

Exploring the learning areas

P–10 Australian Curriculum: English, Mathematics and Science

Professional development booklet

Exploring the learning areas
P-10 Australian Curriculum: English, Mathematics and Science
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Queensland Studies Authority
154 Melbourne Street, South Brisbane
PO Box 307 Spring Hill QLD 4004 Australia

Phone: (07) 3864 0299
Fax: (07) 3221 2553
Email: office@qsa.qld.edu.au
Website: www.qsa.qld.edu.au

1. Planning for implementing

The following is an excerpt from *Planning for implementing*, available from the QSA website: <www.qsa.qld.edu.au/13639.html>

1.1 Curriculum and assessment planning

Curriculum and assessment planning within schools occurs at three levels: whole school, year and unit. Each plan complements the others as they work together to support student learning.

Figure 1: The three levels of curriculum and assessment planning



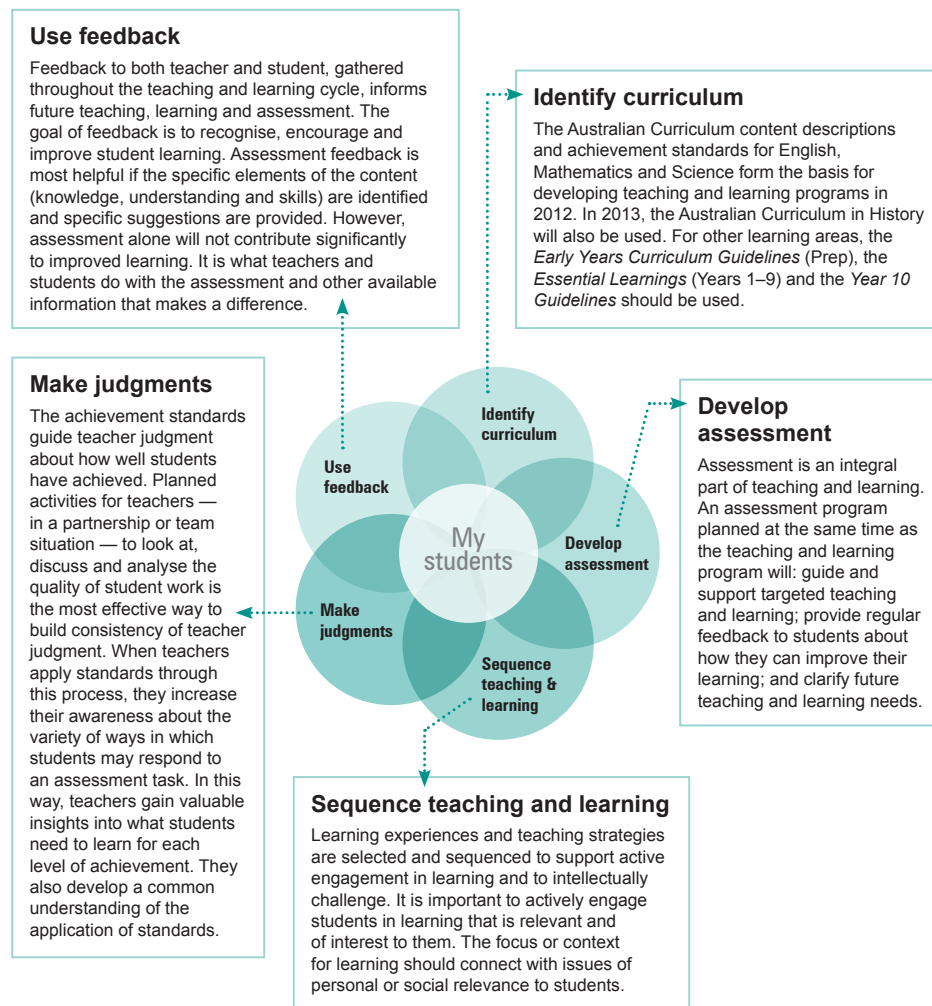
1.2 Elements of effective planning

Curriculum and assessment planning at the whole school, year and unit levels is guided by five important elements of professional practice. These five elements are interdependent. The elements can be used in any sequence, but all should be considered.

Plans are reviewed regularly to inform future planning, teaching, learning and assessment. The five elements are essential in guiding the revision of these plans.

During 2011, schools may choose to audit their current school, year level and unit plans against the Australian Curriculum. See the audit tools on the QSA website <www.qsa.qld.edu.au>.

Figure 2: The five elements for effective curriculum and assessment planning



1.3 Planning resources

The QSA has developed Australian Curriculum and planning resources for P–10 English, Mathematics and Science, for whole school, year level and unit overview planning. These are available from the QSA website <www.qsa.edu.au>.

1.4 Informed prescription and informed professionalism¹

The map does not take the place of the actual journey ... But the map, a summary, an arranged and orderly view of previous experiences, serves as a guide to future experience; it gives direction; it facilitates control; it economizes effort, preventing useless wandering, and pointing out the paths which lead most quickly and most certainly to a desired result.²

High quality/high equity education systems are characterised by a balance of “informed prescription” and “informed professionalism”.

Informed prescription entails an economical curriculum that maps out essential knowledges, competences, skills, processes and experiences, parsimonious and appropriate testing systems for diagnostic and developmental purposes and systems’ accountability, and a strong systemic equity focus on the potential of all learners to meet high expectations and standards.

Informed professionalism involves teacher autonomy to interpret the curriculum, with opportunities for local planning, rich professional resources and development activities, school and classroom-based assessment capacity, and professional capacity to adopt curriculum for teaching and learning of identified equity groups.

