**Instruction:** List the title of the unit of work in the first column and then tick the check box of the content description/s addressed by it, which can be done electronically. Once completed, fill out the ‘Assessments’ table. If you need help completing the template view the curriculum mapping instructions document.

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|  | **Number and Algebra Strand** | | | | | | | | | | | | | | | | |
|  | **Sub-strand** | **Real numbers** | | **Money and financial mathematics** | | **Patterns and algebra** | | | | | | | | | | | |
|  | **Content Descriptions** | Solve simple problems involving inverse proportion  [(VCMNA327)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA327) | | Connect the compound interest formula to repeated applications of simple interest using appropriate digital technologies [(VCMNA328)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA328) | | Factorise algebraic expressions by taking out a common algebraic factor  [(VCMNA329)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA329) | | Simplify algebraic products and quotients using index laws  [(VCMNA330)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA330) | | Apply the four operations to simple algebraic fractions with numerical denominators  [(VCMNA331)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA331) | | Expand binomial products and factorise monic quadratic expressions using a variety of strategies  [(VCMNA332)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA332) | | Substitute values into formulas to determine an unknown and re-arrange formulas to solve for a particular term  [(VCMNA333)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA333) | | Implement algorithms using data structures in a general-purpose programming language [(VCMNA334)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA334) | |
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|  | **Sub-strand** | **Linear and non-linear relationships** | | | | | | | | | | | | | | | |
|  | **Content Descriptions** | Solve problems involving linear equations, including those derived from formulas  [(VCMNA335)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA335) | | Solve linear inequalities and graph their solutions on a number line  [(VCMNA336)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA336) | | Solve simultaneous linear equations, using algebraic and graphical techniques including using digital technology  [(VCMNA337)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA337) | | Solve problems involving gradients of parallel and perpendicular lines  [(VCMNA338)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA338) | | Explore the connection between algebraic and graphical representations of relations such as simple quadratic, reciprocal, circle and exponential, using digital technology as appropriate  [(VCMNA339)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA339) | | Solve linear equations involving simple algebraic fractions  [(VCMNA340)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA340) | | Solve simple quadratic equations using a range of strategies  [(VCMNA341)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA341) | | Solve equations using systematic guess-check-and-refine with digital technology  [(VCMNA342)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA342) | |
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| **Level 9 Achievement Standard** | **Level 10 Achievement Standard** - Separated by line. Number in brackets, E.g. (3), is used as an identifier in various parts of the template. |
| **Number and Algebra**   * Students apply the index laws using integer indices to variables and numbers, express numbers in scientific notation, solve problems involving very small and very large numbers, and check the order of magnitude of calculations. * They solve problems involving simple interest. * Students use the distributive law to expand algebraic expressions, including binomial expressions, and simplify a range of algebraic expressions. * They find the distance between two points on the Cartesian plane and the gradient and midpoint of a line segment using a range of strategies including the use of digital technology. * Students sketch and draw linear and non-linear relations, solve simple related equations and explain the relationship between the graphical and symbolic forms, with and without the use of digital technology. | **Number and Algebra**   * Students recognise the connection between simple and compound interest. (1) * They solve problems involving linear equations and inequalities, quadratic equations and pairs of simultaneous linear equations and related graphs, with and without the use of digital technology. (2) * Students substitute into formulas, find unknown values, manipulate linear algebraic expressions, expand binomial expressions and factorise monic and simple non-monic quadratic expressions, with and without the use of digital technology. (3) * They represent linear, quadratic and exponential functions numerically, graphically and algebraically, and use them to model situations and solve practical problems. (4) |

*See next page for Measurement and Geometry and Statistics and Probability Strands and Assessments section*

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|  | **Measurement and Geometry Strand** | | | | | | | | |
|  | **Sub-strand** | **Using units of measurement** | | **Geometric reasoning** | |  | | **Pythagoras and trigonometry** | |
|  | **Content Descriptions** | Solve problems involving surface area and volume for a range of prisms, cylinders and composite solids  [(VCMMG343)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG343) | | Formulate proofs involving congruent triangles and angle properties [(VCMMG344)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG344) | | Apply logical reasoning, including the use of congruence and similarity, to proofs and numerical exercises involving plane shapes [(VCMMG345)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG345) | | Solve right-angled triangle problems including those involving direction and angles of elevation and depression [(VCMMG346)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG346) | |
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|  | **Statistics and Probability Strand** | | | | | | | | | | | | | | | | |
|  | **Sub-strand** | **Chance** | | | | **Data representation and interpretation** | | | | | | | | | | | |
|  | **Content Descriptions** | Describe the results of two- and three-step chance experiments, both with and without replacements, assign probabilities to outcomes and determine probabilities of events. Investigate the concept of independence [(VCMSP347)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMSP347) | | Use the language of ‘if ....then, ‘given’, ‘of’, ‘knowing that’ to investigate conditional statements and identify common mistakes in interpreting such language  [(VCMSP348)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMSP348) | | Determine quartiles and interquartile range and investigate the effect of individual data values, including outliers on the interquartile range[(VCMSP349)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMSP349) | | Construct and interpret box plots and use them to compare data sets  [(VCMSP350)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMSP350) | | Compare shapes of box plots to corresponding histograms and dot plots and discuss the distribution of data  [(VCMSP351)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMSP351) | | Use scatter plots to investigate and comment on relationships between two numerical variables  [(VCMSP352)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMSP352) | | Investigate and describe bivariate numerical data, including where the independent variable is time  [(VCMSP353)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMSP353) | | Evaluate statistical reports in the media and other places by linking claims to displays, statistics and representative data  [(VCMSP354)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMSP354) | |
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| **Level 9 Achievement Standard** | **Level 10 Achievement Standard** - Separated by line. Number in brackets, E.g. (3), is used as an identifier in various parts of the template. |
| **Measurement and Geometry**   * Students solve measurement problems involving perimeter and area of composite shapes, surface area and volume of rectangular prisms and cylinders, with and without the use of digital technology. * They relate three-dimensional objects to two-dimensional representations. * Students explain similarity of triangles, interpret ratios and scale factors in similar figures, and apply Pythagoras's theorem and trigonometry to solve problems involving angles and lengths in right-angled triangles.   **Statistics and Probability**   * Students compare techniques for collecting data from primary and secondary sources, and identify questions and issues involving different data types. * They construct histograms and back-to-back stem-and-leaf plots with and without the use of digital technology. * Students identify mean and median in skewed, symmetric and bi-modal displays and use these to describe and interpret the distribution of the data. * They calculate relative frequencies to estimate probabilities. * Students list outcomes for two-step experiments and assign probabilities for those outcomes and related events. | **Measurement and Geometry**   * Students solve and explain surface area and volume problems relating to composite solids. (5) * They use parallel and perpendicular lines, angle and triangle properties, similarity, trigonometry and congruence to solve practical problems and develop proofs involving lengths, angles and areas in plane shapes. (6) * They use digital technology to construct and manipulate geometric shapes and objects, and explore symmetry and pattern in two dimensions. (7)   **Statistics and Probability**   * Students compare univariate data sets by referring to summary statistics and the shape of their displays. (8) * They describe bivariate data where the independent variable is time and use scatter-plots generated by digital technology to investigate relationships between two continuous variables. (9) * Students evaluate the use of statistics in the media. (10) * They list outcomes for multi-step chance experiments involving independent and dependent events, and assign probabilities for these experiments. (11) |

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| **Assessments** | | |  |  | | |
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