.  These lines suggest that  tigers share territory with other tigers.  tigers welcome other tigers into their territory.  tigers prefer to live by themselves.</li> <li>tigers are lonely animals.</li> </ul>	
<ul> <li>8. He effortlessly captures his prey.</li> <li>The word effortlessly means the capture was</li> <li>efficient.</li> <li>problematic.</li> <li>strenuous.</li> <li>elegant.</li> </ul>	
9. Sleep embracing him like a blanket.  This line suggests that the tiger fell asleep  quickly.  restlessly.  peacefully.  suddenly.	
<ul> <li>10. What statement best describes the ideas expressed in this poem?</li> <li>Tigers are friendly, social animals.</li> <li>Tigers are savage, dangerous animals.</li> <li>Tigers are proud, powerful animals.</li> <li>Tigers are nurturing, protective animals.</li> </ul>	
ENGLISH	<b>Teach</b> Starter.com



A news reporter is interviewing a NASA scientist about the New Horizons space mission. The New Horizons is a NASA spacecraft that was sent to the dwarf planet, Pluto.

Reporter:

So, the human race has finally sent a spacecraft to Pluto! What a fantastic achievement! What can you tell us about the New Horizons spacecraft?

NASA scientist: The New Horizons is an unmanned spacecraft, which means there are no astronauts on board. It was launched on January 19, 2006 and finally flew past Pluto on July 14, 2015. It captured important data and took photographs to help us learn more about the outer reaches of space.

Reporter:

So the spacecraft took nine and a half years to reach Pluto? That seems like a very a long time to be floating in space.

NASA scientist: It is a long time! You have to remember that Pluto is nearly 5 billion kilometres away from the Earth. That's the equivalent of 32 trips between the Earth and our Sun.

Reporter:

The spacecraft must be very big to be able to travel so far into space.

NASA scientist: Actually, the spacecraft is rather tiny, considering what it has achieved. It's about the size and shape of a grand piano.

Reporter:

That's incredible! How does something so small manage to send messages and photographs back to Earth?

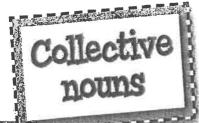
NASA scientist: The New Horizons spacecraft has a dish-shaped antenna for transmitting data. It takes about 30 to 60 minutes to send a high-resolution image back to Earth. The photographs are certainly worth waiting for, though!

Reporter:

Fascinating! Thank you so much for your time today. Good luck with the remainder of this ground-breaking mission!

The same of the sa

Ye	ar 5 Reading Practice — Questions	
Na	me Date	
Re	ad To Pluto and Beyond and answer questions 11-15 below.	
11.	. What is the New Horizons?	
	a planet	
	a grand piano	
	a spacecraft	
	an antenna	
12.	. Which of these statements about the New Horizons spacecraft is <b>incorre</b>	ct?
	The spacecraft was launched on July 14, 2015.	
	The spacecraft has been taking photos of Pluto.	
	The spacecraft is unmanned.	
	The spacecraft is the size of a grand piano.	
13	. Good luck with the remainder of this ground-breaking mission!	
	In this sentence, the word ground-breaking means	
	pioneering.	
	angerous.	
	interesting.	
	unusual.	
14	. Throughout the interview, the reporter is	
	unresponsive.	
	disrespectful.	
	preoccupied.	
	captivated.	
15	. The main purpose of the interview is	
	to describe the dwarf planet, Pluto.	
	to encourage children to become astronauts.	
	to discuss the achievements of the New Horizons space mission.	
	to explain how unmanned spacecraft work.	•
		More Soul
(AZ)	ENGLISH	TeachStarter.com

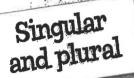


A collective noun names a group, e.g. school, team, herd, flock. The group has members, e.g. a school of fish, a team of players, a herd of cows, a flock of birds.



### Match the groups and their members.

fleet	ants	flotilla	bees
gaggle	whales	cloud	mountains
galaxy -	ships	swarm	soldiers
pod	stars	regiment	boats
army	geese	range	dust



When the members of the group are all doing the same thing at the same time, the collective noun is followed by a singular verb and singular pronouns e.g. The football team is chanting its war cry:

When the members of the group are all behaving individually, the collective nown is followed by a plural verb and plural plural pronouns e.g. After a long day at school, the class are gathering their books and going home.