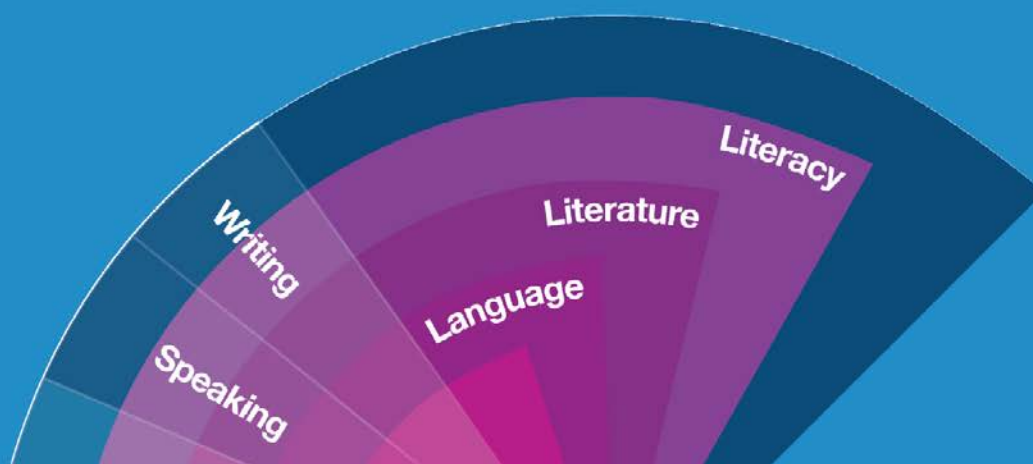
Luke, Weir and Woods (2008) use Dewey’s metaphor to argue that the curriculum constitutes a map of the terrain to be covered. The curriculum is not an exhaustive view of the territory, but it sets the grounds for teachers’ and students’ actual educational journey through the terrain, while the standards set the grounds for judging the quality of the journey. Teacher professional judgment in the shaping of curriculum work programs, pedagogical approaches and classroom assessment allows and enables individuals and cohorts to take different routes through the terrain.

¹ Adapted from Luke, A, Weir, K & Woods, A 2008, *Development of a set of principles to guide a P–12 syllabus framework*, QSA, Brisbane.

² Dewey, J 1902, *The Child and the Curriculum*, Kindle edition, retrieved from Amazon.com.

ENGLISH

The Australian Curriculum English



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2. English³

2.1 Rationale

The study of English is central to the learning and development of all young Australians. It helps create confident communicators, imaginative thinkers and informed citizens. It is through the study of English that individuals learn to analyse, understand, communicate with and build relationships with others and with the world around them. The study of English helps young people develop the knowledge and skills needed for education, training and the workplace. It helps them become ethical, thoughtful, informed and active members of society. In this light it is clear that the Australian Curriculum: English plays an important part in developing the understanding, attitudes and capabilities of those who will take responsibility for Australia's future.

Although Australia is a linguistically and culturally diverse country, participation in many aspects of Australian life depends on effective communication in Standard Australian English. In addition, proficiency in English is invaluable globally. The Australian Curriculum: English contributes both to nation-building and to internationalisation.

The Australian Curriculum: English also helps students to engage imaginatively and critically with literature to expand the scope of their experience. Aboriginal and Torres Strait Islander peoples have contributed to Australian society and to its contemporary literature and its literary heritage through their distinctive ways of representing and communicating knowledge, traditions and experience. The Australian Curriculum: English values, respects and explores this contribution. It also emphasises Australia's links to Asia.

2.2 Aims

The Australian Curriculum: English aims to ensure that students:

- learn to listen to, read, view, speak, write, create and reflect on increasingly complex and sophisticated spoken, written and multimodal texts across a growing range of contexts with accuracy, fluency and purpose
- appreciate, enjoy and use the English language in all its variations and develop a sense of its richness and power to evoke feelings, convey information, form ideas, facilitate interaction with others, entertain, persuade and argue
- understand how Standard Australian English works in its spoken and written forms and in combination with non-linguistic forms of communication to create meaning
- develop interest and skills in inquiring into the aesthetic aspects of texts, and develop an informed appreciation of literature.

³ The information on the following pages has been sourced from the Australian Curriculum v1.2 <www.australiancurriculum.edu.au> (accessed 26 July 2011), excluding the learning area information sheets, which have been taken from the Australian Curriculum, Assessment and Reporting Authority website <www.acara.edu.au/curriculum/resources.html> (accessed May 2011).

2.3 Overview of English

The Australian Curriculum

English (Foundation to Year 10)



The Foundation to Year 10 Australian Curriculum: English is designed to develop students' skills to listen to, read, view, speak, write and create an increasingly sophisticated range of texts. It aims to create confident communicators who appreciate and use the English language creatively and critically in a range of contexts and for a range of purposes.

How is the Foundation to Year 10 Australian Curriculum: English structured?

The Foundation to Year 10 Australian Curriculum: English is organised in three interrelated strands:

- Language – which focuses on knowledge of the English language and how it works
- Literature – which focuses on understanding, appreciating, responding to, analysing and creating literature
- Literacy – which focuses on interpreting and creating a range of types of texts with accuracy, fluency and purpose.

Content descriptions in each strand are grouped into sub-strands that, across the year levels, present a sequence of development of knowledge, skills and understandings. The sub-strands are:

<i>Language</i>	<i>Literature</i>	<i>Literacy</i>
<i>Language variation and change</i>	<i>Literature and context</i>	<i>Texts in context</i>
<i>Language for interaction</i>	<i>Responding to literature</i>	<i>Interacting with others</i>
<i>Text structure and organisation</i>	<i>Examining literature</i>	<i>Interpreting, analysing and evaluating</i>
<i>Expressing and developing ideas</i>	<i>Creating literature</i>	<i>Creating texts</i>
<i>Sound and letter knowledge (F-2)</i>		

The general capabilities and cross curriculum priorities are explicitly included in the content descriptions and elaborations across the strands, as appropriate to the learning area.

How are the language modes represented in the Foundation to Year 10 Australian Curriculum: English?

Each strand focuses on developing, expanding and consolidating students' skills in listening to, reading and viewing increasingly complex and sophisticated texts, and speaking, writing and creating their own. Content descriptions address the processes of listening, speaking, reading, viewing and writing in an integrated and interdependent way.

How does the Foundation to Year 10 Australian Curriculum: English relate to the Literacy general capability?

