

Our school community is one with high expectations.
We are collaborative and inclusive of all.
We deliver a 21st century guaranteed and viable curriculum that results in outstanding student achievement.

The Maths Curriculum links directly to:

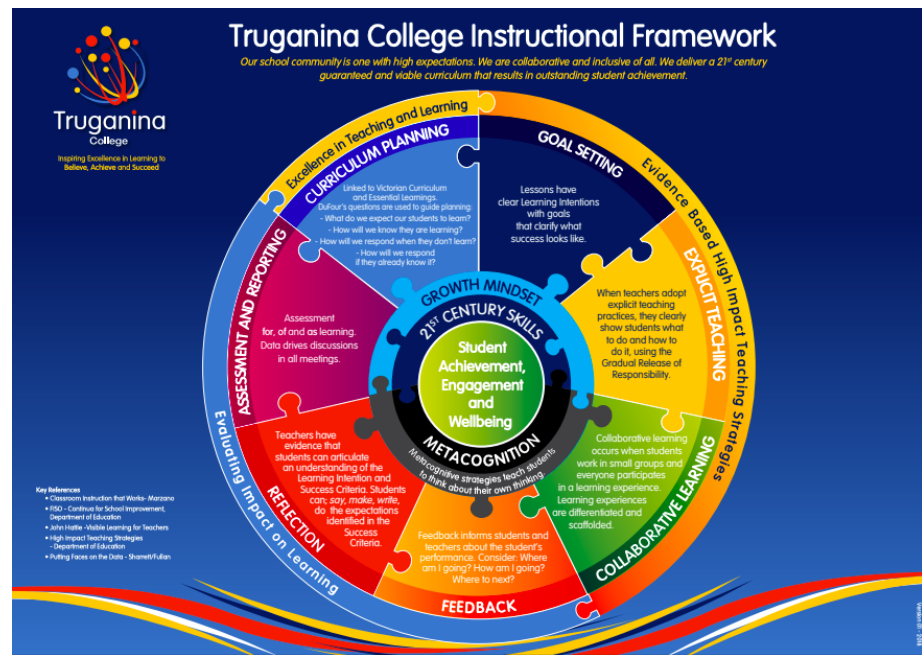
High Impact Teaching Strategies (HITS)



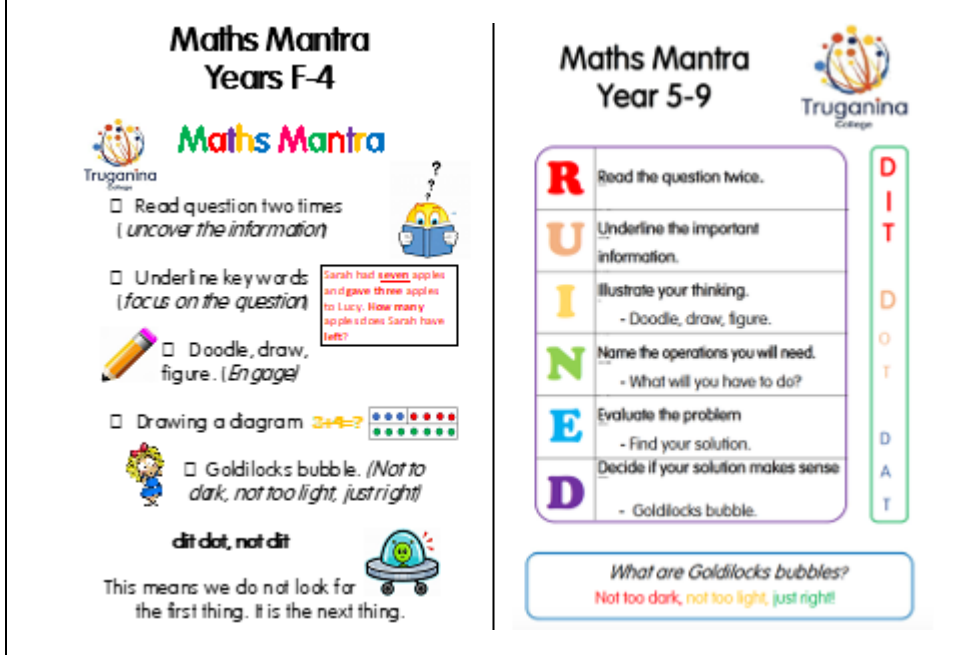
The differentiated Maths Curriculum links directly to the College's Strategic Plan