### Circle the correct verbs and pronouns.

The orchestra packed up [its their] instruments at the end of the performance.

A mob of emus [is are] roaming across the dry inland plains.

The gang of workers [was were] assigned [its their] job for the day.

A panel of experts shared [its their] views on global warming.

The board of directors [has have] reached a decision.

A clump of trees near the farm gate [is are] on fire.

That pair of shoes [belong belongs] to [him them].

collective noun names a group of people or things.



### Choose a collective noun from the list to complete each sentence.

A of dancers will perform	the ballet Swan Lake.	pack
The car race drew a big	_ of spectators.	crew
Dustin shuffled the of cards		anthology crowd
A large crowd cheered the winning boo		troupe
We are reading an	of noetry by Ranio Paters	

### **Multiplication Tables**

This is the order you usually learn you times tables: 2, 5, 10, 3, 4, 9, 6, 7, 8, 11, 12

You need to know these:

- 1. in order
- 2. out of order
- 3. related division facts

Pick an activity each day to help you learn these off by heart

		Pairs:
Say them in order 3 times	Write them down 3 times	Make a matching game by writing the sum on one piece of paper and the answer on the other
Say your times tables while bouncing a ball	Get a family member to test you. Challenge: do them out of order	Play hit the button https:// www.topmarks.co.uk/ maths-games/hit-the- button
Sing a long with a you tube clip of your times tables	Speed test: How quick- ly can you write them down correctly?	Mandala colouring sheet

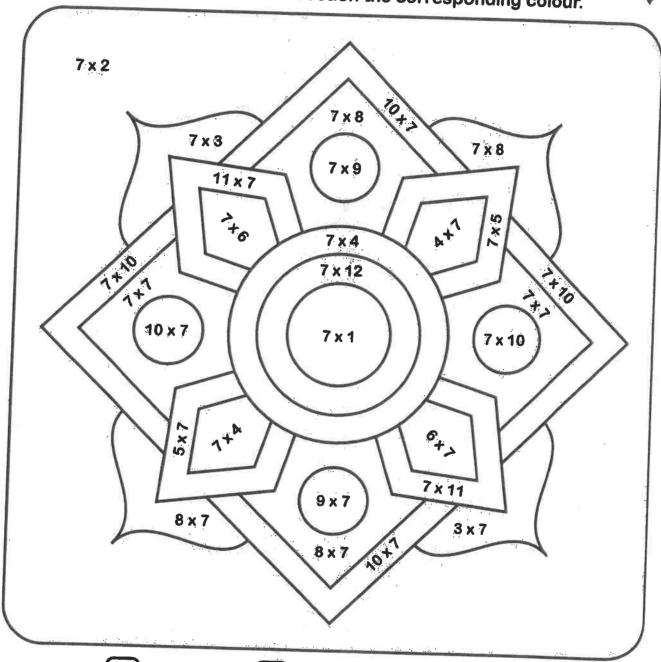
Name:	_ Date:
	_ bate



### 7 x Colour Fun!

7 x 3

Find the answer to the multiplication number sentence and then colour that section the corresponding colour.





black

21 red

orange

35) yellow

dark green 70 light blue

49 dark blue

purple

84

brown

63) pink

light green



(b) teachstarter



Date: \_\_\_\_\_

### Number of the Day

Odd or even?

204

Sum of the digits:

Word form:

Make the number using coins and notes:

Tally marks:

10 more: \_\_\_\_\_

10 less: \_\_\_\_

100 more:\_\_\_\_\_

100 less: \_\_\_\_\_

1000 more: \_\_\_\_\_

1000 less: \_\_\_\_\_

Write a sum that equals your number:

Greater than and less than:

\_\_\_\_>\_

Thousands Hundreds Tens Ones



### NA6 Multiplication facts 2, 3, 5, 10

Multiplication facts are a very important part of your maths knowledge. They are used in many other areas of maths so learn them well.

Practise them often so you can easily recall each fact when you need it.

