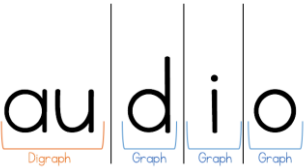




# Week 3 Term 3 Weekly Framework Stage 3


Below is a learning framework for you to follow at home. You should be able to complete each activity independently. If you need some assistance ask for some help from a parent/carer or send a message to your teacher on GoogleClassroom. You are also able to access your Mathletics account. You can complete activities in your Homework book or an exercise book, some maybe submitted through your google classroom. Don't forget to write the date on your activities to keep track. Resources/worksheets/spelling words can be found at the end of this document under resources.

T3 Wk 3	Morning Session	Middle Session	Afternoon
<p><b>Monday</b></p>	<p><b>English – Spelling with Miss Deathe</b>            Success Criteria: I can use the digraph /pp/ making the sound “p” as in <b>puppy</b>.</p> <p>Open the Term 1 Wk 3 Spelling PowerPoint (this can be found on your Google Classroom) and follow the prompts.</p> <p>Fold your page into four columns, labelling each Monday-Thursday with the short date under each. Copy out your spelling words for the week.</p> <p><u>Activity 2 - Highlight the Spelling Pattern</u>            Use a highlighter to trace over the spelling pattern in each of your words (excluding sight words). Can you find other words in a book or dictionary that use the digraph /pp/ to make the same “p” sound? List these in your book.</p> <p><b>English- Writing</b>  <b>A cold task is a piece of work that is completed without assistance. It is important that this work is completed by the students.</b></p> <p><b>COLD TASK</b></p> <p><b>See attached Rainbow Lorikeet information and Writing sheet.</b></p>	<p><b>Maths</b>  <b>2D Space (2)</b>            (relate to Angles)            MA3-15MG - Manipulates, classifies and draws two-dimensional shapes, including equilateral, isosceles and scalene triangles, and describes their properties  <b>Lesson 1</b>            WALT: To name and identify the different properties of triangles.</p> <p><b>Triangles</b> All closed shapes that have 3 straight sides  <b>Equilateral triangles:</b> Triangles that have 3 = sides, and 3 = angles.  <b>Isosceles triangles</b> Triangles that have 2 = sides and 2 = angles  <b>Scalene triangles</b> Triangles that have 3 different side and 3 different angles  <b>Right angled triangles</b> Triangles that have a right angle.</p> <p><b>Resources: Sorting Triangles Challenge Cards</b>            students are to cut and paste into their books or draw on the board and get students to complete.</p> <p><b>Lesson 2:</b> Classify and sort triangles into the categories of scalene, isosceles and equilateral.</p> <p><b>Mathletics online activities : Year 6</b>            Add common denominator            Subtract common denominator            Common denominator            Add NO common denominator            Subtract NO common denominator            Collect More Shapes</p> <p><b>Mathletics online activities : Year 5</b>            Add subtract fractions 1            Add common denominator            Subtract common denominator            Collect More Shapes</p> <p><b>Mathletics worksheets</b></p> <p>3.1 Y5 2D shapes – Polygons                      Geometry F2 p.8            3.2 Y6 2D shapes – Polygons                      Geometry G2 p.7</p> <p><b>Worded problems</b> UP worksheet questions 1-3</p>	<p><b>Library week and week 4</b>            Learning Intention: Research a famous author.            Listen to modern story based on a classic play/story.</p> <p>1.Listen to the story of Romeow and Drooliet  <a href="https://storylineonline.net/books/romeow-drooliet/">https://storylineonline.net/books/romeow-drooliet/</a></p> <p>Think about what message it is trying to portray. What classic story/play is this story based on.</p> <p>2.Log in to World Book Online -  <a href="https://www.worldbookonline.com">https://www.worldbookonline.com</a>            ID – scps1 Password – scps1            Search for information on William Shakespeare</p> <p>Mrs Burke will also be putting the work up in her Google Classroom. Students who wish to join it to complete this work will need to use this code to join - <b>3if22ps</b></p>

T3 Wk 3	Morning Session	Middle Session	Afternoon
<p style="text-align: center;"><b>Tuesday</b></p>	<p><b>English - Spelling:</b>            Success Criteria: I can use the digraph /pp/ making the sound “p” as in puppy.            Open the Term 1 Wk 3 Spelling PowerPoint (this can be found on your Google Classroom) and follow the prompts.</p> <p>Use the <i>Look, Cover, Write</i> and <i>Check</i> method to copy out your spelling words under your ‘Tuesday’ column.</p> <p><u>Activity 2 - Spelling Points</u>            Say the word aloud and write it by separating the <i>sounds</i>. How many points is each word worth if a;            - Graph = 2 points            - Digraph = 5 points            - Trigraph = 10 points</p> <div style="text-align: center;">  </div> <p><b>Handwriting:</b>  <b>WALT:</b>            - Write using cursive.            - Explore joins that facilitate fluency and legibility.</p> <p><b>Core Task:</b>            Review the five S’s - slope, shape, size, spacing and style.            Review correct pen/cil grip, book &amp; sitting position/posture.</p> <p><b>Fluency joins</b>            When you join double f, you can go on to join from the crossbar. When you do a joined ft, go on to join them from the exit flick of t, then go back to do the crossbar last.</p> <p>Tuesday 27th July 2021            ff ff ff ff ff ff ff ff ff ff...            ft ft ft ft ft ft ft ft ft ft ft...</p> <p>After a blizzard, there are often huge drifts of snow piled high on the ground and rooftops. These hefty drifts can be many metres deep. Deep snow on the roads affects traffic until it can be cleared away. Digging a city out after a blizzard is difficult, and requires a large effort from many people.</p>	<p><b>Maths</b>  <b>2D Space (2)</b>            (relate to Angles)            MA3-15MG - Manipulates, classifies and draws two-dimensional shapes, including equilateral, isosceles and scalene triangles, and describes their properties</p> <p><b>Lesson 2</b>            WALT:            Make and compare enlargements of shapes/pictures</p> <p><b>Resources:</b>            Worksheet 2D Shape Enlargement Transformation            Differentiated sheets for more complicated transformations</p> <p><b>Lesson:</b>            Work through the 2D Shape Enlargement Transformation worksheet with the students. Extension students can have a go at completing the more complicated worksheets.</p> <p><b>Mathletics worksheets</b>            3.3 Y5 2D shapes – Triangles                      Geometry F2 p.11            3.4 Y6 2D shapes – Triangles                      Geometry G2 p.11</p> <p><b>Worded problems</b> UP worksheet questions 4-6</p>	<p><b>Science:</b>  <i>Matter Matters - Lesson 3</i>            - Revise previous lesson</p> <p>Record your responses to the below questions:</p> <ol style="list-style-type: none"> <li>1. What is matter?</li> <li>2. What are we talking about if we refer to a substance’s state of matter?</li> <li>3. What is a solid/liquid/gas?</li> <li>4. How can you tell if something is a solid/liquid/gas?</li> <li>5. Can a solid be turned into a liquid or gas, or vice-versa?</li> </ol> <p>Think about slime- whether you have made some by yourself before or even if you have bought some. What does it feel like? How would you <u>describe</u> it?            - Do you think slime is a solid, a liquid or a gas?</p> <p><a href="https://www.youtube.com/watch?v=ELchwUllWa8">https://www.youtube.com/watch?v=ELchwUllWa8</a>            Watch the video <i>What’s Matter</i> on YouTube and make a list of important points and key terms.</p> <p><i>All objects and substances are made from matter.</i></p> <p>Read through <i>Facts of the Matter Teaching Presentation</i> (scroll below the framework), and complete the ‘What’s the Matter?’ worksheet.</p>

