

CURRICULUM, PEDAGOGY AND BEYOND



THE MATHEMATICAL
ASSOCIATION OF VICTORIA



VICTORIAN CURRICULUM
AND ASSESSMENT AUTHORITY

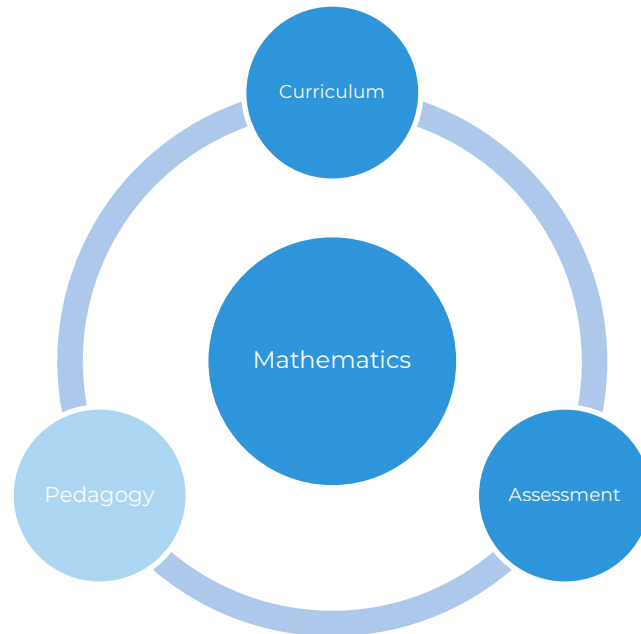
MAV24
CONFERENCE

UNPACKING THE VICTORIAN CURRICULUM-MATHEMATICS 2.0 FOR SUCCESSFUL IMPLEMENTATION

Crystal Afitu
Lee Gianfriddo

Victorian Curriculum and Assessment Authority

Introduction and intention



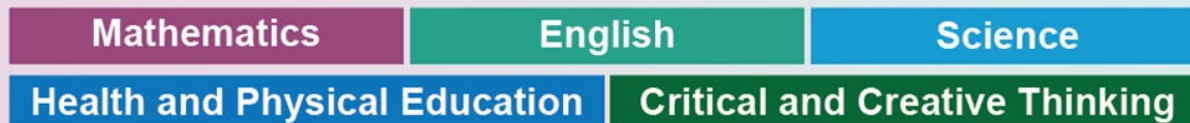
Crystal Afitu
Senior Assessment Development Lead
F-10 Mathematics
VCAA



Lee Gianfriddo
Assessment Project Lead
F-10 Mathematics
VCAA

Curriculum aligned and **actionable** information that directly informs **teaching** and **learning**, for improved **student outcomes**.

The DAL contains over 460 assessments across the curriculum learning areas.



1.

Mathematics and the Victorian Curriculum Version 2.0

Understanding the
changes and the
impact of the revised
curriculum

VC v 1.0

3 strands 13 Sub-strands

Proficiencies sat alongside VCv1

Mathematical processes not explicitly included

Linking AS statements and CDs at each level

VC v 2.0

6 Strands

Proficiencies embedded in VCv2

Mathematical processes included in CDs and AS statements

Increased clarity in linking AS statements and CDs at each level

Strands

Number

Number and Algebra

The Number strand is where students are taught the **properties** of number and efficient mental and written **strategies** with calculations using the four operations


AS: Students...apply knowledge of place value to partition, rearrange and rename two- and three-digit numbers in terms of their parts; and regroup partitioned numbers to assist in calculations

CD: add and subtract one- and two-digit numbers, represent problems using number sentences and solve using part-part-whole reasoning and a variety of calculation strategies

VC2M2N04

◀ Back Next ▶ 🔍

Here are 10 apple slices.



One child eats 5 apple slices.

Another child eats 2 apple slices.

Which number sentence shows how many apple slices are left?

- $10 + 5 + 2 = 17$
- $10 + 5 - 2 = 13$
- $10 - 5 + 2 = 7$
- $10 - 5 - 2 = 3$

◀ Back Next ▶ 🔍

Henry uses partitioning to work out $12 + 15$.

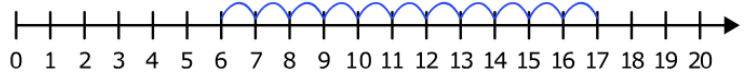
$$\begin{array}{c} \textcircled{12} \\ \textcircled{10} + \textcircled{2} \end{array} + \begin{array}{c} \textcircled{15} \\ \textcircled{\quad} + \textcircled{\quad} \end{array}$$

How should Henry partition 15 to help with the calculation?

- 2
- 5
- 10
- 12
- 15

◀ Back Next ▶ 🔍

Here is a number line.



Use the number line to help complete the number sentence.

$$17 - \square = 6$$

6 11 12 20

Strands

Algebra

Number and Algebra

The Algebra strand is where students 'extend and apply' the strategies and patterns they have learnt to **solve** the calculations. They use symbols and apply rules. This includes using variables to represent numbers or unknowns, enabling the solving of problems and understanding patterns and structures

AS: Students recall and demonstrate proficiency with addition and subtraction facts within 20 and multiplication facts for twos

CD: recall and demonstrate proficiency with addition facts to 20; extend and apply facts to develop related subtraction facts

VC2M2A02

◀ Back Next ▶



$19 - 4 = \square$

◀ Back Next ▶



Tom has 6 marbles.

His friend gave him 5 more.

How many marbles did Tom have altogether?

◀ Back Next ▶



Place a number in each box to complete the number sentence.

$\square + \square = 19$

3 4 5 10 13 16

Strands

The image displays a comprehensive curriculum map for the 'Number' strand, organized into columns representing different levels of learning. The levels shown are Foundation, Level 1, Level 2, Level 3, Level 4, Level 5, Level 6, Level 7, Level 8, Level 9, Level 10, and Level 10A. Each level column contains detailed information including 'Level description', 'Achievement standard', and 'Content descriptions'. The 'Content descriptions' section for each level lists specific mathematical skills and concepts, such as 'Number', 'Number systems', 'Fractions', 'Decimals', and 'Algebra'. The map is presented in a grid-like format with a clean, professional design. A prominent green arrow originates from the 'Number' label in a teal box on the right and points towards the curriculum content, indicating the focus of the document. The background on the left features a decorative pattern of glowing blue dots.

Number

Strands

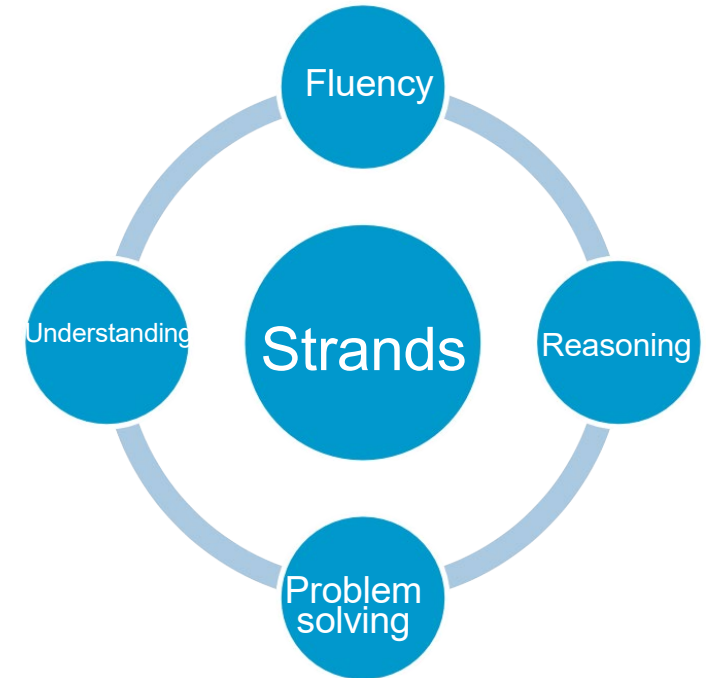
The image displays a curriculum map for Algebra, organized into strands across various levels from Foundation to Level 10. A yellow arrow points from the 'Algebra' label to the 'Algebra' column.

| Strand | Foundation | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8 | Level 9 | Level 10 | |
|---------|--|---|---|---|---|---|---|---|---|---|---|---|
| Algebra | Students learn to: solve a linear equation of variations, recognize area, volume and mass, and algebra involving numbers, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. | Algebra: identify and solve pattern sequences with numbers, symbols, shapes and objects, identifying the repeating unit and recognizing the importance of repeat in solving problems. |

Algebra

Mathematical proficiencies

- The proficiencies are fundamental to learning mathematics and working mathematically
- The proficiencies are included across the 6 strands
- They are the 'what' and 'how' of mathematics in action
- They enable students to respond to familiar and unfamiliar situations, make informed decisions, and adopt reflective approaches to verify and evaluate solutions



Mathematical proficiencies

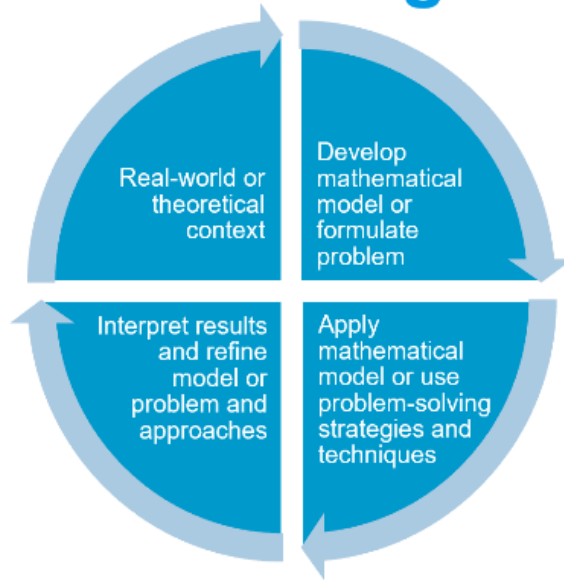
| Achievement Standard | Content Description | Proficiency |
|---|--|------------------------|
| Students extend and use single-digit addition and related subtraction facts and apply additive strategies to model and solve problems involving two- and three-digit numbers. | extend and apply knowledge of addition and subtraction facts to 20 to develop efficient mental strategies for computation with larger numbers without a calculator VC2M3A02 | Understanding, Fluency |
| Students use algebraic expressions to represent situations, describe the relationships between variables from authentic data and substitute values into formulas to determine unknown values. | apply the associative, commutative and distributive laws to aid mental and written computation , and formulate algebraic expressions using constants, variables, operations and brackets VC2M7A02 | |