Just like addition facts, multiplication facts have "turnarounds". When you learn one fact, you have really learnt two!



Here is the recommended sequence for learning the first multiplication facts:

Twos focts (x 2)	0 × 2 0	1 ×2 2	2 ×2 4	3 x 2 6	4 ×2 8	5 x 2 10	6 x 2 12	7 <u>× 2</u> 14	8 ×2 16	9 x 2 18	Related to the addition doubles.
Threes facts (x 3)	0 x 3 0	x 3 3	2 x3 6	3 x3 9	4 <u>x3</u> 12	5 x3 15	6 x3 18	7 <u>x 3</u> 21	8 x3 24	9 x3 27	
Fives facts (x 5)	0 × 5 0	x 5 5	2 x 5 10	3 x 5 15	4 × 5 20	5 × 5 25	6 × 5 30	7 × 5 35	8 × 5 40	9 x 5 45	Count in fives on the clock.
Tens facts (x 10)	0 × 10 0	x 10 10	2 x 10 20	3 x 10 30	4 × 10 40	5 × 10 50	60 ×10	7 × 10 70	8 ×10 80	9 <u>× 10</u> 90	Add a zero to the number.

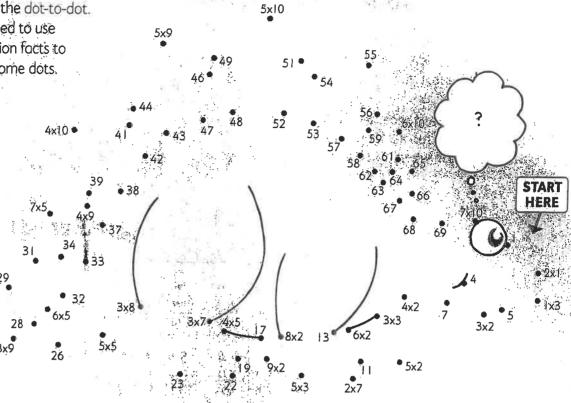
### 

1 Complete these multiplication facts as quickly as you can. Try not to look them up.

a 5	b 3 c 7 x 10	d 7 e 2 x 5 x 4	f 3 y 4 x 10	h 6 i 8 x 5 x 2	j 7
k x 5	1 m 6 x 2 x 10	n 5 6 x 2	p 4 8 x 5	r 7 7 7 7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	t _x 3

Stegosaurus was the dinosaur with big bony plates on its back. It grew to 8 netnes long and had a tiny brain the size of a walnut!

2 Complete the dot-to-dot. You will need to use multiplication facts to work out some dots.



- Did you notice that the fives facts always end with a zero or a five?
  This pattern keeps going, no matter how large the numbers become.
  - a Circle the fives facts below. There are 10 to find.

825	610	337	590	165
411	965	75	908	220
300	105	223	50	446

b	Write	10 more	five	facts	of	your	own
---	-------	---------	------	-------	----	------	-----

### 0

### Problem solving task

**Birthday party:** Emma's birthday party is at Baby Animal World. The entry fee was \$5 for adults and \$3 for children, How many adults and children went to Baby Animal World if the total of all entrance fees for Emma's party was \$30?

odults children

Use the space provided in iMaths 4 Tracker Book to work out your answer.



### Challenge

Five more and five less: Write the numbers that are five more and five less than 1000, 2000, 3000, 9000 and 10,000

### ASSESSMENT

BLM 7

Name Date .

### NUMBERS TO 9 999



- 1 Complete each number pattern.
  - **a** 4, 6, 8, \_\_\_\_\_, \_\_\_\_
  - **c** 55, 50, 45, \_\_\_\_\_, \_\_\_\_,
  - **e** 300, 350, 400, \_\_\_\_, \_\_\_\_, \_\_\_\_
- **b** 19, 21, 23, \_\_\_\_, \_\_\_
- **d** 120, 125, 130, \_\_\_\_, \_\_\_\_
- **f** 66, 55, 44, \_\_\_\_, \_\_\_,
- Write these numbers in words.
  - a 66
  - **b** 706 \_\_\_\_\_
  - **c** 311 \_\_\_\_\_
  - **d** 265
- Write these numbers as numerals.
  - a seven hundred and sixteen
  - **b** eight hundred and forty-seven
  - c two hundred and ninety-three
  - d three hundred and thirty-five
- Write these numbers in expanded form. 4
  - **a** 385 \_\_\_\_\_ **b** 556 \_\_\_\_
- c 222 \_\_\_\_\_
- **d** 278 \_\_\_\_\_

