



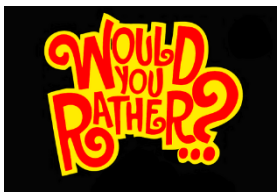



Raymond Terrace Public School



Stage 3 – At Home Learning Unit – Term 4 Week 1

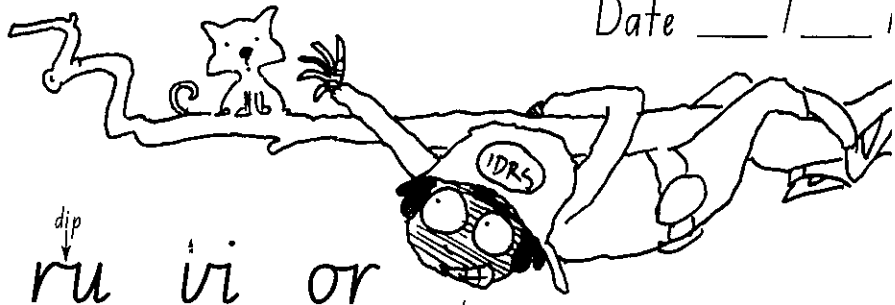
Tuesday 5th October 2021

Morning	<p>Reading – Comprehension- Inferring: <i>This week, we are going to work on the comprehension strategy of “inferring”.</i></p> <p>View the clip to learn more about how we use our world knowledge and clues from the text to draw inferences about things that aren’t directly stated in a text. https://www.youtube.com/watch?v=ZE4jOLDLdOQ</p> <p>Now watch the short animated clip “The Present” by Jacob Frey. https://www.youtube.com/watch?v=C_nJJHaNmY</p> <p>This text has very little dialogue, so you will need to draw inferences from the character’s actions and the events you are shown to answer the questions below.</p> <ol style="list-style-type: none"> 1. The boy is obsessed with video games. Give 3 ways the composer <u>shows</u> us this. 2. His feelings towards the dog change a few times throughout the text. Give 3 examples of his different feelings AND how they are shown. 3. Explain WHY you think he had mixed feelings about the puppy and WHY he wanted to spend time inside. Use clues from the ending of the clip. 4. What do you think the composer’s message is? 	
	<p>Handwriting – Horizontal Joins</p> <p>Complete the handwriting worksheet attached to the pack, focusing on horizontal joins. Notice the dip in the example.</p>	
	<p>Writing – We are going to be focusing on <i>persuasive writing</i> techniques for the first two weeks of term.</p> <p>Step 1- Plan For Success!</p> <p>Developing strong arguments is an important skill for creating effective persuasive writing. Your first idea isn’t usually your best idea!</p> <p>Task: For the following “Would you rather?” statements, brainstorm 4 arguments for each choice. Which choice has the strongest arguments? Write down the option you would choose & highlight the 2 strongest arguments for that choice.</p> <p>Would rather have a snake or a rat for a pet? Would you rather have a pool or a trampoline? Would you rather live 100 years in the past or 100 years in the future?</p> <p>Success Criteria:</p> <p>I have 4 arguments for each option. I have chosen my opinion for each question. I have highlighted my 2 strongest arguments for that opinion.</p>	
Stretch and Recess Break		
Middle	<p>Mathematics: Newcastle Permanent Math Competition Practice</p> <p>For the first time in history, the Newcastle Permanent Maths Competition has gone online. Tomorrow for your Mathematics activity, you will compete in the competition online using a link provided on Google Classroom. To get be ready, today you will practice using last year’s competition paper. The 35 questions test booklet is on the pages following this one. <u>It is your choice how far you push yourself past Section A as the test gets harder as you go.</u> If you are working on Google Classroom, please turn in the answers to Section A only.</p>	
	Lunch Break	
Afternoon	<p>Live Magic Show for Raymond Terrace Public School!</p> <p>Today, you will be treated to a magic show by magician Joel Howlett from JD's World of Magic! The amazing Mrs Wiffen has organised this live magic show for all of RTPS! To watch the magic show, you will need to use the Zoom link that has been shared on Google Classroom and ClassDojo. The show begins at 2:00pm and goes for about half an hour, so make sure you are ready ahead of time and the popcorn is warm!</p>	
	<p>There is a Wellbeing Matrix on one of the following pages that has many activities you could do to fill in the extra time before or after the show.</p>	

★ Revision – Horizontal joins

Date ___ / ___ / ___

Use a horizontal join when joining from o, r, v, w and x. These horizontal joins have a small dip.



You can also join horizontally from the crossbar of f. This horizontal join is straight.

fi fr



oi om on op or ou ov ow ox ri

rm rn ru rv vi wi wn wr xi xp

action exit loud avid ripple wring storm

furry frill fuzzy fretful fitness friend fringe

Thunderstorms can be frighteningly loud.

SELF ASSESSMENT

Underline your three best horizontal joins.



**NEWCASTLE PERMANENT
PRIMARY SCHOOL MATHEMATICS COMPETITION
Wednesday 19 August 2020**

Time allowed: 45 minutes

Instructions:

- When asked by your teacher, open this booklet and check that there are 35 questions.
- Calculators, electronic devices, rulers, geometrical instruments or other aids are **NOT** permitted.
- NO** working is to be shown on your answer sheet. Working paper will be supplied by your teacher if required.
- All answers **MUST** be recorded in **PENCIL** on your answer sheet (a B pencil or darker). Questions 1 to 33 are multiple choice. For questions 34 and 35 colour in the ovals to represent your answer.
- When your teacher gives the signal, begin working on the problems. You have 45 minutes working time.
- Marks will **NOT** be deducted for incorrect answers.
- Make sure that you complete the sections on the answer sheet**

for your name, gender, division, school name and five digit Mathematics Competition Code.

SECTION A

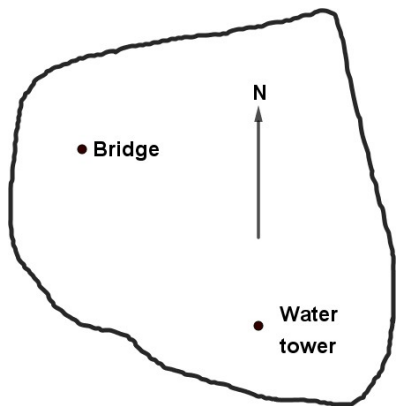
Each correct answer in this section is worth 2 marks.

- What is the difference between 710 and 157 ?
(A) 553 (B) 563 (C) 653 (D) 867
- How many letters of the word BATH have 2 lines of symmetry?
(A) 0 (B) 1 (C) 2 (D) 3
- The number of minutes in 210 seconds is:
(A) 2.1 (B) 3.1 (C) 3.3 (D) 3.5
- $3 + 4 \times 2 =$
(A) 9 (B) 11 (C) 14 (D) 24
- A quadrilateral with only one pair of parallel sides is a:
(A) square (B) parallelogram
(C) kite (D) trapezium
- A mass of 2 kilograms and 80 grams can be written as:
(A) 280 grams (B) 2 008 grams
(C) 2 080 grams (D) 2 800 grams
- The product of 2, 3 and 5 is:
(A) 235 (B) 30 (C) 25 (D) 10
- Which of the following is closest to 3.6 ?
1
(A) 3.06 (B) $3\frac{1}{2}$ (C) 3.69 (D) 3.7
- When 3 138 is divided by 5 the remainder is:
(A) 0 (B) 1 (C) 2 (D) 3

10. A triangle has one angle of 70° and another of 15° . The triangle is:

- (A) obtuse angled (B) acute angled
(C) isosceles (D) right angled

11.11.



Which statement is correct?

- (A) The water tower is south-east of the bridge
(B) The water tower is south-west of the bridge
(C) The bridge is east of the water tower
(D) The bridge is north-east of the water tower

12. How many of the first 50 positive integers are square numbers?

- (A) 4 (B) 6 (C) 7 (D) 8

13. What is the date 10 days after Tuesday 25th June?

- (A) Friday 5th July (B) Friday 6th July
(C) Thursday 4th July (D) Thursday 5th July

14. Which of the following solids has 4 triangular faces and 1 other face?

- (A) triangular prism (B) triangular pyramid
(C) square prism (D) square pyramid

15. 50 boys and 50 girls were asked if they liked or disliked cricket, swimming and netball. The results are shown in the table below.