- Goal 1: To improve student's learning outcomes in Literacy and Numeracy.

Instructional Framework



Maths Mantras



Maths Mantra Years F-4

- Read question two times (*uncover the information*)
- Underline key words (*focus on the question*)
- Doodle, draw, figure. (*Engage!*)
- Drawing a diagram
- Goldilocks bubble. (*Not too dark, not too light, just right!*)

Maths Mantra Year 5-9

R Read the question twice.

U Underline the important information.

I Illustrate your thinking.
- Doodle, draw, figure.

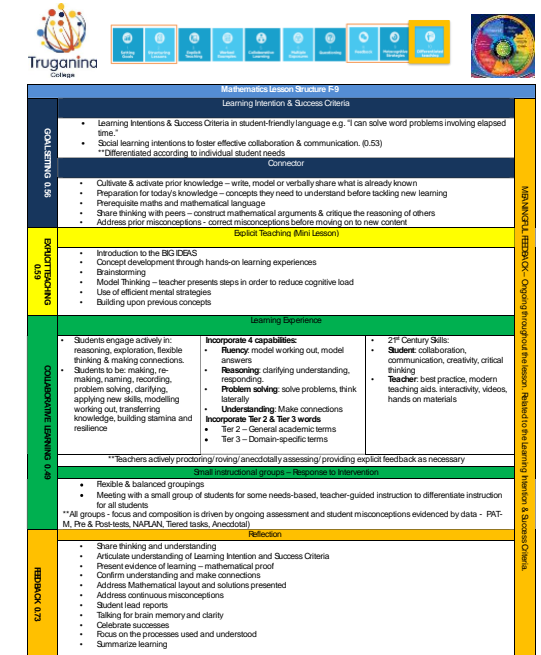
N Name the operations you will need.
- What will you have to do?

E Evaluate the problem
- Find your solution.

D Decide if your solution makes sense
- Goldilocks bubble.

What are Goldilocks bubbles?
Not too dark, not too light, just right!

Maths Lesson Structure



Mathematics Lesson Structure F9
Learning Intention & Success Criteria

The diagram details the structure of a lesson, including:

- Learning Intention & Success Criteria:** Learning intentions in student-friendly language, social learning intentions for effective collaboration, and differentiated according to individual student needs.
- Student Learning:** Cultivate and activate prior knowledge, prepare for today's knowledge, share thinking with peers, and address prior misconceptions.
- 21st Century Skills:** Fluency, Reasoning, Problem Solving, Communication, and Collaboration.
- Reflection:** Share thinking and understanding, articulate understanding of learning intention and success criteria, confirm understanding and make connections, address mathematical layout and solutions, address continuous misconceptions, student lead reports, talking for brain memory and clarity, celebrate successes, focus on processes used and understood, summarize learning.

- 21st century learning**
- Ways of Thinking: Creativity & Innovation, Critical Thinking, Problem Solving & Decision Making, Learning to Learn
 - Ways of Working: Communication & Collaboration
 - Ways of Living in the World: Local & Global Citizenship, Personal & Social Responsibility, Life & Career
 - Tools for Working: Information Literacy, Information & Communication Technology (ICT) Literacy

Curriculum Planning - Refer to DuFour's questions
What do we need our students to learn?
How will we know they are learning?
What will we do if they have already learned it?
What will we do if they have not learned?