- **f** 159 \_\_\_\_\_
- 5 Round the following numbers to the nearest 10.
  - **a** 67 → \_\_\_\_\_
- **b** 165 → \_\_\_\_\_
- **c** 572 → \_\_\_\_\_

- **d** 132 → \_\_\_\_\_
- **e** 79 → \_\_\_\_\_
- **f** 684 → \_\_\_\_\_
- Round these numbers to the nearest 100.
  - **a** 555 → \_\_\_\_\_
- **b** 750 → \_\_\_\_\_
- **c** 531 → \_\_\_\_\_

- **d** 602 → \_\_\_\_\_
- **e** 992 → \_\_\_\_\_
- **f** 651 → \_\_\_\_\_

7 Write the number:

ì	Hundreds	Tens	Ones	1
			<b>5</b> 55	

_		
_		
	_	

L I	T		
P	Hundreds	Tens	Ones
			තතතත

Worksheet Works.com

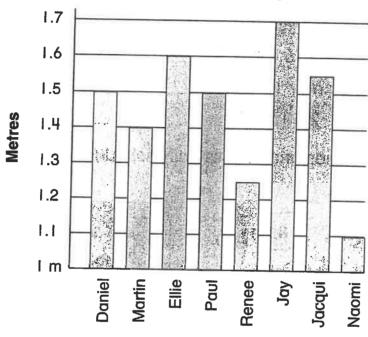
### Addition & Subtraction

Name:

Date:

### Interpreting a bar graph

### Height of children in volleyball team



Names of children

1 \	hat is the difference between the tallest and the shortest player?	
-----	--	--

- Which two players are the same height?\_\_\_\_\_
- Who is shorter than 1.3 metres? \_\_\_\_\_
- Who is taller than 1.5 metres?
- Why does the scale begin at one metre? \_\_\_\_\_
- Who is taller than Paul but shorter than Ellie? \_\_\_\_\_
- What is Renee's height? \_\_\_\_\_
- Do you think these are the exact heights of the children? Why? \_\_\_\_\_



-> If you were represented on this graph, where would you fit in the order tallest to shortest?

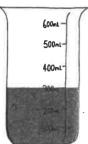
Name Date

### MEASURING CUPS



1 Look at the measuring containers and write how many mL are in each one.

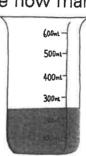
a



Ь



c



ď



e



£



g

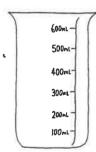


h

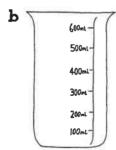


2 Colour the measuring containers to show the given amount.

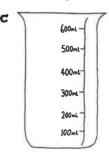
a



430mL



520mL



180mL



3½mL

- **3** a If Penny had to take 20mL of medicine each day for 10 days how many mL did she take altogether?
  - **b** If 420mL were poured out of a 1 litre container, how much would be left?
  - **c** 3 containers were filled with water. Each container held 2L 250mL. How much water was needed altogether?

# Amilies Should Own a Pet

### Reasons For

- Owning a pet teaches children to be more responsible.
- Owning a pet helps to reduce loneliness and stress
- People who own pets are healthier than people who do not.
- Sharing the care of a pet brings families closer together.
- Caring for a pet teaches children how to be loving and affectionate to others.

## Reasons Against

- Some families do not have enough money to properly care for a pet.
- Some families do not have enough time to properly care for a pet.
- Some people do not like animals, or may be allergic to them.
- Some pets have diseases which they can pass on to humans.
- Animals do not belong in people's homes; they belong in the wild.



lame	Date	
	Persuasive Text - Scaffold	
itle		
pening s	tatement (State your <b>opinion</b> about the topic of the text).	
ason 1 (	State your first <b>reason</b> and provide an <b>example</b> to support it).	
	itate your second <b>reason</b> and provide an <b>example</b> to support it).	
son 3 (S	tate your third <b>reason</b> and provide an <b>example</b> to support it).	
cluding	statement (Restate your <b>opinion</b> about the topic of the text).	