Mathematical proficiencies

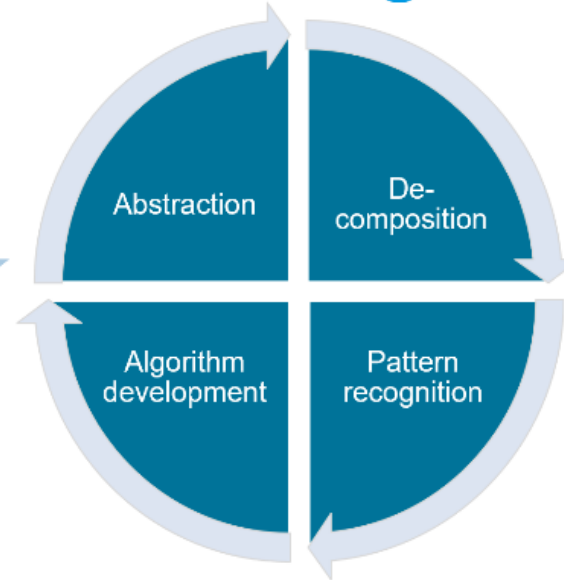
| Achievement Standard | Content Description | Proficiency |
|--|---|-------------------------------|
| They choose rounding and estimation strategies to determine whether results of calculations are reasonable . | choose and use estimation and rounding to check and explain the reasonableness of calculations, including the results of financial transactions VC2M4N07 | Reasoning, Problem-solving |
| Students compare and analyse the distributions of multiple numerical data sets, choose representations, describe features of these data sets using summary statistics and the shape of distributions, and consider the effect of outliers. | choose appropriate forms of display or visualisation for a given type of data; justify selections and interpret displays for a given context VC2M9ST04 | |

Mathematical Processes

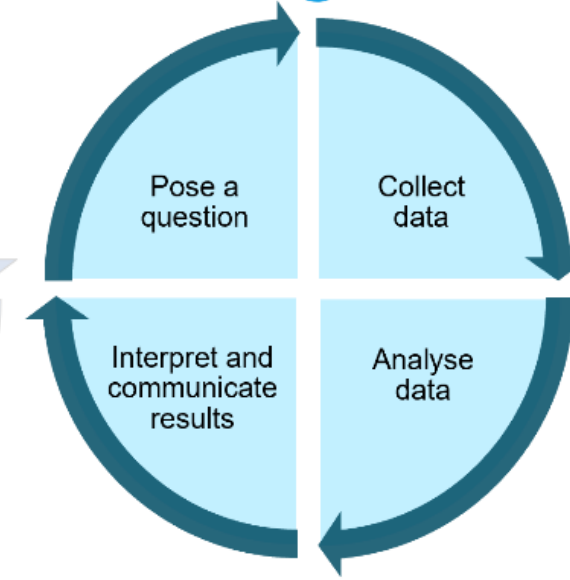
Mathematical modelling



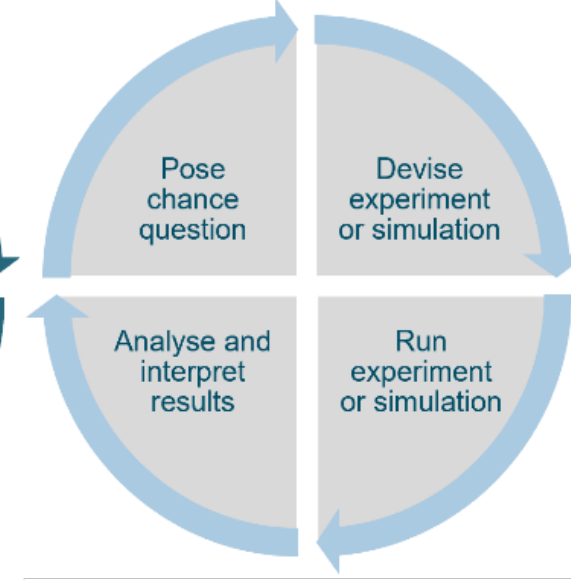
Computational thinking



Statistical investigation



Probability experiments



Mathematical modelling

Home Version 2.0 > Mathematics > Curriculum

Mathematics

INTRODUCTION CURRICULUM SCOPE AND SEQUENCE RESOURCES GLOSSARY

Curriculum

Multi-view Focus view Full view

Filter Levels F 1 2 3 4 5 6 7 8 9 10 10A Expand all Collapse all

< Level 5 Level 6 Level 7 >

check and explain the reasonableness of solutions to problems, including financial contexts using estimation strategies appropriate to the context

VC2M5N08

ELABORATIONS COPY

use mathematical modelling to solve practical problems involving additive and multiplicative situations, including simple financial planning contexts; formulate the problems, choosing operations and efficient mental and written calculation strategies, and using digital tools where appropriate; interpret and communicate solutions in terms of the situation

VC2M5N09

ELABORATIONS COPY

VC2M6N08

ELABORATIONS COPY

use mathematical modelling to solve practical problems involving rational numbers and percentages, including in financial contexts; formulate the problems, choosing operations and using efficient mental and written calculation strategies, and using digital tools where appropriate; interpret and communicate solutions in terms of the situation, justifying the choices made

VC2M6N09

ELABORATIONS COPY

recognise, represent and solve problems involving ratios

VC2M7N09

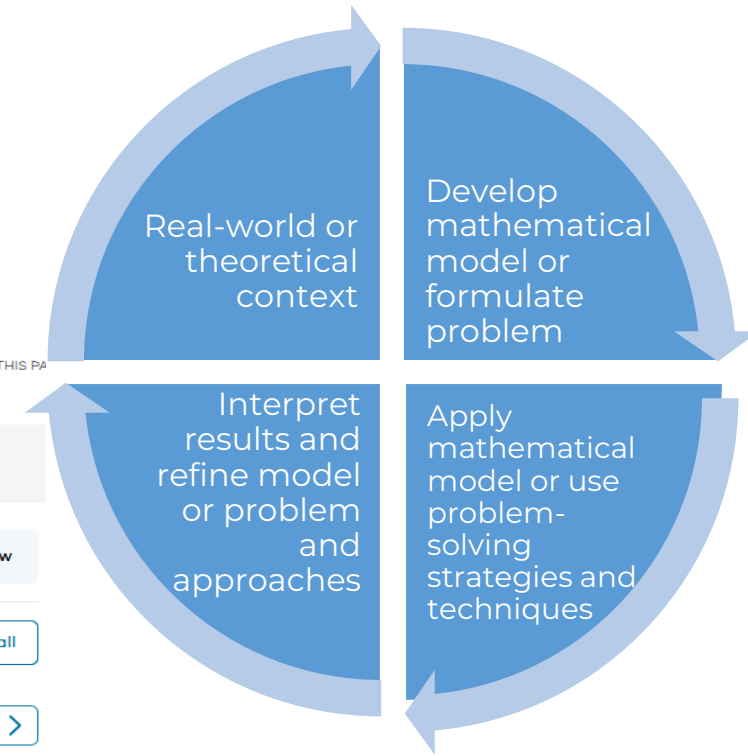
ELABORATIONS COPY

use mathematical modelling to solve practical problems involving rational numbers and percentages, including financial contexts such as 'best buys'; formulate problems, choosing representations and efficient calculation strategies, designing algorithms and using digital tools as appropriate; interpret and communicate solutions in terms of the situation, justifying choices made about the representation

VC2M7N10

ELABORATIONS COPY

PRINT THIS PAGE



Computational thinking

Home Version 2.0 > Mathematics > Curriculum

Mathematics

INTRODUCTION CURRICULUM SCOPE AND SEQUENCE RESOURCES GLOSSARY

Curriculum

Multi-view Focus view Full view

Filter Levels F 1 2 3 4 5 6 7 8 9 10 10A

Expand all Collapse all

< Level 5 Level 6 Level 7 >

follow a mathematical algorithm involving branching and repetition (iteration); create and use algorithms involving a sequence of steps and decisions and digital tools to experiment with factors, multiples and divisibility; identify, interpret and describe emerging patterns

VC2M5N10

ELABORATIONS

design and use algorithms involving a sequence of steps and decisions that use rules to generate sets of numbers; identify, interpret and explain emerging patterns

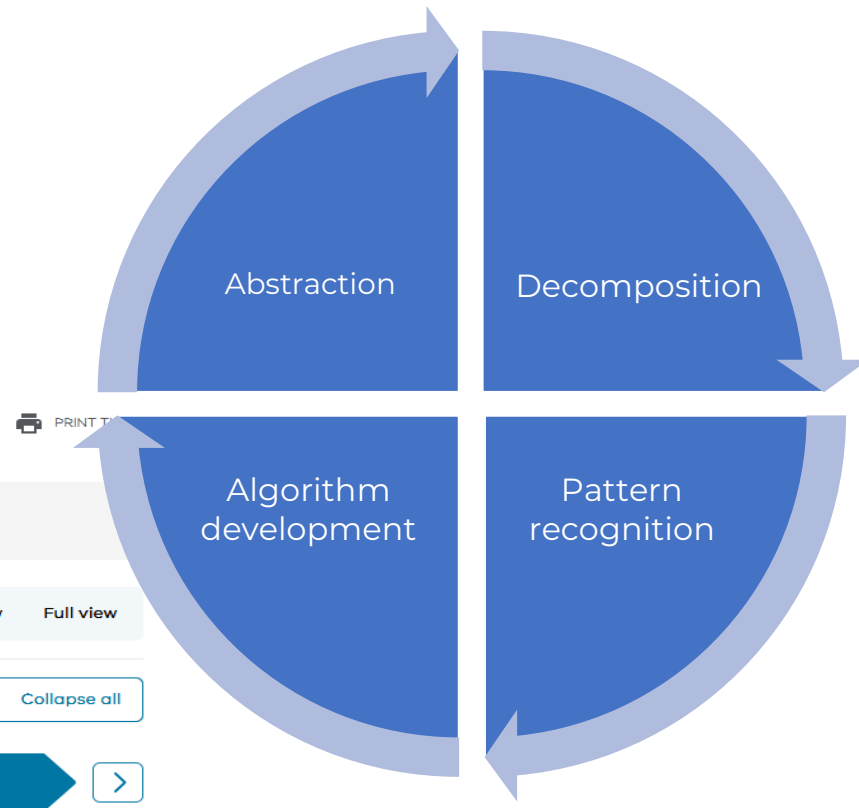
VC2M6A03

ELABORATIONS

design algorithms involving a sequence of steps and decisions that will sort and classify sets of shapes according to their attributes, and describe how the algorithms work

VC2M7SP04

ELABORATIONS



- COMPUTATIONAL THINKING - IN THE VICTORIAN CURRICULUM

DIGITAL TECHNOLOGIES AND MATHEMATICS

DECOMPOSITION
Breaking a complex problem down into smaller, more manageable parts.

