(no-code)

recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles

•

Elaborations

• exploring an augmented or virtual reality tour of a plant or animal to 'zoom in' and understand the scale of cells

• identifying the structure and function of organelles in cells including the nucleus, cell membrane, cell wall, cytoplasm, chloroplasts and vacuoles

• examining a variety of cells, including single-celled organisms, using a light microscope, a digital microscope, and photomicrographs

• comparing the similarities and differences of plant cells and animal cells visible with a light microscope and represented in a digital or physical

• designing a physical or digital of a cell and explaining how the the cell

• considering how the invention of the microscope has contributed to understanding of cell structure

Students learn to:

recognise cells as the basic units of living things, compare plant and animal cells, a the functions of specialised cell structures and organelles

(AC9S8U01)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Inquiring

• Identify, process and evaluate information

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Inquiring

• Identify, process and evaluate information

Managing and operating

• Select and operate tools

Inquiring

• Identify, process and evaluate information

Inquiring

• Identify, process and evaluate information

Managing and operating

• Select and operate tools

Inquiring

• Identify, process and evaluate information

Investigating

• Acquire and collate data

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Creating and exchanging

• Create, communicate and collaborate

Inquiring

• Identify, process and evaluate information

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
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• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Select and operate tools

Digital Literacy: Managing and operating: Select and operate tools

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• select and use the core features of digital tools to efficiently complete tasks
• troubleshoot basic problems and identify repetitive tasks to automate
• select and use the advanced or unfamiliar features of digital tools to efficiently complete tasks
• troubleshoot common problems and automate repetitive tasks
• select and operate advanced and emerging digital tools confidently
• troubleshoot common problems systematically and seek to improve efficiency by developing new skills

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources

• compare information and opinion that can be verified against claims based on personal preference

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the information selected to determine bias and reliability

Snapshot – Select and operate tools

Digital Literacy: Managing and operating: Select and operate tools

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• select and use the core features of digital tools to efficiently complete tasks

• troubleshoot basic problems and identify repetitive tasks to automate

• select and use the advanced or unfamiliar features of digital tools to efficiently complete tasks

• troubleshoot common problems and automate repetitive tasks

• select and operate advanced and emerging digital tools confidently

• troubleshoot common problems systematically and seek to improve efficiency by developing new skills

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources

• compare information and opinion that can be verified against claims based on personal preference

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the information selected to determine bias and reliability

Snapshot – Acquire and collate data

Digital Literacy: Investigating: Acquire and collate data

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• collect and access data using a range of digital tools and methods in response to a defined question or problem

• collect and access data from a range of sources, using specialised digital tools in response to problems, and evaluate it for relevance

• collect and evaluate quantitative and qualitative data using specialised digital tools and processes in the context of identified problems

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
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• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Create, communicate and collaborate

Digital Literacy: Creating and exchanging: Create, communicate and collaborate

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• select and control a variety of features in appropriate digital tools to create content and communicate and collaborate with trusted groups
• select and control advanced features of appropriate digital tools to independently create content and effectively communicate and collaborate with wider groups
• select and control the features of digital tools to purposefully create content and effectively communicate and collaborate, inclusive of diverse groups

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

AC9S8U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
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• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study

- identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
- evaluate the information selected to determine bias and reliability

AC9S8U02

analyse the between structure and function of cells, tissues and organs in a plant and an animal organ and explain how these enable survival of the individual

•

Elaborations

- comparing 2-dimensional and 3-dimensional of organ to understand how organs are positioned within the body
- comparing the structure and function of analogous in a plant and an animal
- examining the specialised cells and tissues involved in structure and function of particular organs in an organ
- describing the structure of each organ in a and relating its function to the overall function of the
- researching how a disorder in cells or tissues can affect how an organ functions, such as how hardening of the arteries can lead to poor circulation or heart disease
- investigating how an artificial organ mimics or augments the function or functions of a real organ

Students learn to:

analyse the relationship between structure and function of cells, tissues and organs an animal organ system and explain how these systems enable survival of the indiv

(AC9S8U02)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Inquiring

- Identify, process and evaluate information

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Analysing

- Interpret concepts and problems

Inquiring

- Identify, process and evaluate information

Analysing

- Interpret concepts and problems

Inquiring

- Identify, process and evaluate information

Analysing

- Interpret concepts and problems

Inquiring

- Identify, process and evaluate information

Analysing

- Interpret concepts and problems

Inquiring

- Identify, process and evaluate information

Analysing

- Interpret concepts and problems

Inquiring

- Identify, process and evaluate information

Reflecting

- Transfer knowledge

Reading and viewing

- Understanding texts

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Reflecting

• Transfer knowledge

Reading and viewing

• Understanding texts

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U02

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The following continuum extract shows the alignment of the continuum with this content.

• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources

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• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the information selected to determine bias and reliability

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context

• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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AC9S8U02

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U02

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

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AC9S8U02

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U02

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S8U02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• apply aspects of knowledge and skills gained in one context to a new or unrelated context to achieve a specific purpose

• transfer knowledge and skills gained in previous experiences to both similar and different contexts, and explain reasons for decisions and choices made

• identify, plan and justify opportunities to transfer knowledge into new contexts

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S8U02

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Comprehension

• reads and views some moderately complex texts (see Text complexity)

• accurately retells a text including most relevant details

• identifies main idea and related or supporting ideas in moderately complex texts (see Text complexity)

• evaluates the accuracy within and across texts on the same topic

• explains how authors use evidence and supporting detail to build and verify ideas

• draws inferences and verifies using textual evidence

Processes

• monitors reading for meaning using grammatical and contextual knowledge (see Fluency)

• explains how textual features support the text's purpose

• identifies and explains techniques used to present perspective (e.g. emotive or descriptive language, order in which ideas are presented)

• predicts the development of ideas based on a partial read (e.g. predicts the final chapter of a narrative, drawing on understanding of the textual features in the previous chapters)

• uses prior knowledge and context to read unknown words (e.g. uses morphemic knowledge of "explosion" to decode "explosive" and uses context and knowledge of metaphorical use of language to understand "explosive outburst")

• uses knowledge of cohesive devices to track meaning throughout a text (e.g. connectives such as "however", "on the other hand") (see Grammar)

• uses knowledge of the features and conventions of the type of text to build meaning (e.g. recognises that the beginning of a persuasive text may introduce the topic and the line of argument)

• identifies language features used to present opinions or points of view

• skims and scans texts for key words to track the development of ideas

• uses sophisticated punctuation to support meaning (e.g. commas to separate clauses in complex sentences)

Vocabulary

• uses knowledge of prefixes and suffixes to read and interpret unfamiliar words

• identifies how technical and discipline-specific words develop meaning in texts

• analyses the effect of antonyms, synonyms and idiomatic language

• understands precise meaning of words with similar connotations (e.g. "generous", "kind-hearted", "charitable")

Comprehension

• reads and views complex texts (see Text complexity)

• identifies the main themes or concepts in complex texts by synthesising key ideas or information

• summarises the text, identifying key details only

• draws inferences, synthesising clues and evidence across a text

• builds meaning by actively linking ideas from a number of texts or a range of digital sources

• distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)

• identifies different interpretations of the text citing evidence from a text

• evaluates language features for relevance to purpose and audience

• analyses texts that have more than one purpose and explains how parts of the text support a particular purpose

• analyses the use of language appropriate to different types of texts (e.g. compare the use of pun in imaginative and persuasive texts)

• identifies techniques used to obscure author's purpose (e.g. inclusion or omission of content)

Processes

• uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning

• uses knowledge of a broader range of cohesive devices to track meaning (e.g. word associations) (see Grammar)

• selects reading or viewing strategies appropriate to reading purpose (e.g. scans text for evidence)

• judiciously selects texts for learning area tasks and purposes

Vocabulary

• identifies language used to create tone or atmosphere

• analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)

• applies knowledge of base words and word origins to understand the meaning of unfamiliar, discipline-specific words

• uses a range of context and grammatical cues to understand unfamiliar words

• interprets complex figurative language (e.g. euphemisms, hyperbole)

Comprehension

• reads and views complex or some highly complex texts (see Text complexity)

• interprets abstract concepts integrating complex ideas

• analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)

• draws inferences using evidence from the text and discounting possible inferences that are not supported by the text

• applies and articulates criteria to evaluate the language structures and features for relevance to purpose and audience

• evaluates the reasoning and evidence in a persuasive text

• explains how context (e.g. time, place, situation) influences interpretations of a text

• analyses the author's perspectives in complex or some highly complex texts

• analyses the techniques authors use to position readers

• recognises when ideas or evidence have been omitted from a text to position the reader

Processes

• automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning

• describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")

• navigates extended texts including complex digital texts

Vocabulary

• demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")

• verifies interpretations of unfamiliar words using grammatical and contextual cues

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

- identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
- identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
- identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatio

Content description

AC9S8U02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
- compare information and opinion that can be verified against claims based on personal preference
- identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
- evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
- identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
- evaluate the information selected to determine bias and reliability

Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S8U02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- apply aspects of knowledge and skills gained in one context to a new or unrelated context to achieve a specific purpose
- transfer knowledge and skills gained in previous experiences to both similar and different contexts, and explain reasons for decisions and choices made
- identify, plan and justify opportunities to transfer knowledge into new contexts

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S8U02

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Comprehension

- reads and views some moderately complex texts (see Text complexity)
- accurately retells a text including most relevant details
- identifies main idea and related or supporting ideas in moderately complex texts (see Text complexity)
- evaluates the accuracy within and across texts on the same topic
- explains how authors use evidence and supporting detail to build and verify ideas
- draws inferences and verifies using textual evidence

Processes

- monitors reading for meaning using grammatical and contextual knowledge (see Fluency)
- explains how textual features support the text's purpose
- identifies and explains techniques used to present perspective (e.g. emotive or descriptive language, order in which ideas are presented)
- predicts the development of ideas based on a partial read (e.g. predicts the final chapter of a narrative, drawing on understanding of the textual features in the previous chapters)

• uses prior knowledge and context to read unknown words (e.g. uses morphemic knowledge of "explosion" to decode "explosive" and uses context and knowledge of metaphorical use of language to understand "explosive outburst")

• uses knowledge of cohesive devices to track meaning throughout a text (e.g. connectives such as "however", "on the other hand") (see Grammar)

• uses knowledge of the features and conventions of the type of text to build meaning (e.g. recognises that the beginning of a persuasive text may introduce the topic and the line of argument)

• identifies language features used to present opinions or points of view

• skims and scans texts for key words to track the development of ideas

• uses sophisticated punctuation to support meaning (e.g. commas to separate clauses in complex sentences)

Vocabulary

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• understands precise meaning of words with similar connotations (e.g. "generous", "kind-hearted", "charitable")

Comprehension

• reads and views complex texts (see Text complexity)

• identifies the main themes or concepts in complex texts by synthesising key ideas or information

• summarises the text, identifying key details only

• draws inferences, synthesising clues and evidence across a text

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• distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)

• identifies different interpretations of the text citing evidence from a text

• evaluates language features for relevance to purpose and audience

• analyses texts that have more than one purpose and explains how parts of the text support a particular purpose

• analyses the use of language appropriate to different types of texts (e.g. compare the use of pun in imaginative and persuasive texts)

• identifies techniques used to obscure author's purpose (e.g. inclusion or omission of content)

Processes

• uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning

• uses knowledge of a broader range of cohesive devices to track meaning (e.g. word associations) (see Grammar)