	Boys		Girls	
	Like	Dislike	Like	Dislike
cricket (C)	40	10	20	30
swimming (S)	30	20	35	15
netball (N)	25	25	30	20

Which of the following lists is in order of overall popularity?

- (A) C, S, N (B) S, N, C (C) S, C, N (D) N, S, C

SECTION B

Each correct answer in this section is worth 3 marks.

16. Fiona's new TV was advertised at a price of \$800 but she was given a 25% discount. How much did she pay for the TV? (A)

- \$775 (B) \$600 (C) \$400 (D) \$200

17. In a game a player rolls 5 dice and obtains a score by **adding any even numbers** but **subtracting any odd numbers**.

What would the score be if the dice showed 2, 5, 1, 4, 5?

- (A) -5 (B) -3 (C) 1 (D) 17

18. Which of the following numbers has 25 as a factor?

- (A) 1805 (B) 1815 (C) 1835 (D) 1875

19. Sylvie can run 100 metres in 14.7 seconds. Ella is 1.5 seconds slower than Sylvie, while Tania is 2.1 seconds faster than Ella.

How many seconds does Tania take to run 100 metres?

- (A) 18.3 (B) 15.3 (C) 14.1 (D) 11.1

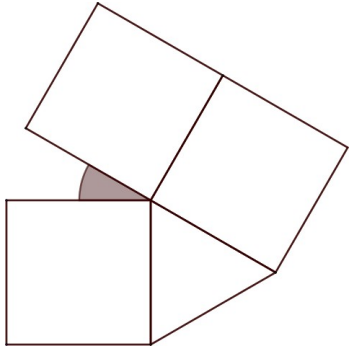
20. The lowest common multiple of 6 and 8 is:

- (A) 48 (B) 24 (C) 12 (D) 2

21. Samantha is paid \$6.00 per hour for baby-sitting, with the time rounded to the nearest half hour. How much does she receive for baby-sitting from 4.50 pm to 9.10 pm?

- (A) \$24 (B) \$26 (C) \$27 (D) \$30

22. The diagram shows 3 squares and an equilateral triangle meeting at a common vertex. What is the size of the shaded angle?



- (A) 20° (B) 30° (C) 40° (D) 45°

23. James bought 3 shirts for \$8 each and 2 caps for \$10 each. He paid with a \$50 note. Which of the following correctly shows the amount of change that he received?

- (A) $50 - 3 \times 8 + 2 \times 10$ (B) $50 - (3 \times 8 - 2 \times 10)$
 (C) $50 - 3 \times (8 + 2) \times 10$ (D) $50 - (3 \times 8 + 2 \times 10)$

24. The teacher made a number pattern by thinking of a starting number then using the rule “double the previous number and add 1”. The 4th number was 87. The starting number was:

- (A) between 0 and 4 (B) between 5 and 8
 (C) between 9 and 12 (D) greater than 12

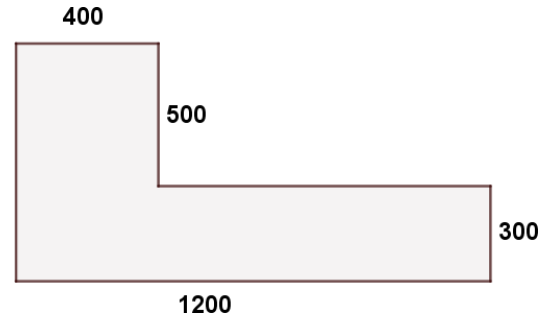
25. $2\frac{3}{4} + 1\frac{1}{2} =$

- (A) $4\frac{1}{4}$ (B) $3\frac{4}{6}$ (C) $3\frac{1}{4}$ (D) $1\frac{1}{4}$

SECTION C

Each correct answer in this section is worth 4 marks.

26. A farm has the shape of two rectangles joined as shown in the diagram, which is not drawn to scale. The diagram also shows the lengths, in metres, of some of the sides of the farm.



The perimeter of the farm, in kilometres, is:

- (A) 2 km (B) 2.4 km (C) 4 km (D) 4.8 km

27. After Grandma picked the apricots from her tree, she used half of them to make apricot jam.

The next day she used one quarter of the remaining apricots to make an apricot tart.

After the tart was made there were 6 apricots remaining. How many apricots did Grandma pick from the tree?

- (A) 24 (B) 16 (C) 12 (D) 8

28. Ravi has 50 cards which are numbered from 1 to 50. He shuffles the cards then turns the top card over so that its number is displayed. What is the probability that the number displayed is not divisible by 5 and is also not divisible by 8?

- (A) $\frac{3}{10}$ (B) $\frac{8}{25}$ (C) $\frac{17}{25}$ (D) $\frac{7}{10}$

29. A piece of wood is a rectangular prism with volume of 120 cm^3 . It is 10 cm long and 3 cm wide. What is the total area, in cm^2 , of all faces of the wood?

- (A) 3600 (B) 164 (C) 133 (D) 82

30. In 1872, the Overland Telegraph Line between Darwin and Adelaide was completed. It has been described as ‘the greatest engineering feat carried out in 19th century Australia’.

It took almost 2 years to complete and covered approximately 3 200 kilometres of the harshest land in Australia.

It used approximately 36 000 telegraph poles to support the wire above the ground.

Ben said ‘they averaged more than 100 poles per day’.

Ella said ‘the average distance between each pair of poles is more than 100 metres’.

Who was correct?

- (A) both wrong (B) Ben correct, Ella wrong
(C) Ella correct, Ben wrong (D) both correct

31. The times for Ashlee’s last 3 kayak paddles were 3 hours 45 minutes, 2 hours 50 minutes and 3 hours 40 minutes. What is the average time of her last 3 paddles?

- (A) 2 hours 45 minutes (B) 3 hours 5 minutes
(C) 3 hours 25 minutes (D) 3 hours 45 minutes

32. A gardener needs to have 7 tonnes of soil delivered to her home. The landscape supply shop agrees to deliver the soil using their truck, which can carry 1.25 tonnes each trip.

The distance from the shop to the home is 6 kilometres.

It costs \$3.50 per kilometre for each **return** trip of the truck. How much will it cost to move the soil?

- (A) \$126 (B) \$210 (C) \$216 (D) \$252

33.

34. The sum of the digits of the number 2 001 is $3.(2 + 0 + 0 + 1 = 3)$.

How many numbers are there, between 1 000 and 10 000, which have a digit sum of 3?

- (A) 10 (B) 9 (C) 7 (D) 3

Questions 34 and 35 are not multiple choice.

For each of them, colour in the ovals to represent your answer in the space provided on the Answer Sheet.

35. What is the largest number, with 45 as a factor, which can be made using any 4 of the digits 1, 2, 3, 4, 5, 6, 7, 8, 9 without repeating any digit?

36. Each letter of the alphabet is given a **different** numerical value, always being a positive whole number. A value can then be calculated for any word by **multiplying the value of its letters**.

For example, if the letter A was given the value 6 and D was 5, then the word ADD would have a value of 150 (because $6 \times 5 \times 5 = 150$).

It is known that POPE has a value of 18
and PROPER has a value of 162.

What is the value of ROPE ?

THERE ARE NO MORE QUESTIONS.

Wellbeing Matrix

A matrix to help students and families focus on their wellbeing with a variety of 'unplugged' activities.

A great complimentary matrix to the 'R U OK? Day' Matrix.

