Introducing the Victorian Curriculum: Mathematics F–6

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VICTORIAN CURRICULUM AND ASSESSMENT AUTHORITY

VICTORIA State Government

Acknowledgment of Country

I would like to acknowledge the traditional custodians of the many lands across Victoria on which each of you are living, learning and working from today.

For myself and those of us in the Melbourne metropolitan area, we acknowledge the traditional custodians of the Kulin Nations.

When acknowledging country, we recognise Aboriginal and Torres Strait Islander peoples' spiritual and cultural connection to country and acknowledge their continued care of the lands and waterways over generations, while celebrating the continuation of a living culture that has a unique role in this region.

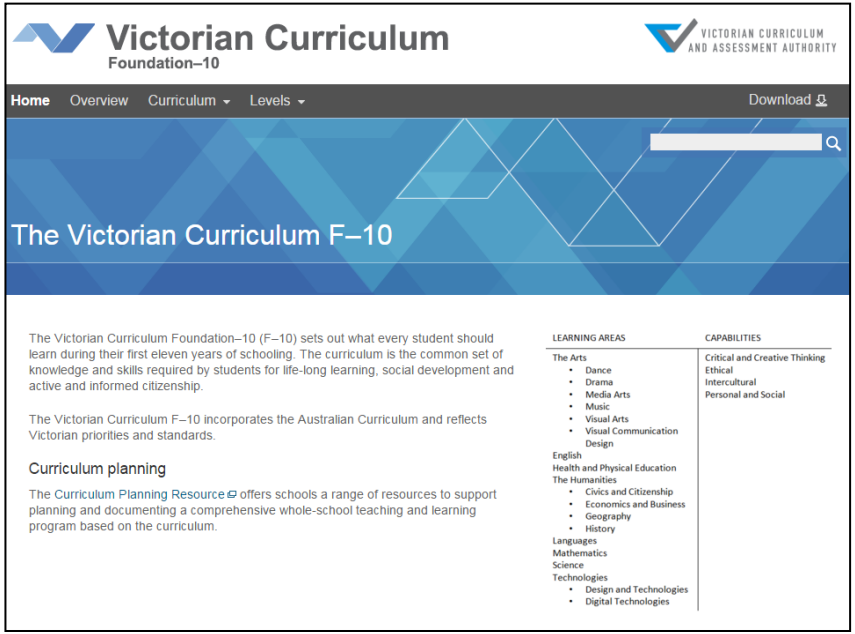
I would like to pay my respects to Elders past, present and emerging, for they hold the memories, traditions, culture and hopes of all Aboriginal and Torres Strait Islander peoples across the nation, and hope they will walk with us on our journey.

Purpose

- **Introduction to the Victorian Mathematics Curriculum F-6**

Victorian Curriculum F-10

- Provides a stable foundation for the development and implementation of whole-school teaching and learning programs
- The Victorian Curriculum F–10 incorporates the Australian Curriculum and reflects Victorian priorities and standards



http://victoriancurriculum.vcaa.vic.edu.au/

Victorian Mathematics Curriculum F-10

The Mathematics curriculum aims to ensure that students:

- develop useful mathematical and numeracy skills for everyday life, work and as active and critical citizens in a technological world
- see connections and apply mathematical concepts, skills and processes to pose and solve problems in mathematics and in other disciplines and contexts
- acquire specialist knowledge and skills in mathematics that provide for further study in the discipline
- appreciate mathematics as a discipline – its history, ideas, problems and applications, aesthetics and philosophy.