• selects reading or viewing strategies appropriate to reading purpose (e.g. scans text for evidence)

• judiciously selects texts for learning area tasks and purposes

Vocabulary

• identifies language used to create tone or atmosphere

• analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)

• applies knowledge of base words and word origins to understand the meaning of unfamiliar, discipline-specific words

• uses a range of context and grammatical cues to understand unfamiliar words

• interprets complex figurative language (e.g. euphemisms, hyperbole)

Comprehension

• reads and views complex or some highly complex texts (see Text complexity)

• interprets abstract concepts integrating complex ideas

• analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)

• draws inferences using evidence from the text and discounting possible inferences that are not supported by the text

• applies and articulates criteria to evaluate the language structures and features for relevance to

purpose and audience
- evaluates the reasoning and evidence in a persuasive text
- explains how context (e.g. time, place, situation) influences interpretations of a text
- analyses the author's perspectives in complex or some highly complex texts
- analyses the techniques authors use to position readers
- recognises when ideas or evidence have been omitted from a text to position the reader

Processes
- automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning
- describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")
- navigates extended texts including complex digital texts

Vocabulary
- demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")
- verifies interpretations of unfamiliar words using grammatical and contextual cues

AC9S8U03

investigate tectonic activity including the formation of geological features at divergent, convergent and transform plate boundaries and describe the scientific for the of plate tectonics

•

Elaborations
- examining of earthquake and volcanic activity over time and proposing
- evaluating the impact of tectonic events on human populations and examining engineering solutions designed to reduce the impact
- modelling interactions at plate boundaries
- investigating the relative significance of different involved in tectonic plate movement including slab pull, ridge push and convection
- relating the extreme age and stability of a large part of the Australian continent to its plate tectonic history
- constructing a timeline of to show the development of the of plate tectonics
- exploring how geologist and oceanographic cartographer Marie Tharp's topographic maps of the Atlantic Ocean floor provided support for the acceptance of the of plate tectonics
- researching First Nations Australians' cultural accounts that provide of earthquakes and volcanoes

Students learn to:

investigate tectonic activity including the formation of geological features at diverge convergent and transform plate boundaries and describe the scientific evidence for plate tectonics

(AC9S8U03)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Generating
- Create possibilities

Inquiring
- Identify, process and evaluate information

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Analysing
- Interpret concepts and problems

Inquiring
- Identify, process and evaluate information

Statistics and probability
- Interpreting and representing data

Analysing

• Interpret concepts and problems

• Draw conclusions and provide reasons

Systems

• All life forms, including human life, are connected through Earth's systems (geosphere, biosphere, hydrosphere and atmosphere) on which they depend for their wellbeing and survival.

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Reflecting

• Transfer knowledge

Engaging with cultural and linguistic diversity

• Develop multiple perspectives

Country/Place

• The First Peoples of Australia are the Traditional Owners of Country/Place, protected in Australian Law by the Native Title Act 1993 which recognises pre-existing sovereignty, continuing■systems of law and customs, and connection to Country/Place. This recognised legal right provides for economic sustainability and a voice into the development■and management of Country/Place.

People

• First Nations Australians have sophisticated political, economic and social organisation systems, which include family and kinship structures, laws, traditions, customs, land tenure systems, and protocols for strong governance and authority.

Related content

This content description can be taught with the following content descriptions from other learning areas.

AC9HG8K01

Snapshot – Create possibilities

Critical and Creative Thinking: Generating: Create possibilities

Content description

AC9S8U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• create possibilities by changing, combining, or elaborating on new and known ideas in a variety of creative ways

• create possibilities by adapting, combining or elaborating on new and known ideas, and proposing a range of different or creative combinations

• create possibilities by connecting or adapting complex ideas and proposing innovative and detailed variations or combinations

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate information

Content description

AC9S8U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate information

Content description

AC9S8U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S8U03

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Collecting, displaying, interpreting and analysing numerical data

• poses questions based on variations in continuous numerical data and chooses the appropriate method to collect and record data (e.g. collects information on the heights of buildings or daily temperatures, tabulates the results and represents these graphically; uses a survey to collect

primary data or secondary data extracted from census data)

• uses numerical and graphical representations relevant to the purpose of the collection of the data and explains their reasoning (e.g. "I can't use a frequency histogram for categorical data because there is no numerical connection between the categories"; converts their data to percentages in order to compare the girls' results to those of the boys, as the total number of boys and girls who participated in the survey was different)

• determines and calculates the most appropriate statistic to describe the spread of data (e.g. when creating an infographic, uses the mean of the data to describe household income and the median of the data for house prices)

• calculates simple descriptive statistics such as mode, mean or median as measures to represent typical values of a distribution (e.g. describes the mean kilojoule intake and median hours of exercise of a sample population when investigating community health and wellbeing; describes central tendency when analysing road safety statistics)

• compares the usefulness of different representations of the same data (e.g. chooses to use a line graph to illustrate trends, a bar graph to compare the living standards of different economies and a histogram to show income distribution)

• describes the spread of a data distribution in terms of the range, clusters, skewness and symmetry of the graphical display, and determines and makes connections to the mode, median and mean of the data

Interpreting graphical representations

• uses features of graphical representations to make predictions (e.g. predicts audience numbers based on historical data; interprets a range of graphs to identify possible trends and make predictions such as economic growth, stock prices, interest rates, population growth)

• summarises data using fractions, percentages and decimals (e.g. 2 3 $\frac{2}{3}$ 3 2 ■ of a class live in the same suburb; represents road safety and sun safety statistics as a percentage of the Australian population)

• explains that continuous variables depicting growth or change often vary over time (e.g. creates growth charts to illustrate impacts of financial decisions; describes patterns in inflation rates, employment rates, migration rates over time; represents changes to fitness levels following the implementation of a personal fitness plan; interprets temperature charts)

• interprets graphs depicting motion such as distance–time and velocity–time graphs

• interprets and describes patterns in graphical representations of data from real-life situations such as the motion of a rollercoaster, flight trajectory of a basketball shot and the spread of disease

• investigates the association of 2 2 2 numerical variables through the representation and interpretation of bivariate data (e.g. uses scatter plots to represent bivariate data when investigating the relationship between 2 2 2 variables, such as income per capita, population density and life expectancy for different socio-economic groups)

• investigates, represents and interprets time series data (e.g. interrogates a time series graph showing the change in costs over time; uses a maximum daily temperature chart to determine the average temperature for the month)

• interprets the impact of changes to data (e.g. recognises the impact of outliers on a data set such as the income of a world-class professional athlete on the average income of players at the state/territory level; uses digital tools to enhance the quality of data in a science investigation)

Sampling

• considers the context when determining whether to use data from a sample or a population

• determines what type of sample to use from a population (e.g. decides to use a representative sample when conducting targeted market research or when researching beliefs about a health-related issue)

• makes reasonable statements about a population based on evidence from samples (e.g. considers accuracy of representation of marginalised individuals or population groups)

• plans, executes and reports on sampling-based investigations, taking into account validity of methodology and consistency of data, to answer questions formulated by the student

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U03
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Draw conclusions and provide reasons
Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

Content description

AC9S8U03
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks by connecting evidence from within and across discipline areas to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks, using analysis of complex evidence and arguments before making recommendations

Snapshot – Identify, process and evaluate information
Critical and Creative Thinking: Inquiring: Identify, process and evaluate information

Content description

AC9S8U03
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Interpret concepts and problems
Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U03
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information
Critical and Creative Thinking: Inquiring: Identify, process and evaluate information

Content description

AC9S8U03
Continuum extract

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

AC9S8U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
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• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

AC9S8U03

Continuum extract

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• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
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• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U03

Continuum extract

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• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S8U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• apply aspects of knowledge and skills gained in one context to a new or unrelated context to achieve a specific purpose
• transfer knowledge and skills gained in previous experiences to both similar and different contexts, and explain reasons for decisions and choices made
• identify, plan and justify opportunities to transfer knowledge into new contexts

Snapshot – Develop multiple perspectives

Intercultural Understanding: Engaging with cultural and linguistic diversity: Deve perspectives

Content description

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• examine how cultural beliefs or practices influence their own perspectives, and those of others, when discussing unfamiliar topics
• consider multiple perspectives held on unfamiliar topics, identifying commonality and difference, and describe how perspectives may be influenced by cultural beliefs and practices
• analyse unfamiliar topics and develop respectful responses, reconciling different cultural perspectives

AC9S8U04

describe the key processes of the rock cycle, including the timescales over which they occur, and examine how the of sedimentary, igneous and metamorphic rocks reflect their formation and influence their use

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Elaborations

• comparing the of different types of rocks and identifying them using a provided dichotomous key
• exploring the major processes of the rock cycle including , , , melting, crystallisation, uplift, heat and pressure in the formation of different types of rocks
• analysing the role of and heat energy in the formation of different types of rocks and comparing how quickly or slowly different processes can occur
• examining fossil , such as body, trace or opalised fossils, to predict how and when a rock was formed
• explaining the uses of different types of rocks with reference to their and formation
• exploring the traditional geological knowledges of First Nations Australians that are used in the selection of different rock types for different purposes
• investigating how First Nations Australians have used quarrying to access rocks for use as or production of everyday objects such as grindstones, hammerstones, anvils and cutting tools
• exploring how the mining of ores and minerals impacts on local and examining environmental rehabilitation initiatives
Students learn to:

describe the key processes of the rock cycle, including the timescales over which th

examine how the properties of sedimentary, igneous and metamorphic rocks reflect

influence their use

(AC9S8U04)
General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.
Generating

• Create possibilities
Inquiring

• Identify, process and evaluate information
Systems

• All life forms, including human life, are connected through Earth's systems (geosphere, biosphere, hydrosphere and atmosphere) on which they depend for their wellbeing and survival.
Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .
Analysing

• Interpret concepts and problems
Inquiring

• Identify, process and evaluate information
Speaking and listening

• Interacting

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Systems

• All life forms, including human life, are connected through Earth's systems (geosphere, biosphere, hydrosphere and atmosphere) on which they depend for their wellbeing and survival.

Measurement and geometry

• Measuring time

Systems

• All life forms, including human life, are connected through Earth's systems (geosphere, biosphere, hydrosphere and atmosphere) on which they depend for their wellbeing and survival.

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Inquiring

• Identify, process and evaluate information

Social management

• Communication

Engaging with cultural and linguistic diversity

• Develop multiple perspectives

Culture

• First Nations Australians' ways of life reflect unique ways of being, knowing, thinking and doing.

Country/Place

• The First Peoples of Australia are the Traditional Owners of Country/Place, protected in Australian Law by the Native Title Act 1993 which recognises pre-existing sovereignty, continuing■systems of law and customs, and connection to Country/Place. This recognised legal right provides for economic sustainability and a voice into the development■and management of Country/Place.

Engaging with cultural and linguistic diversity

• Develop multiple perspectives

Culture

• First Nations Australians' ways of life reflect unique ways of being, knowing, thinking and doing.

Country/Place

• The First Peoples of Australia are the Traditional Owners of Country/Place, protected in Australian Law by the Native Title Act 1993 which recognises pre-existing sovereignty, continuing■systems of law and customs, and connection to Country/Place. This recognised legal right provides for economic sustainability and a voice into the development■and management of Country/Place.

Analysing

• Evaluate actions and outcomes

Inquiring

• Identify, process and evaluate information

Design

• Sustainably designed products, environments and services aim to minimise the impact on or restore the quality and diversity of environmental, social and economic systems.