The Foundation to Year 10 Australian Curriculum: English provides a solid basis for strengthening literacy. Literacy involves the ability to listen, read and view, write, speak and create print, visual and digital materials accurately and confidently to become effective individuals, workers and citizens.

While literacy knowledge and skills are primarily built and consolidated through the English learning area, they are reinforced and strengthened through all learning areas.

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The Literacy general capability is drawn from knowledge, skills and understandings of both the *Language* and *Literacy* strands of the English curriculum. It also identifies language and literacy demands of learning areas that the English curriculum does not specifically address. These demands include for example, the language structures of mathematics questions, the particular requirements of writing a report of an investigation in science, or the specialist vocabulary of history.

Regarding the teaching of grammar, the *Foundation to Year 10 Australian Curriculum: English* reflects some of the latest research and theory in the field. Many national and international curriculum documents do not treat grammar in any detail, focusing more generally on the need for grammatical accuracy.

Many international curricula are written around the modes of *Speaking* and *Listening*, *Reading* and *Writing*.

What international references have been drawn upon in developing the *Australian Curriculum: English*?

Development of the *Foundation to Year 10 Australian Curriculum: English* has drawn on high quality national and international curricula and research.

Australia was one of the highest performing countries in reading literacy of those participating in the 2006 *Programme for International Student Assessment* (PISA). Development of the *Foundation to Year 10 Australian Curriculum: English* has been informed by key international curriculum documents of other top performing countries in that study, including Finland, Hong Kong, Canada (Ontario and British Columbia), New Zealand and Ireland. Other English curriculum documents referred to include those from England, California and Singapore.

The *Foundation to Year 10 Australian Curriculum: English* is consistent with expectations described in these curricula. It is similar in stating explicit skills for early reading and writing.

2.4 P–10 Year level descriptions

Year level descriptions

Year level descriptions have three functions, they:

- emphasise the interrelated nature of the three strands and the expectation that planning an English program will involve integration of content from the strands
- provide information about the learning contexts that are appropriate at each year for learning across the Language, Literature and Literacy strands
- provide an overview of the range of texts to be studied and an indication of their complexity and key features.

They also describe differences in the texts that students create. In the early years, development in reading and writing is rapid and clear distinctions in text complexity can be made so descriptions are written for each year at Foundation, Year 1 and Year 2. In Years 3–10, the two-year description provides for greater flexibility.

Foundation Year level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the three strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit, strengthen and develop these as needed.

In the Foundation year, students communicate with peers, teachers, known adults, and students from other classes.

Students engage with a variety of texts for enjoyment. They listen to, read and view spoken, written and multimodal texts in which the primary purpose is to entertain, as well as some texts designed to inform. These include traditional oral texts, picture books, various types of stories, rhyming verse, poetry, non-fiction, film, multimodal texts and dramatic performances. They participate in shared reading, viewing and storytelling using a range of literary texts, and recognise the entertaining nature of literature.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

Literary texts that support and extend Foundation students as beginner readers include predictable texts that range from caption books to books with one or more sentences per page. These texts involve straightforward sequences of events and everyday happenings with recognisable, realistic or imaginary characters. Informative texts present a small amount of new content about familiar topics of interest; a small range of language features, including simple and compound sentences; mostly familiar vocabulary, known high-frequency words and single-syllable words that can be decoded phonically, and illustrations that strongly support the printed text.

Students create a range of imaginative, informative and persuasive texts including pictorial representations, short statements, performances, recounts and poetry.

Year 1 level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Year 1, students communicate with peers, teachers, known adults and students from other classes.

Students engage with a variety of texts for enjoyment. They listen to, read, view and interpret spoken, written and multimodal texts designed to entertain and inform. These encompass traditional oral texts including Aboriginal stories, picture books, various types of stories, rhyming verse, poetry, non-fiction, film, dramatic performances, and texts used by students as models for constructing their own texts.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

Literary texts that support and extend Year 1 students as independent readers involve straightforward sequences of events and everyday happenings with recognisably realistic or imaginary characters. Informative texts present a small amount of new content about familiar topics of interest and topics being studied in other areas of the curriculum. These texts also present a small range of language features, including simple and compound sentences, some unfamiliar vocabulary, a small number of high-frequency words and words that need to be decoded phonically, and sentence boundary punctuation, as well as illustrations and diagrams that support the printed text.

Students create a variety of imaginative, informative and persuasive texts including recounts, procedures, performances, literary retellings and poetry.

Year 2 level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Year 2, students communicate with peers, teachers, students from other classes, and community members.

Students engage with a variety of texts for enjoyment. They listen to, read, view and interpret spoken, written and multimodal texts in which the primary purpose is to entertain, as well as texts designed to inform and persuade. These encompass traditional oral texts, picture books, various types of print and digital stories, simple chapter books, rhyming verse, poetry, non-fiction, film, multimodal texts, dramatic performances, and texts used by students as models for constructing their own work.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

Literary texts that support and extend Year 2 students as independent readers involve sequences of events that span several pages and present unusual happenings within a framework of familiar experiences. Informative texts present new content about topics of interest and topics being studied in other areas of the curriculum. These texts include language features such as varied sentence structures, some unfamiliar vocabulary, a significant number of high-frequency sight words and words that need to be decoded phonically, and a range of punctuation conventions, as well as illustrations and diagrams that both support and extend the printed text.

Students create a range of imaginative, informative and persuasive texts including imaginative retellings, reports, performances, poetry and expositions.

Year 3 level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Years 3 and 4, students communicate with peers and teachers from other classes and schools in a range of face-to-face and online/virtual environments.