<p>Sit under your favourite tree and read.</p> 	<p>Find a penpal (a family member, friend or neighbour). Draw them a special picture and send it in the mail.</p>	<p>Learn a new skill or hobby like origami, knitting, scarp booking, photography, gardening or magic.</p>	<p>Go for a bush walk. Take a special journal and write or draw some special things you noticed.</p>
<p>Make your own healthy treat. This could be trail mix, a muesli bar, muffin or slice.</p>	<p>Write some special affirmations for yourself on your mirror or next to your bed to read each morning and night.</p>	<p>Make a board game using recycled materials based on your favourite book or television show.</p>	<p>Transform a cardboard box into a time machine. Draw pictures of places you visit on your adventures.</p>
<p>Make a pillow fort and have an adventure with your siblings or teddies!</p>	<p>Design and make a friendship bracelet. Consider using recycled or natural materials.</p>	<p>Find a quiet spot to lay on the grass and look at the clouds. What pictures or patterns do you see?</p>	<p>Organise a special sit down meal with your family</p> 
<p>Listen to your favourite songs. Try and paint or draw how the music makes you feel.</p>	<p>Write a poem about how you are feeling and recite it to someone special.</p>	<p>Make a gratitude jar. Add in all the family, friends and joys of nature that you are grateful for.</p>	<p>Create some new yoga moves. Use animals or plants as inspiration.</p>

Wednesday 6th October 2021

Reading – Comprehension- Inferring: We are working on the comprehension strategy of “*inferring*”. View the clip to learn more about how we use our world knowledge and clues from the text to draw inferences about things that aren’t directly stated in a text.

<https://www.youtube.com/watch?v=ZE4jOLDLdOQ>

House for Sale

Real estate agents use clever tricks to persuade people to view and buy homes. One of those tricks is using positive adjectives to describe the features.

Task 1- View the “House for Sale” page attached. Draw inferences from the description to draw the house. Send a photo of your drawing on Google Classroom or Class Dojo.

Task 2- Write your **inference** about the meaning of these noun groups:

- raw natural materials
- grass coloured wood
- golden oblong handle
- dark entry
- well lit side rooms
- potted garden
- natural heating- needs some work
- uncovered windows



Morning

Spelling Unit 10 & 11 – Using ‘ion’/shun (eg: ‘tion’ and ‘sion’) Part A

Morphological: When adding ‘ion’/ (shun) as ‘tion’ or ‘sion’ to a base word, it depends on the proceeding base word ending.

When “tion” is at the end of a word, it makes its own syllable eg: mo/tion, ac/tion, lo/tion, di/ges/tion, prep/ar/a/tion, sub/trac/tion

Task: Complete the attached “Using ‘ion’/shun (eg: ‘tion’ and ‘sion’) Spelling Worksheet 1

Writing – Persuasive: Positive Noun Groups

Think about the use of positive adjectives to describe features of the home in today’s reading task “*House for Sale*”. Positive noun groups and descriptive language are an important skill for being persuasive.

Task- You are a real estate agent. Write a one paragraph description that would persuade people to view and buy this house.

Plan for success by brainstorming positive adjectives to describe the pool, roof, colour, entry, garden etc. Use these ideas to write a paragraph that uses positive descriptive noun groups (*adjective, adjective noun*).



Success Criteria:

- I have a least 4 positive noun groups.
- My paragraph is at least 5 sentences.
- All of my sentence punctuation is correct.
- I may use other persuasive techniques.

Stretch and Recess Break

Mathematics: Newcastle Permanent Math Competition

The Newcastle Permanent Maths Competition has been running since 1981! For the first time, the competition will be run online due to students learning from home. The competition is a test consisting of 35 maths problem solving questions. You will be given 45 minutes to complete the test. The link for the test is on your class Google Classroom page. If you are unable to access the internet or a device today, then the test can be done on Thursday or Friday this week. If you cannot access it, then finish off the practice test from yesterday or do an activity from the Wellbeing Matrix.



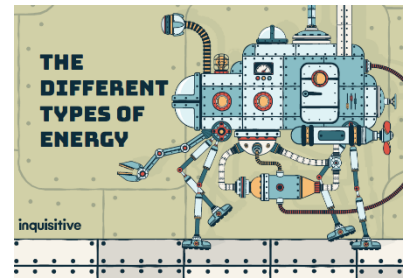
Middle

Lunch Break

Science & Technology – Our Term 4 Science Topic is “Energy”

Different Types of Energy

Focus Question: What are the different types of energy, and how do they change?



Part 1. Read the “Different Types of Energy” booklet attached. Write a summary of what the different types of energy mean and an example of each.

Part 2. Investigating energy transformations

Look at the Investigating energy transformations page: Choose three items from the first list and one item from the second list. Look at them closely (play with them if they are toys) and think about how they work.

Unit 1: Electricity
Lesson 1: Different Types of Energy

Materials needed

Investigation question 1

Investigating energy transformations

You need three items from the following list:

- a toy robot (made from a clock, glowstick, tape, hand saw, or balloon)
- an electric washing ring
- an instant hand pump
- a glow stick
- a hand-cranked or hand-pumped torch
- a pull-back toy car
- a color calculator or color toy
- a hand-crank clock
- a battery
- a rubber band (by itself or a battery or piece of stretched rubber band)
- an energy ball or energy stick
- a Croquet mallet

You need one item from the following list:

- a scale
- a toaster
- a hair dryer
- a radio or clock radio

Net 1: © Science Physical Science Inquisitive

Afternoon

a) What kind of energy do they need to start working? (Think about: Do they need to be wound up, or lifted up, or switched on?) Write it down in the ‘Initial Energy’ column in the table below.

b) What kind (or kinds) of energy is the Initial Energy turned into? (Think about: Does it move? Make noise? Get hot?) Write it down in the ‘Final Energy’ column.

Investigation 1: Different Types of Energy

Focus Question: What are the different types of energy, and how do they change?

Task: Read Different Types of Energy booklet (20 pages) write a summary of what the different types of energy mean and an example of each.

What is energy?	What is ...	Example of
Kinetic energy		
Electrical energy		
Sound energy		
Heat energy		
Light energy		
Potential energy		
You need energy to		

Part 2: Investigating energy transformations

Look at the investigating energy transformations page. Choose three items from the first list and one item from the second list. Look at them closely (play with them if they are toys) and think about how they work.

a) What kind of energy do they need to start working? Think about: Do they need to be wound up, or lifted up, or switched on? Write it down in the ‘Initial Energy’ column in the table below.

b) What kind (or kinds) of energy is the Initial Energy turned into? Think about: Does it move? Make noise? Get hot? Write it down in the ‘Final Energy’ column.

Object	Initial Energy How does it start working?	Final Energy What does it then do?
e.g. light bulb	electrical	light and heat

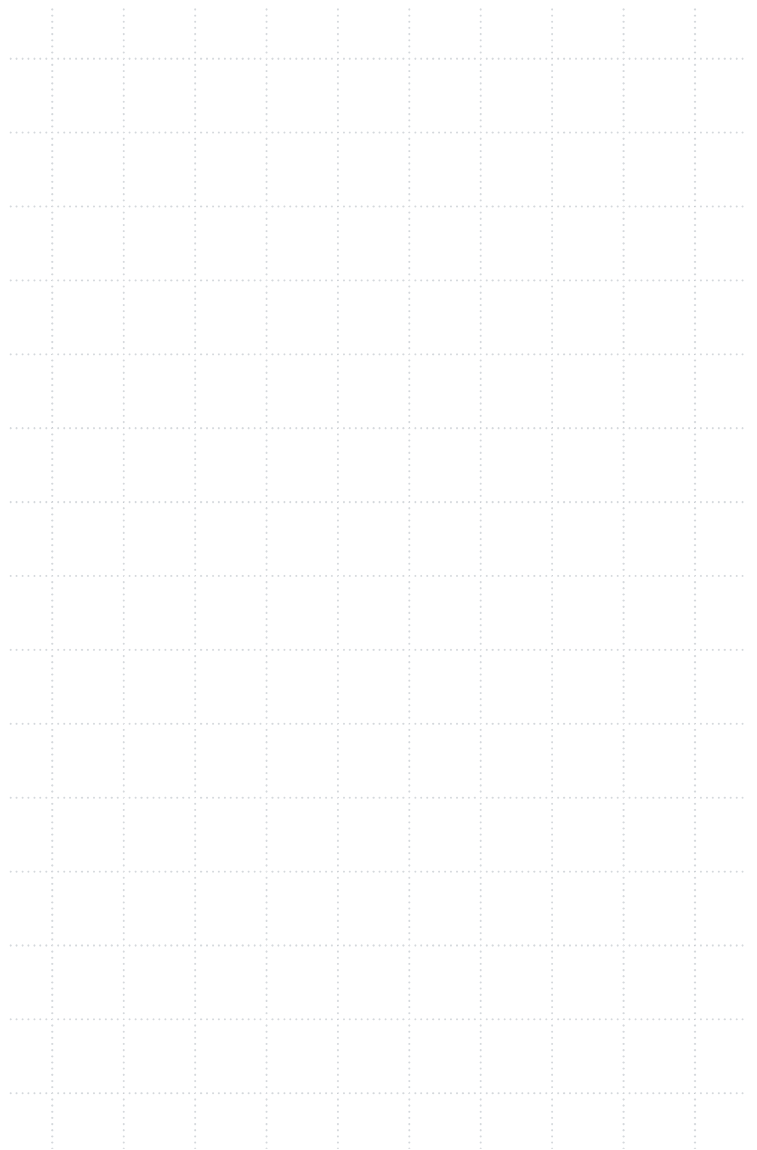
HOUSE FOR SALE!