---..... ...... .. .. 85×4 ------------

### Baseline joins to tall letters



Take the diagonal join to the top of the tall letter.

### u" w uk uk



uk at el nt il ak ib nt mb ut

ball point pencil comb front make plate



BALLPOINT PEN



A ballpoint pen is often called a biro. This is because

it was invented by Hungarian brothers Lazio and Georg

Biro The Biro brothers created a pen with a one

millimetre diameter ball bearing tip which revolved as it

### Baseline joins to tall letters

moved across the page When ballpoint pens were released
in the United States in 1945, 8000 were sold on the
first day. The first ballpoint pens were expensive
However, a French company called Bic produced a cheap
throwaway pen in 1953 Bic pens could draw a line
3½ km long before they ran out of ink These days Bic
sell 14 million pens daily

### (3) Maggie's Surprise

maggies parents serprised her with a trip to the snow in the morning, maggie waited eagily inside her dads car soon they were on their way to her uncles caburn in the mountains maggie was so exited that she was finally old enough to use her mums skis



Find 4 spelling mistakes. Add 5 capital letters, 4 full stops and 4 apostrophes of possession.



### (4) Ryan's Present

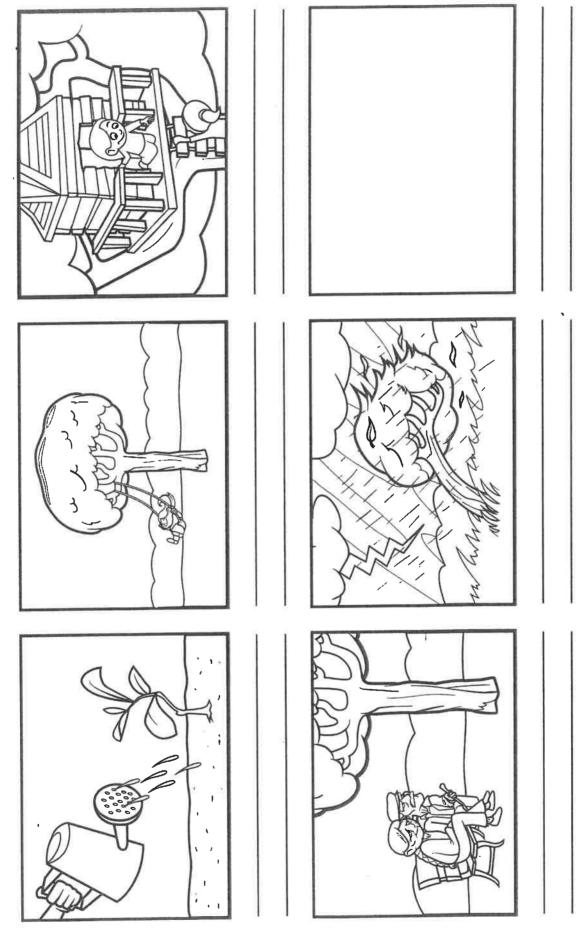
for his birthday, ryans parents took him to swim with sharks at the aquaireum. when they arrived, the aquariums gide told ryan all about the shark he would be swiming with the sharks name was mighty ryans hart beat faster and faster, he hoped that he could be brave during his adventure