T3 Wk 3	Morning Session	Middle Session	Afternoon								
<p><b>Wednesday</b></p>	<p><b>English - Spelling:</b>            Success Criteria: I can use the digraph /pp/ making the sound “p” as in <b>puppy</b>.            Open the Term 1 Wk 3 Spelling PowerPoint (this can be found on your Google Classroom) and follow the prompts.</p> <p>Use the <i>Look, Cover, Write</i> and <i>Check</i> method to copy out your spelling words under your ‘Wednesday’ column.</p> <div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr> <td>however</td> <td>although</td> </tr> <tr> <td>whereas</td> <td>though</td> <td>since</td> </tr> <tr> <td>because</td> <td>while</td> <td>unless</td> </tr> </table> </div> <p><u>Activity 2 - Complex sentences</u>            Choose 5 words from your spelling list to write into complex sentences using known joiner words. You may like to challenge yourself by including quotation marks!</p> <p><b>Literacy - Writing task</b>            Informative task:            Focus - Text structure            Refer to the Informative text rubric. Last week we looked at the audience. Each week will be a new focus.            The text structure is how the information is set out.</p> <p>Task: Research            When you are writing an informative text you need to have research. This information is then categorised under headings.            Look at the information page on Tsunamis in the appendix section.            GENERATE GREAT QUESTIONS.</p> <p>You will be writing an information report on <u>ULURU</u>            Create a list of questions that you could research.            Eg. <b>How old is Uluru?</b>            Write a list of initial questions (minimum of 5)            Choose a question - Flip it.            Choose another question and extend it.            Write a ‘Why’ question.            Use the tsunami sheet as a reference as to what the questions will look like.            Over the next few days you will be completing your report.            Complete your planning page on a page in your workbook. Be sure to use headings to categorise your information.</p>	however	although	whereas	though	since	because	while	unless	<p><b>Wednesday BTFM</b>  <b>BTFM</b>            3.5 Y5 Identify equivalent common fraction            3.6 Y6 Adding fractions with the same common denominator</p> <p><b>Mathletics worksheet</b>            3.7 Y5&amp;6 Adding and subtracting fractions with like denominators p.26</p> <p><b>Worded problems</b> UP worksheet questions 6-8</p>	<p><b>Learning Intention:</b> Students to State the different nutrients and why each is important for our growth and development.</p> <ol style="list-style-type: none"> <li>1. Have a look at the Guide to Healthy Eating again and ask yourself what is in the foods in each food group that makes them needed. Investigate all the nutrients (vitamins, carbohydrates, fibre, protein, fats and minerals). Create a list.</li> <li>2. Chose one nutrient and research information about that nutrient. What does it do? Why do we need it? How do we get it? List the foods we can get it from. Turn the information into either a video/ brochure or power point.</li> </ol> <p>Australian Guide to Healthy Eating  <a href="https://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating">https://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating</a></p>
however	although										
whereas	though	since									
because	while	unless									

T3 Wk 3	Morning Session	Middle Session	Afternoon
<p><b>Thursday</b></p>	<p><b>English - Spelling:</b>            Success Criteria: I can use the digraph /pp/ making the sound “p” as in <b>puppy</b>.            Open the Term 1 Wk 3 Spelling PowerPoint (this can be found on your Google Classroom) and follow the prompts.</p> <p><i>Activity 1 - Use the Look, Cover, Write and Check method to copy out your spelling words under your ‘Thursday’ column.</i></p> <p><i>Activity 2 - Dictionary Meanings</i>            Choose 5 words from your spelling list to locate in the dictionary to find the meaning. Write it in your own words.</p> <p><b>Writing - Informative texts.</b>            Focus- Text structure            Revise your planning.            Will it appeal to your audience?            Does it include - introduction, body and conclusion?            Is there a variety of information?            Have you used visuals, diagrams, charts or labels?            Have you summarised the information not just copied from a website?</p> <p>Create your information report. There is an information report scaffold in the appendix if you need it.</p> <p>Read and edit your work. Look at the rubric and see how many points you would receive for your work for what you have included.</p> <p>Submit online, email or write out and hand in when you return to school.</p> <p><b>Reading Comprehension</b>  <b>Read “Once Bitten”</b>  <b>Before reading</b> predict “PIE”  <b>During Reading</b> Monitor your understanding  <b>After Reading</b> answer the comprehension questions worksheet.</p>	<p><b>Maths</b>  <b>Thursday BTFM</b>            3.8 Y5 Adding and subtracting fractions            3.9 Y6 Adding fractions with related denominator</p> <p><b>Mathletics worksheet</b>            3.10 Y5&amp;6 Calculating – adding decimal fractions p.30</p> <p><b>Worded problems</b> – Work through what you can do on the extension sheet questions 1-9.</p>	<p><b>Learning Intention:</b> To understand how humans have adapted the environment to their needs.</p> <p><b>Success Criteria:</b>            I can calculate my ecological footprint.            I can create an ecological footprint calculator.</p> <p><b>Lesson sequence:</b>            You are going to investigate how human survival and development is a result of being able to adapt to the changing environment. Discuss the following reflection questions with a sibling, your parent, or you could message a peer: <i>What do you think about humans’ connection to the environment?</i>  <i>Have we improved it?</i>  <i>What may happen in the future?</i></p> <p><b>Task 1:</b> Use the ecological footprint calculator from the Geography worksheet to evaluate your impact on the Earth.</p> <p><b>Task 2:</b> Design your own ecological footprint calculator in the grid provided. Think about what behaviours impact on the Earth’s environments the most and how you will grade them.</p> <p><b>Task 3:</b> Research some ways that humans could “payback” the Earth to lessen their impact. Present your findings as an image or flowchart in your workbook.</p>

T3 Wk 3	Morning Session	Middle Session	Afternoon
Friday	<p><b>English - Spelling:</b>            Success Criteria: I can use the digraph /pp/ making the sound “p” as in <b>puppy</b>.            Open the Term 1 Wk 3 Spelling PowerPoint (this can be found on your Google Classroom) and follow the prompts.</p> <p><u>Activity 1:</u>            Have a member of your household test you on your words for the week.</p> <p><u>Activity 2:</u>            Complete your Spelling Word Search for the week (find below framework)</p> <p><b>Reading Comprehension:</b>  <u>Activity 1</u> Read the attached text <i>The Clever Kid</i> and answer the multiple-choice questions in your book.</p> <p><u>Activity 2</u> Complete the Cars and Stars lesson _ <i>Checking your understanding</i>.            multiple choice questions in your book or online,</p> <p><b>Grammar:</b>  <b>Learning Intention:</b> To identify, use and apply progressive tense rules.  <b>Progressive verb tense</b>            Progressive verb tenses express a continuous or ongoing action.  <b>Past progressive</b> – This verb tense expresses an ongoing or continuous action that occurred in the past. This form uses the words ‘was’ and ‘were’ before the ‘-ing’ verb.            - I <u>was talking</u> to Benjamin.            - Benjamin <u>was talking</u> to me.            - The students <u>were talking</u> to Benjamin.  <b>Present progressive</b> – The present aspect of this verb tense expresses an ongoing or continuous action that is occurring right now. This form uses the words ‘am’, ‘is’ or ‘are’ before the ‘-ing’ verb.            - I <u>am talking</u> to Benjamin.            - Benjamin <u>is talking</u> to me.            - The students <u>are talking</u> to Benjamin.  <b>Future progressive</b> – Finally, future progressive verb tense expresses an ongoing or continuous action that will occur in the future. This aspect is formed by using the words ‘will be’ before the ‘-ing’ verb.            - I <u>will be talking</u> to Benjamin.            - Benjamin <u>will be talking</u> to me.            - The students <u>will be talking</u> to Benjamin.</p> <p>Please complete all three activities from the ‘Progressive Verb Tenses’ worksheet.            Please write your answers in your workbook.</p>	<p><b>Friday BTFM</b></p> <p>3.11 Y5 Adding fractions with related denominator</p> <p>3.12 Y6 Estimating when adding fractions</p> <p><b>Mathletics</b></p> <p>3.13 Year 5 extension – The shape within</p> <p>3.14 Year 6 extension – Quadrilaterals</p>	<p><b><u>Creative Arts - Rock Painting</u></b></p> <p>Today’s art activity is ‘Rock Painting Hide n Seek’ which your whole family can be involved in.</p> <p>Find 3 or 4 rocks from your garden or surrounding area then wash and dry them ready to paint.</p> <p>You can use pens, permanent textas, acrylic or metallic paint. Draw your pattern or picture on the rock using a lead pencil and then colour the rock in with what resources you have at home.</p> <p>You can choose to do colourful patterns or draw animals, flowers, plants or any other design of your choice.</p> <p>Once you have finished, you can go for a walk with your family and hide the rocks in your local area/ park for others to find.</p> <p>Here is a link to get you started and has a step to step guide.</p> <p><a href="https://www.youtube.com/watch?v=OD_v8zg26VU">youtube.com/watch?v=OD_v8zg26VU</a></p> <p>Please take a photo of your designs &amp; send them in when finished.</p> 