Systems

• Social, economic and political systems influence the sustainability of Earth's systems.

Related content

This content description can be taught with the following content descriptions from other learning areas.

AC9HG8K01

Snapshot – Create possibilities

Critical and Creative Thinking: Generating: Create possibilities

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• create possibilities by changing, combining, or elaborating on new and known ideas in a variety of creative ways
• create possibilities by adapting, combining or elaborating on new and known ideas, and proposing a range of different or creative combinations
• create possibilities by connecting or adapting complex ideas and proposing innovative and detailed variations or combinations

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
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• evaluate the information selected to determine bias and reliability

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S8U04

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.
• critically evaluate ideas and claims made by a speaker
• explains new learning from interacting with others
• appropriately presents an alternative point to the previous speaker
• initiates interactions confidently in group and whole-class discussions
• poses pertinent questions to make connections between a range of ideas
• uses open questions to prompt a speaker to provide more information
• clarifies task goals and negotiates roles in group learning
• monitors discussion to manage digression from the topic
• identifies and articulates the perspective of a speaker, to move a conversation forward
• interacts within school context or the broader community, adjusting language and responses to suit purpose and audience
• synthesises ideas from group discussion into a common theme or hypothesis
• poses problems, hypothesises and formulates questions about abstract ideas in group situations
• restates different views and makes suggestions to negotiate agreement
• poses questions to clarify assumptions made by the speaker
• questions others to evaluate accuracy of thinking or problem-solving processes
• uses language to align the listener with personal position (e.g. "of course", "as you can imagine", "obviously")
• interacts strategically and confidently with a broad range of interactional partners
• gives an extended explanation and evaluation of a complex concept, issue or process
• justifies a personal stance, after analysis of arguments on a particular issue, using evidence and elaboration in a group situation
• uses language strategically to subtly align others to own perspective as appropriate to audience and purpose

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
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• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
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• evaluate the information selected to determine bias and reliability

Snapshot – Measuring time

Numeracy: Measurement and geometry: Measuring time

Content description

AC9S8U04

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Converting between units of time

• interprets and converts between 12 12 1 2 -hour and 24 24 2 4 -hour digital time, and analog and digital representations of time to solve duration problems
• converts between units of time, using appropriate conversion rates, to solve problems involving time (e.g. uses that there are 60 60 6 0 seconds in a minute to calculate the percentage improvement a 1500 1500 1 5 0 0 m runner made to their personal best time)
• uses rates involving time to solve problems (e.g. "travelling at 60 60 6 0 km/h, how far will I travel in 30 30 3 0 minutes?"; adjusts cooking or baking times based on weight or the size of the container)

Measuring time with large and small timescales

• uses appropriate metric prefixes to measure both large and small durations of time (e.g. millennia, nanoseconds)
• constructs timelines using an appropriate scale (e.g. chronologically sequences historical events)

Measuring how things change over time

• investigates, describes and interprets data collected over time (e.g. uses a travel graph to describe a journey; interprets data collected over a period of time using a graphical representation and makes a prediction for the future behaviour of the data)

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate information

Content description

AC9S8U04

Continuum extract

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• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
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• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Communication

Personal and Social capability: Social management: Communication

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• apply skills to address factors that influence verbal and non-verbal communication
• demonstrate communication skills in a range of contexts, responding to the enablers of, and barriers to, effective verbal and non-verbal communication
• devise strategies that apply effective verbal and non-verbal communication in response to feedback

Snapshot – Develop multiple perspectives

Intercultural Understanding: Engaging with cultural and linguistic diversity: Deve perspectives

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• examine how cultural beliefs or practices influence their own perspectives, and those of others, when discussing unfamiliar topics
• consider multiple perspectives held on unfamiliar topics, identifying commonality and difference, and describe how perspectives may be influenced by cultural beliefs and practices
• analyse unfamiliar topics and develop respectful responses, reconciling different cultural perspectives

Snapshot – Develop multiple perspectives

Intercultural Understanding: Engaging with cultural and linguistic diversity: Deve perspectives

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• examine how cultural beliefs or practices influence their own perspectives, and those of others, when discussing unfamiliar topics
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• analyse unfamiliar topics and develop respectful responses, reconciling different cultural perspectives

Snapshot – Evaluate actions and outcomes

Critical and Creative Thinking: Analysing: Evaluate actions and outcomes

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• evaluate the effectiveness of a course of action or the outcome of a task, including using a given or co-developed set of criteria to support decisions

• evaluate the effectiveness of a course of action or the outcome of a task and account for expected and unexpected results, including using a given or co-developed set of criteria to support decisions

• evaluate the effectiveness of a course of action to achieve desired outcomes and suggest improvements, including using a personally developed set of criteria to support judgements and decisions

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate information

Content description

AC9S8U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources

• compare information and opinion that can be verified against claims based on personal preference

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the information selected to determine bias and reliability

AC9S8U05

classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple

•

Elaborations

• investigating between kinetic and potential energy in a simple such as a roller-coaster or Newton's cradle

• classifying types of energy as either kinetic energy such as movement, heat and electricity or potential energy such as chemical, elastic and gravitational

• critiquing and using such as flow diagrams to illustrate changes between different forms of energy in a

• identifying where heat energy is produced as a by-product of energy transfer, such as filament light globes, exercise, and battery charging and use

• using electrical circuits and components to demonstrate electrical energy transfer and its transformation into heat, light and sound

• observing a Rube Goldberg machine and identifying the energy transfers and transformations involved

• investigating traditional fire-starting methods used by First Nations Australians and their understandings of the transformation of energy

Students learn to:

classify different types of energy as kinetic or potential and investigate energy trans transformations in simple systems

(AC9S8U05)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Generating

• Create possibilities

Inquiring

• Identify, process and evaluate information

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Analysing

• Interpret concepts and problems

Reflecting

• Transfer knowledge

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Engaging with cultural and linguistic diversity

• Develop multiple perspectives

Culture

• First Nations Australians' ways of life reflect unique ways of being, knowing, thinking and doing.

People

• Australia has 2 distinct First Nations Peoples; each encompasses a diversity of nations across Australia. Aboriginal Peoples are the first peoples of Australia and have occupied the Australian continent for more than 60,000 years. Torres Strait Islander Peoples are the First Nations Peoples of the Torres Strait and have occupied the region for over 4,000 years.

Related content

This content description can be taught with the following content descriptions from other learning areas.

AC9TDE8K03

Resources

Work Samples

WS01 - Bouncing ball

Snapshot – Create possibilities

Critical and Creative Thinking: Generating: Create possibilities

Content description

AC9S8U05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• create possibilities by changing, combining, or elaborating on new and known ideas in a variety of creative ways

• create possibilities by adapting, combining or elaborating on new and known ideas, and proposing a range of different or creative combinations

• create possibilities by connecting or adapting complex ideas and proposing innovative and detailed variations or combinations

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatio

Content description

AC9S8U05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S8U05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• apply aspects of knowledge and skills gained in one context to a new or unrelated context to achieve a specific purpose
• transfer knowledge and skills gained in previous experiences to both similar and different contexts, and explain reasons for decisions and choices made
• identify, plan and justify opportunities to transfer knowledge into new contexts

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
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• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U05

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U05

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U05

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U05

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

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Snapshot – Develop multiple perspectives

Intercultural Understanding: Engaging with cultural and linguistic diversity: Deve perspectives

Content description

AC9S8U05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- examine how cultural beliefs or practices influence their own perspectives, and those of others,

when discussing unfamiliar topics
• consider multiple perspectives held on unfamiliar topics, identifying commonality and difference, and describe how perspectives may be influenced by cultural beliefs and practices
• analyse unfamiliar topics and develop respectful responses, reconciling different cultural perspectives

Resource – WS01 - Bouncing ball

By the end of Year 8 students explain the role of specialised cell structures and organelles in cellular function and analyse the relationship between structure and function at organ and body system levels. They apply an understanding of the theory of plate tectonics to explain patterns of change in the geosphere. They explain how the properties of rocks relate to their formation and influence their use. They compare different forms of energy and represent transfer and transformation of energy in simple systems. They classify and represent different types of matter and distinguish between physical and chemical change. Students analyse how different factors influence development of and lead to changes in scientific knowledge. They analyse the key considerations that inform scientific responses and how these responses impact society. They analyse the importance of science communication in shaping viewpoints, policies and regulations.

Students plan and conduct safe, reproducible investigations to test relationships and explore models. They describe potential ethical issues and intercultural considerations needed for specific field locations or use of secondary data. They select and use equipment to generate and record data with precision. They select and construct appropriate representations to organise and process data and information. They analyse data and information to describe patterns, trends and relationships and identify anomalies. They identify assumptions and sources of error in methods and analyse conclusions and claims with reference to conflicting evidence and unanswered questions. They construct evidence-based arguments to support conclusions and evaluate claims. They select and use language and text features appropriately for their purpose when communicating their ideas, findings and arguments to specific audiences.

AC9S8U05

classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems

AC9S8I01

develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships

AC9S8I02

plan and conduct reproducible investigations to answer questions and test hypotheses, including identifying variables and assumptions and, as appropriate, recognising and managing risks, considering ethical issues and recognising key considerations regarding heritage sites and artefacts on Country/Place

AC9S8I03

select and use equipment to generate and record data with precision, using digital tools as appropriate

AC9S8I04

select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information

AC9S8I05

analyse data and information to describe patterns, trends and relationships and identify anomalies

AC9S8I07

construct evidence-based arguments to support conclusions or evaluate claims and consider any ethical issues and cultural protocols associated with using or citing secondary data or information

AC9S8I08

write and create texts to communicate ideas, findings and arguments for specific purposes and

audiences, including selection of appropriate language and text features, using digital tools as appropriate

AC9S8U06

classify as elements, compounds or mixtures and compare different of these, including 2-dimensional and 3-dimensional , symbols for elements and formulas for molecules and compounds

•

Elaborations

• using virtual and physical to distinguish between elements and compounds in terms of types of atoms

• examining how Dmitri Mendeleev arranged the elements in the first version of the periodic table and comparing his arrangement with the current version

• explaining why elements are represented by symbols, compounds and molecules by formulas and mixtures by percentages

• using to show the classification of as elements, compounds and different types of mixtures such as solutions, suspensions and colloids

• examining the information conveyed by different types of of elements and compounds and identifying where and why these different are used

• creating a timeline or to show how the concept of an element has changed over time from Democritus to John Dalton

Students learn to:

classify matter as elements, compounds or mixtures and compare different represe including 2-dimensional and 3-dimensional models, symbols for elements and form and compounds

(AC9S8U06)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Generating

• Create possibilities

Inquiring

• Identify, process and evaluate information

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Speaking and listening

• Speaking

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Inquiring

• Identify, process and evaluate information

Snapshot – Create possibilities

Critical and Creative Thinking: Generating: Create possibilities

Content description

AC9S8U06

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• create possibilities by changing, combining, or elaborating on new and known ideas in a variety of creative ways
• create possibilities by adapting, combining or elaborating on new and known ideas, and proposing a range of different or creative combinations
• create possibilities by connecting or adapting complex ideas and proposing innovative and detailed variations or combinations

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U06

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
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• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U06

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U06

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8U06

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U06

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Snapshot – Speaking

Literacy: Speaking and listening: Speaking

Content description

AC9S8U06

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Crafting ideas

• creates spoken texts responsive to audience and a broad range of learning area topics, clearly articulating words and ideas
• organises more complex ideas or concepts logically, selecting details to accentuate key points