Carefully read the description of the property features below. Using only the information given, sketch the exterior of the front of the house in the space available. Read through the information carefully as not all of it will be needed to sketch your house.

Property Features

If it's a home with character you're after, this structure made from raw natural materials, topped with a canopy of organic timber, is for you. The 120 square metre cottage located in rural Richmond welcomes you with an entry barred by grass coloured wood with golden oblong handles. The dark entry to the home branches off into well lit inside rooms. This home is naturally heated. It currently needs some work, but has the potential for fire-side relaxation. A simple potted garden aside the matted entry leaves a lasting impression of quaint prettiness. With the wooded view and closest neighbours a long way off, you'll love the view from uncovered windows all day and night.

Contact the realtor for further information.



SPELLING: Using 'ion' /shun (eg: 'tion' and 'sion')


Spelling Worksheet 1

Spelling Rule: Using 'tion' and 'sion'

* Use "tion" when the base word ends in a "t"/"te".
(Drop the "e"/"te" before adding -tion)

* If the base word ends in "ss" retain the "ss" and add "ion"

* Use "sion" when the base word ends in "d"/"de" or "s"/"se".
(Drop the "d"/"de" or "s"/"se" before adding "sion")



direct = direction

progress = progression

tense = tension

Add the correct suffix spelling to these base words:

exclude	eg: exclusion	edit		divide	
revise		act		discuss	
confess		impress		attract	
direct		decide		complete	

Adding a suffix to a base word changes the meaning of that word. A common suffix is ion. The suffix 'ion' means: 'the result of'. Fill in the missing gaps:

suffix	base word	new word	meaning
eg: tion	act	action	the result of acting
	attract		
tion			a set of steps to follow
		direction	
	relate		to see things in comparable ways
		question	
	sect		a part of something

Unscramble the "ion" words:

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;">1. noiissdce</td><td style="width: 50%;"></td></tr> <tr><td>2. cntodirie</td><td></td></tr> <tr><td>3. ttnoisa</td><td></td></tr> <tr><td>4. tcusnoi</td><td></td></tr> <tr><td>5. noitca</td><td></td></tr> <tr><td>6. noitseuq</td><td></td></tr> <tr><td>7. ulcnoisxe</td><td></td></tr> <tr><td>8. ssiipmroen</td><td></td></tr> <tr><td>9. nocssefnoi</td><td></td></tr> <tr><td>10. itnnao</td><td></td></tr> </table>	1. noiissdce		2. cntodirie		3. ttnoisa		4. tcusnoi		5. noitca		6. noitseuq		7. ulcnoisxe		8. ssiipmroen		9. nocssefnoi		10. itnnao		<p style="color: #008080; margin: 0;">Word Search - Small: ion</p> <p style="font-size: small; margin: 0;">Find the words from the list in the word search below. Words can be horizontal, vertical or diagonal.</p> <div style="display: flex; align-items: center; margin-top: 10px;"> <table style="border-collapse: collapse; text-align: center;"> <tr><td>s</td><td>t</td><td>a</td><td>t</td><td>i</td><td>o</td><td>n</td></tr> <tr><td>d</td><td>e</td><td>a</td><td>t</td><td>a</td><td>u</td><td>c</td></tr> <tr><td>s</td><td>u</td><td>c</td><td>t</td><td>i</td><td>o</td><td>n</td></tr> <tr><td>s</td><td>w</td><td>t</td><td>t</td><td>p</td><td>r</td><td>m</td></tr> <tr><td>y</td><td>l</td><td>i</td><td>c</td><td>i</td><td>w</td><td>v</td></tr> <tr><td>g</td><td>r</td><td>o</td><td>g</td><td>u</td><td>o</td><td>m</td></tr> <tr><td>m</td><td>e</td><td>n</td><td>t</td><td>i</td><td>o</td><td>n</td></tr> </table> <div style="margin-left: 20px; text-align: left;"> <p>action</p> <p>station</p> <p>section</p> <p>mention</p> <p>suction</p> </div> </div>	s	t	a	t	i	o	n	d	e	a	t	a	u	c	s	u	c	t	i	o	n	s	w	t	t	p	r	m	y	l	i	c	i	w	v	g	r	o	g	u	o	m	m	e	n	t	i	o	n
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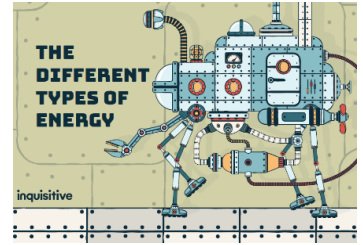
How many words can you make using the letters in:

EDUCATION

Science & Technology: Different Types of Energy

Focus Question: What are the different types of energy, and how do they change?

Part 1. Read the “Different Types of Energy” pages that follow. Write a summary of what the different types of energy mean and an example of each.



	What it is ...	Example	
What is energy?			
Kinetic energy			
Electrical energy			
Sound energy			
Heat energy			
Light energy			
Potential energy			
You need energy too			

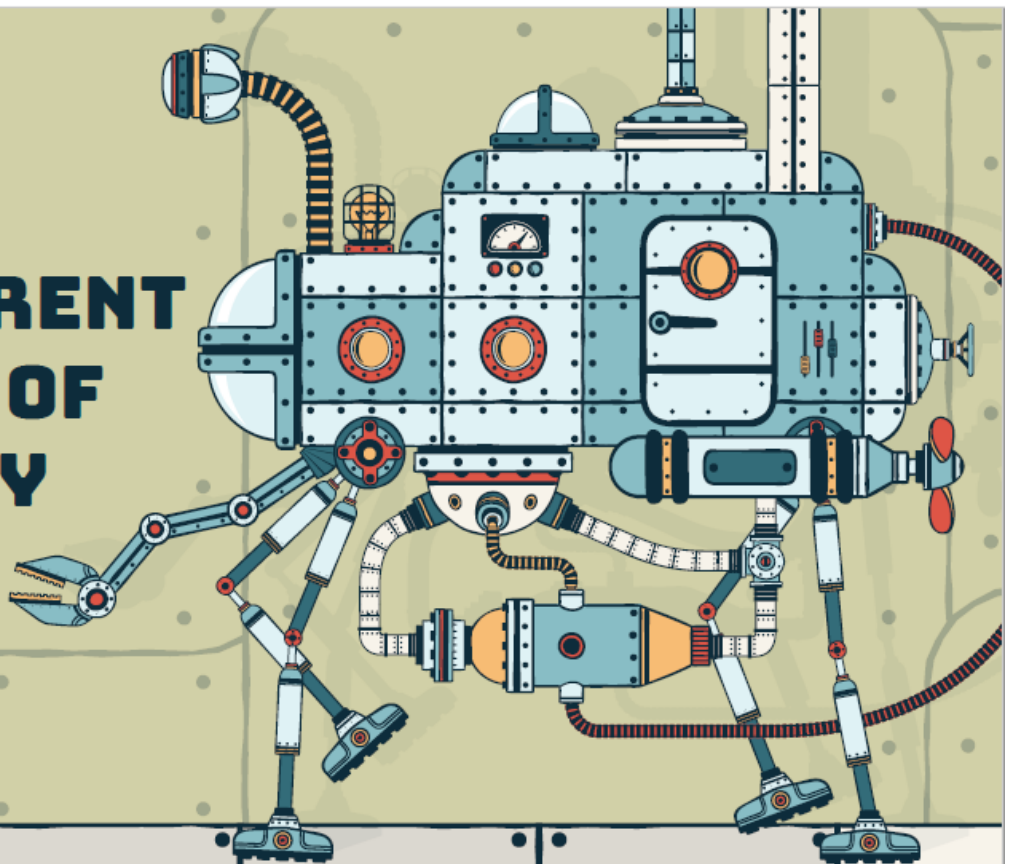
Part 2. Investigating energy transformations

