Numeracy learning continuum

Sub-element	Level 1a Students:	Level 1b Typically, by the end of Foundation Year, students:	Level 2 Typically, by the end of Year 2, students:	Level 3 Typically, by the end of Year 4, students:	Level 4 Typically, by the end of Year 6, students:	Level 5 Typically, by the end of Year 8, students:	Level 6 Typically, by the end of Year 10, students:
Estimating and calculating with whole numbers element							
Understand and use numbers in context	demonstrate concepts of counting using every day experiences	connect and order number names, numerals and groups of objects using numbers up to two digits	model, represent, order and use numbers up to four digits	model, represent, order and use numbers up to five digits	identify, describe and use numbers larger than one million	compare, order and use positive and negative numbers to solve everyday problems	use different ways to represent very large and very small numbers including scientific notation
Estimate and calculate	recognise the effects of adding to and taking away from a collection of objects	solve everyday addition and share stories	estimate the solution to a problem and then calculate the answer	estimate a solution to a problem and then check the solution by recalling addition, subtraction, multiplication and division facts	solve problems and check calculations using efficient mental and written strategies	solve complex problems by estimating and calculating using efficient mental, written and digital strategies	solve and model problems involving complex data by estimating and calculating using a variety of efficient mental, written and digital strategies
Use money	identify situations that involve the use of money	recognise the different value of coins and notes in the Australian monetary system	identify and use combinations of coins and notes for simple purchases	estimate the change from simple purchases	create simple financial plans, budgets and cost predictions	identify and justify 'best value for money' decisions	evaluate financial plans to support specific financial goals
Recognise and using patterns and relationships element							
Recognise and use patterns and relationships	recognise simple patterns in everyday contexts	describe and continue patterns	identify, describe and create everyday patterns	identify and describe trends in everyday patterns	identify and describe pattern rules and relationships that help to identify trends	identify trends using number rules and relationships	explain how the practical application of patterns can be used to identify trends

Numeracy learning continuum

Sub-element	Level 1a Students:	Level 1b Typically, by the end of Foundation Year, students:	Level 2 Typically, by the end of Year 2, students:	Level 3 Typically, by the end of Year 4, students:	Level 4 Typically, by the end of Year 6, students:	Level 5 Typically, by the end of Year 8, students:	Level 6 Typically, by the end of Year 10, students:
Using fractions, decimals, percentages, ratios and rates element							
Interpret proportional reasoning	recognise a 'whole' and 'parts of a whole' within everyday contexts	recognise that a whole object can be divided into equal parts	visualise and describe halves and quarters	visualise, describe and order tenths, hundredths, 1-place and 2-place decimals	visualise, describe and order equivalent fractions, decimals and simple percentages	visualise and describe the proportions of percentages, ratios and rates	illustrate and order relationships for fractions, decimals, percentages, ratios and rates
Apply proportional reasoning	Level 1b is the starting point for this sub-element	identify quantities such as more, less and the same in everyday comparisons	solve problems using halves and quarters	solve problems using equivalent fractions for tenths, hundredths, 1-place and 2-place decimals	solve problems using equivalent fractions, decimals and simple percentages	solve problems using simple percentages, ratios and rates	solve problems involving fractions, decimals, percentages, ratios and rates
Using spatial reasoning element							
Visualise 2D shapes and 3D objects	sort or match objects according to their features	sort and name simple 2D shapes and 3D objects	identify, sort and describe common 2D shapes and 3D objects	visualise, sort, identify and describe symmetry, shapes and angles in the environment	visualise, sort, describe and compare the features of objects such as prisms and pyramids in the environment	visualise, describe and apply their understanding of the features and properties of 2D shapes and 3D objects	visualise, describe and analyse the way shapes and objects are combined and positioned in the environment for different purposes
Interpret maps and diagrams	demonstrate awareness of position of self and objects in relation to everyday contexts	follow directions to demonstrate understanding of common position words and movements	give and follow directions on maps and diagrams of familiar locations	interpret information, locate positions and describe routes on maps and diagrams using simple scales, legends and directional language	identify and describe routes and locations, using grid reference systems and directional language such as north or north east	create and interpret 2D and 3D maps, models and diagrams	create and interpret maps, models and diagrams using a range of mapping tools

Numeracy learning continuum

Sub-element	Level 1a Students:	Level 1b Typically, by the end of Foundation Year, students:	Level 2 Typically, by the end of Year 2, students:	Level 3 Typically, by the end of Year 4, students:	Level 4 Typically, by the end of Year 6, students:	Level 5 Typically, by the end of Year 8, students:	Level 6 Typically, by the end of Year 10, students:
Interpreting statistical information element							
Interpret data displays	display information using real objects or photographs and respond to questions about the information displayed	recognise how to ask and answer simple data questions and interpret data in drawings or picture graphs	collect and describe data on a relevant issue based on one variable and display as lists, tables or picture graphs	collect, record and display data as tables, diagrams, picture graphs and column graphs	collect, compare, describe and interpret data as 2-way tables, double column graphs and sector graphs, including from digital media	compare, interpret and assess the effectiveness of different data displays of the same information	evaluate media statistics and trends by linking claims to data displays, statistics and representative data
Interpret chance events	Level 1b is the starting point for this sub-element	recognise that some events might or might not happen	identify and describe familiar events that involve chance	describe possible outcomes from chance experiments using informal chance language and recognising variations in results	describe chance events and compare observed outcomes with predictions using numerical representations such as a 75% chance of rain or 50/50 chance of snow	describe and explain why the actual results of chance events are not always the same as expected results	explain the likelihood of multiple events occurring together by giving examples of situations when they might happen
Using measurement element							
Estimate and measure with metric units	use informal language and/or actions to describe characteristics of length, temperature, mass, volume, capacity and area in familiar environments	measure by comparing objects and indicate if these measurements are the same or different	estimate, measure and order using direct and indirect comparisons and informal units to collect and record information about shapes and objects	estimate, measure and compare the length, temperature, volume, capacity and mass of everyday objects using metric units and scaled instruments	choose and use appropriate metric units for length, area, volume, capacity and mass to solve everyday problems	convert between common metric units for volume and capacity and use perimeter, area and volume formulas to solve authentic problems	solve complex problems involving surface area and volume of prisms and cylinders and composite solids
Operate with clocks, calendars and timetables	sequence familiar actions and events in a variety of ways	sequence familiar actions and events using the everyday language of time	read digital and analogue clocks to the half and quarter hour, sequence events by months and seasons and identify a date on a calendar	read digital and analogue clocks to the minute, convert between hours and minutes, use 'am' and 'pm', and use calendars to locate and compare time events	convert between 12- and 24-hour systems to solve time problems, interpret and use timetables from print and digital sources	use 12- and 24-hour systems within a single time zone to solve time problems, and place personal and family events on an extended time scale	use 12- and 24-hour systems within a multiple time zone to solve time problems, use large and small timescales in complex contexts and place historical and scientific events on an extended time scale