PATTERN RECOGNITION
Identifying patterns in data and recognizing their significance.

ABSTRACTION
Identifying the essential features of a problem and ignoring the details that are not relevant.

ALGORITHMS
A sequence of instructions that can be followed to solve a problem.

FLOWCHARTS OR PSEUDOCODE
A visual representation of an algorithm, using symbols and arrows to show the flow of the process.

NUMBERS
23, 19, 15, 11, 7, 3, 0, 1, 2, 3, 4, 5

m ÷ n

TECHNICAL EDUCATION AND ASSESSMENT AUTHORITY

Statistical investigation

Home Version 2.0 > Mathematics > Curriculum

Mathematics

INTRODUCTION CURRICULUM SCOPE AND SEQUENCE RESOURCES GLOSSARY

Curriculum

Multi-view Focus view Full view

Filter Levels F 1 2 3 4 5 6 7 8 9 10 10A

Expand all Collapse all

< Level 5 Level 6 Level 7 >

plan and conduct statistical investigations by posing questions or identifying a problem and collecting relevant data; choose appropriate displays and interpret the data; communicate findings within the context of the investigation

VC2M5ST03

ELABORATIONS

COPY

plan and conduct statistical investigations by posing and refining questions to collect categorical or numerical data by observation or survey, or identifying a problem and collecting relevant data; analyse and interpret the data and communicate findings within the context of the investigation

VC2M6ST03

ELABORATIONS

COPY

VC2M7ST02

ELABORATIONS

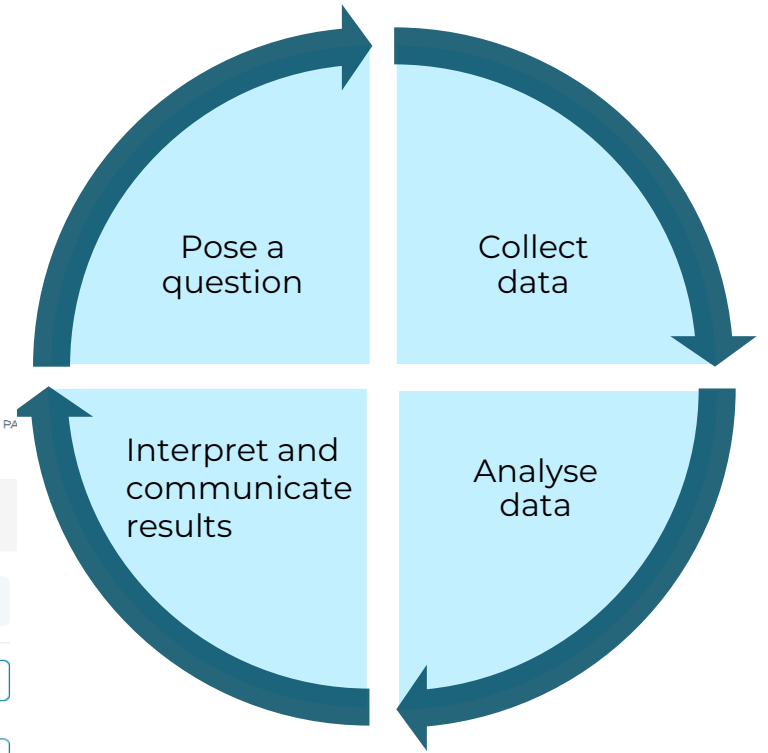
COPY

plan and conduct statistical investigations for issues involving discrete and continuous numerical data, and data collected from primary and secondary sources; analyse and interpret distributions of data and report findings in terms of shape and summary statistics

VC2M7ST03

ELABORATIONS

COPY



Probability experiments and simulations

Home Version 2.0 > Mathematics > Curriculum

Mathematics

INTRODUCTION CURRICULUM SCOPE AND SEQUENCE RESOURCES GLOSSARY

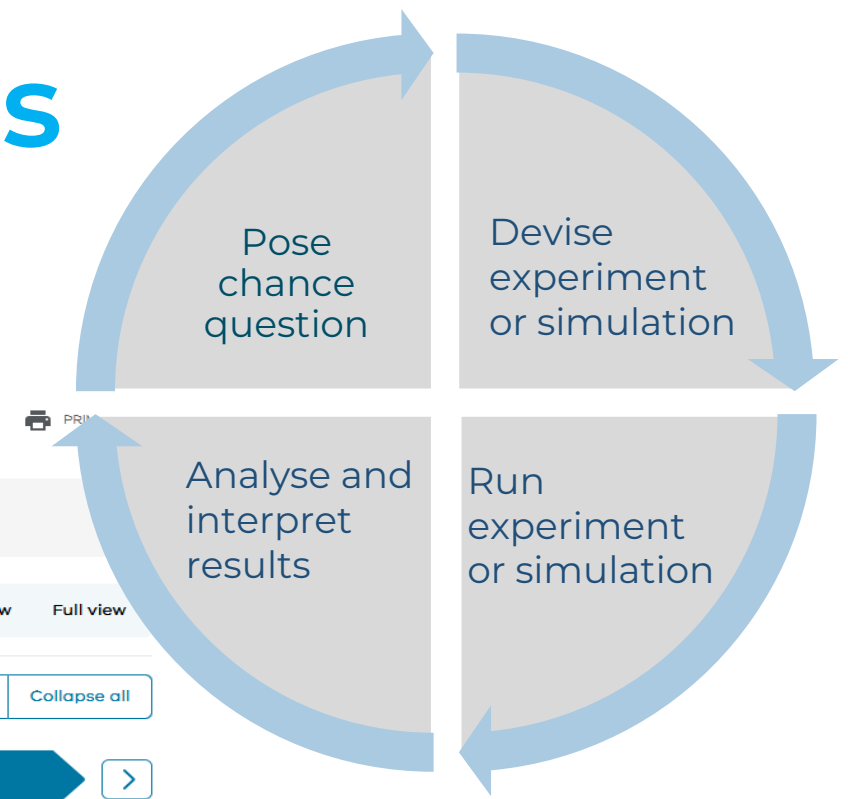
Curriculum

Multi-view Focus view Full view

Filter Levels F 1 2 3 4 5 6 7 8 9 10 10A Expand all Collapse all

< Level 5 Level 6 Level 7 >

| | | |
|---|---|--|
| <p>list the possible outcomes of chance experiments involving equally likely outcomes and compare to those that are not equally likely</p> <p>VC2M5P01</p> <p>ELABORATIONS COPY</p> | <p>describe probabilities using fractions, decimals and percentages; recognise that probabilities lie on numerical scales of 0–1 or 0%–100%; use estimation to assign probabilities that events occur in a given context, using common fractions, percentages and decimals</p> <p>VC2M6P01</p> <p>ELABORATIONS COPY</p> | <p>identify the sample space for single-stage experiments; assign probabilities to the possible outcomes and predict relative frequencies for related experiments</p> <p>VC2M7P01</p> <p>ELABORATIONS COPY</p> |
| <p>conduct repeated chance experiments, including those with and without equally likely outcomes, and observe and record the results; use frequency to compare outcomes and estimate their likelihoods</p> <p>VC2M5P02</p> <p>ELABORATIONS COPY</p> | <p>conduct repeated chance experiments and run simulations with an increasing number of trials using digital tools; compare observations with expected results and discuss the effect on variation of increasing the number of trials</p> <p>VC2M6P02</p> <p>ELABORATIONS COPY</p> | <p>conduct repeated chance experiments and run simulations with a large number of trials using digital tools; compare predicted with observed results, explaining the differences and the effect of sample size on the outcomes</p> <p>VC2M7P02</p> <p>ELABORATIONS COPY</p> |



Mathematics Vs Numeracy

Numeracy comprises knowledge and skills developed through learning in the discipline of mathematics, in conjunction with behaviours and dispositions that students judiciously draw on to use mathematics effectively in a wide range of academic and social situations

Numeracy is fundamental to a student's ability to learn at school and to engage productively in society. In the Victorian Curriculum F–10, students become numerate as they develop the knowledge and skills to use mathematics confidently across learning areas at school and in their lives more broadly.

| Curriculum Area | Mathematics |
|-----------------|--|
| Science | <p>Students require a strong understanding of number, space, shape, structure, measurement, chance and data in order to problem-solve and ask appropriate questions to further investigate the world around them.</p> <p>In Science, students identify and use appropriate measuring instruments and units of measurement, sampling procedures and appropriate types of data collection to achieve a specified purpose. They learn to make estimates, relate measurement to an investigation, develop an understanding of error in measurement and identify methods to improve precision in repeated measurements and use data to draw conclusions related to the prediction or hypothesis investigated.</p> |

Version 2.0 Resources

- Teacher and learning area leader guides
- Planning templates and examples
- Teacher and Learner Unit examples
- Assessment examples
- On Demand Professional Learning modules

Mathematics Level 1 map – template

Use this curriculum area map to identify where content descriptions and achievement standards are explicitly addressed within your school's teaching and learning plans. This template will help you to both map the Victorian Curriculum F–10 Version 2.0 and audit your current teaching and learning plans.