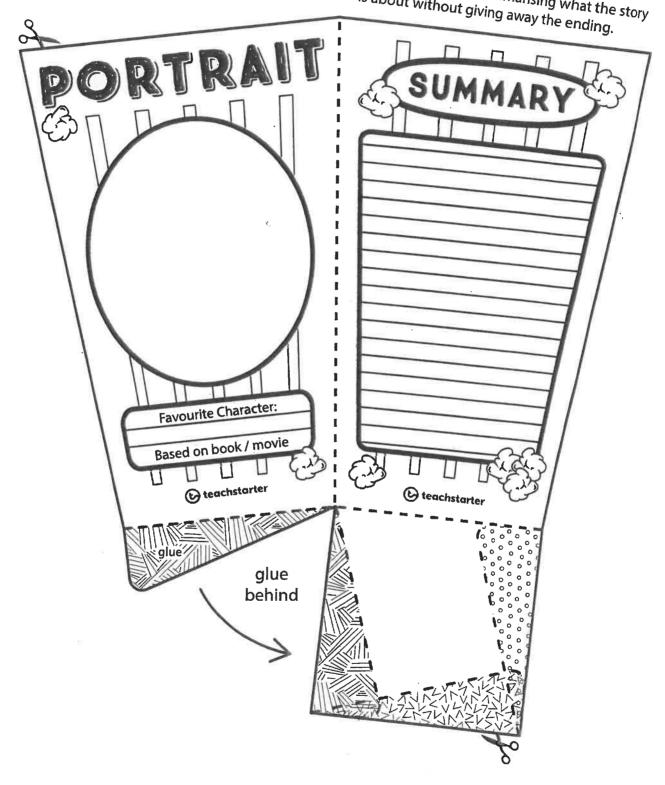
Find 4 spelling mistakes. Add 8 capital letters, 4 apostrophes of possession and 1 exclamation mark.

(b) teachstarter

Infer from the whole comic strip what is happening in each cell. Add a description and draw your own picture in the last cell. Give this your own title:



Write a paragraph summarising what the story is about without giving away the ending.



### Sustainability

n g C n S  $\mathbf{a}$ h u b S g e u t e e y k t u a d k g h n  $\mathfrak{a}$ 0  $\mathfrak{a}$ y u  $\mathfrak{a}$ S b p b t d u

sustainable

reuse

pollution

renewable

electricity

resources

energy

technology

nonrenewable

Earth

conserve

recycle



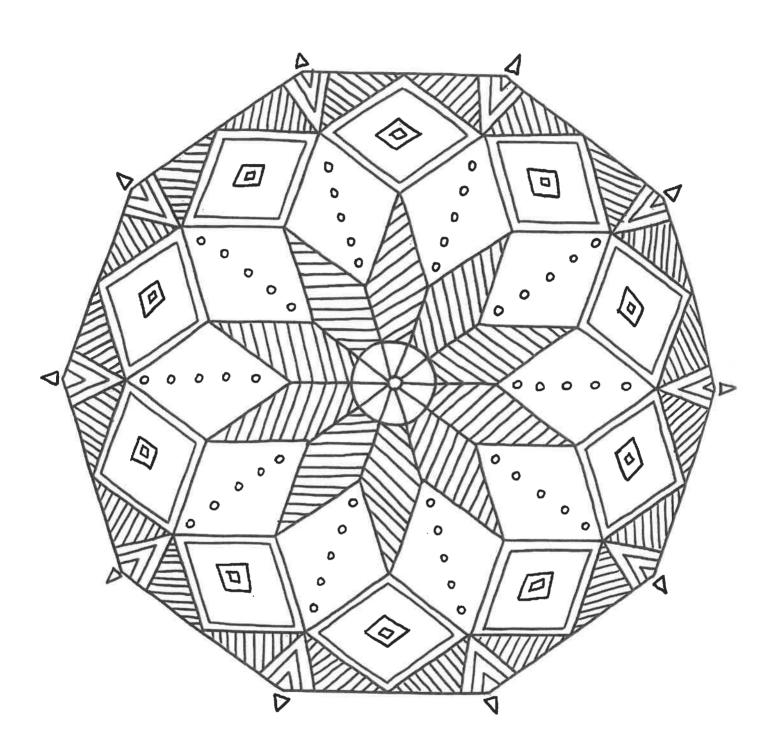


Manage	
Name:	Date:

### Man-Made vs Natural Materials

Find as many different materials as you can around the classroom. Classify them in the table below as man-made or natural materials. Draw the item that you found using a labelled diagram.

Man-Made Materials	Natural Materials
N	



### Facts About Italy

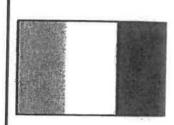
### Where in the world is Italy?

