



Purpose of the literacy and numeracy progressions

The purpose and intent of the progressions are to provide a tool to:

- locate the literacy and numeracy development of students
- plan for student progress in literacy and numeracy
- facilitate shared professional understanding of literacy and numeracy development
- support a whole school approach to literacy and numeracy development.

Literacy and numeracy in the learning areas

The learning areas provide rich opportunities for extending and enriching literacy and numeracy. To effectively plan for differentiated teaching of literacy and numeracy in the learning areas, teachers draw on their knowledge of the Australian Curriculum and their knowledge of their students. Recognising that students learn at different rates, the progressions provide a continuum for teachers to identify and build on students' literacy and numeracy skills. The intention is that students will develop their literacy and numeracy expertise purposefully, in meaningful contexts.

Using this advice and the progressions to plan for student progress in literacy and numeracy

This advice illustrates how the progressions can be used in Economics and Business to support student progress in literacy and numeracy. This advice:

- identifies the sub-elements of the progressions that are most relevant to studying Economics and Business
- identifies some aspects of an achievement standard that include literacy or numeracy demands
- lists some relevant indicators at one or more levels of the progressions to illustrate how the progressions might be unpacked to support student progress in literacy and numeracy in the study of Economics and Business.

Figure 1 illustrates how the progressions are to be used by teachers to identify where students are at on the literacy and numeracy continuum and plan for their ongoing development within the learning areas. Therefore, this advice can support use of the progressions in developing explicit and targeted programs to ensure students are able to access discipline-specific knowledge, concepts, understanding and skills. While advice is provided on the most relevant sub-elements of each progression for the discipline of Economics and Business, whole school planning may address other sub-elements to progress students' literacy and numeracy.

Targeted Achievement Standard	Indicators of literacy development related to the standard		
Year 8	Level LiS2	Level LiS5	Level LiS8
Students: <ul style="list-style-type: none"> explain how markets operate and recognise why governments may influence the market's operation gather relevant data and information from different sources to investigate an economic or business issue interpret data to identify trends and 	<ul style="list-style-type: none"> responds to spoken texts (uses facial expressions, movements, turns towards the speaker) responds to short phrases, focusing on key words, tone of voice and intonation follows a simple recognises and syllable rhyming repeats familiar words heard in or conversation 	<ul style="list-style-type: none"> listens to texts to engage with learning content locates specific information in a learning area text attempts to sequence when recounting uses comprehensive vocabulary to support comprehension (listens for temporal 	<ul style="list-style-type: none"> identifies and paraphrases key points of a speaker's arguments (interprets and uses own words to identify key points in spoken texts such as the promoting the benefits of proposed changes to taxation, or proposed actions to address market failure) the reliability of the source)

Figure 1: Annotated example of how to use learning area advice and the progressions to progress learning in Economics and Business

Numeracy in Economics and Business

In Economics and Business, students use numeracy to understand the principles of financial management, and to make informed judgments and to take effective decisions regarding the use and management of money. They apply their numeracy knowledge and skills to display, interpret and analyse economics and business data, draw conclusions, make predictions and forecast outcomes. Through the study of Economics and Business, students appreciate the ways numeracy knowledge and skills are used in society and apply these to hypothetical and/or real-life experiences.

Using the numeracy progression to support students in Economics and Business

The most relevant sub-elements of the numeracy progression for Economics and Business are: *Quantifying numbers, Operating with percentages, Understanding money, Number patterns and algebraic thinking, Comparing units and Interpreting and representing data.*

Quantifying numbers

This sub-element involves students becoming increasingly able to count, recognise, read and interpret large and small numbers. In Economics and Business, students are required to quantify numbers so that they can process, communicate and interpret numerical information in a variety of economics and business contexts. Quantifying numbers in Economics and Business is necessary for students to understand key financial and economic concepts, particularly in relation to money.