## T3 Wk 3 Stage 3 Spelling Words

Spelling Focus Words		Challenge Words	Sight Words
puppy supply oppose apply happier	clipping pepper applicant disappear dropper	appropriate apprentice apprehend disappointment appearance	wetlands agriculture borough commercial council

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What are the sounds I can hear in this word?

p u pp y

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What part of this word do I need to remember?

puppy

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

Spell the word on your whiteboard

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

Say the word

pepper

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What does the word mean?

A black or white spice that has a sharp flavour and is used for seasoning.

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What are the sounds I can hear in this word?

p e pp er

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What part of this word do I need to remember?

pepper

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

Spell the word on your whiteboard

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

Say the word

oppose

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What does the word mean?

To think, act, or be against something or someone.

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What are the sounds I can hear in this word?

o pp o s e

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What part of this word do I need to remember?

oppose

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

Spell the word on your whiteboard

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

Say the word

dropper

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What does the word mean?

A short tube with a rubber bulb used to measure out liquids by drops.

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What are the sounds I can hear in this word?

d r o pp e r

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

What part of this word do I need to remember?

dropper

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**T3 Week 3 Spelling Words**

Success Criteria: I can use the digraph /pp/ making the sound 'p' as in puppy.

Spell the word on your whiteboard

SAY > MEANING > ANALYSE > REMEMBER > TEACH

**Activities:**

Activity 1: Fold your page in half and rule up two columns front and back. Label each column Monday/Thursday with the short dates.

Activity 2: Highlight the Patterns Use a highlighter to trace over the spelling pattern in each of your words, including sight words. Can you find other words in a book or dictionary that use the digraph /pp/ to make the same 'p' sound? List these in your book.

**T3 Week 3 Spelling Words**

Spelling Focus	Challenge words	Sight Words
puppy	appropriate	wetlands
supply	apprentice	agriculture
oppose	apprehend	borough
apply	disappointment	commercial
happier	appearance	council
clipping		
pepper		
applicant		
disappear		
dropper		

SMART!

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## Stage 3 Term 3: Informative Cold Task **What do**

**you know about the Rainbow Lorikeet?** *Read the information below and watch the video*



<https://www.youtube.com/watch?v=TB-RThFHt0c>

\*While reading, highlight important parts and use the information to write your own information text about rainbow lorikeets on the next page. You do not need to use every bit of information that is listed. You can take out the important facts or information that you think is interesting.

### **RAINBOW LORIKEETS**

*\*If you need some help reading the text, click on this link: (Sound on)*

<https://drive.google.com/file/d/1vTat-P05Nafzlt44MF8iohlxjj9qIEgR/view?usp=sharing>

The Rainbow Lorikeet is unmistakable with its bright red beak and colourful body. Both female and male look alike, with a blue head and belly, green wings, tail and back, and an orange/yellow front. They are often seen in loud and fast-moving flocks.

The Rainbow Lorikeet is found in a wide range of treed habitats including rainforest and woodlands, as well as in well-treed urban areas.

The eggs of the Rainbow Lorikeet are laid on chewed, decayed wood, usually in a hollow limb of a eucalypt tree. Both the female and male prepare the nest cavity and feed the young, but only the female incubates the eggs.

Rainbow lorikeets are sweet, affectionate birds that are known for their comical antics and friendly personalities. In general, these birds are friendly, easy to socialise, and value interaction with their human keepers.

The Rainbow Lorikeet mostly forages on the flowers of shrubs or trees to harvest nectar and pollen, but also eats fruits, seeds and some insects.

This bird is a highly intelligent bird that can learn tricks and other behaviours. Because it's so smart, it is also a capable escape artist. Cage door locks are a must.

Rainbow lorikeets are excellent talkers, and they can learn to say many words and phrases. They are noisy birds and have a high-pitched tone with frequent squawks. Their sometimes shrill vocalizations can be abrasive and unpleasant to some people.

Rainbow lorikeets survive in the wild mainly on nectar and flower pollen. If you look inside of a lorikeet's mouth, you'll notice that their tongues have uniquely adapted "brushes" on the tips to help them harvest these foods from the plants in their environment.

These birds are usually eating for at least three hours throughout the day.

Rainbow lorikeets are very active birds, so they require plenty of exercise to maintain optimal health. A lorikeet needs a large cage so that they have room to climb and fly.

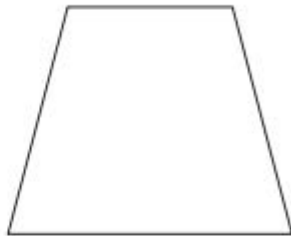
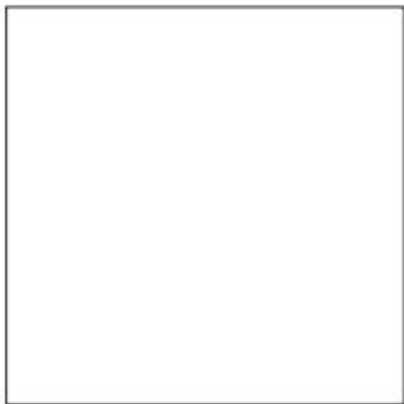




## 2D shapes – quadrilaterals

- 2 As well as always having 4 sides, quadrilaterals have one other feature in common. Use a protractor to carefully measure the angles of these quadrilaterals. Add the 4 angles of each shape together. What do you find?

- a The angles of a quadrilateral always add to \_\_\_\_\_.
- b Find 4 more quadrilaterals around the room and test out the theory.



- 3 Use the information below to draw the following quadrilaterals. Check your drawings with other students. Do they agree with you? Is it possible your drawings may be different and still correct? Why?

- a I have 4 sides of equal length.  
I have 4 equal angles. They're all right angles.  
If you draw my diagonals, the lines form right angles where they intersect.

I'm a \_\_\_\_\_

- b Sometimes I'm called an oblong.  
I have 4 sides.  
My opposite sides are equal.  
If you draw my diagonals, the angles opposite each other at the intersection are equal.

I'm a \_\_\_\_\_

- c I have 2 pairs of equal sides.  
My opposite sides are equal in length.  
My opposite angles are equal.  
None of my angles are  $90^\circ$ .

