

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 the High Impact Teaching Strategies (HITS)

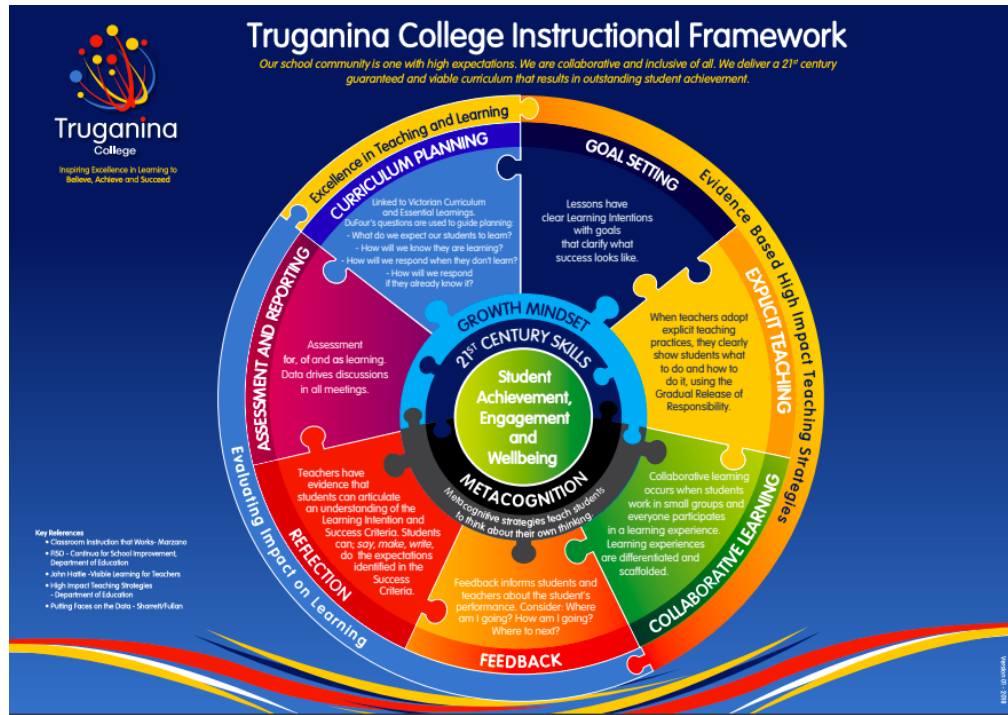


2020
2021
2022
2023
2024

The planning, teaching and learning of the Maths Curriculum links directly to the College's Strategic Plan goals:

- Goal 1: To grow each student's learning outcomes across all curriculum areas, with a focus on Literacy and Numeracy.
- Goal 2: To strengthen a positive culture for learning that empowers both students and staff.
- Goal 3: To increase community connectedness in supporting outstanding student achievement.

Instructional Framework



Maths Mantra

Maths Mantra

- 1 Read the problem.**
Look at any diagrams or pictures.
- 2 Understand the problem.**
What is it asking you to find out?
- 3 Think about how you will find the answer.**
What strategy could you use?
How will you solve the problem?
- 4 Solve the problem using your strategy.**
Show your thinking with words, numbers or drawings.
- 5 Answer the question.**
Record your answer in an appropriate format.

Read - Understand - Think - Solve - Answer

Maths Lesson Structure

Mathematics Lesson Structure P.9
Learning Intention & Success Criteria

50% CHALLENGE

- Learning Intention & Success Criteria in student-friendly language e.g. "I can solve word problems involving elapsed time."
- Social learning intentions to foster effective collaboration & communication. (P.53) "Differentiated according to individual student needs."
- Connect
- Cultivate & activate prior knowledge – write, model or verbally share what is already known
- Preparation for today's knowledge – concepts they need to understand before tackling new learning
- Prerequisite maths and mathematical language
- Share thinking with peers – construct mathematical arguments & critique the reasoning of others
- Address prior misconceptions – correct misconceptions before moving on to new content

60% ENGAGE/LEARN

- Introduction to the task/EDS
- Concept development through hands-on learning experiences
- Brainstorming
- Model thinking – teacher presents steps in order to reduce cognitive load
- Use of efficient mental strategies
- Building upon previous concepts