The VCAA

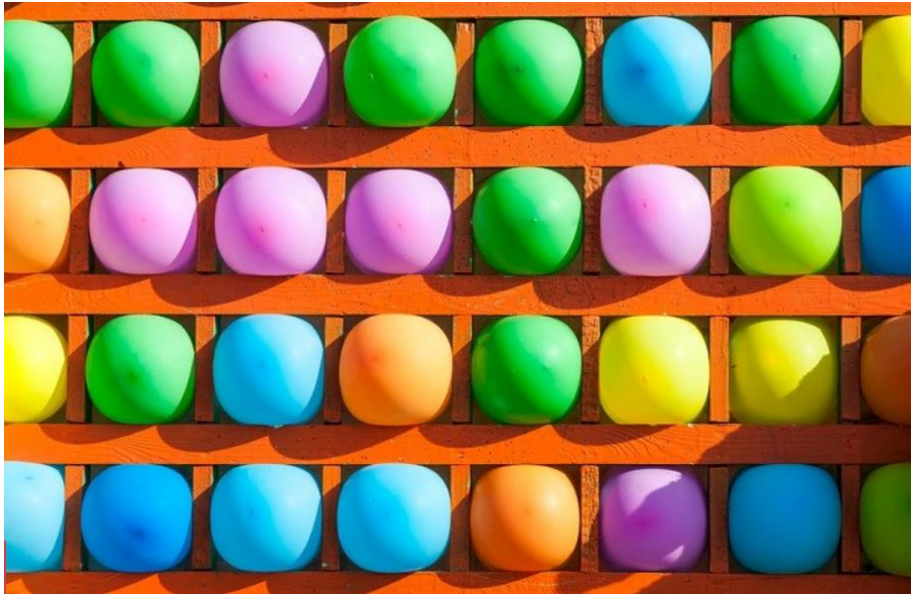
- The VCAA is a statutory authority primarily accountable to the Minister for Education, serving both government and non-government schools.
- The vision of the Victorian Curriculum and Assessment Authority (VCAA) is to be a global education leader.
- The VCAA's mission is to provide high quality curricula, assessment and reporting to enable learning for life.

Mathematics Curriculum Structure

- **Strands and Sub strands**

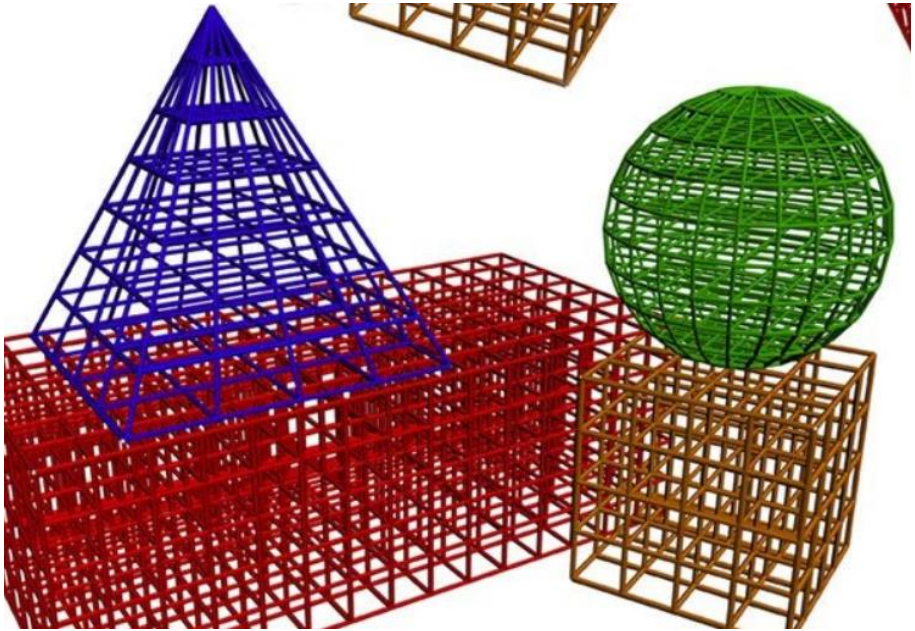
Number and Algebra	Measurement and Geometry	Statistics and Probability
Number and place value	Using units of measurement	Chance
Fractions and decimals	Shape	Data representation and interpretation
Real numbers	Geometric reasoning	
Money and financial mathematics	Location and transformation	
Patterns and algebra	Pythagoras and trigonometry	
Linear and non-linear relationships		

Number and Algebra



- Number and Place Value
- Fractions and Decimals
- Real Numbers
- Money and Financial mathematics
- Patterns and Algebra
- Linear and Non Linear relationships