I'm a \_\_\_\_\_

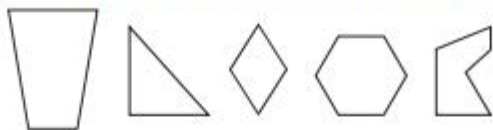
- d Sometimes I'm known as a trapezoid.  
I have one pair of opposite parallel lines.

I'm a \_\_\_\_\_

## 2D shapes – polygons

A polygon is a 2D (flat) shape with 3 or more straight sides. The word comes from the Greek words, *poly* and *gonia*, meaning 'many angles'.

All polygons are closed – they have no break in their boundaries. They have no curved sides.



These are polygons.

- 1** It's time for a polygon pop quiz. Read through the questions and answer any you know. Now for the research. You may draw the shapes, use the internet, or a maths dictionary to help you find the answers. If you want to add some excitement, work in small teams and race against other teams. The first correct team wins.

I have 4 equal sides and 4 equal angles.

I'm a

I'm a 3 sided polygon. I have 2 equal sides and angles.

I'm an

I have 5 sides and 5 angles. This makes me a pentagon.

My angles add to

I have 6 sides and 6 angles. I'm a hexagon.

My angle sum is

I have 4 sides and 4 angles. I have 1 pair of parallel lines.

I'm a

I have 12 sides and 12 angles.

I'm a

I'm a quadrilateral. Both pairs of opposite sides are parallel.

I'm a

I'm a triangle with 1 axis of symmetry. Draw and label me.

What does the phrase 'angle sum' mean?

I'm an equilateral triangle. Draw me.

There may be more than one right answer for some of these.



CHECK

## 2D shapes – polygons

3 Polygons are classified and named differently depending upon their sides and angles. Label and draw at least one example of each of the following. Remember they don't have to be regular. Research the names of any you don't know:

a 3 angles and 3 sides triangle

b 4 angles and 4 sides \_\_\_\_\_

c 5 angles and 5 sides \_\_\_\_\_

d 6 angles and 6 sides \_\_\_\_\_

e 7 angles and 7 sides \_\_\_\_\_

f 8 angles and 8 sides \_\_\_\_\_

g 9 angles and 9 sides \_\_\_\_\_

h 10 angles and 10 sides \_\_\_\_\_

i 11 angles and 11 sides \_\_\_\_\_

j 12 angles and 12 sides \_\_\_\_\_

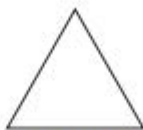
4 What have you called the 4 sided shape? Compare your answer with those of 3 others. Do they agree with you? Why might there be differences?

## 2D shapes – triangles

A triangle is a type of polygon. It has three sides and three angles. The three interior angles always add to  $180^\circ$ . Here are the 3 main types of triangles:



isosceles

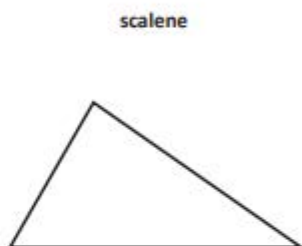
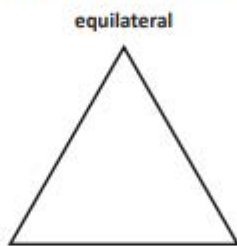
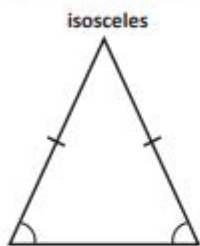


equilateral



scalene

- 1 Triangles are classified into the 3 different groups depending upon their angles. Below is an example of each group. Use a protractor to measure the angles of the triangles. Mark any angles that are the same in a triangle with an arc. The first triangle has been done for you.



- 2 What do you notice? Complete the following statements:

- a Isosceles triangles have \_\_\_\_\_ equal angles.  
 b Equilateral triangles have \_\_\_\_\_ equal angles.  
 c Scalene triangles have \_\_\_\_\_ equal angles.

- 3 Now measure the lengths of the sides. Mark any lines that are the same length in a triangle with a little line. The first triangle has been marked for you in Question 1. What do you notice? Complete the following statements:

- a Isosceles triangles have \_\_\_\_\_ equal sides.  
 b Equilateral triangles have \_\_\_\_\_ equal sides.  
 c Scalene triangles have \_\_\_\_\_ equal sides.

- 4 What do you notice about the relationship between the angles and the sides of a triangle? (This is always the case. They're a consequence of each other.)

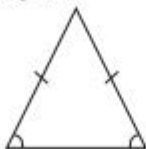
## 2D shapes – triangles

There are 4 main types of triangles:



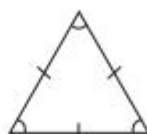
**scalene**

- all sides different
- all angles unequal



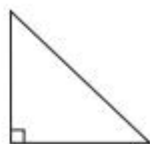
**isosceles**

- two sides equal
- two angles equal



**equilateral**

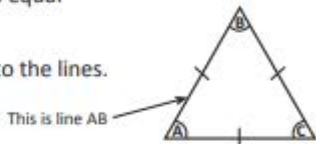
- all sides equal
- all angles equal



**right angle**

- has a right angle

We use letters to name the angles and then use these to refer to the lines.



- 1 In the box below, draw a triangle with three 5 cm sides and three angles of  $60^\circ$ . Label the triangle ABC as in the example above.



- a What do the angles add to? \_\_\_\_\_
- b What kind of triangle have you made? \_\_\_\_\_
- c Using a different colour, extend line AC by 2 cm and mark the new point as D. Draw a new line BD.
- d Are all the angles and sides equal? \_\_\_\_\_
- e What do the angles add to? \_\_\_\_\_
- f What kind of triangle have you made now? \_\_\_\_\_



## What's the Matter?

Everything around you is made from matter. The sun in the sky, the objects in your classroom and even people, all contain matter.

Matter is any physical substance that has **mass** and **volume**.

Mass is the amount of material in a substance or object

Volume is the amount of space occupied by a substance or object.



TEACHER SLIDE

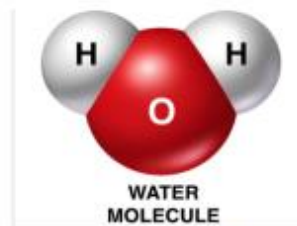
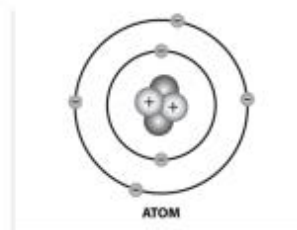
## What's Matter Made From?

The basic building block of all matter is the **atom**.

There are many types of atoms. An **element** is a substance made from one type of atom.

Atoms of different elements can combine to form new substances, or **compounds**. The bonded elements are called **molecules**.

For example, two hydrogen atoms can combine with an oxygen atom to form a compound that we call water.



teachstarter

TEACHER SLIDE

## States of Matter

Matter exists in three main states:

1. solid
2. liquid, or
3. gas.

The state of matter is determined by looking at the observable properties of the substance or object.

The observable properties that need to be considered are **shape**, **volume** and **mass**.



teachstarter



## Calculating – adding and subtracting fractions with like denominators



I ate  $\frac{2}{4}$  of a cake for breakfast. Then I ate another  $\frac{1}{4}$  for lunch.  
How many quarters did I eat altogether?