Students engage with a variety of texts for enjoyment. They listen to, read, view and interpret spoken, written and multimodal texts in which the primary purpose is to entertain, as well as texts designed to inform and persuade. These encompass traditional oral texts including picture books, various types of print and digital texts, simple chapter books, rhyming verse, poetry, non-fiction film, multimodal texts, dramatic performances, and texts used by students as models for constructing their own work.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

Literary texts that support and extend students in Years 3 and 4 as independent readers describe complex sequences of events that extend over several pages and involve unusual happenings within a framework of familiar experiences. Informative texts present new content about topics of interest and topics being studied in other areas of the curriculum. These texts use complex language features, including varied sentence structures, some unfamiliar vocabulary, a significant number of high-frequency sight words and words that need to be decoded phonically, and a range of punctuation conventions, as well as illustrations and diagrams that both support and extend the printed text.

Students create a range of imaginative, informative and persuasive types of texts including narratives, procedures, performances, reports, reviews, poetry and expositions.

Year 4 level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Years 3 and 4, students experience learning in familiar contexts and a range of contexts that relate to study in other areas of the curriculum. They interact with peers and teachers from other classes and schools in a range of face-to-face and online/virtual environments.

Students engage with a variety of texts for enjoyment. They listen to, read, view and interpret spoken, written and multimodal texts in which the primary purpose is aesthetic, as well as texts designed to inform and persuade. These encompass traditional oral texts including Aboriginal stories, picture books, various types of print and digital texts, simple chapter books, rhyming verse, poetry, non-fiction, film, multimodal texts, dramatic performances, and texts used by students as models for constructing their own work.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

Literary texts that support and extend students in Years 3 and 4 as independent readers describe complex sequences of events that extend over several pages and involve unusual happenings within a framework of familiar experiences. Informative texts present new content about topics of interest and topics being studied in other areas of the curriculum. These texts use complex language features, including varied sentence structures, some unfamiliar vocabulary, a significant number of high-frequency sight words and words that need to be decoded phonically, and a variety of punctuation conventions, as well as illustrations and diagrams that both support and extend the printed text.

Students create a range of imaginative, informative and persuasive types of texts including narratives, procedures, performances, reports, reviews, poetry and expositions.

Year 5 level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Years 5 and 6, students communicate with peers and teachers from other classes and schools, community members, and individuals and groups, in a range of face-to-face and online/virtual environments.

Students engage with a variety of texts for enjoyment. They listen to, read, view, interpret and evaluate spoken, written and multimodal texts in which the primary purpose is aesthetic, as well as texts designed to inform and persuade. These include various types of media texts including newspapers, film and digital texts, junior and early adolescent novels, poetry, non-fiction, and dramatic performances.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

Literary texts that support and extend students in Years 5 and 6 as independent readers describe complex sequences, a range of non-stereotypical characters and elaborated events including flashbacks and shifts in time. These texts explore themes of interpersonal relationships and ethical dilemmas within real-world and fantasy settings. Informative texts supply technical and content information about a wide range of topics of interest as well as topics being studied in other areas of the curriculum. Text structures include chapters, headings and subheadings, tables of contents, indexes and glossaries. Language features include complex sentences, unfamiliar technical vocabulary, figurative language, and information presented in various types of graphics.

Students create a range of imaginative, informative and persuasive types of texts including narratives, procedures, performances, reports, reviews, explanations and discussions.

Year 6 level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Years 5 and 6, students communicate with peers and teachers from other classes and schools, community members, and individuals and groups, in a range of face-to-face and online/virtual environments.

Students engage with a variety of texts for enjoyment. They listen to, read, view, interpret and evaluate spoken, written and multimodal texts in which the primary purpose is aesthetic, as well as texts designed to inform and persuade. These include various types of media texts including newspapers, film and digital texts, junior and early adolescent novels, poetry, non-fiction and dramatic performances. Students develop their understanding of how texts, including media texts, are influenced by context, purpose and audience.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

Literary texts that support and extend students in Years 5 and 6 as independent readers describe complex sequences, a range of non-stereotypical characters and elaborated events including flashbacks and shifts in time. These texts explore themes of interpersonal relationships and ethical dilemmas within real-world and fantasy settings. Informative texts supply technical and content information about a wide range of topics of interest as well as topics being studied in other areas of the curriculum. Text structures include chapters, headings and subheadings, tables of contents, indexes and glossaries. Language features include complex sentences, unfamiliar technical vocabulary, figurative language, and information presented in various types of graphics.

Students create a range of imaginative, informative and persuasive types of texts such as narratives, procedures, performances, reports, reviews, explanations and discussions.

Year 7 level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Years 7 and 8, students communicate with peers, teachers, individuals, groups and community members in a range of face-to-face and online/virtual environments. They experience learning in both familiar and unfamiliar contexts that relate to the school curriculum, local community, regional and global contexts.

Students engage with a variety of texts for enjoyment. They listen to, read, view, interpret, evaluate and perform a range of spoken, written and multimodal texts in which the primary purpose is aesthetic, as well as texts designed to inform and persuade. These include various types of media texts including newspapers, magazines and digital texts, early adolescent novels, non-fiction, poetry and dramatic performances. Students develop their understanding of how texts, including media texts, are influenced by context, purpose and audience.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

Literary texts that support and extend students in Years 7 and 8 as independent readers are drawn from a range of realistic, fantasy, speculative fiction and historical genres and involve some challenging and unpredictable plot sequences and a range of non-stereotypical characters. These texts explore themes of interpersonal relationships and ethical dilemmas within real-world and fictional settings and represent a variety of perspectives. Informative texts present technical and content information from various sources about specialised topics. Text structures are more complex including chapters, headings and subheadings, tables of contents, indexes and glossaries. Language features include successive complex sentences with embedded clauses, unfamiliar technical vocabulary, figurative and rhetorical language, and information supported by various types of graphics presented in visual form.

Students create a range of imaginative, informative and persuasive types of texts, for example narratives, procedures, performances, reports and discussions, and are beginning to create literary analyses and transformations of texts.

Year 8 level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Years 7 and 8, students interact with peers, teachers, individuals, groups and community members in a range of face-to-face and online/virtual environments. They experience learning in both familiar and unfamiliar contexts that relate to the school curriculum, local community, regional and global contexts.