Measurement and Geometry

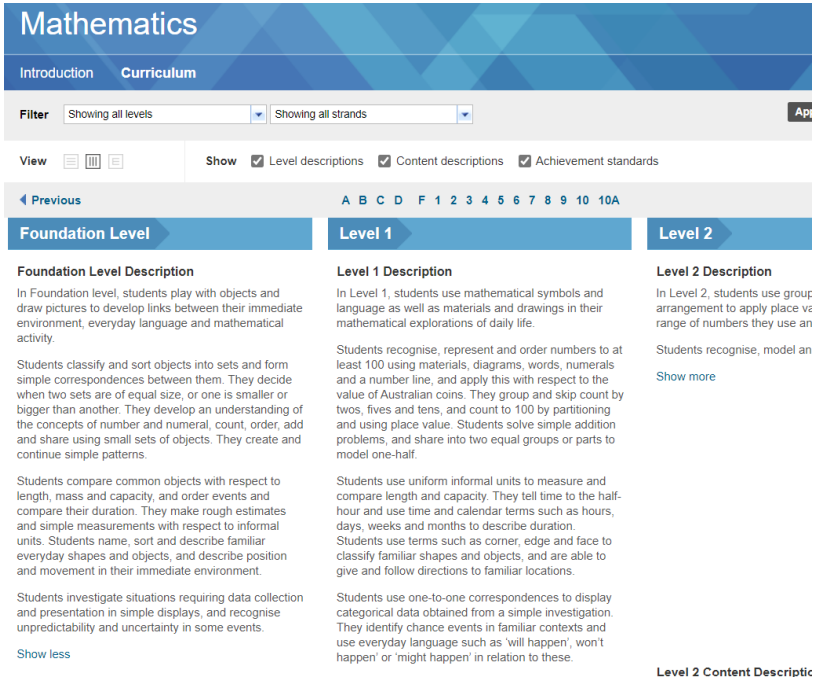


- Using units of measurement
- Geometric reasoning
- Location and transformation
- Pythagoras and Trigonometry