Targeted Achievement Standard	Examples of how indicators relate to the AC standard. <i>Individual student numeracy may be at different levels of the progression as indicated in Figure 1.</i>
Year 7	QuN11
Students: <ul style="list-style-type: none"> • explain the importance of short- and long-term planning to individual and business success and identify different strategies that may be used • interpret data to identify trends. • apply economics and business knowledge, skills and concepts to familiar problems. 	Understanding place value <ul style="list-style-type: none"> • reads and writes numbers applying knowledge of the place value periods of ones, thousands, millions • recognises the relationship between adjacent positions in place value (calculates budgets or investment income to compare financial products) Understanding decimal place value <ul style="list-style-type: none"> • recognises the relationship between adjacent positions in place value for decimals (0.20 is 10 times larger than 0.02, and uses this to calculate differing returns on an investment)
	QuN12
	Representing place value <ul style="list-style-type: none"> • recognises, reads and interprets very large and very small numbers (identifies and interprets the value of national government and private debt)

Operating with percentages

This sub-element involves students using percentages to represent quantities. It is particularly useful to Economics and Business for developing an understanding of the effect of percentage increases and decreases in a range of financial contexts and can support the development of students' financial literacy. Percentages are often also used by students when gathering quantitative evidence as part of an inquiry process.

Targeted Achievement Standard	Examples of how indicators relate to the AC standard. <i>Individual student numeracy may be at different levels of the progression as indicated in Figure 1.</i>
Year 10	OwP5
Students: <ul style="list-style-type: none"> analyse factors that influence major consumer and financial decisions and explain the short- and long-term effects of these decisions gather and analyse reliable data and information from different sources to identify trends, explain relationships and make predictions apply economics and business knowledge, skills and concepts to familiar, unfamiliar and complex hypothetical problems. 	Adding a percentage as multiplying <ul style="list-style-type: none"> increases and decreases quantities by a percentage (to determine discounts and markups to inform a purchasing decision or value for money) uses percentages to calculate simple interest on loans and investments recognises that adding a percentage is equivalent to multiplication (adding 3% by multiplying by 1.03 when calculating interest earned or predicting future capital gain)
	OwP6 Repeatedly adding a percentage <ul style="list-style-type: none"> uses percentage increases or decreases as an operator (measures interest earned in the long term) chooses appropriate strategies for problems in a range of multiplicative situations (percentage of a percentage for calculating successive discounts) uses percentages to calculate compound interest on loans and investments evaluates, critically, claims based on numerical multiplicative operations (why is a 10% increase followed by a 10% discount different from the original price?)

Understanding money

This sub-element focuses on understanding the use of Australian coins when operating with money. Understanding how to use currency is foundational for students of Economics and Business. This basic understanding is augmented by the sub-elements of Operating with percentages (interest and compound interest) and Comparing units (best buys and price rates of change).

Targeted Achievement Standard	Examples of how indicators relate to the AC standard. <i>Individual student numeracy may be at different levels of the progression as indicated in Figure 1.</i>
Year 7	UnM6
Students: <ul style="list-style-type: none"> • apply economics and business knowledge, skills and concepts to familiar problems. 	Coins of mixed values <ul style="list-style-type: none"> • determines the equivalent value of coins to \$5 using any combination of 5c, 10c, 20c or 50c coins
	UnM7 Giving change <ul style="list-style-type: none"> • uses complementary addition (shopkeeper's method of adding change to obtain the amount tendered) to determine the difference between two amounts, rounding as necessary

Number patterns and algebraic thinking

This sub-element involves students making generalisations. As students become increasingly able to connect patterns with the structure of numbers, they create a foundation for algebraic thinking (that is, thinking about generalised quantities). This is particularly useful to Economics and Business for developing an understanding of economic models and the relationship between various sectors of the economy.

Targeted Achievement Standard	Examples of how indicators relate to the AC standard. <i>Individual student numeracy may be at different levels of the progression as indicated in Figure 1.</i>
Year 10	NPA9
Students: <ul style="list-style-type: none"> • analyse reliable data and information from different sources to identify trends, explain relationships and make predictions • apply economics and business knowledge, skills and concepts to familiar, unfamiliar and complex hypothetical problems. 	Algebraic relationships <ul style="list-style-type: none"> • interprets and uses formulae and algebraic representations that describe relationships in various contexts (analyses a table or graph to identify the inverse relationship between price - P - and quantity demanded - QD, the relationship between Human Development Index - HDI and standards of living) • creates an algebraic expression in two unknowns to represent a formula or relationship (writes an equation for demand of a hypothetical product based on data provided and calculates market equilibrium)

Comparing units

This sub-element addresses comparing units in ratios, rates and proportions. The sub-element can be applied in Economics and Business to support students to make informed consumer and financial decisions such as determining best buys, including using price rates of change to identify buying opportunities for stock.