- speaks audibly and coherently to a less familiar audience for a sustained period
- shows increasing awareness of audience by moderating length, content and delivery of spoken texts
- adjusts register according to purpose and audience
- does research to prepare spoken texts
- uses a range of technology, and audio and visual resources to engage audience and enhance content

Vocabulary

- varies vocabulary to add interest and to describe with greater precision (e.g. uses topic-specific noun groups/phrases such as "exploitation of resources") (see Grammar)
- uses language creatively (e.g. "the moon shines bravely")
- uses sensory vocabulary to engage the audience (e.g. "a gasp of dismay")
- uses technical vocabulary to demonstrate topic knowledge (e.g. "deforestation")
- consistently uses a range of synonyms to add variety and precision to spoken text
- uses abstractions (e.g. "freedom", "fairness")

Crafting ideas

- creates spoken texts which explore and interpret concepts drawn from research or learning area content
- selects voice appropriate to purpose (e.g. third person to create distance and authority or first person to achieve personal connection)
- develops complex ideas or a central theme across a spoken text
- uses language features according to purpose, to impact the audience (e.g. uses more complex connectives such as "consequently", "accordingly" to explain)
- rephrases or clarifies to repair or refine meaning
- uses language structures and features appropriate to learning area content
- uses technologies and visual and audio resources to enhance meaning and effect in presentations

Vocabulary

- selects vocabulary to intensify and sharpen the focus (e.g. "scarcely", "absolutely", "real", "simply")
- uses a range of evaluative language to express opinions or convey emotion (e.g. "significant benefits", "devastating consequences")
- uses a range of emotive language appropriate to topic, purpose and audience
- uses rich, evocative, descriptive language
- uses figurative language (e.g. "hungry for success")

Crafting ideas

- creates complex and creative spoken texts which analyse and evaluate issues drawn from research or learning area content
- includes a range of alternative viewpoints in spoken texts, where appropriate
- controls and manipulates a sophisticated range of language features to affect the audience
- uses a range of rhetorical devices and humour to engage an audience
- references and quotes authorities or statistics to add authority (e.g. "according to a recent OECD report")
- delivers spoken text flexibly, allowing for questions and maintaining the flow of ideas

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U06

Continuum extract

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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AC9S8U06

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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AC9S8U07

compare physical and chemical changes and identify indicators of energy change in chemical reactions

•

Elaborations

• performing simple chemical reactions to identify the indicators of chemical change such as gas production, solid production, colour change and temperature change
• analysing and interpreting on the of substances before and after the substances interact to determine if a chemical or physical change has occurred
• investigating and identifying energy changes in different chemical reactions such as differences in temperature
• examining how the physical and chemical of a substance will affect its production or use
• discussing where indicators of chemical change are used for identifying the presence of particular substances, such as in soil, water and medical testing kits

Students learn to:

compare physical and chemical changes and identify indicators of energy change i

(AC9S8U07)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Generating

• Create possibilities

Inquiring

• Identify, process and evaluate information

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Reflecting

• Transfer knowledge

Analysing

• Interpret concepts and problems

Reflecting

• Transfer knowledge

Snapshot – Create possibilities

Critical and Creative Thinking: Generating: Create possibilities

Content description

AC9S8U07

Continuum extract

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• create possibilities by connecting or adapting complex ideas and proposing innovative and detailed variations or combinations

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

AC9S8U07

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8U07

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

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Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

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Critical and Creative Thinking: Analysing: Interpret concepts and problems

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Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S8U07

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

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Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S8U07

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• identify, plan and justify opportunities to transfer knowledge into new contexts

AC9S8H01

explain how new or different perspectives can lead to changes in scientific knowledge

•

•

Elaborations

• identifying how technological developments, such as those related to microscopes and medical imaging, have led to improved understanding of cells and organs

• considering how advances in technologies have enabled the repair and replacement of organs using synthetic

• analysing how sustainability priorities such as efficiency and limiting environmental impact have led to innovative practices in mining and mine site regeneration

• examining the that led to the acceptance of the of plate tectonics over the idea of continental drift

• investigating how advances in deep Earth imaging techniques have enabled identification of mineral, energy and water resources beneath surface sedimentary rock

• discussing the story of Sir Isaac Newton's discovery of gravity or the questions that Albert Einstein asked which led him to developing a new

• researching why Dmitri Mendeleev developed a different of the periodic table

Students learn to:

explain how new evidence or different perspectives can lead to changes in scientifi

(AC9S8H01)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Reading and viewing

• Understanding texts

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Inquiring

• Identify, process and evaluate information

Inquiring

• Identify, process and evaluate information

Analysing

• Draw conclusions and provide reasons

Inquiring

• Identify, process and evaluate information

Design

• Creative and innovative design is integral to the identification of new ways of sustainable living.

• Sustainable design requires an awareness of place, past practices, research and technological developments, and balanced judgements based on projected environmental, social and economic impacts.

Analysing

• Draw conclusions and provide reasons

Inquiring

• Identify, process and evaluate information

Reading and viewing

• Understanding texts

Analysing

• Interpret concepts and problems
Inquiring
• Identify, process and evaluate information
Speaking and listening
• Interacting
Analysing
• Interpret concepts and problems
Inquiring
• Identify, process and evaluate information
Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8H01
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• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context
Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8H01
Continuum extract

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• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability
Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S8H01
Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.
Comprehension
• reads and views some moderately complex texts (see Text complexity)
• accurately retells a text including most relevant details
• identifies main idea and related or supporting ideas in moderately complex texts (see Text complexity)
• evaluates the accuracy within and across texts on the same topic
• explains how authors use evidence and supporting detail to build and verify ideas
• draws inferences and verifies using textual evidence
Processes
• monitors reading for meaning using grammatical and contextual knowledge (see Fluency)

• explains how textual features support the text's purpose
• identifies and explains techniques used to present perspective (e.g. emotive or descriptive language, order in which ideas are presented)
• predicts the development of ideas based on a partial read (e.g. predicts the final chapter of a narrative, drawing on understanding of the textual features in the previous chapters)
• uses prior knowledge and context to read unknown words (e.g. uses morphemic knowledge of "explosion" to decode "explosive" and uses context and knowledge of metaphorical use of language to understand "explosive outburst")
• uses knowledge of cohesive devices to track meaning throughout a text (e.g. connectives such as "however", "on the other hand") (see Grammar)
• uses knowledge of the features and conventions of the type of text to build meaning (e.g. recognises that the beginning of a persuasive text may introduce the topic and the line of argument)
• identifies language features used to present opinions or points of view
• skims and scans texts for key words to track the development of ideas
• uses sophisticated punctuation to support meaning (e.g. commas to separate clauses in complex sentences)

Vocabulary

• uses knowledge of prefixes and suffixes to read and interpret unfamiliar words
• identifies how technical and discipline-specific words develop meaning in texts
• analyses the effect of antonyms, synonyms and idiomatic language
• understands precise meaning of words with similar connotations (e.g. "generous", "kind-hearted", "charitable")

Comprehension

• reads and views complex texts (see Text complexity)
• identifies the main themes or concepts in complex texts by synthesising key ideas or information
• summarises the text, identifying key details only
• draws inferences, synthesising clues and evidence across a text
• builds meaning by actively linking ideas from a number of texts or a range of digital sources
• distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)
• identifies different interpretations of the text citing evidence from a text
• evaluates language features for relevance to purpose and audience
• analyses texts that have more than one purpose and explains how parts of the text support a particular purpose
• analyses the use of language appropriate to different types of texts (e.g. compare the use of pun in imaginative and persuasive texts)
• identifies techniques used to obscure author's purpose (e.g. inclusion or omission of content)

Processes

• uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning
• uses knowledge of a broader range of cohesive devices to track meaning (e.g. word associations) (see Grammar)
• selects reading or viewing strategies appropriate to reading purpose (e.g. scans text for evidence)
• judiciously selects texts for learning area tasks and purposes

Vocabulary

• identifies language used to create tone or atmosphere
• analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)
• applies knowledge of base words and word origins to understand the meaning of unfamiliar, discipline-specific words
• uses a range of context and grammatical cues to understand unfamiliar words
• interprets complex figurative language (e.g. euphemisms, hyperbole)

Comprehension

• reads and views complex or some highly complex texts (see Text complexity)
• interprets abstract concepts integrating complex ideas

• analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)
• draws inferences using evidence from the text and discounting possible inferences that are not supported by the text
• applies and articulates criteria to evaluate the language structures and features for relevance to purpose and audience
• evaluates the reasoning and evidence in a persuasive text
• explains how context (e.g. time, place, situation) influences interpretations of a text
• analyses the author's perspectives in complex or some highly complex texts
• analyses the techniques authors use to position readers
• recognises when ideas or evidence have been omitted from a text to position the reader

Processes

• automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning
• describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")
• navigates extended texts including complex digital texts

Vocabulary

• demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")
• verifies interpretations of unfamiliar words using grammatical and contextual cues

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

AC9S8H01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

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• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Draw conclusions and provide reasons

Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

Content description

AC9S8H01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks by connecting evidence from within and across discipline areas to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks, using analysis of complex evidence and arguments before making recommendations

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatio

Content description

AC9S8H01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Draw conclusions and provide reasons

Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

Content description

AC9S8H01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks by connecting evidence from within and across discipline areas to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks, using analysis of complex evidence and arguments before making recommendations

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatio

Content description

AC9S8H01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
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• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S8H01

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Comprehension

• reads and views some moderately complex texts (see Text complexity)

• accurately retells a text including most relevant details

• identifies main idea and related or supporting ideas in moderately complex texts (see Text complexity)

• evaluates the accuracy within and across texts on the same topic

• explains how authors use evidence and supporting detail to build and verify ideas

• draws inferences and verifies using textual evidence

Processes

• monitors reading for meaning using grammatical and contextual knowledge (see Fluency)

• explains how textual features support the text's purpose

• identifies and explains techniques used to present perspective (e.g. emotive or descriptive language, order in which ideas are presented)

• predicts the development of ideas based on a partial read (e.g. predicts the final chapter of a narrative, drawing on understanding of the textual features in the previous chapters)

• uses prior knowledge and context to read unknown words (e.g. uses morphemic knowledge of "explosion" to decode "explosive" and uses context and knowledge of metaphorical use of language to understand "explosive outburst")

• uses knowledge of cohesive devices to track meaning throughout a text (e.g. connectives such as "however", "on the other hand") (see Grammar)

• uses knowledge of the features and conventions of the type of text to build meaning (e.g. recognises that the beginning of a persuasive text may introduce the topic and the line of argument)

• identifies language features used to present opinions or points of view

• skims and scans texts for key words to track the development of ideas

• uses sophisticated punctuation to support meaning (e.g. commas to separate clauses in complex sentences)

Vocabulary

• uses knowledge of prefixes and suffixes to read and interpret unfamiliar words

• identifies how technical and discipline-specific words develop meaning in texts

• analyses the effect of antonyms, synonyms and idiomatic language

• understands precise meaning of words with similar connotations (e.g. "generous", "kind-hearted", "charitable")

Comprehension

• reads and views complex texts (see Text complexity)

• identifies the main themes or concepts in complex texts by synthesising key ideas or information

• summarises the text, identifying key details only

• draws inferences, synthesising clues and evidence across a text

• builds meaning by actively linking ideas from a number of texts or a range of digital sources

• distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)

• identifies different interpretations of the text citing evidence from a text

• evaluates language features for relevance to purpose and audience

• analyses texts that have more than one purpose and explains how parts of the text support a particular purpose

• analyses the use of language appropriate to different types of texts (e.g. compare the use of pun in imaginative and persuasive texts)

• identifies techniques used to obscure author's purpose (e.g. inclusion or omission of content)

Processes

• uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning

• uses knowledge of a broader range of cohesive devices to track meaning (e.g. word associations)

(see Grammar)
• selects reading or viewing strategies appropriate to reading purpose (e.g. scans text for evidence)
• judiciously selects texts for learning area tasks and purposes

Vocabulary

• identifies language used to create tone or atmosphere
• analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)
• applies knowledge of base words and word origins to understand the meaning of unfamiliar, discipline-specific words
• uses a range of context and grammatical cues to understand unfamiliar words
• interprets complex figurative language (e.g. euphemisms, hyperbole)

Comprehension

• reads and views complex or some highly complex texts (see Text complexity)
• interprets abstract concepts integrating complex ideas
• analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)
• draws inferences using evidence from the text and discounting possible inferences that are not supported by the text
• applies and articulates criteria to evaluate the language structures and features for relevance to purpose and audience
• evaluates the reasoning and evidence in a persuasive text
• explains how context (e.g. time, place, situation) influences interpretations of a text
• analyses the author's perspectives in complex or some highly complex texts
• analyses the techniques authors use to position readers
• recognises when ideas or evidence have been omitted from a text to position the reader

Processes

• automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning
• describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")
• navigates extended texts including complex digital texts

Vocabulary

• demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")
• verifies interpretations of unfamiliar words using grammatical and contextual cues

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8H01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8H01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual

information and digital sources
- compare information and opinion that can be verified against claims based on personal preference
- identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
- evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
- identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
- evaluate the information selected to determine bias and reliability

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S8H01

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.
- critically evaluate ideas and claims made by a speaker
- explains new learning from interacting with others
- appropriately presents an alternative point to the previous speaker
- initiates interactions confidently in group and whole-class discussions
- poses pertinent questions to make connections between a range of ideas
- uses open questions to prompt a speaker to provide more information
- clarifies task goals and negotiates roles in group learning
- monitors discussion to manage digression from the topic
- identifies and articulates the perspective of a speaker, to move a conversation forward
- interacts within school context or the broader community, adjusting language and responses to suit purpose and audience
- synthesises ideas from group discussion into a common theme or hypothesis
- poses problems, hypothesises and formulates questions about abstract ideas in group situations
- restates different views and makes suggestions to negotiate agreement
- poses questions to clarify assumptions made by the speaker
- questions others to evaluate accuracy of thinking or problem-solving processes
- uses language to align the listener with personal position (e.g. "of course", "as you can imagine", "obviously")
- interacts strategically and confidently with a broad range of interactional partners
- gives an extended explanation and evaluation of a complex concept, issue or process
- justifies a personal stance, after analysis of arguments on a particular issue, using evidence and elaboration in a group situation
- uses language strategically to subtly align others to own perspective as appropriate to audience and purpose

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8H01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
- identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
- identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources

• compare information and opinion that can be verified against claims based on personal preference

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the information selected to determine bias and reliability

AC9S8H02

investigate how cultural perspectives and influence the development of scientific knowledge

•

•

Elaborations

• investigating how about the role of women lead to women scientists being placed in subordinate roles and 'written out' of history, a phenomenon known as the Matilda effect

• researching how cultural building techniques such as houses built of bamboo led to the development of structures and better able to withstand the effects of earthquakes

• investigating how collaboration between Swami Vivekananda and Nikola Tesla, who held different , led to an exploration of the between and energy

• analysing how relating to fairness in sport have led to the development of rapid chemical tests to identify performance-enhancing drugs

• investigating how First Nations Australians develop culture through holistic that employ multidisciplinary knowledges and skills

Students learn to:

investigate how cultural perspectives and world views influence the development of knowledge

(AC9S8H02)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Reflecting on culture and cultural diversity

• Examine cultural perspectives and world views

World views

• World views are formed by experiences at personal, local, national and global levels, and are linked to individual, community, business and political actions for sustainability.

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Engaging with cultural and linguistic diversity

• Develop multiple perspectives

Reflecting on culture and cultural diversity

• Examine cultural perspectives and world views

Reading and viewing

• Understanding texts

Reflecting on culture and cultural diversity

• Examine cultural perspectives and world views

Understanding Asia's global significance

• The peoples of Asia shape human endeavour through aesthetic, creative, political, sporting, economic, technological and scientific domains.

Engaging with cultural and linguistic diversity

• Develop multiple perspectives

Reflecting on culture and cultural diversity

• Examine cultural perspectives and world views

Reading and viewing

• Understanding texts

Reflecting on culture and cultural diversity

• Examine cultural perspectives and world views

Engaging with cultural and linguistic diversity

• Develop multiple perspectives

Reflecting on culture and cultural diversity

• Examine cultural perspectives and world views

Culture

• The First Peoples of Australia (Aboriginal Peoples) belong to the world's oldest continuous cultures. First Nations Australians demonstrate resilience in the maintenance, practice and revitalisation of culture despite the many historic and enduring impacts of colonisation, and continue to celebrate and share the past, present and future manifestations of their cultures.

Country/Place

• First Nations communities of Australia maintain a deep connection to, and responsibility for, Country/Place and have holistic values and belief systems that are connected to the land, sea, sky and waterways.

People

• The significant and ongoing contributions of First Nations Australians and their histories and cultures are acknowledged locally, nationally and globally.

Snapshot – Examine cultural perspectives and world views

Intercultural Understanding: Reflecting on culture and cultural diversity: Examine perspectives and world views

Content description

AC9S8H02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• examine the factors that influence cultural perspectives presented within intercultural contexts

• analyse the reasons, experiences and understandings that inform diverse cultural perspectives and world views in a range of intercultural contexts

• evaluate how common and conflicting values within and across cultural and linguistic groups affect the presentation of cultural perspectives and world views

Snapshot – Develop multiple perspectives

Intercultural Understanding: Engaging with cultural and linguistic diversity: Deve perspectives

Content description

AC9S8H02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• examine how cultural beliefs or practices influence their own perspectives, and those of others, when discussing unfamiliar topics

• consider multiple perspectives held on unfamiliar topics, identifying commonality and difference, and describe how perspectives may be influenced by cultural beliefs and practices

• analyse unfamiliar topics and develop respectful responses, reconciling different cultural perspectives

Snapshot – Examine cultural perspectives and world views

Intercultural Understanding: Reflecting on culture and cultural diversity: Examine perspectives and world views

Content description

AC9S8H02
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• examine the factors that influence cultural perspectives presented within intercultural contexts

• analyse the reasons, experiences and understandings that inform diverse cultural perspectives and world views in a range of intercultural contexts

• evaluate how common and conflicting values within and across cultural and linguistic groups affect the presentation of cultural perspectives and world views

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S8H02

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Comprehension

• reads and views some moderately complex texts (see Text complexity)

• accurately retells a text including most relevant details

• identifies main idea and related or supporting ideas in moderately complex texts (see Text complexity)

• evaluates the accuracy within and across texts on the same topic

• explains how authors use evidence and supporting detail to build and verify ideas

• draws inferences and verifies using textual evidence

Processes

• monitors reading for meaning using grammatical and contextual knowledge (see Fluency)

• explains how textual features support the text's purpose

• identifies and explains techniques used to present perspective (e.g. emotive or descriptive language, order in which ideas are presented)

• predicts the development of ideas based on a partial read (e.g. predicts the final chapter of a narrative, drawing on understanding of the textual features in the previous chapters)

• uses prior knowledge and context to read unknown words (e.g. uses morphemic knowledge of "explosion" to decode "explosive" and uses context and knowledge of metaphorical use of language to understand "explosive outburst")

• uses knowledge of cohesive devices to track meaning throughout a text (e.g. connectives such as "however", "on the other hand") (see Grammar)

• uses knowledge of the features and conventions of the type of text to build meaning (e.g. recognises that the beginning of a persuasive text may introduce the topic and the line of argument)

• identifies language features used to present opinions or points of view

• skims and scans texts for key words to track the development of ideas

• uses sophisticated punctuation to support meaning (e.g. commas to separate clauses in complex sentences)

Vocabulary

• uses knowledge of prefixes and suffixes to read and interpret unfamiliar words

• identifies how technical and discipline-specific words develop meaning in texts

• analyses the effect of antonyms, synonyms and idiomatic language

• understands precise meaning of words with similar connotations (e.g. "generous", "kind-hearted", "charitable")

Comprehension

• reads and views complex texts (see Text complexity)

• identifies the main themes or concepts in complex texts by synthesising key ideas or information

• summarises the text, identifying key details only

• draws inferences, synthesising clues and evidence across a text

• builds meaning by actively linking ideas from a number of texts or a range of digital sources

• distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)

- identifies different interpretations of the text citing evidence from a text
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- analyses texts that have more than one purpose and explains how parts of the text support a particular purpose
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Processes

- uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning
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Vocabulary

- identifies language used to create tone or atmosphere
- analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)
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- interprets complex figurative language (e.g. euphemisms, hyperbole)

Comprehension

- reads and views complex or some highly complex texts (see Text complexity)
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- analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)
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- explains how context (e.g. time, place, situation) influences interpretations of a text
- analyses the author's perspectives in complex or some highly complex texts
- analyses the techniques authors use to position readers
- recognises when ideas or evidence have been omitted from a text to position the reader

Processes

- automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning
- describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")
- navigates extended texts including complex digital texts

Vocabulary

- demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")
- verifies interpretations of unfamiliar words using grammatical and contextual cues

Snapshot – Examine cultural perspectives and world views

Intercultural Understanding: Reflecting on culture and cultural diversity: Examine perspectives and world views

Content description

AC9S8H02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- examine the factors that influence cultural perspectives presented within intercultural contexts

- analyse the reasons, experiences and understandings that inform diverse cultural perspectives and world views in a range of intercultural contexts
- evaluate how common and conflicting values within and across cultural and linguistic groups affect the presentation of cultural perspectives and world views

Snapshot – Develop multiple perspectives

Intercultural Understanding: Engaging with cultural and linguistic diversity: Deve perspectives

Content description

AC9S8H02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

- examine how cultural beliefs or practices influence their own perspectives, and those of others, when discussing unfamiliar topics
- consider multiple perspectives held on unfamiliar topics, identifying commonality and difference, and describe how perspectives may be influenced by cultural beliefs and practices
- analyse unfamiliar topics and develop respectful responses, reconciling different cultural perspectives

Snapshot – Examine cultural perspectives and world views

Intercultural Understanding: Reflecting on culture and cultural diversity: Examine perspectives and world views

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- evaluate how common and conflicting values within and across cultural and linguistic groups affect the presentation of cultural perspectives and world views

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S8H02

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Comprehension

- reads and views some moderately complex texts (see Text complexity)
- accurately retells a text including most relevant details
- identifies main idea and related or supporting ideas in moderately complex texts (see Text complexity)
- evaluates the accuracy within and across texts on the same topic
- explains how authors use evidence and supporting detail to build and verify ideas
- draws inferences and verifies using textual evidence