Instructions

1. Enter your details in the footer on page 1.
2. Enter the title of each teaching and learning unit in the first column of each mapping table. Indicate the connections to the curriculum by checking the box of the relevant content description(s) and writing the number of the relevant sentence(s) from the achievement standard.
3. Complete all the mapping tables, listing all teaching and learning units. Check that all achievement standard sentences have been covered. Detail any comments, notes and actions.
4. Complete the Assessment, Analysis of Curriculum Coverage and Next Steps sections on the final page.

Hint: Use your completed curriculum area map to start populating or updating your curriculum area plan.

| Strand | Number | | | | | Algebra | | |
|--------|--|--|---|--|--|--|--|--|
| | Content description (CD) | | | | | | | |
| Number | recognise, represent and order numbers to at least 120 using physical and virtual materials, numerals, number lines and charts VCCM1N01 | partition one- and two-digit numbers in different ways using physical and virtual materials, including partitioning two-digit numbers into tens and ones VCCM1N02 | quantify sets of objects, to at least 120, by partitioning collections into equal groups using number knowledge and skip counting VCCM1N03 | add and subtract numbers within 20, using physical and virtual materials, part-whole knowledge to 10 and a variety of calculation strategies VCCM1N04 | use mathematical modelling to solve practical problems involving additive situations, including simple money transactions; represent the situations with diagrams, physical and virtual materials; use calculation strategies to solve the problem | use mathematical modelling to solve practical problems involving equal sharing and grouping; represent the situations with diagrams, physical and virtual materials; use calculation strategies to solve the problem | recognise, continue and create pattern sequences with numbers, symbols, shapes and objects including Australian coins, formed by skip counting, initially by tens, three and fives VCCM1A01 | recognise, continue and create repeating patterns with numbers, symbols, shapes and objects, identifying the repeating unit and recognising the importance of repetition in solving problems VCCM1A03 |

Teaching and learning unit: 8.2.7 Pythagoras' theorem and applications

Mathematics, Level 8

Overview, including Victorian Curriculum F–10 links

| Description of the teaching and learning unit | Cohort considerations (in relation to this teaching and learning unit) |
|--|--|
| <p>This unit covers:</p> <ul style="list-style-type: none"> • the recognition, demonstration and proof of Pythagoras' theorem, and its use to calculate side lengths in right-angled triangles • application of the theorem to solve practical problems involving lengths and distances in the plane • Pythagorean triples. <p>The unit is planned as 8 lessons of 45–60 minutes duration over a period of approximately 2 weeks.</p> | <p>This topic involves a combination of graphical, numerical and symbolic representations related to triangles, squares as shapes and the relation of these shapes to areas and side lengths involving squares and square roots of numbers.</p> <p>Relevant data on student background could be obtained from NAPLAN Year 7 data or DAL assessments, as well as school data on prior learning and achievement.</p> <p>Manipulatives, measurement, drawing and digital tools can be used to support differentiation for the diversity of student learner backgrounds and needs, as well as the inclusion of some open and rich tasks.</p> <p>The work in this topic uses scaled diagrams, and graph paper, as well as 'blank pages', and physical models can be used assist students as applicable in construction work.</p> <p>Where students have difficulty with computational and algebraic processes, this can be scaffolded by the complementary use of various online calculation tools that also demonstrate the working and steps in solution processes.</p> |

| Achievement standard (AS) paragraph for Number strand, with numbered sentences | Y/N |
|--|--------------------------|
| 1. By the end of Level 1, students connect number names, numerals and quantities, and order numbers to at least 120. | <input type="checkbox"/> |
| 2. They demonstrate how one- and two-digit numbers can be partitioned in different ways and that two-digit numbers can be partitioned into tens and ones. | <input type="checkbox"/> |
| 3. Students partition collections into equal groups and skip count in twos, fives or tens to quantify collections to at least 120. | <input type="checkbox"/> |
| 4. They solve problems involving addition and subtraction of numbers to 20 and use mathematical modelling to solve practical problems involving addition, subtraction, equal sharing and grouping, using calculation strategies. | <input type="checkbox"/> |

| Achievement standard (AS) paragraph for Algebra strand, with numbered sentences | Y/N |
|---|--------------------------|
| 5. Students use numbers, symbols and objects, including Australian coins, to create skip counting and repeating patterns, identifying the repeating unit. | <input type="checkbox"/> |

Levels F–10: Curriculum revisions

This section outlines the high-level whole-of-curriculum revisions for Mathematics Version 2.0 Foundation to Level 10.

Refer to the Mathematics comparison of curricula document (Version 1.0 to Version 2.0) document on the [VCAA website](#) for more detailed revisions by level.

High level overview of Levels F–10 revisions

- Content is now organised under 6 strands – Number, Algebra, Measurement, Space (formerly Geometry), Statistics and Probability – with no sub-strands.
- There are clearer connections between the content descriptions and the achievement standards.
- The 4 proficiencies of Understanding, Fluency, Reasoning and Problem-solving have been embedded into the content descriptions and achievement standards, which now more clearly articulate the proficiencies.

Levels F–6 revisions

- The Probability strand commences at Level 3.
- There is greater emphasis on the processes of mathematical modelling and, from Level 3, statistical investigation and conducting repeated chance experiments.
- There is a continued focus on computational and algorithmic thinking.
- Content has been resequenced to provide students with increased opportunity to consolidate and master key skills.
- Play- and exploration-based content is included across Foundation to Level 2.



Student Login

Username

Password

Login

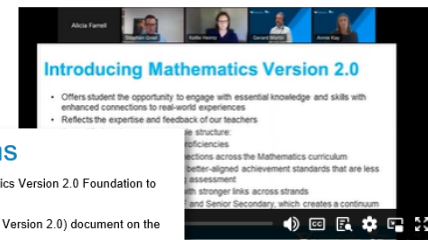
–10 Mathematics Version 2.0 webinars

This page provides recordings of our recent webinars supporting primary and secondary school leaders and teachers to understand the Victorian Curriculum F–10 Mathematics Version 2.0.

For school principals and curriculum area leaders (both primary and secondary)

- ▼ An overview of the revisions to the F–10 Mathematics curriculum

This webinar is for school principals and curriculum area leaders. It provides an overview of the key changes in Mathematics Version 2.0 and the broad implications for schools. It also provides timelines and lists the resources available to support familiarisation.

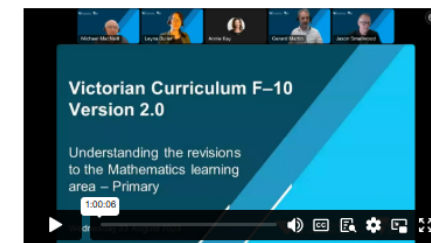


Revisions to the F–10 Mathematics

For primary school teachers

- ▼ Understanding the revisions to the Mathematics learning area – Primary

This webinar is for primary school teachers. It provides an overview of the revisions to the structure, levels, content descriptions and achievement standards in Mathematics Version 2.0. It also shares the resources available to support familiarisation.



Understanding the revisions to the Mathematics learning area – Primary transcript

Understanding the revisions to the Mathematics learning area – Primary presentation

Resources

This page contains links to resources and professional learning to support educators to become familiar with the Victorian Curriculum F–10 Version 2.0 Mathematics (Mathematics Version 2.0).

Watch videos

To find out more about Mathematics Version 2.0, watch the following video.

Understanding the Victorian Curriculum F–10 Version 2.0, Mathematics



2.

Principles of quality assessment

Establishing a shared
understanding of
what quality
assessment looks like

Assessment ~ *the how we'll know*

Assessment is ultimately distinguished by the purpose for which the assessment results are used, rather than by the format of the assessment.

Purpose

Formative
assessment for learning

Summative
assessment of learning

the formative use of assessment provides feedback during the course of learning so that action can be taken to promote learning

the summative use of assessment represents an end point of instruction

Assessment ~ *the how we'll know*

VCAA's classroom assessment principles

- ▣ Promote student learning
- ▣ Align to the curriculum
- ▣ Support a developmental approach to teaching and learning
- ▣ Enable all students to demonstrate their true level of development
- ▣ Lead to valid inferences about student learning and progress
- ▣ Support feedback that is actionable
- ▣ Be a continuous process firmly embedded in the instructional cycle

3.

