## Online Advanced Year 5-6 Mathematics Class 2021

Purpose:	This Google classroom is designed to help students at year 5-6 to deepen the knowledge of the basics, extend to important topics in year 6, 7 and 8 and acquire problem solving strategies to deal with the challenging mathematics for selective school and scholarship tests.
Audience:	The target audience is year 5-6 students who have <b>completed</b> (or nearly completed) all Australian year 6 primary school mathematics. It's also suitable for normal year 7 students as well.
Delivery:	Online delivery by Google classroom
Date:	The class starts on 20 <sup>th</sup> Feb 2021, runs for 11 weeks and students can continue to access the Google Classroom for revision until end of Feb 2022.

## **Course content**

There are 11 lesson recordings (approx. 2 hours each). During week 1-5, students are expected to complete a small workbook at the middle of the recorded lesson before continue with the lesson to watch the working-out of all the questions. In week 6-10, the focus is in maths problem-solving where students will study 2 strategies in each lesson and do 2 short tests to practise the two strategies. In week 11, they learn about choosing strategies for maths problems. Students are expected to spend at least 2 hours per week to watch each lesson and do the workbook for it. However, a more realistic amount of time would be 4 hours to cover many resources for each week.

Maths Enrichment in important areas						
1.	Advanced Number Sense	<ul> <li>Place values, decimal place values and how to read place value tables</li> <li>Basic maths operations on large numbers</li> <li>A deep look at how division algorithms work</li> <li>Multiplication and division fact family</li> </ul>				
2.	Fraction Sense and Operations	<ul> <li>How to draw fractions to enable comparisons</li> <li>Division vs Fraction</li> <li>Common multiples and denominators</li> <li>Fraction operations</li> <li>Equivalent fraction and cancelling down</li> </ul>				
3.	Relationships	<ul> <li>Proportional relationships and rates: direct and inverse</li> <li>Distance, time and speed</li> <li>Ratios</li> </ul>				
4.	Algebra	<ul> <li>Pre-algebra skills: number sentence, unknowns and write number sentences with unknowns</li> <li>Strategies: guess &amp; check, balance scales</li> </ul>				
5.	Geometry	<ul> <li>Perimeter, area, volume, angles and circle</li> </ul>				
Maths Problem Solving Strategies						
6.	Problem Solving Strategies Session 1	<ol> <li>Making a List of Items (including using a table)</li> <li>Guess and Check</li> </ol>				

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7.	Problem Solving Strategies Session 2	<ol> <li>Looking for Patterns to find the Rule</li> <li>Solving a Simpler Problem First</li> </ol>
8.	Problem Solving Strategies Session 3	<ol> <li>Working Backwards</li> <li>Acting It Out</li> </ol>
9.	Problem Solving Strategies Session 4	<ol> <li>7. Eliminating Possibilities</li> <li>8. Drawing Diagram to Illustrate Problems</li> </ol>
10.	Problem Solving Strategies Session 5	<ol> <li>The Model Method for Algebra</li> <li>Avoiding Unnecessary and/or Complex Calculations</li> </ol>
11.	Problem Solving Strategies Session 5	11. Choosing strategies for a maths problem.

**Note:** It is possible to do this class without being a member of the Mathemafix Selective Support group by using the PDF copies of the tests. However, it's much easier for members of the Mathemafix Selective Support group as they have access to online tests and also Maths Online (to cover all year 6 school maths).

## Access the Google Classroom

To access the Google Classroom, each student will need a Google Account. The Google account given by the Department of Education will not work outside the service that Google provides for the Department of Education. Parents will have to set up a Google account for their kids. As some of the resources are videos on YouTube, a Google account for kids under 13 years of age will have problem playing these videos. Therefore, parents must set up Google account for a kid 13 year of age or older to use the Google Classroom for this maths class.

Once you have enrolled your child, send the Google email address in to get invitation to join the Google Classroom.



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	+ Create	Google Calendar 📋 Class Drive folder		
All topics Preparation for the	Preparation for the Advanced Ye	ear 5-6 Mathe 🕴		
Week 1 - Advanced	Rapid Coverage of Gaps in Year 6 School M	Posted 12:32 PM		
Week 2 - Advanced	Year 6 - Maths Online Tracking Sheet - fast	Posted 12:33 PM		
Week 3 - Advanced	Year 6 - Maths Online Tracking Sheet - nor	Posted 12:33 PM		
Week 4 - Advanced	Year 6 Weekly Revision Tests	Posted 12:33 PM		
Week 5 - Advanced Singapore Year 5 M				
Week 6-10 - Advanc	Week 1 - Advanced Year 5-6 Ma	thematics Wor :		
Post Workshop - Au	Advanced Mathematics Grade 5-6 Worksho	Recorded		
Post Workshop - Sin	Week 1 - Practice workbook	<ul> <li>Mid-lesson practice</li> </ul>		
Worksheets for year Maths Problem Solv	Week 1 - Practice workbook answers	Answers for		
Γ	Indices rules and worksheet	practice questions		
	Week 1 - Skills - Long division (video)	Scheduled for Sep 14, 8:00 AM		
	Week 1 - Skills - Short division (video)	Scheduled for Sep 14, 8:00 AM		
Other resources	Week 1 - Skills - Division with large divisor (	Scheduled for Sep 14, 8:00 AM		
	Week 1 - Skills - Division with decimal result	Scheduled for Sep 14, 8:00 AM		
	Week 1 - Skills - Division of decimal by deci	Scheduled for Sep 14, 8:00 AM		
	Week 1 - Indices / Exponent (video)	Scheduled for Sep 14, 8:00 AM		
View more				