Students engage with a variety of texts for enjoyment. They listen to, read, view, interpret, evaluate and perform a range of spoken, written and multimodal texts in which the primary purpose is aesthetic, as well as texts designed to inform and persuade. These include various types of media texts including newspapers, magazines and digital texts, early adolescent novels, non-fiction, poetry and dramatic performances. Students develop their understanding of how texts, including media texts, are influenced by context, purpose and audience.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

Literary texts that support and extend students in Years 7 and 8 as independent readers are drawn from a range of realistic, fantasy, speculative fiction and historical genres and involve some challenging and unpredictable plot sequences and a range of non-stereotypical characters. These texts explore themes of interpersonal relationships and ethical dilemmas within real-world and fictional settings and represent a variety of perspectives. Informative texts present technical and content information from various sources about specialised topics. Text structures are more complex including chapters, headings and subheadings, tables of contents, indexes and glossaries. Language features include successive complex sentences with embedded clauses, unfamiliar technical vocabulary, figurative and rhetorical language, and information supported by various types of graphics presented in visual form.

Students create a range of imaginative, informative and persuasive types of texts, for example narratives, procedures, performances, reports and discussions, and begin to create literary analyses and transformations of texts.

Year 9 level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Years 9 and 10, students interact with peers, teachers, individuals, groups and community members in a range of face-to-face and online/virtual environments. They experience learning in familiar and unfamiliar contexts, including local community, vocational and global contexts.

Students engage with a variety of texts for enjoyment. They interpret, create, evaluate, discuss and perform a wide range of literary texts in which the primary purpose is aesthetic, as well as texts designed to inform and persuade. These include various types of media texts, including newspapers, film and digital texts, fiction, non-fiction, poetry, dramatic performances and multimodal texts, with themes and issues involving levels of abstraction, higher order reasoning and intertextual references. Students develop a critical understanding of the contemporary media, and the differences between media texts.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

Literary texts that support and extend students in Years 9 and 10 as independent readers are drawn from a range of genres and involve complex, challenging and unpredictable plot sequences and hybrid structures that may serve multiple purposes. These texts explore themes of human experience and cultural significance, interpersonal relationships, and ethical and global dilemmas within real-world and fictional settings and represent a variety of perspectives. Informative texts represent a synthesis of technical and abstract information (from credible/verifiable sources) about a wide range of specialised topics. Text structures are more complex including chapters, headings and subheadings, tables of contents, indexes and glossaries. Language features include successive complex sentences with embedded clauses, a high proportion of unfamiliar and technical vocabulary, figurative and rhetorical language, and dense information supported by various types of graphics presented in visual form.

Students create a range of imaginative, informative and persuasive types of texts including narratives, procedures, performances, reports, discussions, literary analyses, transformations of texts and reviews.

Year 10 level description

The English curriculum is built around the three interrelated strands of Language, Literature and Literacy. Teaching and learning programs should balance and integrate all three strands. Together the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Years 9 and 10, students interact with peers, teachers, individuals, groups and community members in a range of face-to-face and online/virtual environments. They experience learning in familiar and unfamiliar contexts, including local community, vocational and global contexts.

Students engage with a variety of texts for enjoyment. They interpret, create, evaluate, discuss and perform a wide range of literary texts in which the primary purpose is aesthetic, as well as texts designed to inform and persuade. These include various types of media texts, including newspapers, film and digital texts, fiction, non-fiction, poetry, dramatic performances and multimodal texts, with themes and issues involving levels of abstraction, higher order reasoning and intertextual references. Students develop critical understanding of the contemporary media, and the differences between media texts.

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Students create a range of imaginative, informative and persuasive types of texts including narratives, procedures, performances, reports, discussions, literary analyses, transformations of texts and reviews.

2.6 Activity: Comparing the Australian Curriculum: English to the Queensland English Essential Learnings

Consider the:

- Australian Curriculum: English for a Year level in your phase of learning
- mapping of the Australian Curriculum: English to the *English Essential Learnings* for this Year level

1. *What implications does the mapping have for your planning?*

For example: resources informing your planning and pedagogy, resources you use with your students.

2. *How can you interrelate the three content strands in your teaching?*

MATHEMATICS

The Australian Curriculum Mathematics

Statistics and probability

Measurement and geometry

Number and algebra

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3. Mathematics

3.1 Rationale

Learning mathematics creates opportunities for and enriches the lives of all Australians. The Australian Curriculum: Mathematics provides students with essential mathematical skills and knowledge in Number and Algebra, Measurement and Geometry, and Statistics and Probability. It develops the numeracy capabilities that all students need in their personal, work and civic life, and provides the fundamentals on which mathematical specialties and professional applications of mathematics are built.

Mathematics has its own value and beauty and the Australian Curriculum: Mathematics aims to instil in students an appreciation of the elegance and power of mathematical reasoning. Mathematical ideas have evolved across all cultures over thousands of years, and are constantly developing. Digital technologies are facilitating this expansion of ideas and providing access to new tools for continuing mathematical exploration and invention. The curriculum focuses on developing increasingly sophisticated and refined mathematical understanding, fluency, logical reasoning, analytical thought and problem-solving skills. These capabilities enable students to respond to familiar and unfamiliar situations by employing mathematical strategies to make informed decisions and solve problems efficiently.

The Australian Curriculum: Mathematics ensures that the links between the various components of mathematics, as well as the relationship between mathematics and other disciplines, are made clear. Mathematics is composed of multiple but interrelated and interdependent concepts and systems which students apply beyond the mathematics classroom. In science, for example, understanding sources of error and their impact on the confidence of conclusions is vital, as is the use of mathematical models in other disciplines. In geography, interpretation of data underpins the study of human populations and their physical environments; in history, students need to be able to imagine timelines and time frames to reconcile related events; and in English, deriving quantitative and spatial information is an important aspect of making meaning of texts.

The curriculum anticipates that schools will ensure all students benefit from access to the power of mathematical reasoning and learn to apply their mathematical understanding creatively and efficiently. The mathematics curriculum provides students with carefully paced, in-depth study of critical skills and concepts. It encourages teachers to help students become self-motivated, confident learners through inquiry and active participation in challenging and engaging experiences.