Italy is a country in the south-east of Europe. It has borders with four other countries: France, Switzerland, Austria and Slovenia.

Italy is easy to spot on a map because it is shaped like a high-heeled boot. The boot looks like it is kicking a ball which is actually one of Italy's 350 islands, Sicily. Italy has a very long coastline (4722 miles long) and sits within the Mediterranean Sea. The Italian Alps are in the north of the country and, believe



it or not, there are three volcanoes in the south: Vesuvius, Etna and Stromboli. Vesuvius famously erupted in AD 79 causing devastating death and destruction to nearby cities.



### Did You Know...?

The colours of the Italian flag represent three different virtues:

green = hope white = faith red = charity

### What Is the Weather Like in Italy?

Most people consider Italy to be a hot summer holiday destination, although there are also popular ski resorts in the mountainous regions in the north. Central Italy has a milder climate with similar temperatures all year round. Southern Italy has very hot summers and mild winters and as a result, more than 52 million tourists visit Italy each year.

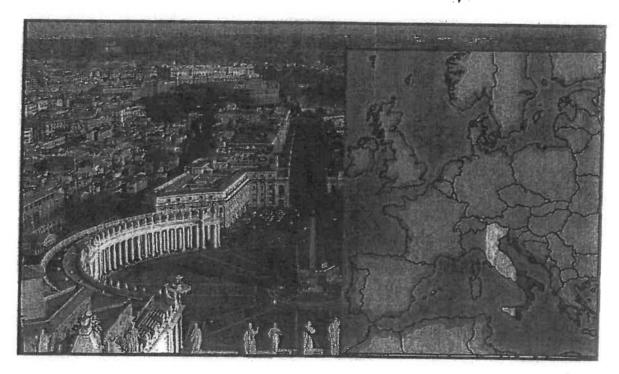






### What Is the Capital City of Italy?

The capital city of Italy is Rome. Rome is known as the 'Eternal City' and has a population of 2.9 million people. It was founded in 753 BC by Romulus and is famous for the Roman Colosseum and other ancient buildings.



### **Facts about Italy**

- · Italy's nickname is 'bel paese' which means 'beautiful country' in Italian.
- Mont Blanc is the highest peak in Italy, measuring 4807m high.
- The majority of Italians are Christians and 90% of the population are Roman Catholic.
- Italy's longest river is the River Po and is 405 miles long.