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





1 Shade the shapes to help you answer the problems:


a   $\frac{1}{3} + \frac{1}{3} =$  


b   $\frac{3}{9} + \frac{3}{9} =$  


c   $\frac{4}{10} + \frac{3}{10} =$  


d   $\frac{3}{8} + \frac{2}{8} =$  

2 Try these. Draw some diagrams if that will help you.

a  $\frac{1}{5} + \frac{2}{5} =$  

b  $\frac{2}{7} + \frac{3}{7} =$  

c  $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$  

d  $\frac{1}{10} + \frac{5}{10} + \frac{1}{10} =$  

3 Write addition fraction sentences for the following problems. Write your answers:

a  $\frac{1}{3}$  of the kids in Bailey's class played basketball at recess.  $\frac{1}{3}$  of the kids played football.  $\frac{1}{3}$  of the kids sat round and chatted. What fraction of the class played sport?

$$\frac{\square}{\square} + \frac{\square}{\square} = \frac{\square}{\square}$$

b Josh spent  $\frac{1}{5}$  of his pocket money at the milk bar and  $\frac{2}{5}$  buying credits for his game. Write a fraction sentence to show the fraction he spent.

$$\frac{\square}{\square} + \frac{\square}{\square} = \frac{\square}{\square}$$

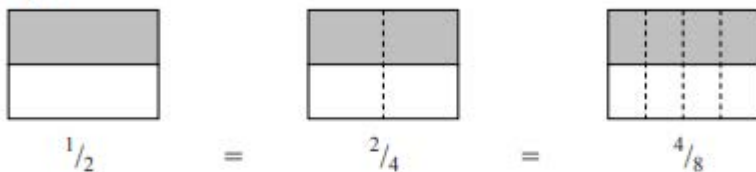
4 Look at the problem  $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$ . Why does the 4 stay as 4 – why isn't it  $\frac{2}{4} + \frac{1}{4} = \frac{3}{8}$ ?



### C8. Identify equivalent common fractions

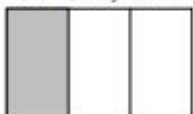
Different common fractions can be used to represent the same amount. These are called equivalent fractions. Use the diagrams below to help you to identify the common fractions.

Example:

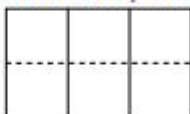


Colour the diagrams below and use them to help you answer the questions.

1.  $\frac{1}{3} =$  how many sixths?



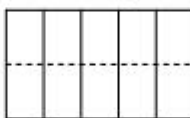
What is the pattern?



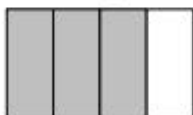
2.  $\frac{2}{5} =$  how many tenths?



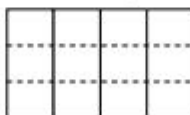
What is the pattern?



3.  $\frac{3}{4} =$  how many twelfths?



What is the pattern?



Explain the patterns between the **equivalent fractions** in each question:

#### **BACKWARDS QUESTION:**

Can you draw a picture to represent a fraction where a certain number of thirds is the same as a certain number of fourths? Is it possible to show thirds and fourths on the same whole?

# Once Bitten

story by David Hill  
illustrated by Peter Sheehan

THE FIRST TIME I GOT PAID for delivering advertising leaflets, I went to a coffee shop.

It was a coffee shop that Mum and I had been to quite a few times before. It was up two lots of stairs, over a shoe shop and an art gallery on our town's busiest corner. You could sit at tables beside the window, eat the best mud cake I've ever tasted and enjoy watching all the little people scuttling across the street like beetles when the 'WALK' buzzer went.

I had to go into town and sign some forms for my first pay. Mum said I was allowed to buy myself a treat, providing that I didn't spend too much. There was half an hour till I had to catch the bus home, so I went to the coffee shop.

It felt weird walking in. The place was nearly full. Everyone else was

a grown-up, and they all seemed to be staring at this kid coming in by himself.

I pretended to inspect the food under the plastic covers. I found a piece of mud cake and put it on a plate on my tray. It looked a bit lonely by itself.

'May I have a banana milkshake, please?' I asked the woman at the counter.

'Certainly, sir,' she said. 'Is sir dining alone? Would sir like anything else?'

She was smiling at me, and I knew she wasn't trying to put me down. But it made me feel embarrassed. 'I'll have one of those apricot muesli bars, please,' I told her, in an adult voice, the best that I could do.

When I picked up the tray, the milkshake and the plate with the



mud cake kept sliding around on it. I was trying to balance them, and stuff the change into my pockets, all at the same time. The woman at the counter was still smiling at me. There was only one empty seat by the window, so I headed for it.

I was watching my tray to make sure things didn't slide off, and I didn't dare look down till I got to the seat. I lowered the tray onto the table and sat down. Then I saw the guy sitting on the other side.

He was a Bikie. Man, what a Bikie! He had his hair shaved skinhead style. He had a tattoo on one hand saying DEATH RULES, and a tattoo on the other hand saying HI MUM. There was a dotted line tattooed across his forehead with a message above it: LIFT TO INSPECT.

He wore a leather jacket with zips and chains and a studded dog collar hanging from it. *He must sound like a heavy metal rock band when he moves*, I thought. One of his legs was sticking out under the side of the table, and I could see his black jeans were all ripped and torn above his big black leather boots. Excellent clothes! I wondered if he'd ridden his motorbike up the stairs into the coffee bar.

The Bikie was drinking a cup of coffee. He was eating a cream doughnut, and he had something else on his plate. I'd never been this close to a real live Bikie before. I wondered



if he'd lean across and bite me, or pick me up and squash me into the sugar bowl or something.

He didn't. He looked at me and gave me a 'Hiya' sort of nod.

I was just going to nod back when a voice began calling. 'Sir? Sir, do you want a straw for your milkshake?' It was the woman at the counter.

I hurried over, feeling embarrassed again. I said, 'Thanks,' took the straw and headed back to my table.

Halfway there, I stopped and stared. No, he couldn't be! Yes, he was! The Bikie had stopped eating his doughnut. He'd picked up my apricot muesli bar. He'd peeled off the wrapping, and he was taking a bite from one end.

For a second I felt scared. Then I felt angry. It was my muesli bar. I'd paid for it with my leaflet-delivery money. As I reached the table, I made up my mind that I'd show this guy he couldn't push delivery boys around.

I sat down again. I picked up the muesli bar from where the Bikie had put it down on his plate. I took a bite from it—from the end he hadn't touched. Then I put the bar back down on the plate, just like he had.

The Bikie slowly raised his shaven head and looked at me once more. He stared thoughtfully for a moment. He gave a nod, picked up the muesli bar and took another bite (a smaller and neater bite than mine) from his

end. He put the bar back down on the plate again.

It felt like one of those Wild West movies where the good guy and the bad guy stand facing each other along an empty street, waiting to see who draws first.

I drewed—drew—whatever. I reached for the shrinking apricot muesli bar a second time. I picked it up, and I looked steadily at the tattooed terror opposite me. I bit another bite, and I returned the bar to the Bikie's plate. *Not much apricot in there*, my tastebuds were telling me. *More like honey*. I'd better try another coffee shop next payday.

The Bikie gave me another nod. He picked up the remaining piece of muesli bar. He held it between his thumb and one finger. He had his little finger bent in the air like some terribly polite person holding a nice cup of tea.

He carefully bit the final piece of bar exactly in half. Then he lifted his eyebrows in a question-asking sort of



way. I noticed for the first time that one eyebrow had a little tattoo above it, saying UNZIP HERE. He held the last little bit of muesli bar across the table towards me.

I'll never know where my next words came from. But they came. It was just like being in a movie, all right.

'She's right,' I told the Bikie. 'You can have it. Tell you what—you can have these too, if you're so hungry.' I pushed my mud cake and banana milkshake across the table towards him. The Bikie's mouth dropped open three centimetres.

'And in return—' I went on. Then I reached across, grabbed his doughnut and (from the untouched end again) I took the hugest, most massive bite I could. The Bikie's mouth dropped open now to six centimetres.