3.2 Aims

The Australian Curriculum: Mathematics aims to ensure that students:

- are confident, creative users and communicators of mathematics, able to investigate, represent and interpret situations in their personal and work lives and as active citizens
- develop an increasingly sophisticated understanding of mathematical concepts and fluency with processes, and are able to pose and solve problems and reason in Number and Algebra, Measurement and Geometry, and Statistics and Probability
- recognise connections between the areas of mathematics and other disciplines and appreciate mathematics as an accessible and enjoyable discipline to study.

3.3 Activity: Rationale and aims

1. *Identify two or three big ideas in the rationale and aims. How do they inform:*

- your understanding of Mathematics as a learning area or discipline
- the approach to Mathematics in the Australian Curriculum
- your teaching and learning approaches?

3.4 Overview of mathematics

The Australian Curriculum

Mathematics (Foundation to Year 10)

The Foundation to Year 10 Australian Curriculum: Mathematics provides students with the skills to be confident, creative users and communicators of mathematics, able to investigate, represent and interpret situations both at school and in their lives outside of school. The curriculum focuses on developing increasingly sophisticated and refined mathematical understanding, fluency, logical reasoning, analytical thought and problem-solving skills.

How is the Australian Curriculum: Mathematics structured?

The Foundation to Year 10 Australian Curriculum: Mathematics is organised around three content strands and four proficiency strands.

The content strands are:

- *Number and algebra*
- *Measurement and geometry*
- *Statistics and probability*

The proficiency strands describe the actions in which students can engage when learning and using the content. The proficiencies are incorporated into the content descriptions of the three strands. While not all proficiency strands apply to every content description, they indicate the breadth of mathematical actions that teachers can emphasise.

The proficiencies are:

- *Understanding*
- *Fluency*
- *Problem solving*
- *Reasoning.*

Content descriptions are grouped into sub-strands to illustrate the sequence of development of concepts through and across the year levels. The sub-strands contained in each strand are listed below.

<i>Number and algebra</i>	<i>Measurement and geometry</i>	<i>Statistics and probability</i>
<i>Number and place value (F-8)</i>	<i>Using units of measurement (F-10)</i>	<i>Chance (1-10)</i>
<i>Fractions and decimals (1-6)</i>	<i>Shape (F-7)</i>	<i>Data representation and interpretation (F-10)</i>
<i>Real numbers (7-10)</i>	<i>Geometric reasoning (3-10)</i>	
<i>Money and financial mathematics (1-10)</i>	<i>Location and transformation (F-7)</i>	
<i>Patterns and algebra (F-10)</i>	<i>Pythagoras and trigonometry (9-10)</i>	
<i>Linear and non-linear relationships (7-10)</i>		

The **general capabilities** and **cross-curriculum priorities** are explicitly included in the content descriptions and elaborations across the strands, as appropriate to the learning area.

How does the Australian Curriculum: Mathematics relate to the Numeracy general capability?

In the Australian Curriculum general capabilities refer to a set of knowledge, skills and dispositions that will assist students to live and work successfully in the twenty-first century.

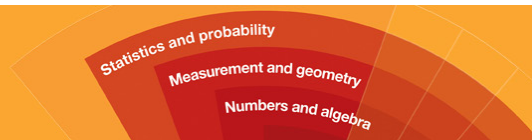
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Throughout their schooling, students develop and use these capabilities in their learning across all learning areas, in co-curricular programs such as sport, school camps and drama productions, and in their lives outside school.

Mathematics makes a special contribution to the development of numeracy in a manner that is more explicit than is the case in other learning areas. It is important that the mathematics curriculum provides the opportunity to apply mathematical understanding and skills in context, both in other learning areas and in real world contexts. A particularly important context for the application of *Number and algebra* is financial mathematics. In *Measurement and geometry*, there is an opportunity to apply understanding to design. The 21st century world is information driven, and through *Statistics and probability* students can interpret data and make informed decisions.

What international references have been drawn upon in developing the Australian Curriculum: Mathematics?

Development of the Foundation to Year 10 Australian Curriculum: Mathematics has drawn on high quality national and international curricula and research.

Singapore is one of the highest performing countries in mathematics of those participating in the Trends in International Mathematics and Science Study (TIMSS, 2007). England and the United States of America also performed significantly higher than Australia at Year 4 and at Year 8 in TIMSS.

The Foundation to Year 10 Australian Curriculum: Mathematics is, in the main, consistent with the expectations described in the United States of America (National Council of Teachers of Mathematics Standards), the New Zealand mathematics curriculum,

and those of Finland, Singapore and the United Kingdom. The report of the American Statistical Society, Guidelines in Assessment and Instruction in Statistical Education (GAISE) has been used in the development of the *Statistics and probability* strand.

In comparison to the Singapore mathematics curriculum, the Foundation to Year 10 Australian Curriculum: Mathematics content is introduced more slowly in the early and primary years to ensure students have the opportunity to develop deep understanding before moving on. By Year 10, the conceptual difficulty is similar to that described in the Singapore documents.

The Foundation to Year 10 Australian Curriculum: Mathematics also has greater emphasis than the Singapore mathematics curriculum on building depth of mathematical understanding and includes the use of a variety of digital technologies to enhance the teaching and learning of mathematics. The Foundation to Year 10 Australian Curriculum: Mathematics facilitates a deep knowledge of statistics and probability and includes practical application of mathematics including financial literacy.

For more information please go to www.australiancurriculum.edu.au/Mathematics/Rationale.

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3.5 Proficiency strands

The proficiency strands describe the actions in which students can engage when learning and using the content. While not all proficiency strands apply to every content description, they indicate the breadth of mathematical actions that teachers can emphasise.

Understanding

Students build a robust knowledge of adaptable and transferable mathematical concepts. They make connections between related concepts and progressively apply the familiar to develop new ideas. They develop an understanding of the relationship between the ‘why’ and the ‘how’ of mathematics. Students build understanding when they connect related ideas, when they represent concepts in different ways, when they identify commonalities and differences between aspects of content, when they describe their thinking mathematically and when they interpret mathematical information.