Learning Experience

- Students engage actively in: reasoning, exploration, flexible thinking & making connections. Students take making, modelling, naming, recording, problem solving, clarifying, applying new skills, modeling working out, transferring knowledge, building narrative and resilience
- Incorporate 4 capabilities:**
 - Fluency:** model working out, model answers
 - Reasoning:** clarifying understanding, responding
 - Problem solving:** solve problems, think laterally
 - Understanding:** Make connections
- Incorporate:** Tier 2 & Tier 3 words
- Tier 2** – General academic terms
- Tier 3** – Domain-specific terms

21st Century Skills: Student collaboration, communication, creativity, critical thinking
Teacher: best practice, modern teaching aids, interactivity, videos, hands on materials

70% EVALUATE/REFLECT

- Flexible & balanced groupings
- Meeting with a small group of students for some needs-based, teacher-guided instruction to differentiate instruction for all students
- All groups - focus and composition is driven by ongoing assessment and student misconceptions evidenced by data - PAT, M, Pre & Post-tests, NAPLAN, Tiered tasks, Anecdotal

Reflection

- Share thinking and understanding
- Articulate understanding of Learning Intention and Success Criteria
- Present evidence of learning – mathematical proof
- Confirm understanding and make connections
- Address Mathematical layout and solutions presented
- Address continuous misconceptions
- Student lead reports
- Talking for brain memory and clarity
- Calculate successes
- Focus on the processes used and understood
- Summarise 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

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 Common Assessment Task for 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 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	The Proficiency Strands	1	2	3	4	5	6	7	8	9	10	11
	Understanding Fluency	Refer to the Maths Essential Learnings when planning the Maths Curriculum. Differentiated Curriculum Planning to include Small Group Instruction to address misconceptions from Pre-test data.										
Year 5	Problem Solving Reasoning are an integral part of the Maths curriculum across the three content strands: Number & Algebra, Measurement & Geometry and Statistics & Probability	Statistics & Probability Chance (VCMSP203) (VCMSP204)	Number & Algebra Big ideas in Number: Multiplicative thinking Multiplication & Division (VCMNA183) (VCMNA184) Mental Strategies L, H		Number & Algebra Big ideas in Number: Partitioning Fractions & Decimals Beyond Hundredths (VCMNA189) (VCMNA190)			Number & Algebra Money and Financial Maths (VCMNA191)		Number & Algebra Order of Operations (VCMNA193) (VCMNA220)		Measurement & Geometry Capacity, Volume and Mass (VCMMG195)
Year 6	are an integral part of the Maths curriculum across the three content strands: Number & Algebra, Measurement & Geometry and Statistics & Probability	Number & Algebra CONSOLIDATE Fractions & Decimals Multiplying Decimals (VCMNA215) (VCMNA216)		Number & Algebra Big ideas in Number: Partitioning Fractions Review addition & subtraction related denominators include (VCMNA219) Addition Mixed Numbers (VCMNA212) Mental Strategies Q		Number & Algebra Big ideas in Number: Partitioning Fractions of a Quantity Connections between fractions, decimals & percentages (VCMNA213) (VCMNA217)		Financial Maths Percentage Discounts (VCMNA218) Mental Strategies S,		Statistics & Probability Chance (VCMSP234)	Number & Algebra Sequences Difference Strategy (VCMNA219)	Measurement & Geometry Capacity & Mass (VCMMG222) (VCMMG223)
Year 7	The four processes will continue to be embedded across each term.	Big ideas in Number: Partitioning Mental strategies K,O	Number & Algebra Best Buys (VCMNA250)		Statistics & Probability Mean, Median, Mode, Stem & Leaf Plots (VCMSP269) (VCMSP270) (VCMSP271)			Number & Algebra Big ideas in Number: Proportional Reasoning Rates and Ratios (VCMNA249)		Multiplicative Thinking Learning and Assessment Framework Zones (LAF)		
Year 8		Measurement & Geometry Big ideas in Number: Multiplicative Thinking Area & Volume to include circles & irrational numbers (VCMNA275) (VCMMG286) (VCMMG287) (VCMMG288) (VCMMG289)				Measurement & Geometry Congruence (VCMMG291) (VCMMG292) (VCMMG293)				Multiplicative Thinking Learning and Assessment Framework Zones (LAF)		
Year 9		Number & Algebra Money and Financial Maths (VCMNA304)		Statistics & Probability Chance (VCMSP321) (VCMSP322) (VCMSP323)			Number & Algebra Big ideas in Number: Proportional Reasoning Rates and Proportion (VCMNA301)		Multiplicative Thinking Learning and Assessment Framework Zones (LAF)			

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