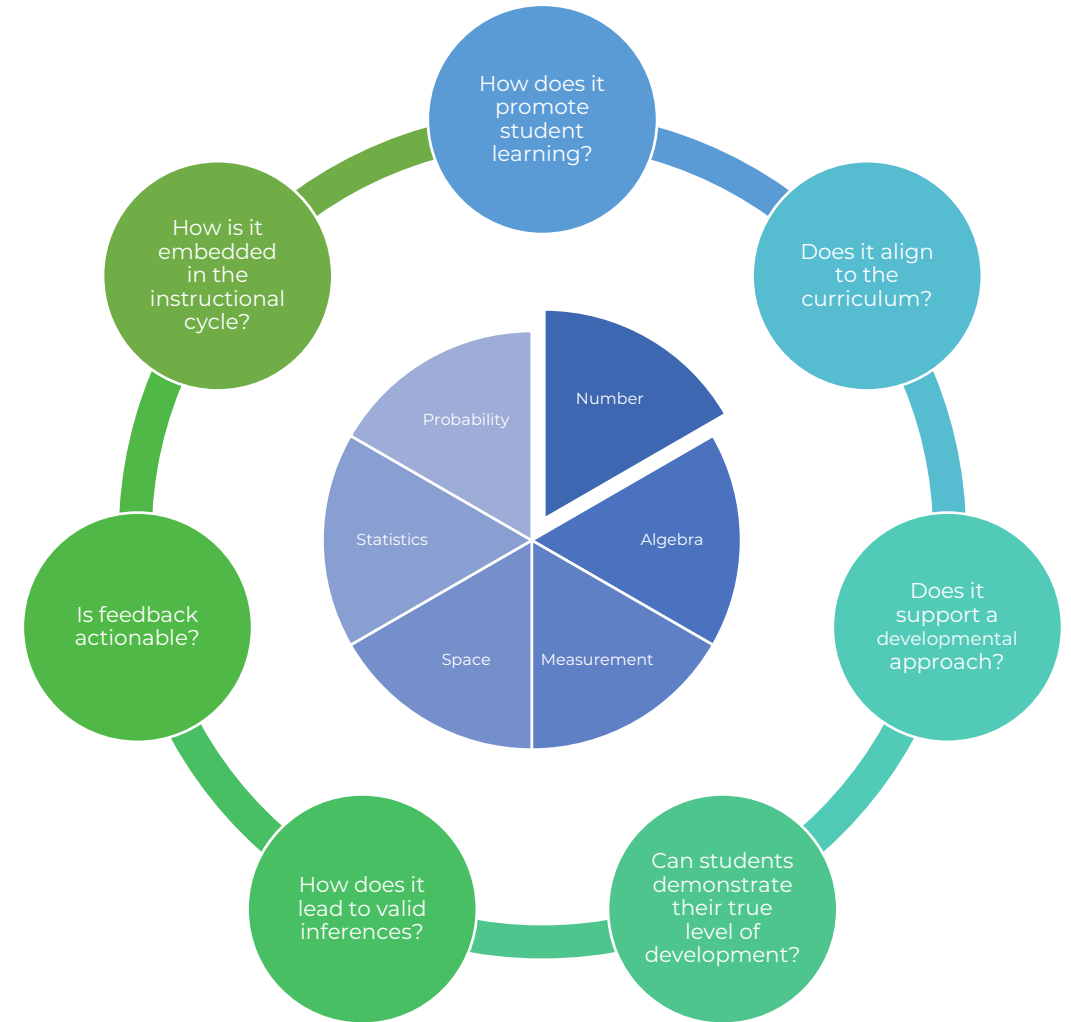
Appraising assessments

A process for on-
balanced decision
making when
selecting assessments

Assessing Mathematics

How will we form an accurate picture of a student's mathematical understanding and ability as described by the curriculum?

What is the expected evidence of the skill we want to observe?



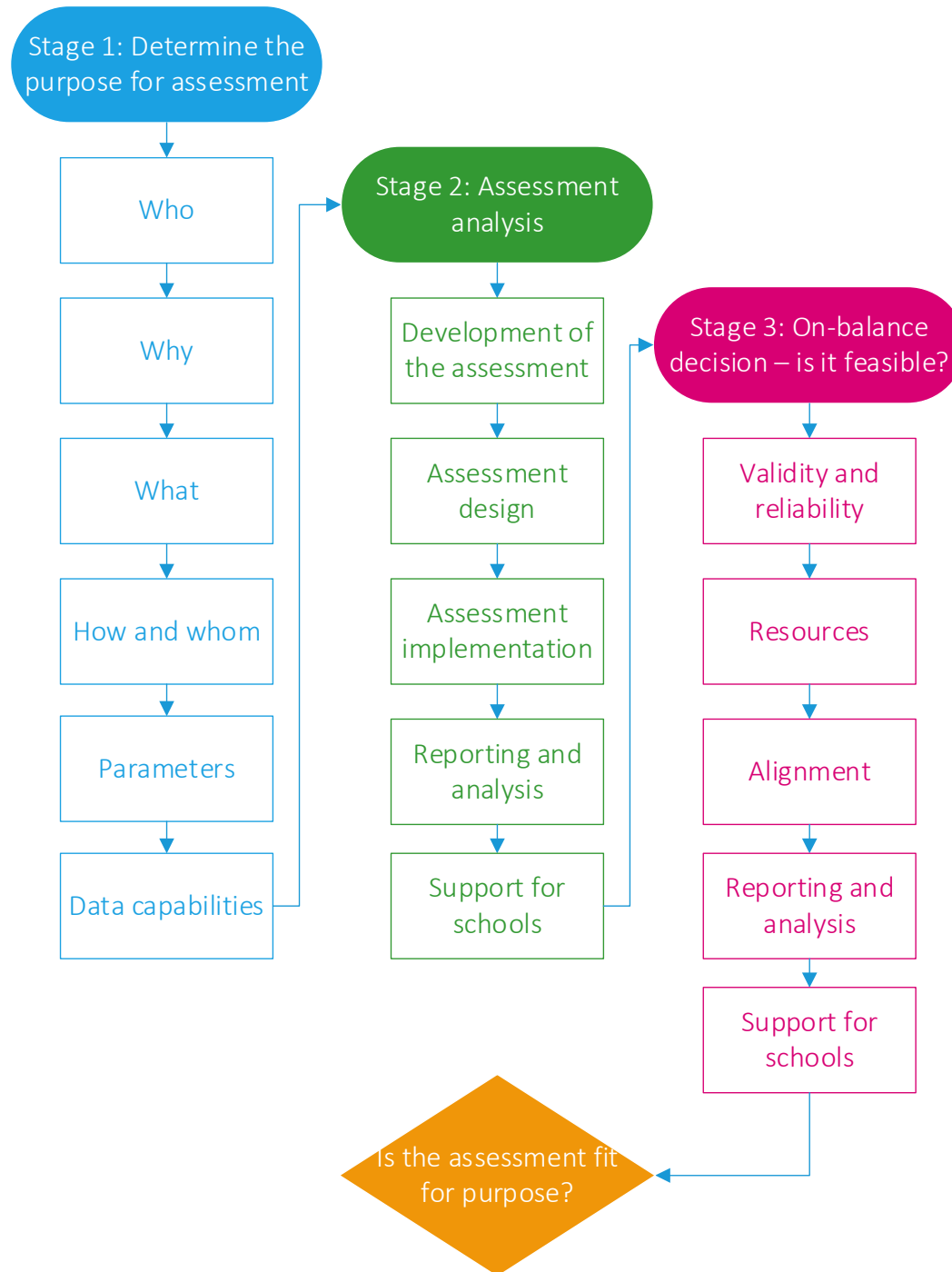
Is it fit for purpose?

Stage 1: Determine the purpose for assessment



Stage 2: Assessment analysis

Stage 3: On-balance decision – is it feasible?



4.

Utilising the Digital Assessment Library (DAL)

A free digital resource
to measure student
understanding of the
Victorian Curriculum
2.0

What is the DAL?

The DAL delivers free, high quality online classroom assessments, providing teachers with meaningful and timely information about student learning and progress.

All assessments are directly aligned to the Victorian Curriculum F-10 with progressive release of Victorian Curriculum Version 2.0 assessments.

Assessments are linear, with selected branched assessments now available.

Curriculum aligned and **actionable** information that directly informs **teaching** and **learning**, for improved **student outcomes**.

The DAL contains over 460 assessments across the curriculum learning areas.

Mathematics

English

Science

Health and Physical Education

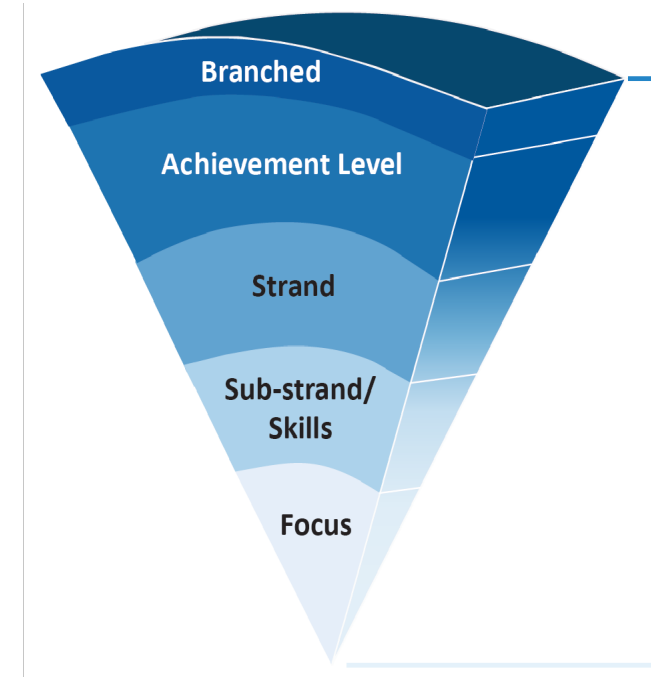
Critical and Creative Thinking



| Learning Area | Assessment Type | F - 10 Curriculum | | | | | | | | | | Total Number of Assessments | | |
|--------------------------------|-------------------|-------------------|---|---|---|---|---|---|---|---|---|-----------------------------|-----|-----|
| | | F | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | 10 | |
| Mathematics | Achievement Level | | | | | | | | | | | | 15 | 246 |
| | Branched Numeracy | | | | | | | | | | | | 5 | |
| | Substrand | | | | | | | | | | | | 56 | |
| | Skills | | | | | | | | | | | | 52 | |
| | Focus | | | | | | | | | | | | 118 | |
| English | Achievement Level | | | | | | | | | | | | 9 | 38 |
| | Branched Literacy | | | | | | | | | | | | 5 | |
| | Skills | | | | | | | | | | | | 18 | |
| | Focus | | | | | | | | | | | | 6 | |
| Science | | | | | | | | | | | | | | 92 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Science | Achievement Level | | | | | | | | | | | | 5 | 92 |
| | Strand/sub strand | | | | | | | | | | | | 30 | |
| | Focus | | | | | | | | | | | | 57 | |
| Health and Physical Education | Achievement Level | | | | | | | | | | | | | 82 |
| | Strand/sub strand | | | | | | | | | | | | | |
| | Focus | | | | | | | | | | | | 82 | |
| Creative and Critical Thinking | Achievement Level | | | | | | | | | | | | 10 | 10 |
| | Strand/sub strand | | | | | | | | | | | | | |
| | Focus | | | | | | | | | | | | | |

