Mathematics Level 4 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**.

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| **Achievement standard (AS) paragraph for Number strand, with numbered sentences** | **Y/N** |
| 1. By the end of Level 4, students use their understanding of place value to represent tenths and hundredths in decimal form and to multiply natural numbers by multiples of 10. |  |
| 1. Students use mathematical modelling to solve financial and other practical problems, formulating the problem using number sentences, solving the problem choosing efficient strategies and interpreting the results in terms of the situation. |  |
| 1. They use their proficiency with addition, subtraction, multiplication facts for tens (× 10) and related division facts to perform arithmetic operations to add and subtract, and multiply and divide numbers efficiently. |  |
| 1. They choose rounding and estimation strategies to determine whether results of calculations are reasonable. |  |
| 1. They recognise common equivalent fractions in familiar contexts and make connections between fraction and decimal notations. |  |
| 1. Students count and represent familiar fractions on a number line. |  |

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|  | **Strand** | **Number** | | | | | | | | | | | | | | | | | | | |
|  | **Content description (CD)** | recognise and extend the application of place value to tenths and hundredths and use the conventions of decimal notation to name and represent decimals  VC2M4N01 | | investigate number sequences involving multiples of 3, 4, 6, 7, 8 and 9  VC2M4N02 | | find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation  VC2M4N03 | | count by multiples of quarters, halves and thirds, including mixed numerals; locate and represent these fractions as numbers on number lines  VC2M4N04 | | solve problems involving multiplying or dividing natural numbers by multiples and powers of 10 without a calculator, using the multiplicative relationship between the place value of digits  VC2M4N05 | | develop efficient mental and written strategies and use appropriate digital tools for solving problems involving addition and subtraction, and multiplication and division where there is no remainder  VC2M4N06 | | choose and use estimation and rounding to check and explain the reasonableness of calculations, including the results of financial transactions  VC2M4N07 | | solve problems involving purchases and the calculation of change to the nearest 5 cents with and without digital tools  VC2M4N08 | | use mathematical modelling to solve practical problems that involve additive and multiplicative situations, including financial contexts; formulate the problems using number sentences and choose efficient calculation strategies, using digital tools where appropriate; interpret and communicate solutions in terms of the situation  VC2M4N09 | | follow and create algorithms involving a sequence of steps and decisions that use addition or multiplication to generate sets of numbers; identify and describe any emerging patterns  VC2M4N10 | |
| **Teaching and learning unit** | **Semester/Year** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** |
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| **Comments, notes, actions** |  | | | | | | | | | | | | | | | | | | | | | |

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| **Achievement standard (AS) paragraph for Algebra strand, with numbered sentences** | **Y/N** |
| 1. Students find unknown values in numerical equations involving addition and subtraction. |  |
| 1. They follow and create algorithms that generate sets of numbers and identify emerging patterns. |  |

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| **Achievement standard (AS) paragraph for Measurement strand, with numbered sentences** | **Y/N** |
| 1. Students use appropriate scaled instruments and appropriate units to measure length, mass, capacity and temperature. |  |
| 1. They measure and approximate perimeters and areas for regular and irregular shapes. |  |
| 1. They convert between units of time when solving problems involving duration. |  |
| 1. Students compare angles relative to a right angle using angle names. |  |

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|  | **Strand** | **Algebra** | | | | **Measurement** | | | | | | | |
|  | **Content description (CD)** | find unknown values in numerical equations involving addition and subtraction, using the properties of numbers and operations  VC2M4A01 | | recall and demonstrate proficiency with multiplication facts up to 10 × 10 and related division facts, and explain the patterns in these; extend and apply facts to develop efficient mental and written strategies for computation with larger numbers without a calculator  VC2M4A02 | | use scaled and digital instruments to interpret unmarked and partial units to measure and compare lengths, masses, capacities, durations and temperatures, using appropriate units  VC2M4M01 | | recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units  VC2M4M02 | | solve problems involving the duration of time including situations involving ‘am’ and ‘pm’ and conversions between units of time  VC2M4M03 | | estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship to a right angle  VC2M4M04 | |
| **Teaching and learning unit** | **Semester/Year** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** |
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| **Comments, notes, actions** |  | | | | | | | | | | | | | |

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| **Achievement standard (AS) paragraph for Space strand, with numbered sentences** | **Y/N** |
| 1. Students represent and approximate shapes and objects from their environment. |  |
| 1. Students create and interpret grid references. |  |
| 1. They identify line and rotational symmetry in plane shapes and create symmetrical patterns. |  |

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| **Achievement standard (AS) paragraph for Statistics strand, with numbered sentences** | **Y/N** |
| 1. Students create many-to-one data displays, assess the suitability of displays for representing data and informally discuss the shape of distributions and variation in data. |  |
| 1. They use surveys and digital tools to generate categorical or discrete numerical data in statistical investigations and communicate their findings in context. |  |

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| **Achievement standard (AS) paragraph for Probability strand, with numbered sentences** | **Y/N.** |
| 1. Students order events or the outcomes of chance experiments in terms of likelihood and identify whether events are independent or dependent. |  |
| 1. They conduct repeated chance experiments and describe the variation in results. |  |

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|  | **Strand** | **Space** | | | | | | | | **Statistics** | | | | | | **Probability** | | | |
|  | **Content description (CD)** | explain and compare the geometric properties of two-dimensional shapes and three-dimensional objects  VC2M4SP01 | | represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects  VC2M4SP02 | | create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways  VC2M4SP03 | | recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometry software where appropriate  VC2M4SP04 | | acquire data for categorical and discrete numerical variables to address a question of interest or purpose using digital tools; represent data using many-to-one pictographs, column graphs and other displays or visualisations; interpret and discuss the information that has been created  VC2M4ST01 | | analyse the effectiveness of different displays or visualisations in illustrating and comparing data distributions, then discuss the shape of distributions and the variation in the data  VC2M4ST02 | | conduct statistical investigations, collecting data through survey responses and other methods; record and display data using digital tools; interpret the data and communicate the results  VC2M4ST03 | | describe possible everyday events and the possible outcomes of chance experiments and order outcomes or events based on their likelihood of occurring; identify independent or dependent events  VC2M4P01 | | conduct repeated chance experiments to observe relationships between outcomes in games and other chance situations, and identify and describe the variation in results  VC2M4P02 | |
| **Teaching and learning unit** | **Semester/Year** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** | **CD** | **AS no.** |
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| **Comments, notes, actions** |  | | | | | | | | | | | | | | | | | | |

# Assessment

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| **Teaching and learning unit** | **Assessment task name(s) and type(s)** | **AS no.** |
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# Analysis of curriculum coverage

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| <The following questions could be used as prompts for the analysis process:   * Have you addressed all the content descriptions? * Have you addressed all the sentences in the achievement standard? * Where are there gaps in the content description coverage? * Where are there gaps in the achievement standard coverage? * Are all content descriptions equal? Do you think they all take the same amount of time to teach? * Is anything being over-taught? * Is anything being missed completely or given insufficient attention?> |

# Next steps

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| <The following questions could be used as prompts for next steps:   * What implications would gaps in content description coverage have on your teaching and learning plans? * What implications would gaps in achievement standard coverage have on assessment? * How will you address any gaps?   Use your completed curriculum area map to start populating or updating your curriculum area plan.> |