Look at the Investigating energy transformations page: Choose three items from the first list and one item from the second list. Look at them closely (play with them if they are toys) and think about how they work.

- What kind of energy do they need to start working? (Think about: Do they need to be wound up, or lifted up, or switched on?) Write it down in the ‘Initial Energy’ column in the table below.
- What kind (or kinds) of energy is the Initial Energy turned into? (Think about: Does it move? Make noise? Get hot?) Write it down in the ‘Final Energy’ column

Object	Initial Energy How does it start working?	Final energy What does it then do?
<i>e.g. light bulb</i>	<i>electrical</i>	<i>Light and heat</i>

THE DIFFERENT TYPES OF ENERGY



inquisitive

What is energy?	3
Kinetic energy	4
Electrical energy	5
Sound energy	6
Heat energy	7
Light energy	8
Potential energy	9
You need energy too!	10



What is energy?

Energy is the ability to do work. It is what makes things happen.

Energy is not matter, or 'things'. You can not fill a box with it or weigh it.

Energy is what makes things move or change.

There are different types of energy, including heat, light and sound.



Kinetic energy

Kinetic energy is the energy of movement.

A moving car, a kicked soccer ball or a rolling skateboard all have kinetic energy.

Different types of kinetic energy are described on the following pages.

Electrical energy

Electrical energy is the movement of tiny particles, called electrons.

When electrons move through a material such as a metal wire, an electric current is produced.

Lightning is a natural form of electrical energy.

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5

Sound energy

Sound energy is the energy of particles that are vibrating.

A moving particle bumps the particle next to it and so on.

The vibrating particles travel until they reach our ears and we hear them as sound.

Sound energy can travel through solids, liquids and gases (such as air).

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6

Heat energy

All substances are made of tiny particles called atoms.

All atoms move, or 'vibrate' and they produce heat energy.

Fire is a form of heat energy.



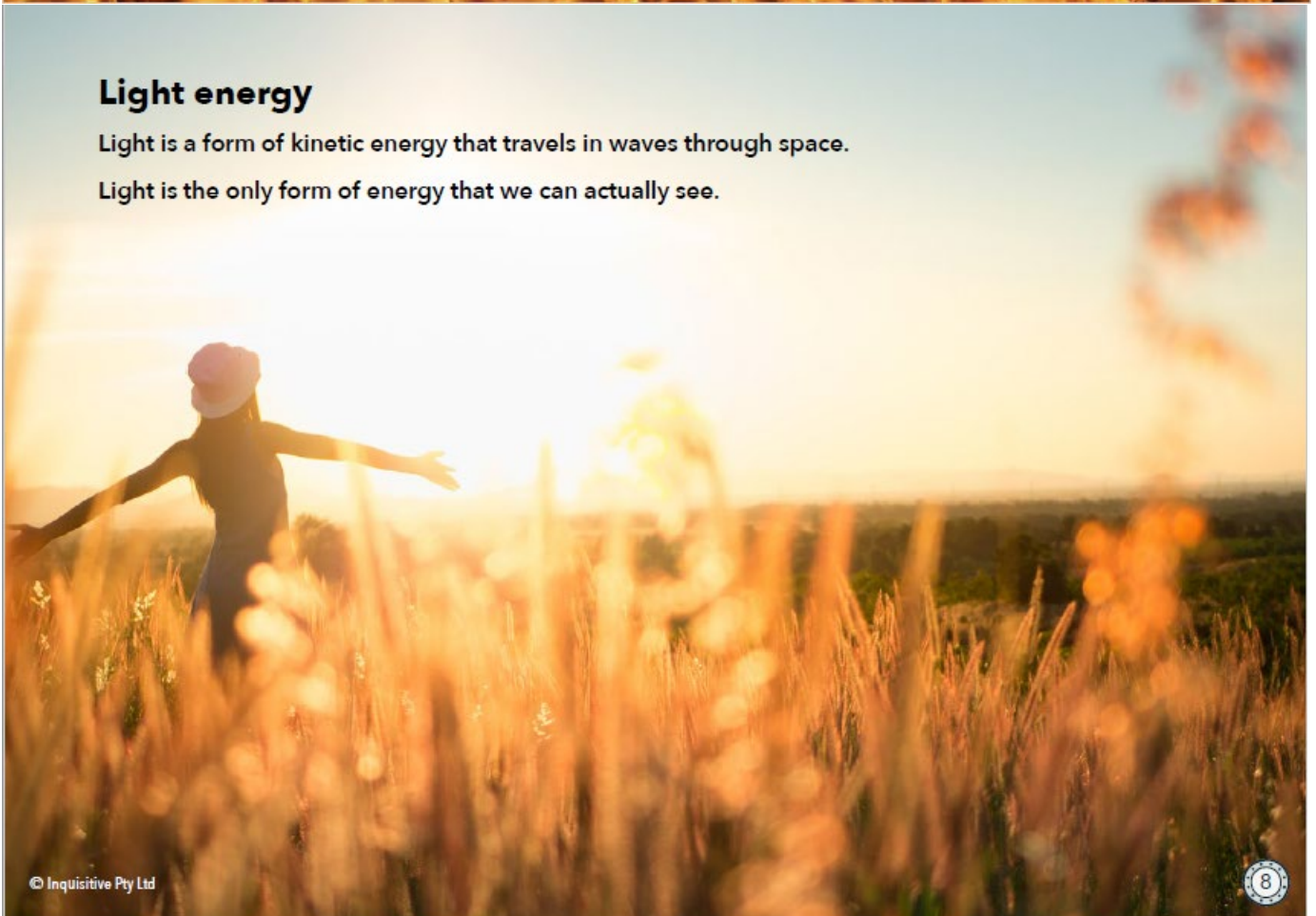
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Light energy

Light is a form of kinetic energy that travels in waves through space.

Light is the only form of energy that we can actually see.

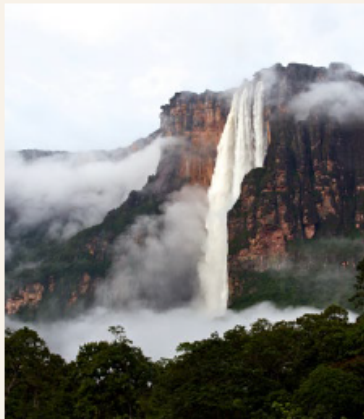


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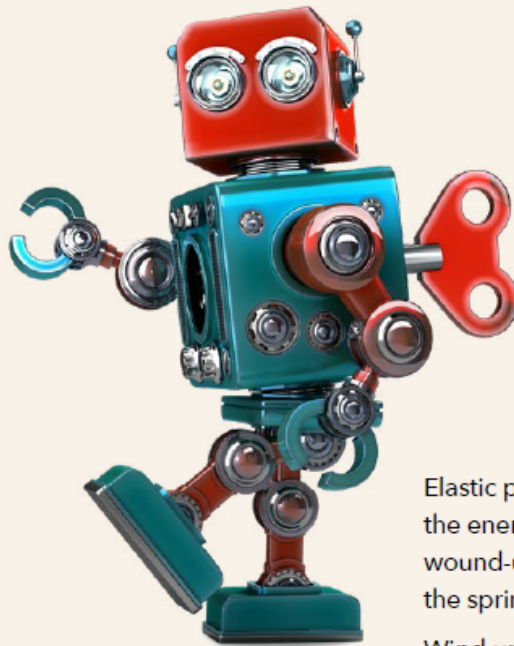
Potential energy

Potential is stored energy. There are different kinds of potential energy.