Assessment & Reporting - Data drives discussion
in all meetings

- **NAPLAN minimum standards**
For outlines of the competencies expected of Year 3, 5, 7 and 9 students in Numeracy: <https://www.nap.edu.au/naplan/numeracy/minimum-standards>
- **Maths Proficiency Strands**
For details of the four strands in the Mathematics Curriculum: <http://victoriancurriculum.vcaa.vic.edu.au/mathematics/introduction/learning-in-mathematics>

- The Compass Learning Tasks will be the Tiered tasks for the first unit from Years 2 to 9.
- Foundation to Year 1 Compass Learning Tasks will be a snapshot of students' learning from the first unit.
- Mental Strategies A – S will be based on the Truganina College Efficient Mental Strategies
- Big Ideas In Number outline of concepts
- Week 2 is pre-assessment week.
- Week 8 is post assessment week. All assessments to be completed by Friday of Week 8.
- Misconceptions are based on pre and post - tests as questions from these tests have been taken from previous NAPLAN and PAT Assessments.

Week	1	2	3	4	5	6	7	8	9	10
<p>Refer to the Maths Essential Learnings when planning the Maths Curriculum.</p> <p>Differentiated Curriculum Planning to include Small Group Instruction to address misconceptions from Pre-test data.</p>										
Foundation	Number & Algebra CONSOLIDATE Count on – 1 more, 2 more Number Lines 10s Frame Trusting the Count (VCMNA071) (VCMNA072) Mental Strategies A, B Big Ideas in Number: Trusting the count		Measurement & Geometry Length Informal Units Use different objects to determine longer or shorter (VCMMG078)		Measurement & Geometry Time Sequencing of events Days, Weeks, Weekend Introduce “o’clock” (VCMMG079) (VCMMG080)		Number & Algebra Represent Money (VCMNA075)		Number & Algebra CONSOLIDATE Simple Addition on 10s frame 7 and 3 make 10 Beginning of number facts to 10 (VCMNA073) Mental Strategies A, B, E Big Ideas in Number: Trusting the count	
Year 1	CONSOLIDATE Number & Place Value Counting collections Identifying numbers 0 - 100 on chart Simple addition facts Number Lines (VCMNA087) (VCMNA088) (VCMNA089) Mental Strategies C		Statistics & Probability Identify Outcomes (VCMSP100)		Measurement & Geometry Capacity Comparison using measuring cylinders, cups or flasks (VCMMG095)	Measurement & Geometry Mass Comparison of pairs using uniform non-formal units (VCMMG095)	Number & Place Value Money Recognition Value Combinations to make larger values (VCMNA092)		Measurement & Geometry Shape Consolidate 2D shapes (<i>corners & sides</i>) Move to 3D objects (<i>edge, vertex & face</i>) Include different orientations (VCMMG098)	
Year 2	Number & Algebra Subtraction Addition (VCMNA107) Big Ideas in Number: Additive thinking		Number & Algebra Multiplication and Division Use of the area concept (VCMNA108) (VCMNA114) Mental Strategies H		Statistics & Probability Data Interpretation Collect Data Display and Interpret (VCMSP126) (VCMSP127) (VCMSP128)		Measurement & Geometry Time Half, Quarter to and past (VCMMG117) (VCMMG124)		Number & Algebra Division (VCMNA109) Mental Strategies H	Number & Algebra Big Idea in Number: Partitioning Halves, Quarters and Eighths (VCMNA110)
Year 3	Number & Algebra Multiplication and Division Problem Solving (VCMNA134) (VCMNA135) Mental Strategies H, G Big Ideas in Number: Multiplicative thinking		Statistics & Probability Chance Experiments (VCMSP147)		Measurement & Geometry Angles Using tools to identify 1/2, 1/4, full turn etc Not angle measures (VCMMG146)		Measurement & Geometry Shapes Drawing skills using templates Making 3D objects (Nets) (VCMMG142)		Mental Strategies D, E	
Year 4	Number & Algebra Multiples & Factors Factor Trees and Common Factors (VCMNA154) (VCMNA155) (VCMNA156) (VCMNA161) (VCMNA162) Mental Strategies H, L Big Ideas in Number: Multiplicative thinking		Statistics & Probability Data Representation and Interpretation (surveys, displays, pictographs, column and bar charts) (VCMSP178) (VCMSP179) (VCMSP180)		Measurement & Geometry Scales, Legends and Directions (VCMMG172)		Number & Algebra Division: formal algorithm including problems in context (worded problems) (VCMNA155) (VCMNA156) (VCMNA162) (VCMNA164) Mental Strategies G, H, L, and N Big Ideas in Number: Multiplicative thinking		Number & Algebra Decimals (VCMNA159)	
Year 5	Measurement & Geometry Perimeter (VCMMG196)	Measurement & Geometry Area (VCMMG196) Mental Strategy I Big Ideas in Number: Multiplicative thinking	Measurement & Geometry Volume and Capacity (VCMMG196)	Measurement & Geometry Location: describing routes and locations using grid reference systems and directional language (VCMMG199)	Measurement & Geometry Symmetry and Transformations (VCMMG200) (VCMMG201)	Number & Algebra Factors, multiples and divisibility rules (VCMNA181) Mental Strategy J Big Ideas in Number: Multiplicative thinking		Number & Algebra Rounding and Estimating (VCMNA182) Mental Strategy N	Statistics & Probability Pose questions, collect data, construct displays and describe and interpret data (VCMSP205) (VCMSP206) (VCMSP207)	
Year 6	Measurement & Geometry Area Big Ideas in Number: Multiplicative thinking Include conversion of units (VCMMG224) Lead to Volume (VCMMG225)		Measurement & Geometry Transformation Cartesian Coordinate System (VCMMG229) (VCMMG230)		Mental Strategies H, L, N		Number & Algebra Order of Operations (VCMNA220)		Statistics & Probability Pose Questions, Construct Displays, Describe & Interpret Data (VCMSP235) (VCMSP236) (VCMSP237)	