Processes

- monitors reading for meaning using grammatical and contextual knowledge (see Fluency)
- explains how textual features support the text's purpose
- identifies and explains techniques used to present perspective (e.g. emotive or descriptive language, order in which ideas are presented)
- predicts the development of ideas based on a partial read (e.g. predicts the final chapter of a narrative, drawing on understanding of the textual features in the previous chapters)
- uses prior knowledge and context to read unknown words (e.g. uses morphemic knowledge of "explosion" to decode "explosive" and uses context and knowledge of metaphorical use of language to

understand "explosive outburst")

• uses knowledge of cohesive devices to track meaning throughout a text (e.g. connectives such as "however", "on the other hand") (see Grammar)

• uses knowledge of the features and conventions of the type of text to build meaning (e.g. recognises that the beginning of a persuasive text may introduce the topic and the line of argument)

• identifies language features used to present opinions or points of view

• skims and scans texts for key words to track the development of ideas

• uses sophisticated punctuation to support meaning (e.g. commas to separate clauses in complex sentences)

Vocabulary

• uses knowledge of prefixes and suffixes to read and interpret unfamiliar words

• identifies how technical and discipline-specific words develop meaning in texts

• analyses the effect of antonyms, synonyms and idiomatic language

• understands precise meaning of words with similar connotations (e.g. "generous", "kind-hearted", "charitable")

Comprehension

• reads and views complex texts (see Text complexity)

• identifies the main themes or concepts in complex texts by synthesising key ideas or information

• summarises the text, identifying key details only

• draws inferences, synthesising clues and evidence across a text

• builds meaning by actively linking ideas from a number of texts or a range of digital sources

• distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)

• identifies different interpretations of the text citing evidence from a text

• evaluates language features for relevance to purpose and audience

• analyses texts that have more than one purpose and explains how parts of the text support a particular purpose

• analyses the use of language appropriate to different types of texts (e.g. compare the use of pun in imaginative and persuasive texts)

• identifies techniques used to obscure author's purpose (e.g. inclusion or omission of content)

Processes

• uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning

• uses knowledge of a broader range of cohesive devices to track meaning (e.g. word associations) (see Grammar)

• selects reading or viewing strategies appropriate to reading purpose (e.g. scans text for evidence)

• judiciously selects texts for learning area tasks and purposes

Vocabulary

• identifies language used to create tone or atmosphere

• analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)

• applies knowledge of base words and word origins to understand the meaning of unfamiliar, discipline-specific words

• uses a range of context and grammatical cues to understand unfamiliar words

• interprets complex figurative language (e.g. euphemisms, hyperbole)

Comprehension

• reads and views complex or some highly complex texts (see Text complexity)

• interprets abstract concepts integrating complex ideas

• analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)

• draws inferences using evidence from the text and discounting possible inferences that are not supported by the text

• applies and articulates criteria to evaluate the language structures and features for relevance to purpose and audience

• evaluates the reasoning and evidence in a persuasive text

- explains how context (e.g. time, place, situation) influences interpretations of a text
- analyses the author's perspectives in complex or some highly complex texts
- analyses the techniques authors use to position readers
- recognises when ideas or evidence have been omitted from a text to position the reader

Processes

- automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning
- describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")
- navigates extended texts including complex digital texts

Vocabulary

- demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")
- verifies interpretations of unfamiliar words using grammatical and contextual cues

Snapshot – Examine cultural perspectives and world views

Intercultural Understanding: Reflecting on culture and cultural diversity: Examine perspectives and world views

Content description

AC9S8H02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- examine the factors that influence cultural perspectives presented within intercultural contexts
- analyse the reasons, experiences and understandings that inform diverse cultural perspectives and world views in a range of intercultural contexts
- evaluate how common and conflicting values within and across cultural and linguistic groups affect the presentation of cultural perspectives and world views

Snapshot – Develop multiple perspectives

Intercultural Understanding: Engaging with cultural and linguistic diversity: Deve perspectives

Content description

AC9S8H02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- examine how cultural beliefs or practices influence their own perspectives, and those of others, when discussing unfamiliar topics
- consider multiple perspectives held on unfamiliar topics, identifying commonality and difference, and describe how perspectives may be influenced by cultural beliefs and practices
- analyse unfamiliar topics and develop respectful responses, reconciling different cultural perspectives

Snapshot – Examine cultural perspectives and world views

Intercultural Understanding: Reflecting on culture and cultural diversity: Examine perspectives and world views

Content description

AC9S8H02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- examine the factors that influence cultural perspectives presented within intercultural contexts
- analyse the reasons, experiences and understandings that inform diverse cultural perspectives and world views in a range of intercultural contexts
- evaluate how common and conflicting values within and across cultural and linguistic groups affect the presentation of cultural perspectives and world views

AC9S8H03

examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations

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•

Elaborations

• researching and discussing ethical issues that arise from organ transplantation

• discussing how scientists' development of organoids has impacted on the ethical, environmental, social and economic issues that arise from using live animals in a laboratory to research diseases and treatments

• investigating how scientific responses including new building , improved predictions and early warning have supported communities living in a country in the region located near plate boundaries, for example Japan, Indonesia or New Zealand

• examining how the development of hybrid and solar, electric and hydrogen-powered vehicles are applications of contemporary science responses to the depletion of fossil fuels and exploring environmental considerations

• exploring how the development of biodegradable has led to more sustainable packaging and reduction in landfill

Students learn to:

examine how proposed scientific responses to contemporary issues may impact on ethical, environmental, social and economic considerations

(AC9S8H03)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Inquiring

• Identify, process and evaluate information

Responding to ethical issues

• Explore ethical issues

• Making and reflecting on ethical decisions

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Inquiring

• Identify, process and evaluate information

Responding to ethical issues

• Making and reflecting on ethical decisions

Understanding ethical concepts and perspectives

• Examine values, rights and responsibilities and ethical norms

Responding to ethical issues

• Making and reflecting on ethical decisions

Understanding ethical concepts and perspectives

• Examine values, rights and responsibilities and ethical norms

Speaking and listening

• Interacting

Inquiring

• Identify, process and evaluate information

Understanding Asia's global significance

• The peoples of Asia shape human endeavour through aesthetic, creative, political, sporting, economic, technological and scientific domains.

Inquiring

• Identify, process and evaluate information

Design

• Sustainably designed products, environments and services aim to minimise the impact on or restore the quality and diversity of environmental, social and economic systems.

Inquiring

• Identify, process and evaluate information

Design

• Sustainably designed products, environments and services aim to minimise the impact on or restore the quality and diversity of environmental, social and economic systems.

• Creative and innovative design is integral to the identification of new ways of sustainable living.

Related content

This content description can be taught with the following content descriptions from other learning areas.

AC9HG8K05

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources

• compare information and opinion that can be verified against claims based on personal preference

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the information selected to determine bias and reliability

Snapshot – Explore ethical issues

Ethical Understanding: Responding to ethical issues: Explore ethical issues

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• describe how ethical perspectives or approaches to ethical issues may vary in different situations

• analyse■the relationships between values, ethical perspectives■and ethical frameworks when responding to ethical issues

• apply knowledge of ethical concepts, values, perspectives and frameworks when responding to ethical issues

Snapshot – Making and reflecting on ethical decisions

Ethical Understanding: Responding to ethical issues: Making and reflecting on et

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• consider alternative■ethical responses■to an issue when making and reflecting on ethical decisions

• consider how values and beliefs influence approaches to ethical issues, and■analyse■how these affect■outcomes

• analyse■biases■when applying ethical concepts,■values■and ethical frameworks,■in order to explore and evaluate ethical decisions

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Making and reflecting on ethical decisions

Ethical Understanding: Responding to ethical issues: Making and reflecting on et

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• consider alternative ethical responses to an issue when making and reflecting on ethical decisions
• consider how values and beliefs influence approaches to ethical issues, and analyse how these affect outcomes
• analyse biases when applying ethical concepts, values and ethical frameworks, in order to explore and evaluate ethical decisions

Snapshot – Examine values, rights and responsibilities and ethical norms

Ethical Understanding: Understanding ethical concepts and perspectives: Exami responsibilities and ethical norms

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• describe how the relationships between values, rights and responsibilities, and ethical norms influence responses and decisions related to ethical issues
• describe the relationship between the role of individual and community values, rights and responsibilities, and ethical norms when responding to ethical issues
• describe the importance of values, rights and responsibilities when reaching a position on an ethical issue, and evaluate their role in challenging and defending ethical norms

Snapshot – Making and reflecting on ethical decisions

Ethical Understanding: Responding to ethical issues: Making and reflecting on et

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• consider alternative ethical responses to an issue when making and reflecting on ethical decisions
• consider how values and beliefs influence approaches to ethical issues, and analyse how these affect outcomes
• analyse biases when applying ethical concepts, values and ethical frameworks, in order to explore and evaluate ethical decisions

Snapshot – Examine values, rights and responsibilities and ethical norms

Ethical Understanding: Understanding ethical concepts and perspectives: Exami responsibilities and ethical norms

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

- describe how the relationships between values, rights and responsibilities, and ethical norms influence responses and decisions related to ethical issues
- describe the relationship between the role of individual and community values, rights and responsibilities, and ethical norms when responding to ethical issues
- describe the importance of values, rights and responsibilities when reaching a position on an ethical issue, and evaluate their role in challenging and defending ethical norms

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S8H03

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

- critically evaluate ideas and claims made by a speaker
- explains new learning from interacting with others
- appropriately presents an alternative point to the previous speaker
- initiates interactions confidently in group and whole-class discussions
- poses pertinent questions to make connections between a range of ideas
- uses open questions to prompt a speaker to provide more information
- clarifies task goals and negotiates roles in group learning
- monitors discussion to manage digression from the topic
- identifies and articulates the perspective of a speaker, to move a conversation forward
- interacts within school context or the broader community, adjusting language and responses to suit purpose and audience
- synthesises ideas from group discussion into a common theme or hypothesis
- poses problems, hypothesises and formulates questions about abstract ideas in group situations
- restates different views and makes suggestions to negotiate agreement
- poses questions to clarify assumptions made by the speaker
- questions others to evaluate accuracy of thinking or problem-solving processes
- uses language to align the listener with personal position (e.g. "of course", "as you can imagine", "obviously")
- interacts strategically and confidently with a broad range of interactional partners
- gives an extended explanation and evaluation of a complex concept, issue or process
- justifies a personal stance, after analysis of arguments on a particular issue, using evidence and elaboration in a group situation
- uses language strategically to subtly align others to own perspective as appropriate to audience and purpose

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

- identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
- compare information and opinion that can be verified against claims based on personal preference
- identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
- evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
- identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
- evaluate the information selected to determine bias and reliability

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatio

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8H03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

AC9S8H04

explore the role of science communication in informing individual viewpoints and community policies and regulations

•

•

Elaborations

• investigating campaigns designed to increase rates of organ donation
• exploring how seismic is collected and shared between governments across the region and how governments use this including for tsunami alerts
• investigating how promotion of biodegradable and the importance of using them has informed individual viewpoints
• researching how science organisations and high-profile science communicators such as Professor Lisa Harvey-Smith or Dr Karl Kruszelnicki influence people's attitudes to science

Students learn to:

explore the role of science communication in informing individual viewpoints and c and regulations

(AC9S8H04)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Inquiring

• Identify, process and evaluate information

Social awareness

• Community awareness

Social management

• Communication

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Inquiring

• Identify, process and evaluate information

Social management

• Communication

Statistics and probability

• Interpreting and representing data

Growing Asia-Australia engagement

• Australia's developing and deepening relationships with the peoples of Asia influence both mutual understandings and expressions of citizenship and culture nationally, regionally and globally.