I stood up, bits of doughnut cream still sticking to my chin, and I walked as calmly as I could out of the coffee shop. I half expected people to start cheering. 'Yay! It's the Muesli-Bar Kid! I also half expected a motorbike to come roaring through the tables and down the stairs after me.

At the bus stop a few minutes later, I could hardly believe I'd done it. My legs were beginning to shake and my heart was thumping, but I felt great. Okay, I hadn't eaten either of the other things I'd paid for, but I'd won all right. I'd really given that



Bikie something to chew on.

Delivery Boys 1, Bikies 0, I thought, and started laughing. The other people waiting for the bus looked at me in surprise.

As the bus arrived, I reached into my pocket for my Opal card, but my fingers felt something else as well. Something thin and light and crackly.

What's this? I wondered, and pulled it out. There in my hand, still in its wrapper, lay my untouched apricot muesli bar. ■



## Comprehension questions

Were you paying attention when reading 'Once Bitten'?  
Answer the following questions on the story—be prepared to  
back your answers up with evidence from the story.

1. Why do you think the boy felt embarrassed at being called 'Sir'?

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2. Why did the boy sit next to the bikie?

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3. How do you think the boy would have felt when he took the first bite of the muesli bar?

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4. What does the phrase 'waiting to see who draws first' mean?

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5. Why do you think the Bikie played along and didn't say that it was his muesli bar?

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6. Write one final sentence to this story, after the boy has discovered the muesli bar in his pocket.

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## C2. Adding fractions with the same denominators

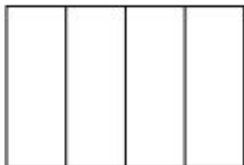
Using pictures is a good way to understand a concept. Today we will learn how to add and subtract fractions with the same denominators.

**Example:**

$$\frac{1}{4} + \frac{2}{4}$$

Colour  $\frac{1}{4}$  of the rectangle in blue:

Colour  $\frac{2}{4}$  of the rectangle in red:



How many pieces do you have now altogether? \_\_\_\_\_

If you shade  $\frac{1}{4}$  of this shape, how many pieces do you shade? \_\_\_\_\_

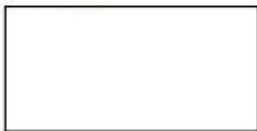
If you shade  $\frac{2}{4}$  of this shape, how many pieces do you shade? \_\_\_\_\_

How many pieces would this make altogether? \_\_\_\_\_ What fraction is this? \_\_\_\_\_

What would you have done if it was  $\frac{3}{4} - \frac{1}{4}$ ? Can you think of how to do it using an eraser?

**Try these:** some are addition and some are subtraction

1.  $\frac{3}{8} + \frac{1}{8} =$



2.  $\frac{2}{5} - \frac{1}{5} =$



3.  $\frac{2}{6} + \frac{3}{6} =$



4.  $\frac{8}{10} - \frac{3}{10} =$







Name \_\_\_\_\_

Date \_\_\_\_\_

## What's the Matter?

Research the answers to the following questions. Record your responses on the lines provided.

1. What is matter?

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2. Give three examples of something that contains matter.

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3. Write a definition for volume.

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4. What is an atom?

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5. Describe what an element is. Give an example in your answer.

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6. What is the difference between an atom and a molecule?

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7. What are the three main states in which matter can exist?

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8. What are the observable properties that help decide what state of matter a substance is in?





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## Geography - Our Ecological Impact

We can measure our own impact on the Earth's environment by calculating our ecological footprint.

	4 points	3 points	2 points	1 point
What type of house do you live in?	large	medium	small	Eco friendly
What type of heating do you have?	air-conditioning	gas	Solar	we wear onesies
How do you mostly travel?	car	bus	train	walk
What do you mostly eat?	take away	meat	vegies	we grow our own
What do you do with your rubbish?	throw it on the ground	everything goes in the bin	recycle	compost
Results	17 – 20  You will need three Earths to support your lifestyle.	13 – 16  You will need two Earths to support your lifestyle.	10 – 13  You will need one Earth to support your lifestyle.	Less than 10  You are a friend of the Earth.

Task 1: Use this ecological footprint calculator to evaluate your impact on the Earth






Task 2: Design your own ecological footprint calculator using this empty grid. Think about the behaviours that impact on the Earth's environments the most and how you will grade them.

Task 3: Research some ways that humans could "payback" the Earth to lessen their impact. Present your findings as an image or flowchart in your workbook.

# Stage 3 Spelling Words – T3 Wk3

F	B	A	F	O	E	A	P	K	N	V	F	N	O	Y	M	T	H	S	Z
K	O	X	P	L	O	W	U	V	T	S	N	Z	L	L	Y	K	L	B	V
A	P	P	A	P	P	R	E	H	E	N	D	E	E	A	S	B	F	S	N
F	P	N	C	S	L	U	A	T	V	R	C	C	C	I	P	U	F	F	A
T	O	Z	L	T	H	I	X	P	L	O	N	O	F	N	W	P	B	E	M
U	S	Z	I	A	E	R	C	X	P	A	C	G	U	K	J	N	L	B	Z
L	E	L	P	C	W	Z	I	A	R	R	N	Y	F	N	M	Y	T	Y	K
R	Q	D	P	U	I	I	P	A	N	H	O	D	O	N	C	E	N	F	H
L	E	W	I	N	N	P	E	V	A	T	W	P	S	Z	O	I	H	L	A
W	F	D	N	I	R	P	E	C	O	M	M	E	R	C	I	A	L	G	G
A	D	E	G	Q	P	K	W	D	U	D	A	J	X	I	C	H	G	F	R
P	H	M	J	A	A	I	T	P	Q	U	Y	A	M	U	A	R	Z	S	I
P	D	I	S	A	P	P	O	I	N	T	M	E	N	T	A	T	H	V	C
R	H	J	U	K	U	B	D	I	U	Y	J	E	O	E	Y	G	E	V	U
E	X	K	G	D	W	H	R	U	L	D	I	J	P	P	U	C	K	H	L
N	P	E	P	P	E	R	O	P	T	T	O	P	P	O	C	K	O	N	T
T	T	L	Q	Y	K	P	P	R	M	C	A	U	R	T	T	C	G	A	U
I	G	N	Y	T	X	U	P	D	W	S	P	O	O	G	T	F	B	F	R
C	B	K	S	P	S	N	E	J	I	Y	B	J	V	R	C	D	O	O	E
E	Q	A	C	T	E	L	R	D	P	H	H	A	P	P	I	E	R	U	B

DISAPPOINTMENT

APPEARANCE

APPLICANT

CLIPPING

HAPPIER

SUPPLY

APPLY

AGRICULTURE

COMMERCIAL

DISAPPEAR

WETLANDS

DROPPER

PEPPER

PUPPY

APPROPRIATE

APPRENTICE

APPREHEND

BOROUGH

COUNCIL

OPPOSE

## Reading Comprehension: Friday lesson

Mastering Reading Skills: Daily Reading Comprehension Practice, Year 5

### The Clever Kid

*[The GRAY WOLF and the WHITE WOLF are standing at the foot of a hill. At the top of the hill is a KID.]*

GRAY WOLF: Look, brother, there is a kid on the very top of that hill!

WHITE WOLF: I see her!

GRAY WOLF: I wish we could get at her. She would make a fine dinner.

WHITE WOLF: The hill is too steep. We must make her come to us.

GRAY WOLF: Oh little Kid! Sweet little Kid!

WHITE WOLF: The grass down here is sweeter! And greener! And fresher! And younger!

GRAY WOLF: Come down and eat your dinner here!

KID: Do you speak of my dinner, sirs?

WOLVES: Oh yes, yes, yes!

