



Purpose of the literacy and numeracy learning 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 learning 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.

Literacy and numeracy in The Arts

Arts learning programs based on Australian Curriculum: The Arts Years 7-10 can provide opportunities for students to:

- develop aspects of the literacy and numeracy identified in the learning progressions that are also associated with specific arts practices, forms, skills, techniques and processes including processes for analysing, evaluating, critiquing and reflecting and interpreting ideas, meanings and messages
- apply and build on literacy and numeracy capabilities acquired in other learning areas and in earlier years of schooling. This might involve applying knowledge and skills in different contexts, for different purposes or deepening and broadening prior learning to explore new aspects of a concept or skill.

Through Arts learning students develop verbal and auditory working memory, visuo-spatial reasoning and their ability to interpret and use symbols and symbol systems to create meaning. These skills are transferrable across learning contexts and support development of literacy and numeracy capabilities.

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

This advice illustrates how the learning progressions can be used in Media Arts to support student progress in literacy and numeracy. This advice:

- identifies the sub-elements of the learning progressions that are most relevant to studying Media Arts
- identifies some aspects of an achievement standard that include literacy or numeracy demands
- lists some relevant indicators at one or more levels of the learning progressions to illustrate how the learning progressions might be unpacked to support student progress in literacy and numeracy in and through the study of Media Arts
- identifies how students can develop Literacy and Numeracy capabilities purposefully and in meaningful contexts through Media Arts.

Figure 1 illustrates how the learning progressions are to be used by teachers to identify where students are at on the literacy and the numeracy continua and plan for their ongoing development within the learning areas. Therefore, this advice can support use of the learning 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 learning progression for the discipline of Media Arts whole school planning may address other sub-elements to progress students' literacy and numeracy development.

Targeted Achievement Standard	Indicators of literacy development related to the standard		
A. Year 9	B. Level LIS2	C. Level LIS5	D. Level LIS8
<p>Students:</p> <ul style="list-style-type: none"> interpret, process, analyse and organise information from a range of primary and secondary sources and use it as evidence to answer inquiry questions 	<ul style="list-style-type: none"> responds to spoken texts (uses facial expressions, movements, turns towards the speaker) responds to short phrases relying on key words, tone of voice and intonation follows a simple sequence of one-syllable rhythm words (see Phonics awareness) recognises and repeats familiar words heard in a text or conversation 	<ul style="list-style-type: none"> listens to texts to engage with learning area content recalls specific information from learning area text attempts to sequence and report ideas uses simple strategies (asking questions to elicit extra information, asking others' contributions, check own comprehension) 	<ul style="list-style-type: none"> identifies and paraphrases key points of a speaker's arguments (interprets speeches and uses own words to identify key historical events and arguments) uses the rhetorical devices used by the speaker and explains how they are used in a speech and the point/s of view expressed) identifies any shifts in direction, purpose or focus, and critically evaluates the effectiveness of the text, such as whose voice is missing? How has language been used to include or exclude?

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

Numeracy in Media Arts

In Media Arts, students develop numeracy capability when they create, represent and interpret data in spatial and numerical forms. Students may use calculation, estimation and measurement to plan and make media artworks. They might also use ratios and rates to discuss bias in their analysis of media artworks and may include graphical representations of data in media artworks they make.

Using the numeracy learning progression to support students in Media Arts

The most relevant sub-elements of the numeracy learning progression for Media Arts are *Comparing units*, *Interpreting fractions*, *Understanding units of measurement*, *Understanding geometric properties*, *Positioning and locating*, and *Interpreting and representing data*.

Typically, students acquire knowledge and skill relating to many of the indicators listed below during their Primary years. As they learn in Media Arts across Years 7-10 students can apply and build on this learning in new contexts.

Comparing units (ratios, rates and proportion)

This sub-element addresses comparing units in ratios, rates and proportions. A ratio describes a situation in comparative terms, and a proportion is taken to mean when this comparison is used to describe a related situation in the same comparative terms. Rates rather than ratios are used to compare different types of quantities. For example, in an evaluation of a media artwork they have made, a student might document the 'frame rate' they have used (for example, 24 fps or 24frames per second) and compare the proportion of close-ups, medium and longshots (10:22:18 or 20% close ups or 44% medium shots and 36% long shots).