Fluency

Students develop skills in choosing appropriate procedures, carrying out procedures flexibly, accurately, efficiently and appropriately, and recalling factual knowledge and concepts readily. Students are fluent when they calculate answers efficiently, when they recognise robust ways of answering questions, when they choose appropriate methods and approximations, when they recall definitions and regularly use facts, and when they can manipulate expressions and equations to find solutions.

Problem Solving

Students develop the ability to make choices, interpret, formulate, model and investigate problem situations, and communicate solutions effectively. Students formulate and solve problems when they use mathematics to represent unfamiliar or meaningful situations, when they design investigations and plan their approaches, when they apply their existing strategies to seek solutions, and when they verify that their answers are reasonable.

Reasoning

Students develop an increasingly sophisticated capacity for logical thought and actions, such as analysing, proving, evaluating, explaining, inferring, justifying and generalising. Students are reasoning mathematically when they explain their thinking, when they deduce and justify strategies used and conclusions reached, when they adapt the known to the unknown, when they transfer learning from one context to another, when they prove that something is true or false and when they compare and contrast related ideas and explain their choices.

3.6 Activity: Using the proficiency stands

The proficiency strands are the “verbs” of the Australian Curriculum: Mathematics.

1. *What are some of the verbs or key terms that describe the different proficiency strands?*
2. *How would you summarise each of the proficiency strands in one sentence?*

Understanding

Fluency

Problem Solving

Reasoning

3. How will you approach teaching the proficiency strands?

3.7 Activity: Comparing the Australian Curriculum: Mathematics to the Queensland Mathematics Essential Learnings

Consider the:

- Australian Curriculum: Mathematics for a Year level in your phase of learning
- mapping of the Australian Curriculum: Mathematics to the *Mathematics Essential Learnings* for this Year level

1. What implications does the mapping have for your planning?

For example: resources informing your planning and pedagogy, resources you use with your students.

SCIENCE

The Australian Curriculum Science

Science understanding

Science as a human endeavour

Science inquiry skills

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4. Science

4.1 Rationale

Science provides an empirical way of answering interesting and important questions about the biological, physical and technological world. The knowledge it produces has proved to be a reliable basis for action in our personal, social and economic lives. Science is a dynamic, collaborative and creative human endeavour arising from our desire to make sense of our world through exploring the unknown, investigating universal mysteries, making predictions and solving problems. Science aims to understand a large number of observations in terms of a much smaller number of broad principles. Science knowledge is contestable and is revised, refined and extended as new evidence arises.

The Australian Curriculum: Science provides opportunities for students to develop an understanding of important science concepts and processes, the practices used to develop scientific knowledge, of science's contribution to our culture and society, and its applications in our lives. The curriculum supports students to develop the scientific knowledge, understandings and skills to make informed decisions about local, national and global issues and to participate, if they so wish, in science-related careers.

In addition to its practical applications, learning science is a valuable pursuit in its own right. Students can experience the joy of scientific discovery and nurture their natural curiosity about the world around them. In doing this, they develop critical and creative thinking skills and challenge themselves to identify questions and draw evidence-based conclusions using scientific methods. The wider benefits of this “scientific literacy” are well established, including giving students the capability to investigate the natural world and changes made to it through human activity.

The science curriculum promotes six overarching ideas that highlight certain common approaches to a scientific view of the world and which can be applied to many of the areas of science understanding. These overarching ideas are patterns, order and organisation; form and function; stability and change; systems; scale and measurement; and matter and energy.

4.2 Aims

The Australian Curriculum: Science aims to ensure that students develop:

- an interest in science as a means of expanding their curiosity and willingness to explore, ask questions about and speculate on the changing world in which they live
- an understanding of the vision that science provides of the nature of living things, of the Earth and its place in the cosmos, and of the physical and chemical processes that explain the behaviour of all material things
- an understanding of the nature of scientific inquiry and the ability to use a range of scientific inquiry methods, including questioning; planning and conducting experiments and investigations based on ethical principles; collecting and analysing data; evaluating results; and drawing critical, evidence-based conclusions
- an ability to communicate scientific understanding and findings to a range of audiences, to justify ideas on the basis of evidence, and to evaluate and debate scientific arguments and claims

- an ability to solve problems and make informed, evidence-based decisions about current and future applications of science while taking into account ethical and social implications of decisions
- an understanding of historical and cultural contributions to science as well as contemporary science issues and activities and an understanding of the diversity of careers related to science
- a solid foundation of knowledge of the biological, chemical, physical, Earth and space sciences, including being able to select and integrate the scientific knowledge and methods needed to explain and predict phenomena, to apply that understanding to new situations and events, and to appreciate the dynamic nature of science knowledge.

4.3 Overview of Science

The Australian Curriculum

Science (Foundation to Year 10)

The Foundation to Year 10 Australian Curriculum: Science is designed to develop students' interests in science and an appreciation of how science provides a means of exploring and understanding the changing world in which they live. It provides an understanding of scientific inquiry methods, a foundation of knowledge across the disciplines of science; and develops an ability to communicate scientific understanding and use evidence to solve problems and make evidence-based decisions.

How is the Foundation to Year 10 Australian Curriculum: Science structured?

The Foundation to Year 10 Australian Curriculum: Science is organised in three interrelated strands:

- *Science understanding* – which focuses on the important science concepts from across different areas of science.
- *Science as a human endeavour* – which focuses on the nature and influence of science.
- *Science inquiry skills* – which focuses on skills essential for working scientifically.