Social management

• Communication

World views

• World views that recognise the interdependence of Earth's systems, and value diversity, equity and social justice, are essential for achieving sustainability.

Reading and viewing

• Understanding texts

Social awareness

• Community awareness

Social management

• Communication

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8H04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources

• compare information and opinion that can be verified against claims based on personal preference

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the information selected to determine bias and reliability

Snapshot – Community awareness

Personal and Social capability: Social awareness: Community awareness

Content description

AC9S8H04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• explain the way their actions and the actions of others influence communities

• analyse roles and responsibilities of citizens within communities

• evaluate ways of contributing to communities at local, regional, national and global levels

Snapshot – Communication

Personal and Social capability: Social management: Communication

Content description

AC9S8H04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

- apply skills to address factors that influence verbal and non-verbal communication
- demonstrate communication skills in a range of contexts, responding to the enablers of, and barriers to, effective verbal and non-verbal communication
- devise strategies that apply effective verbal and non-verbal communication in response to feedback

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8H04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
- compare information and opinion that can be verified against claims based on personal preference
- identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
- evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
- identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
- evaluate the information selected to determine bias and reliability

Snapshot – Communication

Personal and Social capability: Social management: Communication

Content description

AC9S8H04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- apply skills to address factors that influence verbal and non-verbal communication
- demonstrate communication skills in a range of contexts, responding to the enablers of, and barriers to, effective verbal and non-verbal communication
- devise strategies that apply effective verbal and non-verbal communication in response to feedback

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S8H04

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Interpreting graphical representations

- uses features of graphical representations to make predictions (e.g. predicts audience numbers based on historical data; interprets a range of graphs to identify possible trends and make predictions such as economic growth, stock prices, interest rates, population growth)
- summarises data using fractions, percentages and decimals (e.g. 2 3 $\frac23$ 3 2 ■ of a class live in the same suburb; represents road safety and sun safety statistics as a percentage of the Australian population)
- explains that continuous variables depicting growth or change often vary over time (e.g. creates growth charts to illustrate impacts of financial decisions; describes patterns in inflation rates, employment rates, migration rates over time; represents changes to fitness levels following the implementation of a personal fitness plan; interprets temperature charts)
- interprets graphs depicting motion such as distance–time and velocity–time graphs
- interprets and describes patterns in graphical representations of data from real-life situations such as the motion of a rollercoaster, flight trajectory of a basketball shot and the spread of disease
- investigates the association of 2 2 2 numerical variables through the representation and interpretation of bivariate data (e.g. uses scatter plots to represent bivariate data when investigating the relationship between 2 2 2 variables, such as income per capita, population

density and life expectancy for different socio-economic groups)
• investigates, represents and interprets time series data (e.g. interrogates a time series graph showing the change in costs over time; uses a maximum daily temperature chart to determine the average temperature for the month)
• interprets the impact of changes to data (e.g. recognises the impact of outliers on a data set such as the income of a world-class professional athlete on the average income of players at the state/territory level; uses digital tools to enhance the quality of data in a science investigation)

Sampling

• considers the context when determining whether to use data from a sample or a population
• determines what type of sample to use from a population (e.g. decides to use a representative sample when conducting targeted market research or when researching beliefs about a health-related issue)
• makes reasonable statements about a population based on evidence from samples (e.g. considers accuracy of representation of marginalised individuals or population groups)
• plans, executes and reports on sampling-based investigations, taking into account validity of methodology and consistency of data, to answer questions formulated by the student

Recognising bias

• applies an understanding of distributions to evaluate claims based on data (e.g. recognises that the accuracy of using a sample for predicting population values depends on both the relative size of the sample and how well the characteristics of the sample reflect the characteristics of the population; critically analyses statistics that reinforce stereotypes; evaluates claims made by the media regarding young people in relation to drugs and/or risk-taking behaviours)
• identifies and explains bias as a possible source of error in media reports of survey data (e.g. uses data to evaluate veracity of review headlines such as "everybody's favourite game"; investigates media claims on attitudes to government responses to market failure or income redistribution)
• justifies criticisms of data sources that include biased statistical elements (e.g. inappropriate sampling from populations; identifying sources of uncertainty in a scientific investigation; checks the authenticity of a data set)

Snapshot – Communication

Personal and Social capability: Social management: Communication

Content description

AC9S8H04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• apply skills to address factors that influence verbal and non-verbal communication
• demonstrate communication skills in a range of contexts, responding to the enablers of, and barriers to, effective verbal and non-verbal communication
• devise strategies that apply effective verbal and non-verbal communication in response to feedback

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S8H04

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Comprehension

• reads and views some moderately complex texts (see Text complexity)
• accurately retells a text including most relevant details
• identifies main idea and related or supporting ideas in moderately complex texts (see Text complexity)
• evaluates the accuracy within and across texts on the same topic
• explains how authors use evidence and supporting detail to build and verify ideas
• draws inferences and verifies using textual evidence

Processes

• monitors reading for meaning using grammatical and contextual knowledge (see Fluency)
• explains how textual features support the text's purpose
• identifies and explains techniques used to present perspective (e.g. emotive or descriptive language, order in which ideas are presented)
• predicts the development of ideas based on a partial read (e.g. predicts the final chapter of a narrative, drawing on understanding of the textual features in the previous chapters)
• uses prior knowledge and context to read unknown words (e.g. uses morphemic knowledge of "explosion" to decode "explosive" and uses context and knowledge of metaphorical use of language to understand "explosive outburst")
• uses knowledge of cohesive devices to track meaning throughout a text (e.g. connectives such as "however", "on the other hand") (see Grammar)
• uses knowledge of the features and conventions of the type of text to build meaning (e.g. recognises that the beginning of a persuasive text may introduce the topic and the line of argument)
• identifies language features used to present opinions or points of view
• skims and scans texts for key words to track the development of ideas
• uses sophisticated punctuation to support meaning (e.g. commas to separate clauses in complex sentences)

Vocabulary

• uses knowledge of prefixes and suffixes to read and interpret unfamiliar words
• identifies how technical and discipline-specific words develop meaning in texts
• analyses the effect of antonyms, synonyms and idiomatic language
• understands precise meaning of words with similar connotations (e.g. "generous", "kind-hearted", "charitable")

Comprehension

• reads and views complex texts (see Text complexity)
• identifies the main themes or concepts in complex texts by synthesising key ideas or information
• summarises the text, identifying key details only
• draws inferences, synthesising clues and evidence across a text
• builds meaning by actively linking ideas from a number of texts or a range of digital sources
• distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)
• identifies different interpretations of the text citing evidence from a text
• evaluates language features for relevance to purpose and audience
• analyses texts that have more than one purpose and explains how parts of the text support a particular purpose
• analyses the use of language appropriate to different types of texts (e.g. compare the use of pun in imaginative and persuasive texts)
• identifies techniques used to obscure author's purpose (e.g. inclusion or omission of content)

Processes

• uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning
• uses knowledge of a broader range of cohesive devices to track meaning (e.g. word associations) (see Grammar)
• selects reading or viewing strategies appropriate to reading purpose (e.g. scans text for evidence)
• judiciously selects texts for learning area tasks and purposes

Vocabulary

• identifies language used to create tone or atmosphere
• analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)
• applies knowledge of base words and word origins to understand the meaning of unfamiliar, discipline-specific words
• uses a range of context and grammatical cues to understand unfamiliar words
• interprets complex figurative language (e.g. euphemisms, hyperbole)

Comprehension

• reads and views complex or some highly complex texts (see Text complexity)

- interprets abstract concepts integrating complex ideas
- analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)
- draws inferences using evidence from the text and discounting possible inferences that are not supported by the text
- applies and articulates criteria to evaluate the language structures and features for relevance to purpose and audience
- evaluates the reasoning and evidence in a persuasive text
- explains how context (e.g. time, place, situation) influences interpretations of a text
- analyses the author's perspectives in complex or some highly complex texts
- analyses the techniques authors use to position readers
- recognises when ideas or evidence have been omitted from a text to position the reader

Processes

- automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning
- describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")
- navigates extended texts including complex digital texts

Vocabulary

- demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")
- verifies interpretations of unfamiliar words using grammatical and contextual cues

Snapshot – Community awareness

Personal and Social capability: Social awareness: Community awareness

Content description

AC9S8H04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- explain the way their actions and the actions of others influence communities
- analyse roles and responsibilities of citizens within communities
- evaluate ways of contributing to communities at local, regional, national and global levels

Snapshot – Communication

Personal and Social capability: Social management: Communication

Content description

AC9S8H04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- apply skills to address factors that influence verbal and non-verbal communication
- demonstrate communication skills in a range of contexts, responding to the enablers of, and barriers to, effective verbal and non-verbal communication
- devise strategies that apply effective verbal and non-verbal communication in response to feedback

AC9S8I01

develop investigable questions, reasoned predictions and hypotheses to explore scientific , identify and test

-
-

Elaborations

- discussing what is meant by a causal and examining how causation is different from correlation
- developing investigable questions to test causal , such as: 'How does the concentration of a salt solution affect plant cells? How does the amount of sunlight affect the amount of electricity produced by a solar cell?'
- developing investigable questions to explore scientific , such as: 'How do the shapes of the continents support the of plate tectonics?'
- predicting what will happen when conditions change in a given scenario or phenomenon, such as:

'When of less resistance are used to transfer electricity there will be less heat energy produced'
• formulating hypotheses such as: 'An earthquake of greater magnitude will cause more damage because there is more energy transferred'
Students learn to:

develop investigable questions, reasoned predictions and hypotheses to explore sc
identify patterns and test relationships

(AC9S8I01)
General capabilities and cross-curriculum priorities
This content description connects to the following general capabilities and cross-curriculum priorities.
Generating
• Put ideas into action
Inquiring
• Develop questions
Speaking and listening
• Interacting
Elaborations
Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .
Inquiring
• Develop questions
Reading and viewing
• Understanding texts
Inquiring
• Develop questions
Speaking and listening
• Interacting
Inquiring
• Develop questions
Generating
• Put ideas into action
Generating
• Put ideas into action
Speaking and listening
• Speaking
Resources
Work Samples
WS01 - Bouncing ball

Snapshot – Put ideas into action
Critical and Creative Thinking: Generating: Put ideas into action
Content description
AC9S8I01
Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• put ideas into action by predicting potential or future outcomes and systematically testing a range of options
• put ideas into action by making predictions, testing and evaluating options, and reconsidering approaches in complex or unfamiliar situations
• put ideas into action by making predictions, testing and evaluating options, proposing modifications and adapting approaches in complex or unfamiliar situations
Snapshot – Develop questions
Critical and Creative Thinking: Inquiring: Develop questions

Content description

AC9S8I01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• develop■questions to examine unfamiliar ideas and topics
• questions developed focus on improving understanding about a topic and clarifying information about processes or procedures
• develop questions to investigate complex issues and topics
• questions developed assist in forming an understanding of why phenomena or issues arise
• develop questions to investigate complex issues and topics
• questions developed facilitate increasing understanding of abstract ideas and concepts