KID: You speak of my dinner, but you think of your own. I will stay where I am.

### KEY SKILLS PRACTICE

At the end of the play, the kid says "You speak of my dinner, but you think of your own." What does this show about the kid's understanding of the wolves?

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### Learning Intention:

Use an integrated range of skills, strategies and knowledge to read, view and comprehend a wide range of texts in different media and technologies.

### Success Criteria:

- I can find the main idea/theme of a text
- I am able to recall important facts and details to answer questions about a text

### Guided/Independent Learning:

Students read the text '*The Clever Kid*' and answer the following multiple choice questions.

1. Which meaning of the word foot is used in the first sentence?
  - a. A unit of length
  - b. Part of the leg
  - c. The base of something
  - d. The end of a series or group
2. What is the purpose of the first paragraph in italics?
  - a. To introduce the main problem
  - b. To establish the setting
  - c. To summarise the events
  - d. To tell the main theme
3. Why does the white wolf say the below?

WHITE WOLF: *The grass down here is sweeter? And greener! And fresher! And younger!*

  - a. To convince the kid to come down from the hill
  - b. To show the white wolf that there is plenty to eat
  - c. To warn the kid that the gray wolf cannot be trusted
  - d. To explain why he chooses to stay at the bottom of the hill
4. In which line would the character most likely sound excited?
  - a. GRAY WOLF: *Look, brother there is a kid on the very top of that hill!*
  - b. GRAY WOLF: *I wish we could get at her. She would make a fine dinner*
  - c. WHITE WOLF: *The hill is too steep. We must make her come to us*
  - d. KID: *Do you speak of my dinner, sirs?*

## Progressive Verb Tenses

### Activity I

In each of these sentences, the verb is missing. Can you rewrite each sentence, using the verb in the brackets in the PAST PROGRESSIVE form? Remember: you need the auxiliary verbs 'was' or 'were' (in the past tense) and must make sure the verb ends with '-ing'.

E.g. When I arrive at the cinema, the film \_\_\_\_\_. (start)

When I arrive at the cinema, the film *was starting*.

1. What \_\_\_\_\_ the manager \_\_\_\_\_ at 7:00 pm yesterday? (do)
2. Tina and Shelly \_\_\_\_\_ to the hotel when it \_\_\_\_\_ to rain.  
(walk/start)
3. When Donny \_\_\_\_\_ the room, everyone \_\_\_\_\_. (enter/talk)

In each of these sentences, the verb is missing. Can you rewrite each sentence, using the verb in the brackets in the PRESENT PROGRESSIVE form? Remember: you need the auxiliary verbs 'is', 'am' or 'are' (in the present tense) and must make sure the verb ends with '-ing'.

4. I \_\_\_\_\_ in the sales department, where Sophie \_\_\_\_\_ me.  
(work/training)
5. My brother \_\_\_\_\_ the computer while I \_\_\_\_\_ for my trip. (use/pack)
6. I \_\_\_\_\_ attention because I am interested in lesson the teacher \_\_\_\_\_.  
(pay/teach)

In each of these sentences, the verb is missing. Can you rewrite each sentence, using the verb in the brackets in the FUTURE PROGRESSIVE form? Remember: you need the word 'will be' and must make sure the verb ends with '-ing'.

7. We \_\_\_\_\_ TV when the News has finished. (watch)
8. She \_\_\_\_\_ to play with her friends on the weekend (want).
9. Every Saturday, they \_\_\_\_\_ netball at Jamison Park. (play)

## Activity 2

Can you identify if the following sentence is written in the past, present or future progressive tense? Hint: the word before the verb may help you.

Amelia is going to the beach.

Brock will be running for the bus.

Savanah was doing her homework.

Aidan was watching to the television.

She is seeing you tomorrow.

Lilly and Alisha are walking around the river.

Levi is writing a letter to his friend.

He was mowing the lawn.

The dog will be swimming in water.

He is eating his lunch.

Evelyn and Erin were making friendship bracelets.

Jaiden is emailing a response to his friend.

He was blowing a bubble.

The beaver will be chomping through the wood.

Tyler will be completing homework on Thursday night.

## Activity 3

You are to use the following verbs in their past progressive form in a full sentence:

walk

eat

make

You are to use the following verbs in their present progressive form in a full sentence:

dance

learn

put

You are to use the following verbs in their future progressive form in a full sentence:

watch

sleep

run



## MATHAROO Worksheet UP – 21 21

Student Name: \_\_\_\_\_

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

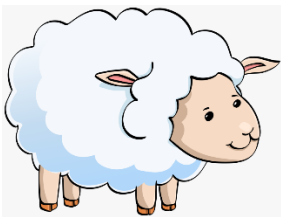


1. One of the most popular computer games ever is “MARIO”! Last week, an original Super Nintendo Cartridge of the first Mario game was sold for two million dollars. The price when first bought 25 years ago was \$99. By how much has its value increased? (Ignore the effects of inflation.)



2. Last week, the Australian Olympic Committee reported that Australia was sending 472 competitors to the Tokyo Olympics, beginning shortly. However, in the past few days that number has decreased by 2. By what FRACTION has the size of the Australian Olympic Team REDUCED since last week?

3. The cost of a ticket on the first Virgin Galactic community flight into space last week was \$200,000. The spacecraft entered space 80 kilometres above earth. Calculate the cost per kilometre of that return trip for a passenger.



4. It is reported that there are 67 million sheep in Australia. IF that is true, how many sheep ears are there in Australia? Write your answer in figures.

5. One credit card company has changed its charging policy for shopkeepers. The old policy was an annual charge of \$90 for a full year. The new cost is \$9 per month. How much MORE does a shopkeeper have to pay each year under this new policy?



6. We aren't recommending this, but one guy in the United States made a pig of himself last week by eating 76 hot dogs in 10 minutes. At that rate, about how long would it have taken him to eat 19 hot dogs?

7. Champion football player Shane Crawford says that, in a full game of footy, he ran a total distance of 15 kilometres, on average. If he ran equal distances in each quarter, how many kilometres and metres MAY he have run in the third quarter?



8. The price of 2-bedroom units varies quite a bit from suburb to suburb. (WHY?) The prices of units in one particular suburb are, at the moment, \$595,000, \$400,000 and \$540,000. Find the MEAN and the MEDIAN of these prices.



## MATHAROO Worksheet EXT – 21 21

Student Name: \_\_\_\_\_

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

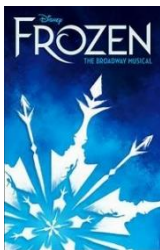


1. Aussie surfing champion Stephanie Gilmore was born on 29<sup>th</sup> January, 1988. She is now 178 centimetres tall. **ON AVERAGE**, about how many centimetres per year has she grown in her lifetime? Is this a meaningful statistic? Why or why not?



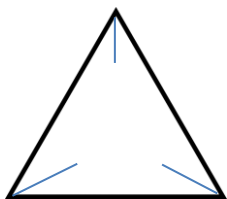
2. The 100-metre sprint at the Tokyo Olympics is expected to take around 10 seconds from start to finish. It is estimated to take an athlete 45 steps to complete the race. At that rate, find the average speed of an athlete in the race, in kilometres per hour.

3. "FROZEN, THE MUSICAL" had its Melbourne premiere recently. The show runs for 2 hours 10 minutes. Elsa and Anna are on the stage **TOGETHER** for 30% of the entire showtime. For how long do they appear on stage together?



4. We aren't recommending this, but last week, one guy in the United States ate 76 hot dogs in 10 minutes to win a hot-dog-eating contest. On average, how long did it take him to eat each hot dog? (But do you think he actually **ENJOYED** eating all those hot dogs?)