It is important to note that, even though the achievement standards in Years 7-10 Media Arts do not include overt references to *Comparing units* these skills are essential and implied in the following aspects of the achievement standard:

Targeted Achievement Standard	Examples of how indicators relate to the AC standard <i>Individual student numeracy may be at different levels of the learning progression as indicated in Figure 1</i>
Year 10	CoU2/3
<p>Students:</p> <ul style="list-style-type: none"> evaluate how genre and media conventions and technical and symbolic elements are manipulated to make representations and meaning manipulate genre and media conventions and integrate and shape the technical and symbolic elements for specific purposes, meaning and style. 	<p>A student:</p> <p>Ratios</p> <ul style="list-style-type: none"> interprets ratios as a comparison between the same units of measure (calculates the aspect ratio of an image - the proportional relationship between its width and its height also applies to calculation of pixel aspect ratios when manipulating a digital image) <p>Rates</p> <ul style="list-style-type: none"> uses rates to determine how quantities change (compares the effect of different frame rates - frames per second - when producing a slow-motion sequence) <p>Applying proportion</p> <ul style="list-style-type: none"> interprets proportion as the equality of two ratios or rates (for example, chooses an aspect ratio when re-sizing images for an online media artwork. For example, if the aspect ratio is 3:2 then a picture that is 600 pixels wide would be 400 pixels tall as 3:2 is equivalent to 600:400 and therefore in the same proportion).

Interpreting fractions

This sub-element emphasises the development of the fraction concept and the size of fractions rather than the development of procedures or algorithmic skills.

This sub-element describes how a student becomes increasingly able to use fractions as numbers that describe a relationship between two abstract measures of quantity. For example, in Media Arts students might refer to fractions when analysing or evaluating media artworks.

It is important to note that, even though the achievement standards in Years 7-10 Media Arts do not include overt references to Interpreting fractions, opportunities to develop these skills are implied in the following aspects of the achievement standard:

Targeted Achievement Standard	Examples of how indicators relate to the AC standard <i>Individual student numeracy may be at different levels of the learning progression as indicated in Figure 1</i>
Year 8	InF6/7
Students: <ul style="list-style-type: none">• identify and analyse how representations of social values and points of view are portrayed in the media artworks they make, distribute and view• identify and analyse the social and ethical responsibility of the makers and users of media artworks.	A student: Fractions as numbers <ul style="list-style-type: none">• understands the relationship between a fraction, decimal and percentage as different representations of the same quantity ($\frac{1}{2} = 0.5 = 50\%$, for example, interchangeably writes about a response from 50%, 0.5 or half of the audience) Using fractions <ul style="list-style-type: none">• uses strategies to find a fraction of a quantity (to find a time-point two-thirds of the way through a music video or animation, finds one-third then doubles).

Understanding units of measurement

This sub-element describes how a student becomes increasingly able to recognise attributes that can be measured and how units of measure are used and calculated. In making the transition from informal to formal units, a student attends to the structure of units used to measure, how they are assembled end-to-end, side-by-side or in layers without gaps or overlapping. The structure of the units gives rise to ways of calculating length, area and volume. For example, in Media Arts students use informal units of measurement to plan how set/props can be arranged in available space or how symbols might be positioned in a screen-based work.

It is important to note that, even though the achievement standards in Years 7-10 Media Arts do not include overt references to Understanding Units of Measurement, opportunities to develop these skills are implied in the following aspects of the achievement standard:

Targeted Achievement Standard	Examples of how indicators relate to the AC standard <i>Individual student numeracy may be at different levels of the learning progression as indicated in Figure 1</i>
Year 8	UGP5/6
Students: <ul style="list-style-type: none">• use genre and media conventions and shape technical and symbolic elements for specific purposes and meaning• collaborate with others in design and production processes and control equipment and technologies to achieve their intentions.	A student: Using informal units of measurement <ul style="list-style-type: none">• measures the length and area of a shape using a single informal unit repeatedly (iteration) (steps out the area of a space where a scene for a film will be shot to ensure that set/props etc. can be positioned appropriately) Identifying the structure of units <ul style="list-style-type: none">• estimates lengths that lie between full units by visualising subdivisions of the unit (estimates a starting position for completing a sequence of movements across the performance space in a dance or music video).

Understanding geometric properties

This sub-element describes how a student becomes increasingly able to identify the attributes of shapes and objects and how they can be combined or transformed. Being able to use spatial reasoning and geometric properties to solve problems is important for a range of tasks. For example, in Media Arts students can analyse how the properties of shapes and objects have been manipulated to create meaning or how use of shapes and objects can represent cultural and historical influences in media artworks.

It is important to note that, even though the achievement standards in Years 7-10 Media Arts do not include overt references to Understanding geometric properties, opportunities to develop these skills are implied in the following aspects of the achievement standard:

Targeted Achievement Standard	Examples of how indicators relate to the AC standard <i>Individual student numeracy may be at different levels of the learning progression as indicated in Figure 1</i>
Year 8	UGP3/4/5
Students: <ul style="list-style-type: none">• identify and analyse how representations of social values and points of view are portrayed in the media artworks they make, distribute and view• identify and analyse the social and ethical responsibility of the makers and users of media artworks• use genre and media conventions and shape technical and symbolic elements for specific purposes and meaning.	A student: <ul style="list-style-type: none">Properties of shapes and objects<ul style="list-style-type: none">• represents shapes and objects (creates symbolic elements by drawing 2D representations of shapes and objects from the natural world)Symmetry<ul style="list-style-type: none">• recognises that shapes can have lines of symmetry (frames an image symmetrically as a device to represent or communicate meaning)Angles and lines<ul style="list-style-type: none">• uses angle properties to identify perpendicular and parallel lines, (when planning a shot list for a film).