Gravitational potential energy is the energy an object has because of where it is.

Water at the top of a waterfall has gravitational potential energy.



Elastic potential energy is the energy that is stored in a wound-up spring. Winding up the spring transfers energy to it.

Wind up toys and clocks need elastic potential energy to work.

You need energy too!

The chemical energy in food is transformed into the kinetic energy we need to move our bodies, and to keep organs such as our heart, lungs and brain working.



What is your body's favourite source of energy?



Materials needed

INVESTIGATION QUESTION 8

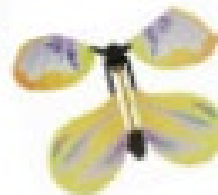
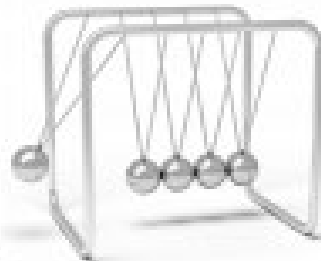
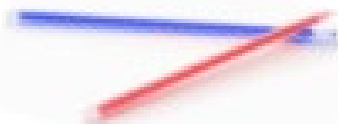
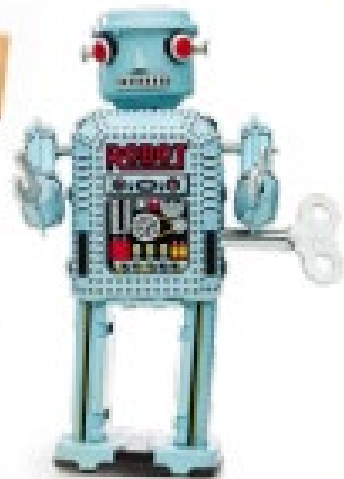
Investigating energy transformations

You need three items from the following list:

- a toy instrument (such as a drum, glockenspiel, hand bell, or ukulele)
- a wind-up 'walking' toy
- an instant heat pack
- a glow stick
- a hand-cranked or 'squeeze' torch
- a pull-back toy car
- a solar calculator or solar toy
- a Newton's Cradle
- a balloon
- a rubber band toy (such as a butterfly or plane or old-fashioned slingshot)
- an Energy Ball or Energy Stick
- a Dropper Popper

You need one item from the following list:

- a kettle
- a toaster
- a hairdryer
- a radio or clock radio



Reading – Comprehension- Inferring: No Litter Generation

Persuasive texts often play on people's emotions. Watch the clip below to see how this animator used emotions to give a message.

<https://www.youtube.com/watch?v=FVArB2cnB4Y>

Task: Answer the questions below. You will need to use your world knowledge and clues from the animation text to **draw inferences** about things that aren't stated.

1. What were 3 negative consequences of littering shown at the start?
2. How did the composer influence our emotions?
3. What made the little girl take action?
4. Why did she put on a super-hero cape?
5. What action did she take?
6. What were 3 positive consequences of her actions on others, the planet and the future?
7. What is the intention/message of this animation?
8. What emotion did you feel at the end? Why?



Spelling Unit 10 & 11 – Using 'ion'/'shun (eg: 'tion' and 'sion') Part B

Morphological: When adding 'ion'/'shun) as 'tion' or 'sion' to a base word, it depends on the preceding base word ending.

When "tion" is at the end of a word, it makes its own syllable eg: mo/tion, ac/tion, lo/tion, di/ges/tion, prep/ar/a/tion, sub/trac/tion

Task: Complete the attached "Using 'ion'/'shun (eg: 'tion' and 'sion') spelling worksheet. **WORKSHEET 2**

Writing – Persuasive: Negative Noun Groups

Yesterday, we worked on using positive noun groups to persuade. Today we are going to use negative noun groups and adjectives that trigger emotions and persuade people to take action.

Task- Compose a persuasive paragraph that persuades students at our school to stop littering. You can include visuals from the internet or draw a picture to support your paragraph. Think about the ideas presented in the "No Litter Generation" animation from our Reading task.

Plan for success by brainstorming negative or emotive adjectives to describe (for example) yogurt tubs, chip packets, plastic wrap, the playground, animals etc.

revolting	disgusting
unimaginable	terrible
horrendous	awful
horrific	ridiculous

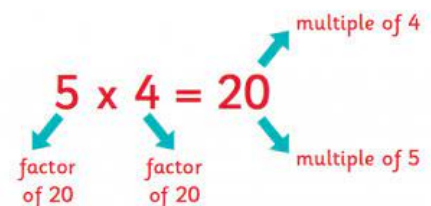
Success Criteria:

- I have a least 4 negative/emotive noun groups.
- My paragraph is at least 5 sentences.
- All of my sentence punctuation is correct.
- I may use other persuasive techniques or images.

Stretch and Recess Break

Mathematics Activity 1 – Factors & Multiples

Quite often, we get confused between factors and multiples. What is the difference? Today you will revise the meanings of both and practise identifying factors and multiples of different numbers. For the students who love a challenge, you will also need to identify the Lowest Common Multiple (LCM) or Highest Common Factor (HCF) of pairs of numbers. Use the worksheet or the Google Classroom version for this activity.



Mathematics Activity 2 – Complete the Shikaku Puzzle Challenge.

To complete the Shikaku puzzle, you will need to fill the grid with squares and rectangles. Each circled number shows you the area of the shape that you will need to make. You must fill the entire grid without leaving any blank space. Have a look at the completed example before attempting your own. Some puzzles will have numbers that aren't circled, use these as hints to show you where your shape will go.

Lunch Break

Geography – Bushfire Mitigation: Project Firestorm RFS (Level 1)

This term in Geography, we are looking at bushfire mitigation. During home learning, we are going to use an online resource called PROJECT FIRESTORM where you will learn about bushfire mitigation.

Go to - <https://www.projectfirestorm.com.au/> and explore all of the parts of Level 1. Use the knowledge you build up to answer the questions on the worksheet. There is also a Google Classroom version of this activity available.

Morning

Middle

Afternoon

SPELLING: Using 'ion' /shun (eg: 'tion' and 'sion')


Spelling Worksheet 2

Spelling Rule: Using 'tion' and 'sion'

* Use "tion" when the base word ends in a "t"/"te".
(Drop the "e"/"te" before adding -tion)

* If the base word ends in "ss" retain the "ss" and add "ion"

* Use "sion" when the base word ends in "d"/"de" or "s"/"se".
(Drop the "d"/"de" or "s"/"se" before adding "sion")



direct = direction

progress = progression


tense = tension

Break the following 'ion' / (shun) words into syllables:

Remember: When 'tion' is at the end of a word, it makes its own syllable.

Word	Syllable Breaks	Number of Syllables
1. motion	eg: mo/tion	2
2. action		
3. lotion		
4. digestion		
5. preparation		
6. subtraction		

Use the base words for clues to write the missing 'tion' words in the sentences:

direct	When is the next _____ of the magazine due out?	
instruct	In which _____ should I turn?	
educate	I couldn't understand the dog's _____ to my shoes!	
edit	We go to school to get a good _____.	
attract	Please follow my _____ carefully.	