The proficiency strands: Understanding, Fluency, Problem Solving and Reasoning are an integral part of the Maths curriculum across the three content strands: Number & Algebra, Measurement & Geometry and Statistics & Probability
 The four proficiency strands will continue to be embedded across each unit of work.

Year 7		<p>Number & Algebra Fractions, Percentages and Decimals (VCMNA244) (VCMNA245) (VCMNA246) (VCMNA247) (VCMNA248)</p> <p>Big Ideas in Number: Partitioning</p>	<p>Measurement & Geometry Triangles, Quadrilaterals, Prisms, Area, Volume and Unit Conversion (VCMMG258) (VCMMG259) (VCMMG260)</p> <p>Big Ideas in Number: Multiplicative thinking</p>	<p>Number & Algebra Pattern Generators Extending Patterns</p> <p>Big Ideas in Number: Multiplicative thinking</p>
Year 8		<p>Number & Algebra Consolidating: Pattern Generators Extending Patterns</p> <p>Big Ideas in Number: Multiplicative thinking, Generalising</p>	<p>Statistics & Probability Data Collection (VCMSP297) (VCMSP298) (VCMSP299) (VCMSP300)</p>	<p>Number & Algebra Real Numbers Rates and Ratios (VCMNA277)</p> <p>Big Ideas in Number: Multiplicative thinking</p>
Year 9		<p>Measurement & Geometry Measurement – Including Units of Measurement, Area, Total Surface Area and Volume of Prisms (VCMMG312) (VCMMG313) (VCMMG314)</p> <p>Big Ideas in Number: Multiplicative thinking</p>	<p>Number & Algebra Linear and Non-Linear Relationships (VCMNA308) (VCMNA309) (VCMNA310) (VCMNA311)</p>	<p>Measurement & Geometry Geometric Reasoning (VCMMG316) (VCMMG317)</p>

Updated: 10 June 2022