Positioning and locating

This sub-element describes how a student becomes increasingly able to recognise the attributes of position and location. This sub-element is important to Media Arts as it assists students to manipulate story principles (composition, space, time, movement, sound and lighting) to create meaning.

It is important to note that, even though the achievement standards in Years 7-10 Media Arts do not include overt references to Positioning and locating, these skills are essential and implied in the following aspects of the achievement standard:

Targeted Achievement Standard	Examples of how indicators relate to the AC standard <i>Individual student numeracy may be at different levels of the learning progression as indicated in Figure 1</i>
Year 10	PoL3/4/5
<p>Students:</p> <ul style="list-style-type: none"> • analyse how social and cultural values and alternative points of view are portrayed in media artworks they make, interact with and distribute • evaluate how genre and media conventions and technical and symbolic elements are manipulated to make representations and meaning • manipulate genre and media conventions and integrate and shape the technical and symbolic elements for specific purposes, meaning and style • collaboratively apply design, production and distribution processes. 	<p>A student:</p> <p>Using an informal map or plan</p> <ul style="list-style-type: none"> • draws an informal map or sketch to provide directions (sketches the pathways the actors will follow in an action sequence) • locates positions on an informal map (locates positions for equipment etc. when planning filming or locates positions on an informal map included in an analysis or evaluation of a media artwork) <p>Using formal maps and plans</p> <ul style="list-style-type: none"> • locates position on maps using grid references • identifies features on maps and plans <p>Interpreting maps and plans</p> <ul style="list-style-type: none"> • interprets the scale as a ratio used to create plans, drawings or maps • interprets plans involving scale (creates scale drawings when making models, for example, for a stop-motion photography project).

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 and to critically evaluate investigations by others. Making sense of data draws on knowing the concepts and tools that are being used to describe the global features of data. A student understands how these concepts and tools make meaning of data in context and develops the ability to think critically about any claims, either questioning or confirming them.

In Media Arts students can use these numeracy skills to analyse and evaluate media artworks they make, engage with, read and distribute.

It is important to note that, even though the achievement standards in Years 7-10 Media Arts do not include overt references to Interpreting and representing data these skills are essential and implied in the following aspects of the achievement standard:

Targeted Achievement Standard	Examples of how indicators relate to the AC standard <i>Individual student numeracy may be at different levels of the learning progression as indicated in Figure 1</i>
Year 10	IRD5/6
Students: <ul style="list-style-type: none">• analyse how social and cultural values and alternative points of view are portrayed in media artworks they make, interact with and distribute• evaluate how genre and media conventions and technical and symbolic elements are manipulated to make representations and meaning.	A student: Graphical representations of data <ul style="list-style-type: none">• uses graphical representations relevant to the purpose of the collection of the data (chooses an appropriate format to represent data showing responses to a media artwork or issue)• uses features of graphical representations to make predictions (predicts audience numbers based on historical data) Recognising bias <ul style="list-style-type: none">• recognises and explains bias as a possible source of error in media reports of survey data (uses data to evaluate veracity of review headlines such as 'everybody's favourite game').

Measuring time

This sub-element describes how a student becomes increasingly aware of the passage of time. A student appreciates units of time are associated with regularly occurring events, such as the rotation of Earth or the swing of a pendulum. They apply units and conventions associated with measuring and recording the succession and duration of time. In Media Arts students can also learn to appreciate the concept of 'passing time' and how our sense of time can be manipulated.

Targeted Achievement Standard	Examples of how indicators relate to the AC standard <i>Individual student numeracy may be at different levels of the learning progression as indicated in Figure 1</i>
Year 8	MeT3
Students: <ul style="list-style-type: none">• use genre and media conventions and shape technical and symbolic elements for specific purposes and meaning• collaborate with others in design and production processes and control equipment and technologies to achieve their intentions.	A student: <ul style="list-style-type: none">• uses standard instruments and units to describe and measure time to minutes (for example, accurately describes time-points in a media arts work they are developing or critiquing)• reads and interprets different representations of time on an analogue clock, digital clock or timer (for example, in making decisions about how long a section of a time-based work should last, how to manipulate tension to maximise audience impact or when analysing choices made by a media arts practitioner).