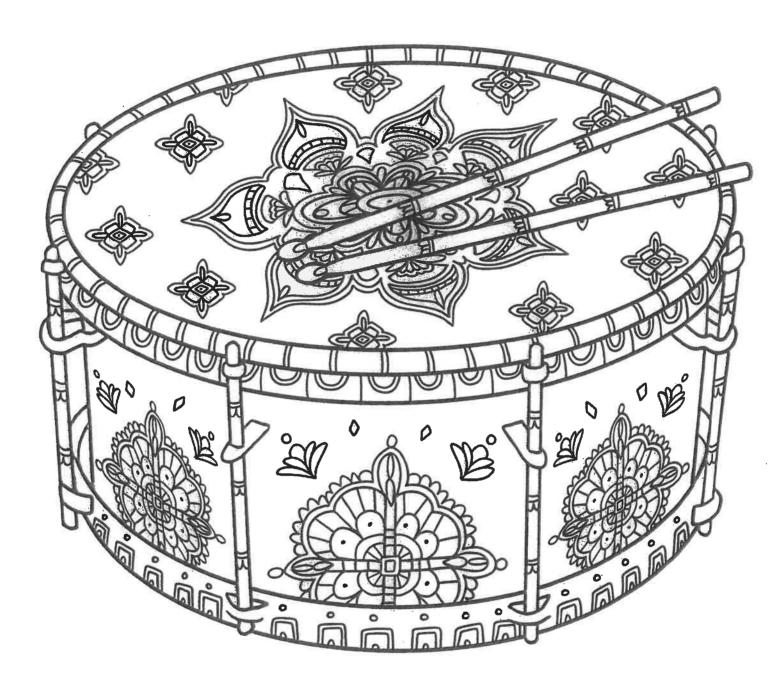


### Questions

1.	Where is Italy? Tick <b>one</b> .	
	O south-west Europe	
	O north-east Europe	
	O south-east Europe	
	O north-west Europe	
2.	What is Italy shaped like?	
(	How long is the Italian coastline? Tick <b>one</b> .  O 350 miles  O 4722 miles	
(	○ 4807 miles	
(	O 79 miles	
4. \	Why is Vesuvius a famous volcano? Explain you	ur answer fullu.
3		
-		
5. F C	Find and copy a word that shows that there are of Italy.	
). [	Draw lines to match the facts about Italy.	
	Bel paese means	Mont Blanc.
	Rome was founded by	Rome.
	The highest peak in Italy is	beautiful country.
	'Eternal City' is another name for	Romulus.
. н С	low long is the River Po? Tick <b>one</b> .  753 miles  405 feet  4807 miles	
C	) 405 miles	









### **Broken Pencil**

### **Participants**

Individual students, pairs or small groups (depending on resources)

### **Materials**

1 x pencil

1 x glass of water (approximately three-quarters full)

### **Procedure**

1. Stand the pencil up in front of the glass of water. Draw a picture or take a photo of what you observe.

2. Stand the pencil up behind the glass. Draw a picture or take a photo of what you observe.

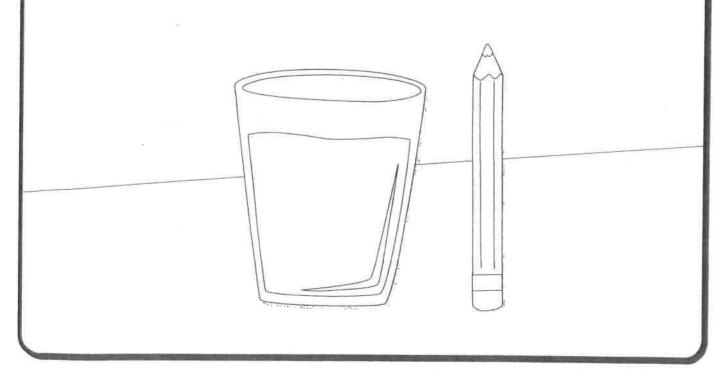
3. Put the pencil in the glass of water. Draw a picture or take a photo of what you observe.

### **Keep Safe**

Report any spills to the teacher.

### **Think**

Explain why the pencil's appearance changes depending on where it is positioned in relation to the glass.



Science Task Cards - Refracting Light

### Which Way?

### **Participants**

Individual students, pairs or small groups (depending on resources)

### **Materials**

1 x tall glass of water (half full)

### **Procedure**

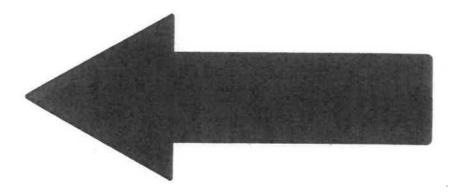
- 1. Hold the black arrow behind the empty half of the glass. Keep the card about half a forearm's length behind the glass. Draw a picture or take a photo of what you observe.
- 2. Move the arrow so that it is now behind the water. Draw a picture or take a photo of what you observe. If the image is hard to focus on, close one of your eyes.
- 3. Move the arrow slowly up and down between the filled and empty part of the glass and try to observe the change in the image as it happens. Describe the changes to the image.

### **Keep Safe**

Report any spills to the teacher.

### Think

How does this activity prove that light travels in straight lines?



Science Task Cards - Refracting Light

### **Changing Patterns**

### **Participants**

Individual students, pairs or small groups (depending on resources)

### **Materials**

1 x clear glass/bottle of water (full)

### **Procedure**

1. Hold the striped pattern behind the bottle of water, keeping the card right up against it. Draw a picture or take a photo of what you observe.

2. Slowly move the card backwards and observe what happens to the pattern. If the image becomes hard to focus on, close one of your eyes.

3. Photograph, draw or note two more changes to the pattern. Move the card backwards and forwards to capture the best images.

### **Keep Safe**

Report any spills to the teacher.

### **Think**

How does this activity prove that light travels in straight lines?