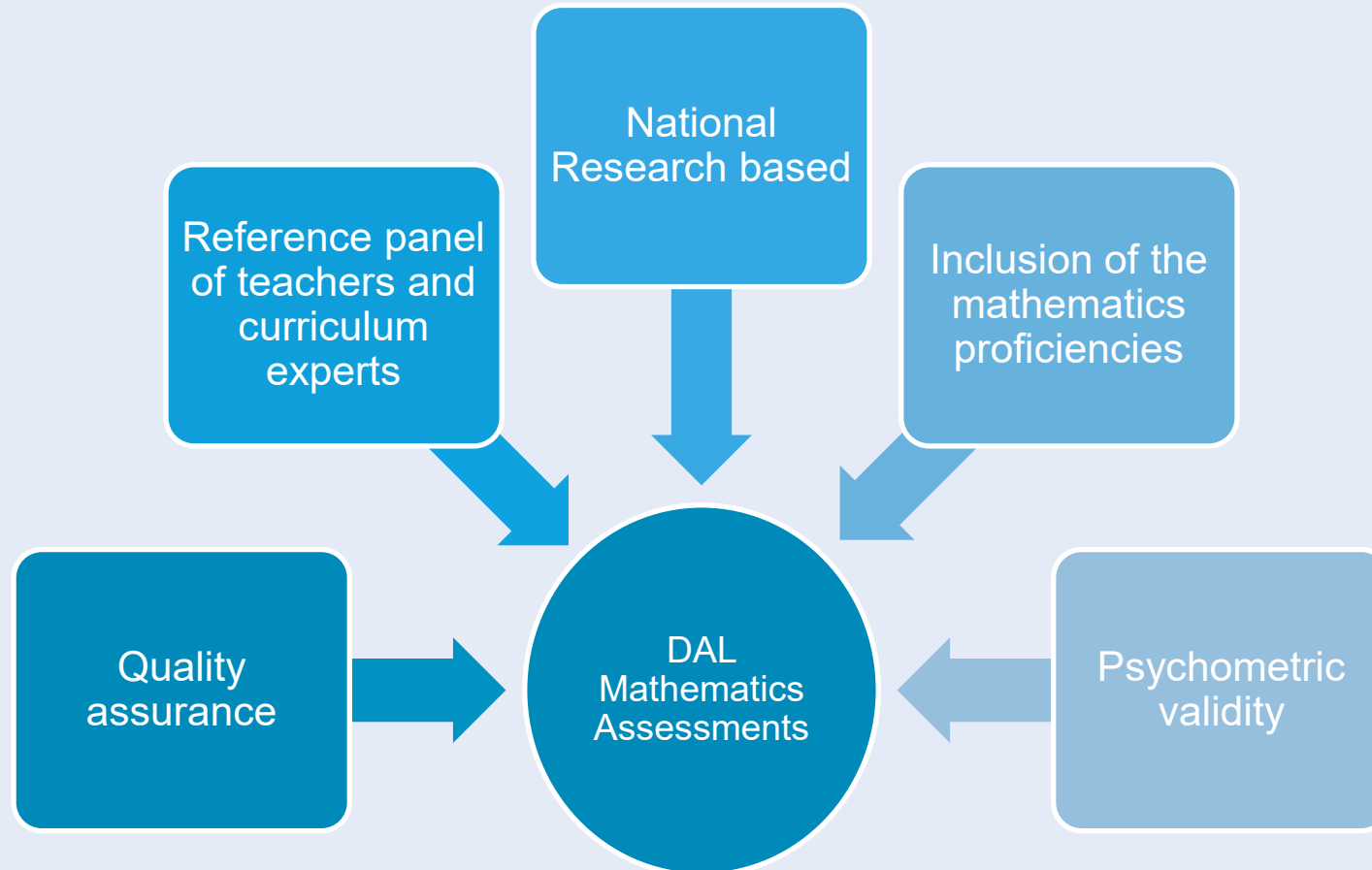
While these levels do not have specific, targeted assessments, their content is incorporated within the scope of the assessments available.

Victorian curriculum version 2.0



DAL Assessment Development

Victorian Curriculum F-10

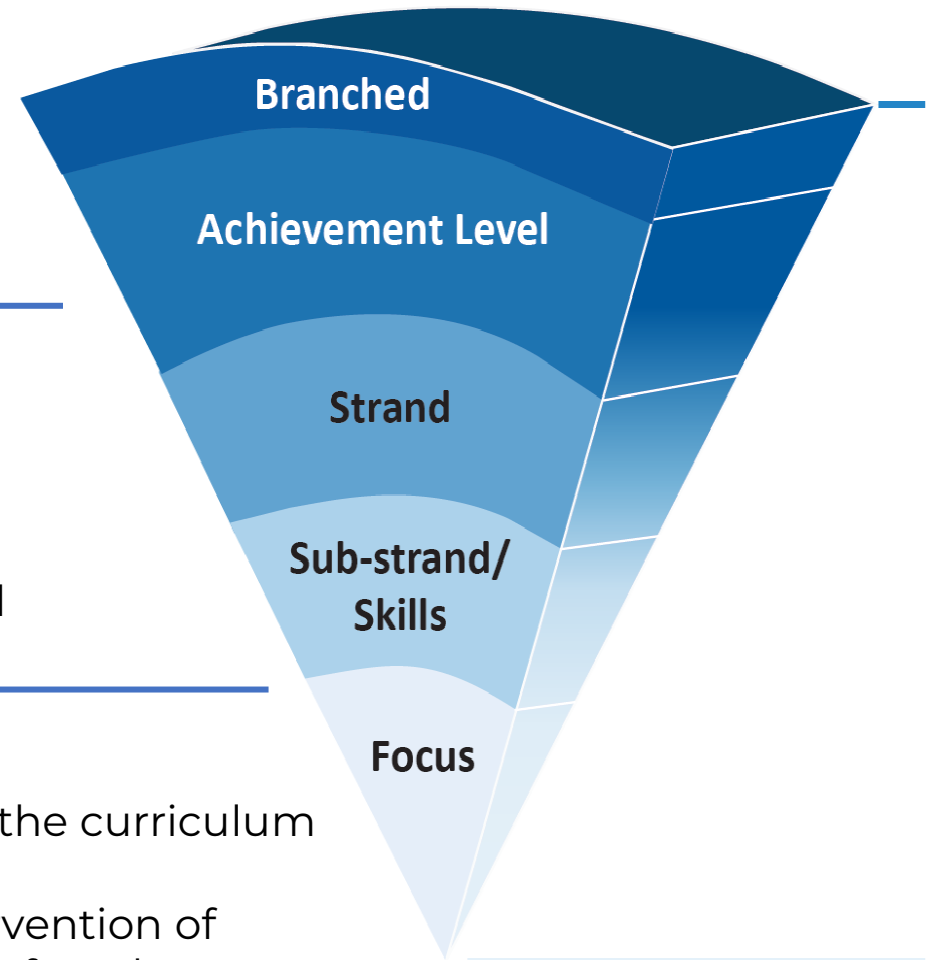


DAL Assessment Types

- Relative placement within a level
 - 6-12 months
 - Whole school, cohort, or class/group performance
-

- Focuses on a collection of related skills
 - 3-6 months
 - Provides direction for semester and term planning at a cohort, class and student level
-

- Focuses on a narrow part of the curriculum
 - Flexible
 - Supports differentiated intervention of individual and small groups of students
-

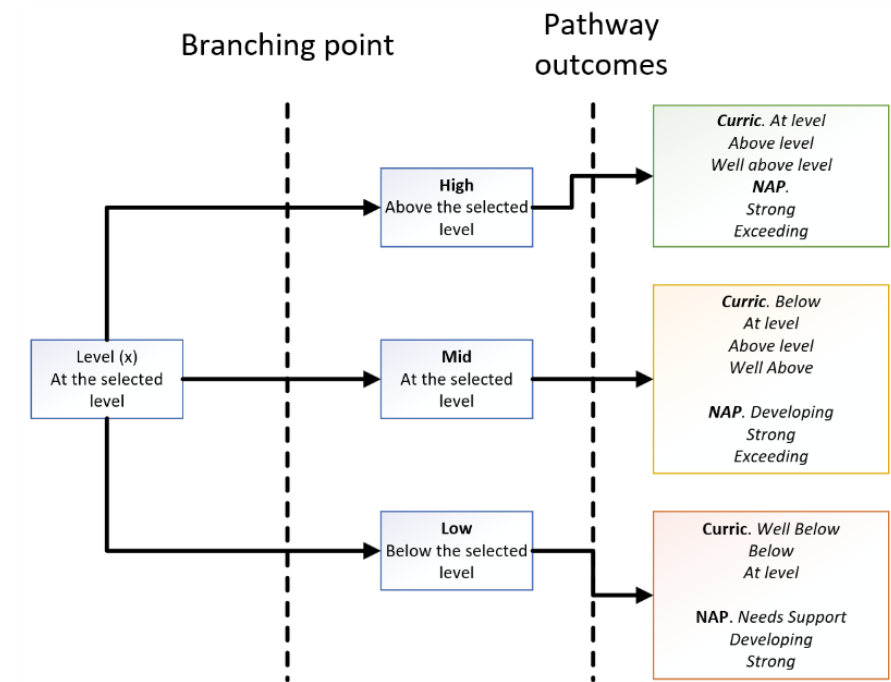
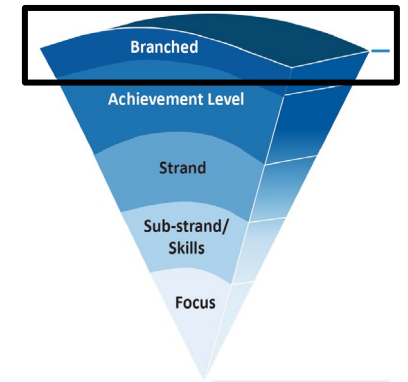