Write the following words in a sentence:

direction	
instruction	
education	
edition	
attraction	

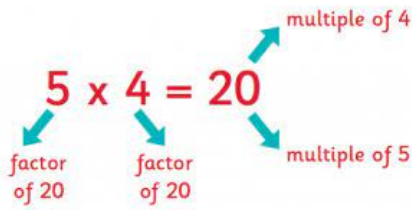
Use the 'ion' verb to noun word bank (left) to fill the sentences in this story:

reflect - reflection	I really _____ great actors, now that I am going to be in a play, I hope my performance will be worthy of _____.
correct - correction	The character I play is a veterinarian who performs a routine _____. I wanted someone to _____ my performance to see if I was ready.
substitute - substitution	I need to _____ any mistakes before opening night. I asked Mum to watch me perform my scene and suggest a _____ I might need to make.
examine - examination	Mum said that I did not need to _____ anything about my performance, but that my costume might need an _____.
admire - admiration	Mum held up a mirror to _____ my image back at me. I looked at my _____ and saw that my shirt was on backwards.
alter - alteration	I couldn't find the belt for my costume, so I had to _____ another belt. I don't think anyone will notice the _____.

CHALLENGE: Write your own sentences using the following base + 'ion' words:

Irritate – irritation, coordinate – coordination, separate – separation, explore – exploration, preserve – preservation.

Mathematics Activity 1 – Factors & Multiples



Factors are the different numbers that you can multiply to get to a certain number. Another way to think of them is they are the numbers you can count by to get to a certain number. In the example, you can count by 4s or 5s to get to 20, so both 4 and 5 are factors of 20.

Multiples are found when you multiply a certain number by any whole number. Another way to think of the is they are the numbers you say when you skip count by a certain number.

Write all the factors of the numbers listed. *Clue: There is one space provided for each factor.*

10: _____

12: _____

15: _____

18: _____

20: _____

24: _____

What is the Highest Common Factor (HCF) of these pairs? *Clue: It is the highest factor that they both have.*

10 & 12: _____

15 & 18: _____

20 & 24: _____

18 & 24: _____

Write the first 10 multiples of each number listed:

3: _____

4: _____

6: _____

8: _____

10: _____

15: _____

20: _____

What is the Lowest Common Multiple (LCM) of these pairs? *Clue: It is the lowest multiple that they both have.*

6 & 8: _____

10 & 15: _____

4 & 10: _____

8 & 20: _____

Mathematics Activity 2 – Shikaku Puzzle Challenge

Example:

2	2			4
2	2	5		
6			2	
			4	
			4	

Puzzle 1:

	2	3		2
		3		
	4	3		8
	6			

Puzzle 2:

		4	4		4	8		2	2
	7								
						8		4	
9		9			4			2	2
						5			
			5		2	2	3	3	3
			4	10		5			
	7				2		8		
	2								8
9		9				3		2	2

Puzzle 3:

						8			
	5								
		4	3	9	9		3		
10			3				3		
			5						
		2	2			8		6	
		9						6	
			9			2	4		10
				4		2	4		
					8				

Puzzle 4:

	9								
2	7								8
						2			
				9					
		8				3			
			2	4					
		4					5	6	
6				3		2			
	5						4		2
2			7						

YOU ARE NEEDED AS A FIRESTORMER AGENT- YOUR MISSION IS TO INVESTIGATE



Week 1 Lesson 1 - Learn About Bushfires

Go to this link and begin your mission - <https://www.projectfirestorm.com.au/>

Enter Level 1 if you dare! - You will see five (5) video links in yellow that will help you answer the following questions:

1	Enter – What causes bushfires? What are three things that can cause bushfires?	1 2 3
2	Enter – How can people prepare for them? List two things you can do to prepare	1 2 3
3	Enter – What are ways of preventing them? What does Total Fire Ban mean? Write your answer using a complex sentence (<i>Clue: start a sentence with 'If' and it will be a complex sentence</i>)	
4	Enter – How should you respond to a bushfire? (Find - Warnings that save lives link). In blue you will find 5 suggestions to fill in the blanks. (The spaces tell you how many letters in the words)	B _ _ _ _ _ P _ _ _ _ _ _ _ _ P _ _ _ _ _ _ _ R _ _ _ _ _ _ _ P _ _ _ _ _ _ P _ _ _ _ _ _ _ _ _ _ B _ _ _ _ _ _ _ _
5	Enter – What happens after? What is arson in a bushfire? Write your definition then create the acrostic poem.	Definition: A R S O N

Reading – Comprehension- Inferring: Back to School Poem

We know that poems use figurative language and other techniques that require us to draw **inferences** to make meaning.

Task - Read the poem “Back to School Today” attached.

1. The girl in the poem had mixed feelings about returning to school.

Why do you think she was both excited and nervous?

2. Explain the literal meaning of these figurative phrases:

- * anticipation tickling on my skin
- * I grin from ear to ear!
- * I can not wait to see them all.
- * I feel butterflies down within my core.
- * A giant grin lights up my face!

3. These techniques “Show” how the girl is feeling. How are you feeling about returning to school? Write a few sentences that “Show” your teacher how you feel- see if they can **infer** from your description!



Morning

Spelling Unit 10 & 11 – Using ‘ion’/shun (eg: ‘tion’ and ‘sion’) Part C

Morphological: When adding ‘ion’/ (shun) as ‘tion’ or ‘sion’ to a base word, it depends on the preceding base word ending.

When “tion” is at the end of a word, it makes its own syllable eg: mo/tion, ac/tion, lo/tion, di/ges/tion, prep/ar/a/tion, sub/trac/tion

Task: Complete the attached “Using ‘ion’/shun (eg: ‘tion’ and ‘sion’) spelling worksheet. **WORKSHEET 3**

Writing – Persuasive Techniques: Positive, negative and emotive language.

Trampolines! People have mixed feeling about them. We can influence their feelings through our choice of descriptive language.

Task: You are going to write 2 paragraphs. One will persuade parents that buying a trampoline is a great choice, and the other will persuade parents that buying a trampoline is a terrible idea!

Brainstorm some positive, negative and emotive noun groups and phrases that will persuade your audience. Think about our learning so far this week!

Success Criteria:

- I have a positive paragraph with at least 3 noun groups.
- I have a negative paragraph with at least 3 noun groups.
- My paragraphs are at least 4 sentences.
- All of my sentence punctuation is correct.
- I may use other persuasive techniques or images.



Stretch and Recess Break

STEM – Design your dream car

In this activity, you are going to design your very own dream car. Think big and dream out of the box.

REMEMBER:

- No idea is a bad idea - sometimes it's the little ideas that open the way to big dreams!
- Don't worry about what's possible; just focus on what you'd like to see. Some amazing ideas are born from dreams!



See the attachment in this learning pack for the instructions for this lesson.

Middle

Lunch Break

PE – Attack vs. Defense

In Term 4, we are going to focus on developing tactics and skills for invasive games. Invasive games are team games where the main objective is for players to invade their opposition's territory to score points. An obvious example is *Capture the Flag*. Look at these other examples of invasion games:

- Basketball
- Netball
- Soccer
- Rugby League
- Touch Football/Oztag
- Hockey
- Ultimate Frisbee



Your task is to select five invasive games and brainstorm the different skills/tactics you would use for attack and defense. A worksheet with a table has been provided with this pack to help you set it out. Once you have finished, you need to select one skill that you brainstormed, suggest a drill that would help a player work on that skill and then do the drill yourself!

Afternoon

Back to School Today

Stephanie Mulrooney



I wake up with anticipation
tickling on my skin,
Excitement builds inside me, it's
so hard to hold it in!
I look at my reflection and I grin
from ear to ear,
The day that I've been waiting
for... yes finally, it's here!

It's time to read and write again,
to think and laugh and play,
I've missed my friends so very
much since we have been away.
I think of all the fun we have,
the silly jokes we share,
I cannot wait to see them all, I
can't wait to be there!

So why do I feel butterflies deep
down within my core?
Why do I feel nervous, and
reluctant, and unsure?
What if I've forgotten all the
things I'm meant to do?
What if things are not the same
as what I thought I knew?

I enter the familiar grounds, the
memories returning,
Happy thoughts of special times,
of friendship and of learning.
There's bustle in the playground as
the children dash around,
Oh, how I've missed that cheerful
noise, it's such a joyous sound!