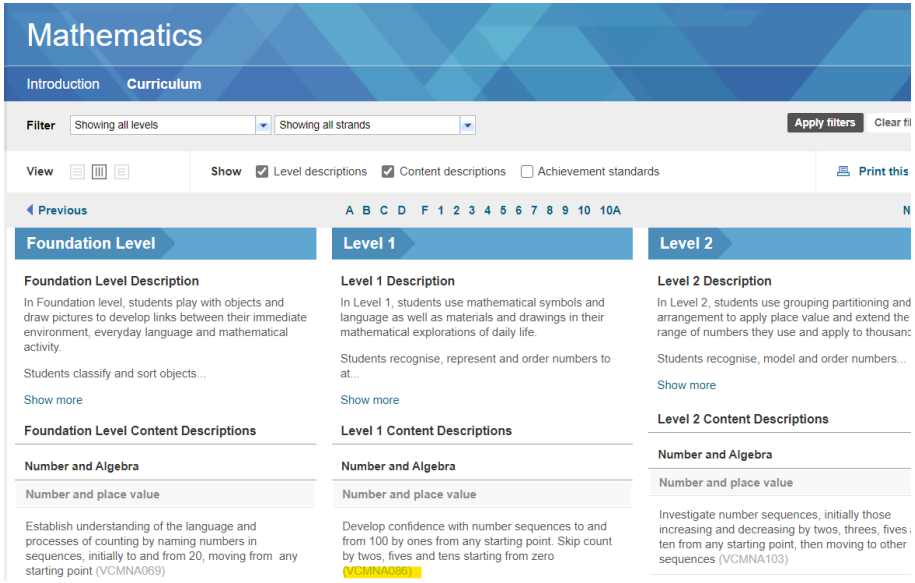
Statistics and Probability

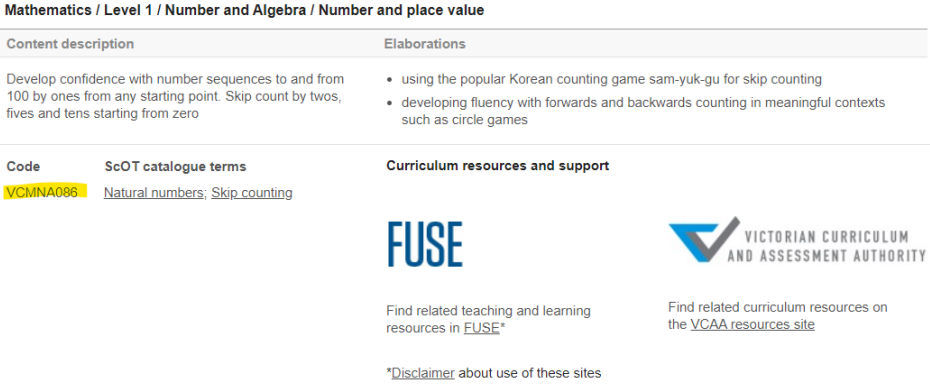
- Chance
- Data representation and interpretation

Level Descriptions



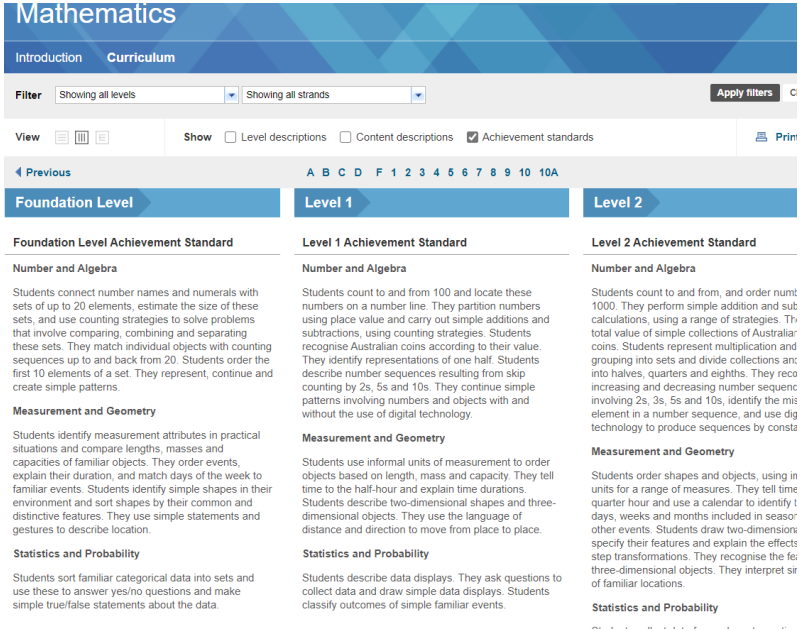
Content Descriptions





Achievement Standards

- **Achievement Standard statement is what we are requiring students to achieve, and what we report against.**
- **The Content Descriptions are developed, as ‘stepping stones’ to reach the Achievement Standard at a given level**



Proficiencies

- Understanding
- Fluency
- Problem Solving
- Reasoning

Scope and Sequence

Victorian Curriculum
Foundation–10

Mathematics – Number and Algebra: Foundation – Level 6

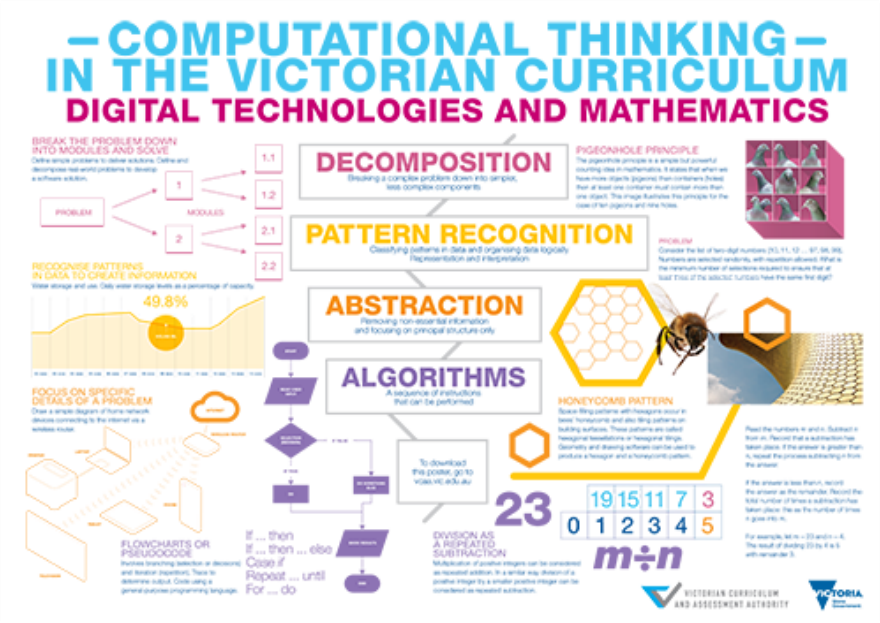
VICTORIAN CURRICULUM AND ASSESSMENT AUTHORITY