Branched Numeracy Assessments Levels 2 to 10

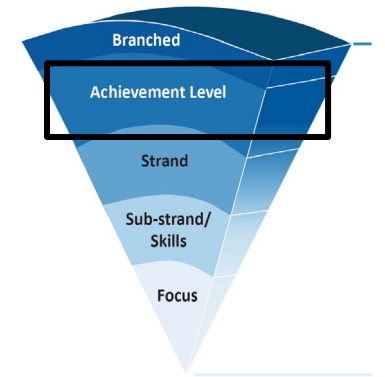
Branched

Branched Numeracy assessments

- broadly cover content from across the Mathematics curriculum assessing foundational skills of Numeracy
- Branched to cover a range of levels and skills depending on student responses
- relative placement within a level
- Indicative NAPLAN proficiency (for levels 3-6)
- recommended administration of at least 9 months between administration
- whole school, cohort, or class/group performance



Achievement Assessments Levels 2 to 10

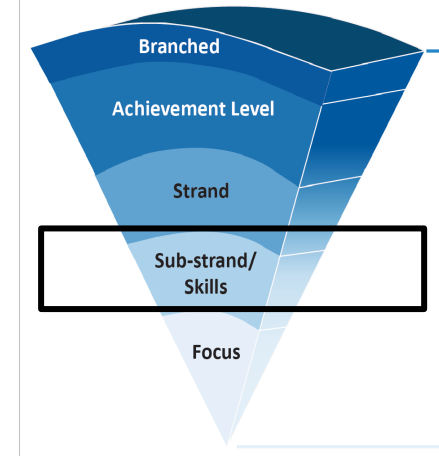


Achievement Level

Achievement assessments

- Levels 2-10 aligned to Victorian Curriculum version 1
- Levels 1-6 aligned to Victorian Curriculum version 2 (7-10 Jan release)
- broadly cover content from all Strands of the Mathematics curriculum
- relative placement within a level
- recommended administration of every 6-12 months
- whole school, cohort, or class/group performance

Skills Assessments Levels F to 10



Skills

Skills assessments

- contain a collection of related aspects of the curriculum
- can be administered every 3-6 months
- provides direction for semester and term planning at a cohort, class and student level
- have been developed to complement the DE mathematics lesson plans
- designed to support curriculum planning implementation



Search Q Learning Events Sof

[Home](#) > [Learning](#) > [Lesson plans guidance](#)

Victorian Lesson Plans guidance: Mathematics

Classroom resources that support the teaching of the Victorian Curriculum 2.0 and are based on the revised Victorian Teaching and Learning Model (VTLM 2.0)



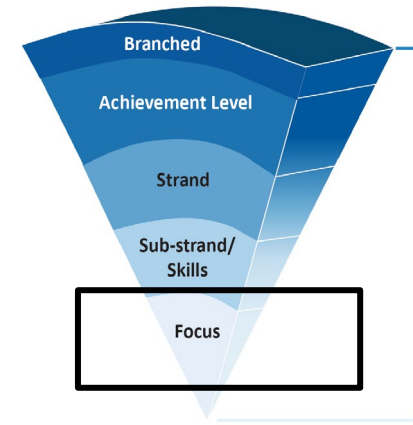
On this page

[Sequence structure](#)

[Assessment resources](#)

[Supporting resources](#)

Focus Assessments Levels 2 to 10



Focus

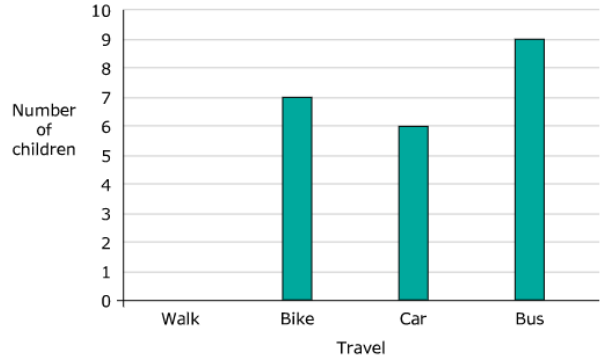
Focus assessments

- explicitly link to Content Descriptions and linking Achievement Standard statements
- have been developed as a Set, Set A (Pre) and Set B (Post)
- can be administered as required to complement existing teaching and learning cycles
- currently only available in the Number and Algebra strand
- provides direction for class, group and student planning

Curriculum Alignment

◀ Back Next ▶ 🔍

Noah asks his class how they come to school.
The graph shows the results but the results for walk are missing.



| Travel | Number of children |
|--------|--------------------|
| Walk | ? |
| Bike | 7 |
| Car | 6 |
| Bus | 9 |

Half of the children in the class come to school by car or bus.

How many children walk to school?

Mathematics – Level 5

Strand

Statistics

Achievement Standard Statement

Students compare distributions of discrete and continuous numerical and ordinal categorical data sets as part of their statistical investigations, using digital tools.

Content Description

VC2M6ST01 - Interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables using comparative displays or visualisations and digital tools; compare distributions in terms of mode, range and shape

Intent

Evaluate categorical data to determine a missing value in a column graph

Proficiency

Problem solving

Number

Which two number sentences show 5×3 ?

- $5 + 5 + 5 + 5 + 5$
- $3 + 3 + 3 + 3 + 3$
- $3 + 3 + 3$
- $5 + 5 + 5$

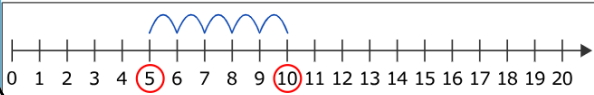
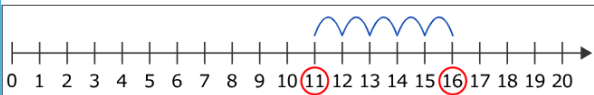
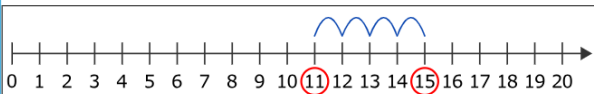
VC2M3N05

VC2M2N04

Which partitioning option would be best used to calculate $97 - 42$?

- Step 1: $90 - 7$
Step 2: $40 - 2$
Step 3: add the answers
- Step 1: $90 - 40$
Step 2: $7 + 2$
Step 3: add the answers
- Step 1: $100 - 97$
Step 2: $50 - 42$
Step 3: add the answers
- Step 1: $90 - 40$
Step 2: $7 - 2$
Step 3: add the answers

Choose the number line that shows how to add 11 and 5 together.



VC2M1N04

Algebra

Eggs are stored in a cardboard tray, six spaces wide and eight spaces long.

How many spaces for eggs are there?

VC2M4A02

VC2M7A02

$$5603 + 194 = 194 + \boxed{}$$

VC2M6A02

Ella had 20 football cards.

She shared them equally with her brother, and was then given another 6.

Which of the following shows how many football cards Ella has now?

- $20 \times 2 + 6$
- $20 \div 2 + 6$
- $20 \div (2 + 6)$
- $(20 + 6) \div 2$

5.

Activity: Exploring DAL Mathematics assessments

Enhancing digital and data literacy skills to inform curriculum aligned planning and teaching.

DAL Mathematics

How might you use these?

When might you use these?

How do they reflect the VCAA's Principles of Assessment?

What are the nuances between the various assessment types? (Achievement Level, Skills and Focus)

Can you see examples of the differences in cognitive complexity?

| Task | Progress | Date Started | Date Finished |
|---|----------|--------------|-----------------------|
| Mathematics L1 Achievement v2 | 0% | | Start |
| Mathematics L3 Achievement v2 | 0% | | Start |
| Mathematics L5 Achievement v2 | 0% | | Start |
| Maths F L3 2,3,5 and 10 multiplication and division facts [A Pre] (VC2M3A03) | 0% | | Start |
| Maths F L3 2,3,5 and 10 multiplication and division facts [B Post] (VC2M3A03) | 0% | | Start |
| Maths F L3 Unit fractions and their multiples [A Pre] (VC2M3N03) | 0% | | Start |
| Maths F L3 Unit fractions and their multiples [B Post] (VC2M3N03) | 0% | | Start |
| Maths Skills L1 Multiplication and division | 0% | | Start |
| Maths Skills L3 Number and place value | 0% | | Start |
| Maths Skills L5 Addition and Subtraction | 0% | | Start |
| Maths Skills L7 Operations | 0% | | Start |
| Maths Skills L9 Linear and non-linear relationships | 0% | | Start |

username:

MAV24DEMO1

pw: MAV24DEMO1

username:

MAV24DEMO2

pw: MAV24DEMO2

1

Promote student learning

2

Align to the curriculum

3

Support a developmental approach to teaching and learning

4

Enable all students to demonstrate their true level of development

5

Lead to valid inferences about student learning and progress

6

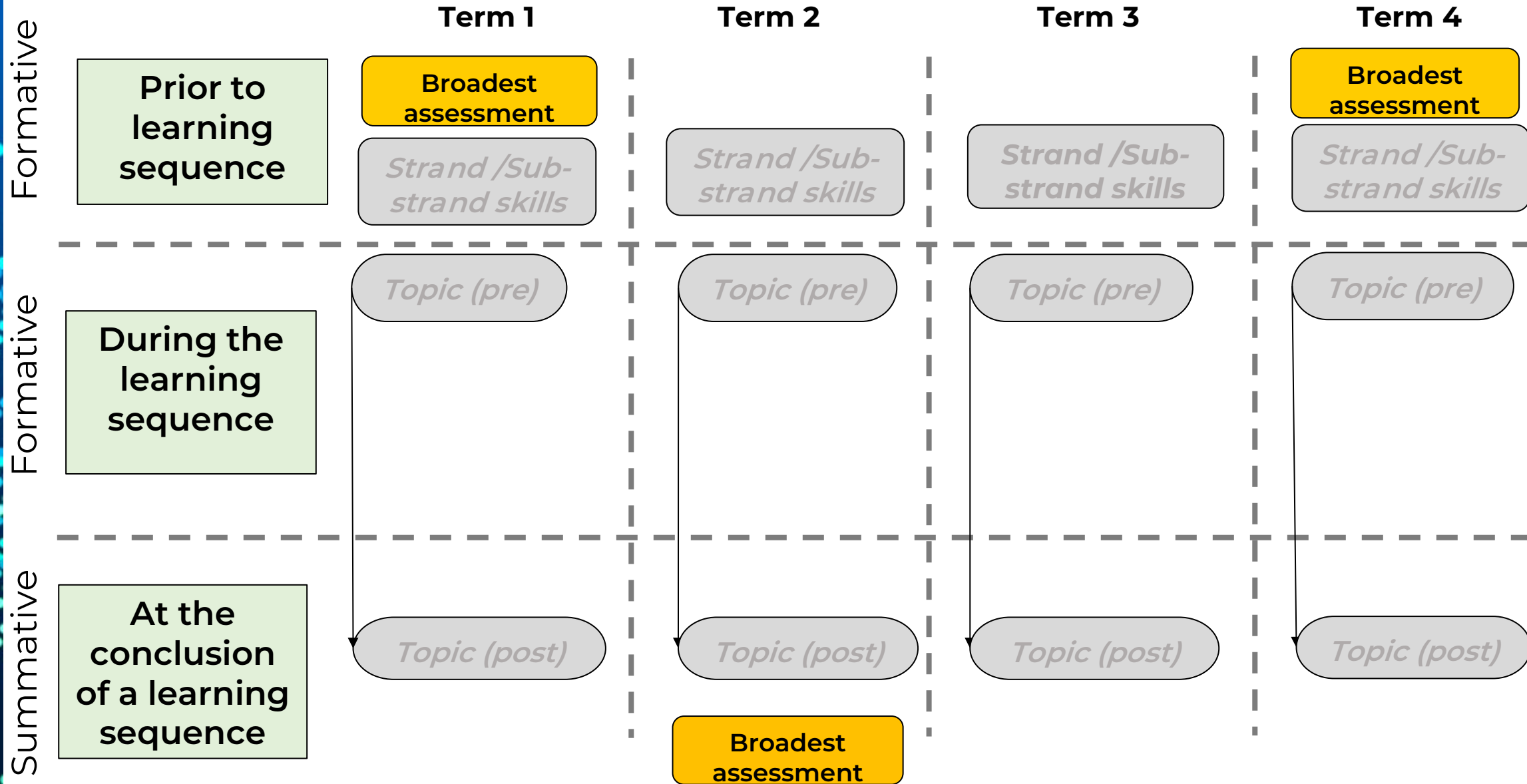
Support feedback that is actionable

7

Be a continuous process firmly embedded in the instructional cycle

<https://dal.vcaa.vic.edu.au/student>

Planning for teaching and learning



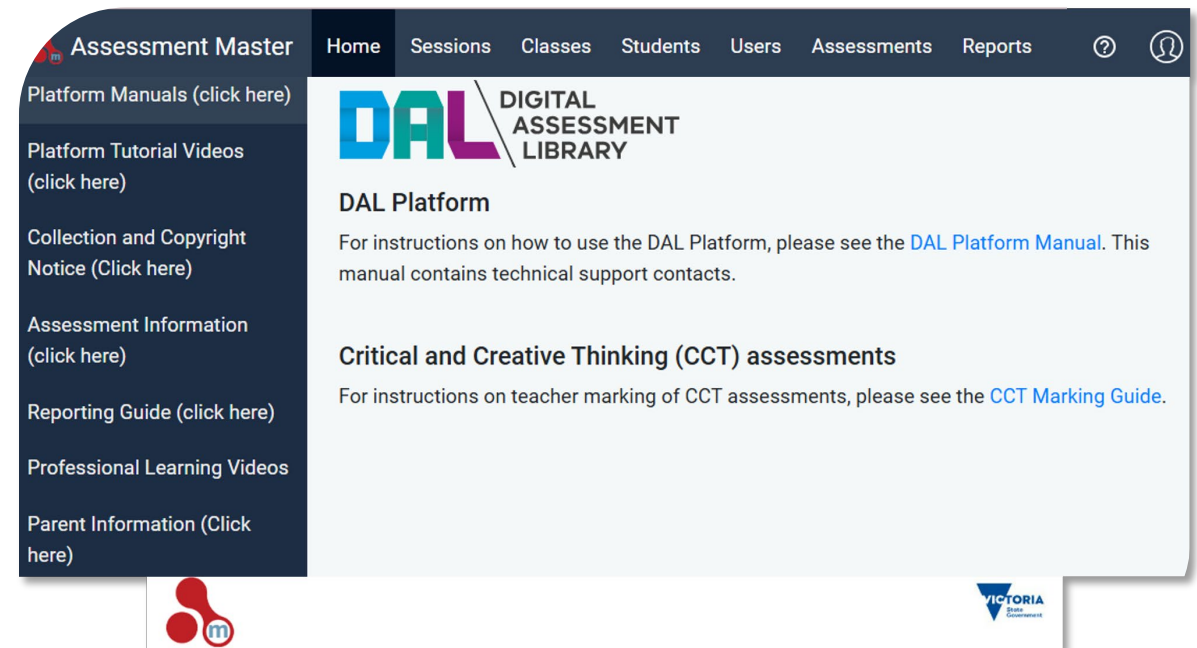
Digital Assessment Library Resources

VCAA DAL Helpdesk

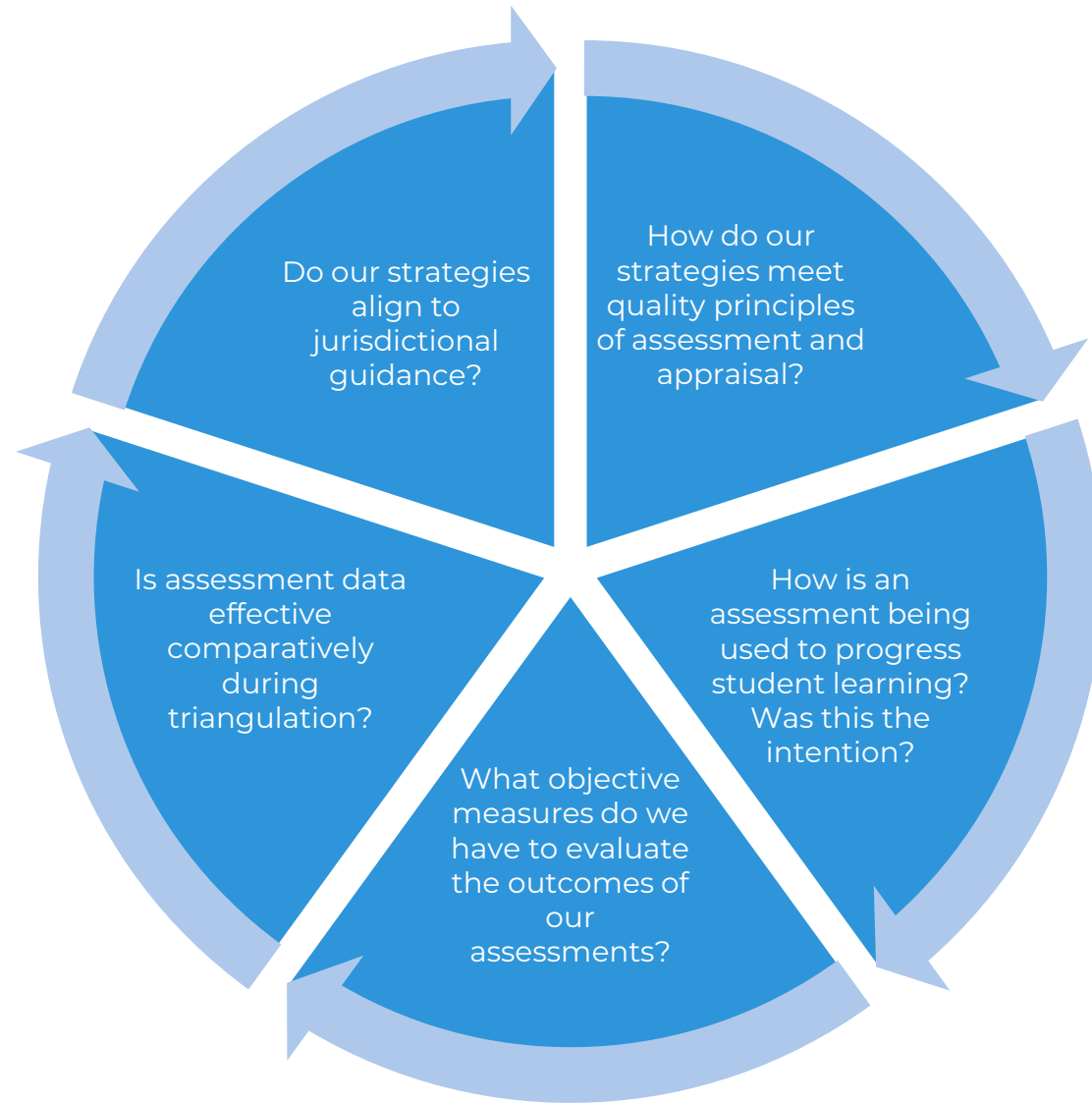
Phone: 1800 314 523

Email: vcaa.dal@education.vic.gov.au

- Platform Manual
- Catalogue
- Reporting Guide
- Tutorial Videos
- Information for Parents
- Webinars



Reflection



Getting started



To register your interest scan below:



Thanks

Any questions?

You can find me at:

✉ crystal.afitu@education.vic.gov.au

in [linkedin.com/in/crystal-afitu](https://www.linkedin.com/in/crystal-afitu)

Victorian teachers search for the DAL on the VCAA website

<https://www.vcaa.vic.edu.au/assessment/f-10assessment/digital-assessment-library>

Curriculum aligned and **actionable** information that directly informs **teaching** and **learning**, for improved **student outcomes**.

The DAL contains over 460 assessments across the curriculum learning areas.

Mathematics

English

Science

Health and Physical Education

Critical and Creative Thinking