5. An unusual hobby for a New Zealand lady has been keeping **ALL** of her junk mail from her (physical) letter box for the past 10 years. She has collected 10,000 items, which altogether weigh 245 kilograms. Find the **AVERAGE** weight of each of those items, in grams.



6. An equilateral triangle has sides of length 13.5 cm. Each of its internal angles is divided into two equal angles. How many degrees are each of these smaller angles?

7. One supermarket catalogue claims that its prices have just got "lowererererer". What **FRACTION** of the letters in that non-existent word are unnecessary? Express your answer in simplest terms.



8. **OPEN-ENDED QUESTION:** The **MEAN** of five decimal numbers is 6.7, and this particular decimal number is the **second lowest** of the five numbers. What might the other four numbers be? Give 3 possible answers.



### C9 Adding and subtracting fractions

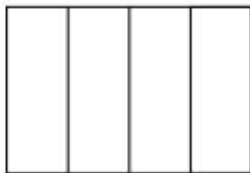
Today we will learn how to add and subtract fractions with pictures.

**Example:**

$$\frac{1}{4} + \frac{2}{4}$$

Colour  $\frac{1}{4}$  of the rectangle in blue:

Colour  $\frac{2}{4}$  of the rectangle in red:



How many pieces do you have now altogether? \_\_\_\_\_

If you shade  $\frac{1}{4}$  of this shape, how many pieces do you shade? \_\_\_\_\_

If you shade  $\frac{2}{4}$  of this shape, how many pieces do you shade? \_\_\_\_\_

How many pieces would this make altogether? \_\_\_\_\_ What fraction is this? \_\_\_\_\_

What would you have done if it was  $\frac{3}{4} - \frac{1}{4}$ ? Can you think of how to do it using an eraser?

**Try these:** some are addition and some are subtraction

1.  $\frac{3}{8} + \frac{1}{8} =$



2.  $\frac{2}{5} - \frac{1}{5} =$



3.  $\frac{2}{6} + \frac{3}{6} =$



4.  $\frac{8}{10} - \frac{3}{10} =$

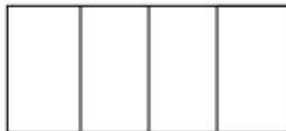


### C10. Adding fractions with related denominators

Using pictures is a good way to understand a concept. Today we will learn how to add and subtract fractions with related denominators.

**Example:**

$$\frac{1}{4} + \frac{1}{2}$$



Colour  $\frac{1}{4}$  of the rectangle in blue: how many pieces do you shade? \_\_\_\_\_

Colour  $\frac{1}{2}$  of the rectangle in red: how many pieces do you shade? \_\_\_\_\_

How many pieces would this make altogether? \_\_\_\_\_ What fraction is this? \_\_\_\_\_

What would you have done if it was  $\frac{1}{2} - \frac{1}{4}$ ? Can you think of how to do it using an eraser?

**Try these:** some are addition and some are subtraction. For some you will need to cut the shape into more parts before you can add or subtract. Make sure that you think about how many pieces you need altogether before getting started.

1.  $\frac{3}{4} + \frac{1}{8} =$



2.  $\frac{2}{5} - \frac{1}{10} =$



3.  $\frac{2}{6} + \frac{1}{3} =$



4.  $\frac{1}{2} - \frac{3}{10} =$





Getting ready

We can construct regular shapes inside circles. You will use what you know about angles and degrees to help you. You'll also need a protractor and a compass.

How many degrees are there in a circle? There are \_\_\_\_\_.



What to do

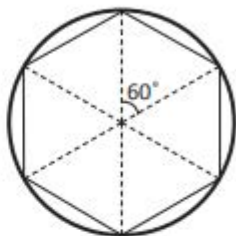
We are going to make a regular hexagon inside this circle.

How many sides and angles do hexagons have? They have 6 sides and 6 angles. We will therefore need to divide the angles in the circle by 6.

$$\underline{\hspace{2cm}} \div 6 = 60^\circ$$

So, from the centre we draw 6 lines, each with angles of  $60^\circ$  between them. Extend the lines to the edge of the circle.

Now, join the points where the lines meet the circle edge. Ta da!

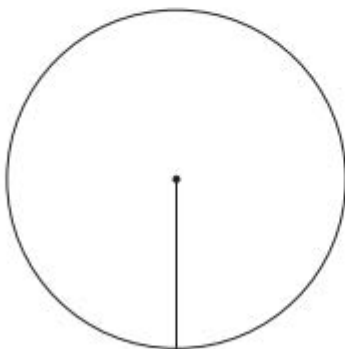


What to do next

It's your turn. Use the circles below to make a regular octagon and a regular decagon. How many angles will you need for each shape? What will their angle size be?

Place your protractor along the line in the circle with the centre point of the protractor on the dot. Measure the angle needed and draw your next line. Repeat this process until all lines are drawn.

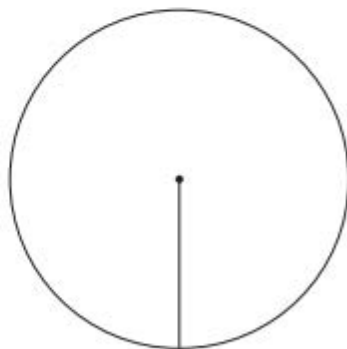
Join the points where the lines meet the circle. Has it worked?



octagon

lines \_\_\_\_\_

angle \_\_\_\_\_



decagon

lines \_\_\_\_\_

angle \_\_\_\_\_

## C4. Estimating when adding fractions

Sometimes it can be difficult to know when an answer involving fractions is wrong. It is important to be able to estimate when adding and subtracting.

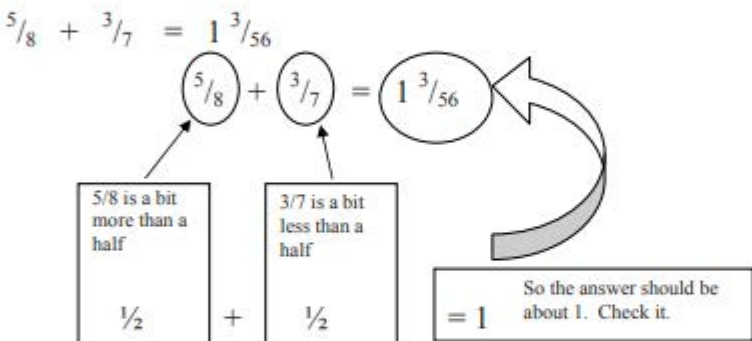
### Instructions:

For each of the problems below say whether you think the answer is likely to be correct or not, and come up with one way that you could estimate the answer to know.

1.  $\frac{5}{8} + \frac{3}{7} = 1\frac{3}{56}$  \_\_\_\_\_

2.  $1\frac{1}{7} + \frac{4}{5} = 1\frac{33}{35}$  \_\_\_\_\_

Sometimes when you are estimating with common fractions it can help to think in halves and wholes rather than in exact numbers (see below)



### Try these:

1.  $\frac{9}{20} + 1\frac{1}{16} =$     So the answer is about \_\_\_\_\_

2.  $\frac{10}{11} - \frac{3}{7} =$     So the answer is about \_\_\_\_\_

3.  $\frac{19}{20} + \frac{7}{6} =$     So the answer is about \_\_\_\_\_

Sometimes thinking in halves is not quite fine enough and we need to think in thirds or quarters to estimate an answer. Try to use one of these to estimate answers for the following problems.

1.  $1\frac{6}{8} - 1\frac{3}{12} =$     So the answer is about \_\_\_\_\_

2.  $\frac{3}{10} + 1\frac{2}{6} =$     So the answer is about \_\_\_\_\_