Foundation Level	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Number and Algebra						
Number and place value						
Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point	Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero	Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and ten from any starting point, then moving to other sequences	Investigate the conditions required for a number to be odd or even and identify odd and even numbers	Investigate and use the properties of odd and even numbers	Identify and describe factors and multiples of whole numbers and use them to solve problems	Identify and describe properties of prime, composite, square and triangular numbers
Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond	Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line	Recognise, model, represent and order numbers to at least 1000	Recognise, model, represent and order numbers to at least 10 000	Recognise, represent and order numbers to at least tens of thousands	Use estimation and rounding to check the reasonableness of answers to calculations	Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers and make estimates for these computations
Subitise small collections of objects	Count collections to 100 by partitioning numbers using place value	Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting	Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems	Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems	Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies	Investigate everyday situations that use integers. Locate and represent these numbers on a number line
Compare, order and make correspondences between collections, initially to 20, and explain reasoning	Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts	Explore the connection between addition and subtraction	Recognise and explain the connection between addition and subtraction	Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9	Solve problems involving division by a one digit number, including those that result in a remainder	
Represent practical situations to model addition and subtraction	Represent practical situations that model sharing	Solve simple addition and subtraction problems using a range of efficient mental and written strategies	Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation	Recall multiplication facts up to 10 × 10 and related division facts	Use efficient mental and written strategies and apply appropriate digital technologies to solve problems	
Represent practical situations to model sharing		Recognise and represent multiplication as repeated addition, groups and arrays	Recall multiplication facts of two, three, five and ten and related division facts	Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder	Recognise, represent and order numbers to at least hundreds of thousands	
		Recognise and represent division as grouping into equal sets and solve simple problems using these representations	Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies			

Numeracy

- **Victorian Curriculum F-10 Mathematics**
- **Numeracy**
- **The ‘Numeracy across the Victorian Curriculum’ resources**

Computational Thinking



- **Decomposition**
  - Break down the problem into simpler, less complex components
- **Pattern Recognition**
  - Classify patterns in data and organizing data logically
  - Representation and interpretation
- **Abstraction**
  - Removing non essential information and focusing on principal structure only
- **Algorithms**
  - A sequence of instructions that can be performed

Frequently Asked Questions

- **We have a FAQ webpage**
- **Do you have any mathematics curriculum questions?**

Resources

Planning	Teaching	Assessing
Pages - Curriculum mapping templates (vcaa.vic.edu.au)	Pages - Help me find a teaching resource (vcaa.vic.edu.au)	Pages - Annotated work samples (vcaa.vic.edu.au)
Pages - Scope and sequence (vcaa.vic.edu.au)		Pages - Mathematics - Indicative progress (vcaa.vic.edu.au)
Home | Victorian Curriculum Planning (vcaa.vic.edu.au)		Pages - Formative Assessment (vcaa.vic.edu.au)

Contacts

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For further advice about the implementation of the F–10 curriculum in Victorian schools, including developments, resources and professional learning opportunities, please subscribe to the F–10 Curriculum Update:
https://www.vision6.com.au/em/forms/subscribe.php?db=399327&s=112201&a=18689&k=799b5d6