Content descriptions are organised into sub-strands to illustrate the development of concepts through and across the year levels. The sub-strands contained in each strand are listed:

<i>Science understanding</i>	<i>Science as a human endeavour</i>	<i>Science inquiry skills</i>
<i>Biological sciences</i>	<i>Nature and development of science</i>	<i>Questioning and predicting</i>
<i>Chemical sciences</i>	<i>Use and influence of science</i>	<i>Planning and conducting</i>
<i>Earth and space sciences</i>		<i>Processing and analysing data and information</i>
<i>Physical sciences</i>		<i>Evaluating</i>
		<i>Communicating</i>

The *Science understanding* content descriptions are written by year level; the *Science as a human endeavour* and *Science inquiry skills* content descriptions are written for two-year bands.

The **general capabilities** and **cross curriculum priorities** are explicitly included in the content descriptions and elaborations across the strands, as appropriate to the learning area.

What are the overarching ideas?

There are a number of overarching ideas that represent key aspects of a scientific view of the world and bridge knowledge and understanding across the disciplines of science.

In the Foundation to Year 10 Australian Curriculum: Science, six overarching ideas support the coherence and developmental sequence of science knowledge within and across year levels. The overarching ideas frame the development of concepts in the *Science understanding* strand; support key aspects of the *Science inquiry skills* strand and can contribute to developing students' appreciation of the nature of science.

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The six overarching ideas that frame the Foundation to Year 10 Australian Curriculum: Science are:

- *Patterns, order and organisation*
- *Form and function*
- *Stability and change*
- *Scale and measurement*
- *Matter and energy*
- *Systems.*

What international references have been drawn upon in developing the Foundation to Year 10 Australian Curriculum: Science?

Development of the Foundation to Year 10 Australian Curriculum: Science has drawn on high quality national and international curricula and research.

In addition to Australia, Finland, Canada and Singapore were in the top ten highest performing countries in scientific literacy of those participating in the 2009 Programme for International Student Assessment (PISA).

In relation to the Finland science curriculum, the Foundation to Year 10 Australian Curriculum: Science has a similar level of cognitive demand, a greater emphasis on Science as a human endeavour, more flexibility in choice of learning contexts, a greater focus on sustainability and ecosystems, inquiry skills presented in a more developmental sequence, less focus on human body systems and less specificity in relation to the chemical sciences.

In relation to the Ontario (Canada) science curriculum, the Foundation to Year 10 Australian Curriculum: Science has very similar overall content, except that the Australian Curriculum has a greater emphasis on

learning about the nature and use of science, and includes more references to measurement in science.

In relation to the Singapore science curriculum, the Foundation to Year 10 Australian Curriculum: Science has a similar level of cognitive demand and focus on inquiry-based learning, less factual content, more clearly defined inquiry skills, and a greater focus on Earth sciences.

Compared to other curricula, the Foundation to Year 10 Australian Curriculum: Science emphasises the 'big picture' ideas of science through overarching ideas and important science concepts. It also makes more explicit the use of digital technologies in science.

For more information please go to:

www.australiancurriculum.edu.au/Science/Rationale.

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4.4 Science as a Human Endeavour

Through science, humans seek to improve their understanding and explanations of the natural world. Science involves the construction of explanations based on evidence and science knowledge can be changed as new evidence becomes available. Science influences society by posing, and responding to, social and ethical questions, and scientific research is itself influenced by the needs and priorities of society. This strand highlights the development of science as a unique way of knowing and doing, and the role of science in contemporary decision making and problem solving. It acknowledges that in making decisions about science practices and applications, ethical and social implications must be taken into account. This strand also recognises that science advances through the contributions of many different people from different cultures and that there are many rewarding science-based career paths.

The content in the Science as a Human Endeavour strand is described in two-year bands. There are two sub-strands of Science as a Human Endeavour. These are:

Nature and development of science

This sub-strand develops an appreciation of the unique nature of science and scientific knowledge, including how current knowledge has developed over time through the actions of many people.

Use and influence of science

This sub-strand explores how science knowledge and applications affect peoples' lives, including their work, and how science is influenced by society and can be used to inform decisions and actions.

Relationship between the strands

In the practice of science, the three strands of Science Understanding, Science as a Human Endeavour and Science Inquiry Skills are closely integrated; the work of scientists reflects the nature and development of science, is built around scientific inquiry and seeks to respond to and influence society's needs. Students' experiences of school science should mirror and connect to this multifaceted view of science.

To achieve this, the three strands of the Australian Curriculum: Science should be taught in an integrated way. The content descriptions of the three strands have been written so that at each year this integration is possible. In the earlier years, the 'Nature and development of science' sub-strand within the Science as a Human Endeavour strand focuses on scientific inquiry. This enables students to make clear connections between the inquiry skills that they are learning and the work of scientists. As students progress through the curriculum they investigate how science understanding has developed, including considering some of the people and the stories behind these advances in science.

They will also recognise how this science understanding can be applied to their lives and the lives of others. As students develop a more sophisticated understanding of the knowledge and skills of science they are increasingly able to appreciate the role of science in society. The content of the Science Understanding strand will inform students' understanding of contemporary issues, such as climate change, use of resources, medical interventions, biodiversity and the origins of the universe. The importance of these areas of science can be emphasised through the content of the Science as a Human Endeavour strand, and students can be encouraged to view contemporary science critically through aspects of the Science Inquiry Skills strand, for example by analysing, evaluating and communicating.

4.5 Activity: Refocusing with Science as a Human Endeavour

1. *Using the information on the previous page and the example discussed, consider a Science assessment or learning experience you currently use, and how you might refocus it using the lens of Science as a Human Endeavour.*

2. *How will you approach teaching the Science as a Human Endeavour strand?*

4.6 Activity: Comparing the Australian Curriculum: Science to the Queensland Science Essential Learnings

Consider the:

- Australian Curriculum: Science for a Year level in your phase of learning
- mapping of the Australian Curriculum: Science to the *Science Essential Learnings* for this Year level

3. What implications does the mapping have for your planning?

For example: resources informing your planning and pedagogy, resources you use with your students.

Queensland Studies Authority

154 Melbourne Street, South Brisbane

PO Box 307 Spring Hill

QLD 4004 Australia

T +61 7 3864 0299

F +61 7 3221 2553

www.qsa.qld.edu.au