Targeted Achievement Standard	Examples of how indicators relate to the AC standard. <i>Individual student numeracy may be at different levels of the progression as indicated in Figure 1.</i>
Year 9	CoU2
Students: <ul style="list-style-type: none"> explain the importance of managing financial risks and rewards and analyse the different strategies that may be used analyse relevant data and information from different sources to answer questions, identify trends and explain relationships apply economics and business knowledge, skills and concepts to familiar, unfamiliar and hypothetical problems. 	Ratios <ul style="list-style-type: none"> interprets ratios as a comparison between the same units of measure (interprets ratios such as debt-equity ratio, savings-income ratio)
	Rates <ul style="list-style-type: none"> uses rates to determine how quantities change (uses price rate of change to measure the direction and speed of a financial trend, such as an upward momentum in stock prices)
	CoU3
	Applying proportion <ul style="list-style-type: none"> explains and applies the difference between direct and indirect proportion (direct – increase in income and increase in demand for branded products, indirect - decrease in price and increase in demand) demonstrates how increasing one quantity in a ratio will affect the total proportion (increasing savings in the savings-income ratio will affect the total proportion of savings)

Interpreting and representing data

This sub-element describes how a student becomes increasingly able to recognise and use visual and numerical displays to describe data associated with statistical investigations. Making sense of data is vital to studying Economics and Business. Students use data to develop displays to propose explanations for patterns, trends and relationships and to predict outcomes. They interpret statistical displays to support their own interpretations and to think critically about claims made by others, either questioning or confirming them.

Targeted Achievement Standard	Examples of how indicators relate to the AC standard. <i>Individual student numeracy may be at different levels of the progression as indicated in Figure 1.</i>
Year 10	IRD4
Students:	Shape of data displays <ul style="list-style-type: none"> determines and calculates the most appropriate statistic to describe the data (selects the mean to

Targeted Achievement Standard	Examples of how indicators relate to the AC standard. <i>Individual student numeracy may be at different levels of the progression as indicated in Figure 1.</i>
<ul style="list-style-type: none"> • explain why and how governments manage economic performance to improve living standards • give explanations for variations in economic performance and standards of living within and between economies • gather and analyse reliable data and information from different sources to identify trends, explain relationships and make predictions • develop and present evidence-based conclusions and reasoned arguments incorporating different points of view • use appropriate texts, subject-specific language, conventions and concepts. 	<ul style="list-style-type: none"> • describe the central tendency when there are no outliers that will skew the data, such as unemployment rates or economic growth • uses simple descriptive statistics (arithmetical mean or median) as measures to represent typical values of a distribution (uses mean to describe household income and median for house prices) • compares the usefulness of different representations of the same data (determines the usefulness of a line graph to illustrate trends)
	<p>IRD5</p>
	<p>Graphical representations of data</p> <ul style="list-style-type: none"> • uses graphical representations relevant to the purpose of the collection of the data (selects a line graph to demonstrate a trend, a bar graph to compare the living standards of different economies or a histogram to show income distribution) • uses features of graphical representations to make predictions (interprets a range of graphs to identify possible trends and make predictions such as economic growth, stock prices, interest rates, population growth) • recognises that continuous variables depicting growth or change often vary over time (growth charts) • interprets and describes patterns in graphical representations in real-life situations (uses scatter plots of data for economies to investigate the possible relationships between two variables such as per capita income and life expectancy) • interprets the impact of outliers in data (the impact of an ageing population on mean age of a population, the impact of very high-income earners on mean income) • determines whether to use data from a sample or a population • determines what type of sample to use from a population • makes reasonable statements about a population based on evidence from samples
	<p>IRD6</p>
<p>Recognising bias</p> <ul style="list-style-type: none"> • applies an understanding of distributions to evaluate claims based on data (evaluates claims made regarding standards of living, income redistribution) 	

Targeted Achievement Standard	Examples of how indicators relate to the AC standard. <i>Individual student numeracy may be at different levels of the progression as indicated in Figure 1.</i>
	<ul style="list-style-type: none"> • justifies criticisms of data sources that include biased statistical elements (inappropriate sampling from populations) • recognises and explains bias as a possible source of error in media reports of survey data (evaluates the validity of evidence provided by data to test media claims on attitudes to government responses to market failure or income redistribution, the value of businesses having a triple bottom line)