I turn to see my teacher smiling
at the classroom door,
I know at once that there's
no need to worry anymore.
A giant grin lights up my face,
I think it's fair to say,
That I am simply overjoyed to
be back at school today!



SPELLING: Using 'ion' /shun (eg: 'tion' and 'sion')

Spelling Worksheet 3

Spelling Rule: Using 'tion' and 'sion'

* Use "tion" when the base word ends in a "t"/"te".
(Drop the "e"/"te" before adding -tion)

* If the base word ends in "ss" retain the "ss" and add "ion"

* Use "sion" when the base word ends in "d"/"de" or "s"/"se".
(Drop the "d"/"de" or "s"/"se" before adding "sion")

direct


 = direction

progress



















 = progression

tense

 = tension



Look at the pictures and sentences. Write 'tion' or 'sion' in the spaces to complete the word with the correct spelling. Be careful...one word ends with 'cion'!

	At the meeting, we had a discuss_____ about how to organise our work next year.
	Do you know what the current popular_____ of the world is?
	When you are choosing vegetables to buy, you should pay close atten_____ to how fresh they are.
	Have you made a deci_____ about which lounge you will buy?
	I prefer smaller houses. I would not like to live in a man_____!
	Melanie's vi_____ is not very good. She can see much better when she is wearing her glasses.
	I have very good rhythm, so I like to play percus_____. I am not very good at hearing melodies, but I love the beat!
	If you want to learn a new language, you can travel to another country. You can also study in a formal institu_____.
	Races do not make Rick feel nervous. He is not scared in a competi_____.
	Airplanes need large jet engines for their propul_____.
	The teacher gave Sophia an exten_____ to finish her essay.
	After you read the text, you will answer some comprehend_____ questions.
	Coer_____ means to force someone to do something they do not want to do.
	The police had a suspi_____ about the man in the video.
	Today is a special occa_____. It is my thirtieth birthday!
	It is a good idea to limit how much televi_____ you watch.
	In our next ses_____, we will talk about a marketing strategy.
	Kelly was happy to hear about her admin_____ to the dance program.
	Bill and Kathy will attend a teaching conven_____ this week.
	A large propor_____ of the ticket price will be donated to charity.
	I use different sec_____ of the wardrobe for each kind of clothes.
	Lydia has an important posi_____ on the medical research team.

Change the verb to a noun by adding the suffix 'ion' or 'ation':

correct	eg: correction	examine		reflect	
explore		separate		substitute	
admire		alter		irritate	
subtract		preserve		coordinate	

Adding 'ion' to a verb to make a noun:

VERB	NOUN	VERB	NOUN
Distinct		Express	
Predict		Possess	
Select		Obsess	
React		Confess	
Detect		Impress	
<i>What's the rule?</i>	ct + 'ion'	<i>What's the rule?</i>	ss + 'ion'

Adding 'ion' to a verb to make a noun:

VERB	NOUN	VERB	NOUN
assert		create	
invent		imitate	
suggest		illustrate	
exhaust		congratulate	
except		translate	
distort		migrate	
<i>What's the rule?</i>		<i>What's the rule?</i>	

Challenge words – Look at the following words and write the correct 'ion' ending:

VERB	NOUN	VERB	NOUN
Admit		Describe	

Correct the spelling of these words and write a sentence to demonstrate your understanding of the word meaning:

Incorrect Spelling	Correct Spelling	Sentence
eg: seclusion	seclusion	She liked to sunbathe in the seclusion of her own garden.
suspenshen		
attendsion		
acksion		

Adding 'sion' to a verb to make a noun:

VERB	NOUN	VERB	NOUN
Explode		Protrude	
Decide		Allude	
Divide		Collide	
Invade		Evade	
Conclude		Erode	
Intrude		Ascend	

What's the rule? _____

VERB	NOUN	VERB	NOUN
Produce		Reduce	
Introduce		Reproduction	

What's the rule? _____

STEM: Design Your Dream Car - Activity Instructions

In this activity, you are going to design your very own dream car. Think big and dream out of the box.

REMEMBER:

- No idea is a bad idea - sometimes it's the little ideas that open the way to big dreams!
- Don't worry about what's possible; just focus on what you'd like to see. Some amazing ideas are born from dreams!

Part A: Movement

Step 1. Do you think we will still be driving on roads in the future? What if you want to take your car over difficult terrains, like sand, mountains or the ocean? Does a car even need to have four wheels or any wheels at all?

Watch this https://www.youtube.com/watch?v=VBPrq_IXT1c

Take some inspiration from animals in the natural world or from the clip you just watched. Imagine a car with spider legs, a car that hops like a kangaroo, a slithering snake type car or a car that flies in any kind of way. List your ideas in the table below:

Animal	Movement
<i>E.g. Spider</i>	<i>Walks on eight legs</i>
<i>E.g. Kangaroo</i>	<i>Hops</i>

Step 2. Using the animals you thought about or ideas from the clip in the table 1, draw two cars that move in different ways below. These designs don't have to be perfect or very detailed, they're just for exploring ideas. Make sure to explain your designs using labels.

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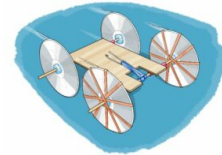
Part B: Power

In this step you need to decide what resource is going to fuel your car.

Step 1. Petrol, gas and diesel are non-renewable resources, which means that they will eventually run out and we won't have any more of them left on planet Earth. Yet almost all cars currently use these as a source of fuel.

Car manufacturers are already considering alternative energy sources, but we're sure you could be even more creative.

Think about some things that go into your bin. What about a car powered by banana peels, or cat litter? Remember that years ago, carriages were pulled by horses and sailboats didn't have motors. What about a pedal-powered car, or a massive wind-up propellor?



What resource is going to power your car? _____

Part C: Look and Feel

Step 1. Now it's time to start thinking about the fun stuff – In the table below create two different dream car designs. Good designers don't just settle on one idea - they try lots of different things and sometimes they're surprised by what they find when experimenting.

<p>Example Car 1 Colours: Red and green Design: Stripes Car shape: Square Texture: Hairy Wheels: yes/no Made from: tin</p>	<p>Example Car 2 Colours: Orange and blue Design: Dots Car shape: Triangle Texture: Spiky Wheels: yes/no Made from: rubber</p>
<p>Colours: Design: Car shape: Texture: Wheels: yes/no Made from:</p>	<p>Colours: Design: Car shape: Texture: Wheels: yes/no Made from:</p>

Part D: Create your Dream Car

Step 1. Think about all of the things you have considered in Parts A, B and C. Gather up your favourite bits and pieces from the many designs you've drafted already and list them here:

- how does your car move? _____
- what is it made out of? _____
- what is it fuelled by? _____

Step 2. You are now going to create a finished artwork that portrays your final dream car. You do this on an A4 piece of paper or in your learning from home book.

Remember:

- No idea is a bad idea - sometimes it's the little ideas that open the way to big dreams!
- Don't worry about what's possible; just focus on what you'd like to see.
- Remember to take a photo of your car and send it through to your teacher in Google Classroom or Dojo.

Step 3. Write two or three sentences explaining the features of your car and why you made these choices. This will need to be submitted along with your picture.

PE - Brainstorm skills and tactics for attack and defense in five invasive games. Soccer has been started for you.

Game	Soccer				
Skills & Tactics for Attack	<ul style="list-style-type: none"> - Dribbling - Passing (short, medium and long passes) - Go backwards to go forwards tactic - Trapping the ball - Tricking your opponent - - - 				
Skills & Tactics for Defense	<ul style="list-style-type: none"> - Mark your opponent - Tackling - Goalkeeping (catching, blocking, standing where the ball will go) - Staying in position - - - 				

Select a skill and then suggest three different drills a player could do to work on that skill. Practise the drills at home.

Sport –	Focus Skill –		
<i>Drill 1</i> –	<i>Drill 2</i> –	<i>Drill 3</i> –	