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S8I01

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.
• critically evaluate ideas and claims made by a speaker
• explains new learning from interacting with others
• appropriately presents an alternative point to the previous speaker
• initiates interactions confidently in group and whole-class discussions
• poses pertinent questions to make connections between a range of ideas
• uses open questions to prompt a speaker to provide more information
• clarifies task goals and negotiates roles in group learning
• monitors discussion to manage digression from the topic
• identifies and articulates the perspective of a speaker, to move a conversation forward
• interacts within school context or the broader community, adjusting language and responses to suit purpose and audience
• synthesises ideas from group discussion into a common theme or hypothesis
• poses problems, hypothesises and formulates questions about abstract ideas in group situations
• restates different views and makes suggestions to negotiate agreement
• poses questions to clarify assumptions made by the speaker
• questions others to evaluate accuracy of thinking or problem-solving processes
• uses language to align the listener with personal position (e.g. "of course", "as you can imagine", "obviously")
• interacts strategically and confidently with a broad range of interactional partners
• gives an extended explanation and evaluation of a complex concept, issue or process
• justifies a personal stance, after analysis of arguments on a particular issue, using evidence and elaboration in a group situation
• uses language strategically to subtly align others to own perspective as appropriate to audience and purpose

Snapshot – Develop questions

Critical and Creative Thinking: Inquiring: Develop questions

Content description

AC9S8I01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• develop■questions to examine unfamiliar ideas and topics
• questions developed focus on improving understanding about a topic and clarifying information about processes or procedures
• develop questions to investigate complex issues and topics
• questions developed assist in forming an understanding of why phenomena or issues arise
• develop questions to investigate complex issues and topics
• questions developed facilitate increasing understanding of abstract ideas and concepts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S8I01

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Comprehension

• reads and views some moderately complex texts (see Text complexity)
• accurately retells a text including most relevant details
• identifies main idea and related or supporting ideas in moderately complex texts (see Text complexity)
• evaluates the accuracy within and across texts on the same topic
• explains how authors use evidence and supporting detail to build and verify ideas
• draws inferences and verifies using textual evidence

Processes

• monitors reading for meaning using grammatical and contextual knowledge (see Fluency)
• explains how textual features support the text's purpose
• identifies and explains techniques used to present perspective (e.g. emotive or descriptive language, order in which ideas are presented)
• predicts the development of ideas based on a partial read (e.g. predicts the final chapter of a narrative, drawing on understanding of the textual features in the previous chapters)
• uses prior knowledge and context to read unknown words (e.g. uses morphemic knowledge of "explosion" to decode "explosive" and uses context and knowledge of metaphorical use of language to understand "explosive outburst")
• uses knowledge of cohesive devices to track meaning throughout a text (e.g. connectives such as "however", "on the other hand") (see Grammar)
• uses knowledge of the features and conventions of the type of text to build meaning (e.g. recognises that the beginning of a persuasive text may introduce the topic and the line of argument)
• identifies language features used to present opinions or points of view
• skims and scans texts for key words to track the development of ideas
• uses sophisticated punctuation to support meaning (e.g. commas to separate clauses in complex sentences)

Vocabulary

• uses knowledge of prefixes and suffixes to read and interpret unfamiliar words
• identifies how technical and discipline-specific words develop meaning in texts
• analyses the effect of antonyms, synonyms and idiomatic language
• understands precise meaning of words with similar connotations (e.g. "generous", "kind-hearted", "charitable")

Comprehension

• reads and views complex texts (see Text complexity)
• identifies the main themes or concepts in complex texts by synthesising key ideas or information
• summarises the text, identifying key details only
• draws inferences, synthesising clues and evidence across a text
• builds meaning by actively linking ideas from a number of texts or a range of digital sources
• distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)
• identifies different interpretations of the text citing evidence from a text
• evaluates language features for relevance to purpose and audience
• analyses texts that have more than one purpose and explains how parts of the text support a particular purpose
• analyses the use of language appropriate to different types of texts (e.g. compare the use of pun in imaginative and persuasive texts)
• identifies techniques used to obscure author's purpose (e.g. inclusion or omission of content)

Processes

- uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning
- uses knowledge of a broader range of cohesive devices to track meaning (e.g. word associations) (see Grammar)
- selects reading or viewing strategies appropriate to reading purpose (e.g. scans text for evidence)
- judiciously selects texts for learning area tasks and purposes

Vocabulary

- identifies language used to create tone or atmosphere
- analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)
- applies knowledge of base words and word origins to understand the meaning of unfamiliar, discipline-specific words
- uses a range of context and grammatical cues to understand unfamiliar words
- interprets complex figurative language (e.g. euphemisms, hyperbole)

Comprehension

- reads and views complex or some highly complex texts (see Text complexity)
- interprets abstract concepts integrating complex ideas
- analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)
- draws inferences using evidence from the text and discounting possible inferences that are not supported by the text
- applies and articulates criteria to evaluate the language structures and features for relevance to purpose and audience
- evaluates the reasoning and evidence in a persuasive text
- explains how context (e.g. time, place, situation) influences interpretations of a text
- analyses the author's perspectives in complex or some highly complex texts
- analyses the techniques authors use to position readers
- recognises when ideas or evidence have been omitted from a text to position the reader

Processes

- automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning
- describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")
- navigates extended texts including complex digital texts

Vocabulary

- demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")
- verifies interpretations of unfamiliar words using grammatical and contextual cues

Snapshot – Develop questions

Critical and Creative Thinking: Inquiring: Develop questions

Content description

AC9S8I01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- develop■questions to examine unfamiliar ideas and topics
- questions developed focus on improving understanding about a topic and clarifying information about processes or procedures
- develop questions to investigate complex issues and topics
- questions developed assist in forming an understanding of why phenomena or issues arise
- develop questions to investigate complex issues and topics
- questions developed facilitate increasing understanding of abstract ideas and concepts

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S8I01
Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.
• critically evaluate ideas and claims made by a speaker
• explains new learning from interacting with others
• appropriately presents an alternative point to the previous speaker
• initiates interactions confidently in group and whole-class discussions
• poses pertinent questions to make connections between a range of ideas
• uses open questions to prompt a speaker to provide more information
• clarifies task goals and negotiates roles in group learning
• monitors discussion to manage digression from the topic
• identifies and articulates the perspective of a speaker, to move a conversation forward
• interacts within school context or the broader community, adjusting language and responses to suit purpose and audience
• synthesises ideas from group discussion into a common theme or hypothesis
• poses problems, hypothesises and formulates questions about abstract ideas in group situations
• restates different views and makes suggestions to negotiate agreement
• poses questions to clarify assumptions made by the speaker
• questions others to evaluate accuracy of thinking or problem-solving processes
• uses language to align the listener with personal position (e.g. "of course", "as you can imagine", "obviously")
• interacts strategically and confidently with a broad range of interactional partners
• gives an extended explanation and evaluation of a complex concept, issue or process
• justifies a personal stance, after analysis of arguments on a particular issue, using evidence and elaboration in a group situation
• uses language strategically to subtly align others to own perspective as appropriate to audience and purpose

Snapshot – Develop questions

Critical and Creative Thinking: Inquiring: Develop questions

Content description

AC9S8I01
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• develop■questions to examine unfamiliar ideas and topics
• questions developed focus on improving understanding about a topic and clarifying information about processes or procedures
• develop questions to investigate complex issues and topics
• questions developed assist in forming an understanding of why phenomena or issues arise
• develop questions to investigate complex issues and topics
• questions developed facilitate increasing understanding of abstract ideas and concepts

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S8I01
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• put ideas into action by predicting potential or future outcomes and systematically testing a range of options
• put ideas into action by making predictions, testing and evaluating options, and reconsidering approaches in complex or unfamiliar situations
• put ideas into action by making predictions, testing and evaluating options, proposing modifications and adapting approaches in complex or unfamiliar situations

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S8I01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• put ideas into action by predicting potential or future outcomes and systematically testing a range of options
• put ideas into action by making predictions, testing and evaluating options, and reconsidering approaches in complex or unfamiliar situations
• put ideas into action by making predictions, testing and evaluating options, proposing modifications and adapting approaches in complex or unfamiliar situations

Snapshot – Speaking

Literacy: Speaking and listening: Speaking

Content description

AC9S8I01

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Crafting ideas

• creates spoken texts responsive to audience and a broad range of learning area topics, clearly articulating words and ideas
• organises more complex ideas or concepts logically, selecting details to accentuate key points
• speaks audibly and coherently to a less familiar audience for a sustained period
• shows increasing awareness of audience by moderating length, content and delivery of spoken texts
• adjusts register according to purpose and audience
• does research to prepare spoken texts
• uses a range of technology, and audio and visual resources to engage audience and enhance content

Vocabulary

• varies vocabulary to add interest and to describe with greater precision (e.g. uses topic-specific noun groups/phrases such as "exploitation of resources") (see Grammar)
• uses language creatively (e.g. "the moon shines bravely")
• uses sensory vocabulary to engage the audience (e.g. "a gasp of dismay")
• uses technical vocabulary to demonstrate topic knowledge (e.g. "deforestation")
• consistently uses a range of synonyms to add variety and precision to spoken text
• uses abstractions (e.g. "freedom", "fairness")

Crafting ideas

• creates spoken texts which explore and interpret concepts drawn from research or learning area content
• selects voice appropriate to purpose (e.g. third person to create distance and authority or first person to achieve personal connection)
• develops complex ideas or a central theme across a spoken text
• uses language features according to purpose, to impact the audience (e.g. uses more complex connectives such as "consequently", "accordingly" to explain)
• rephrases or clarifies to repair or refine meaning
• uses language structures and features appropriate to learning area content
• uses technologies and visual and audio resources to enhance meaning and effect in presentations

Vocabulary

• selects vocabulary to intensify and sharpen the focus (e.g. "scarcely", "absolutely", "real", "simply")
• uses a range of evaluative language to express opinions or convey emotion (e.g. "significant benefits", "devastating consequences")
• uses a range of emotive language appropriate to topic, purpose and audience
• uses rich, evocative, descriptive language
• uses figurative language (e.g. "hungry for success")

Crafting ideas

• creates complex and creative spoken texts which analyse and evaluate issues drawn from research or

learning area content
• includes a range of alternative viewpoints in spoken texts, where appropriate
• controls and manipulates a sophisticated range of language features to affect the audience
• uses a range of rhetorical devices and humour to engage an audience
• references and quotes authorities or statistics to add authority (e.g. "according to a recent OECD report")
• delivers spoken text flexibly, allowing for questions and maintaining the flow of ideas

Resource – WS01 - Bouncing ball

By the end of Year 8 students explain the role of specialised cell structures and organelles in cellular function and analyse the relationship between structure and function at organ and body system levels. They apply an understanding of the theory of plate tectonics to explain patterns of change in the geosphere. They explain how the properties of rocks relate to their formation and influence their use. They compare different forms of energy and represent transfer and transformation of energy in simple systems. They classify and represent different types of matter and distinguish between physical and chemical change. Students analyse how different factors influence development of and lead to changes in scientific knowledge. They analyse the key considerations that inform scientific responses and how these responses impact society. They analyse the importance of science communication in shaping viewpoints, policies and regulations.

Students plan and conduct safe, reproducible investigations to test relationships and explore models. They describe potential ethical issues and intercultural considerations needed for specific field locations or use of secondary data. They select and use equipment to generate and record data with precision. They select and construct appropriate representations to organise and process data and information. They analyse data and information to describe patterns, trends and relationships and identify anomalies. They identify assumptions and sources of error in methods and analyse conclusions and claims with reference to conflicting evidence and unanswered questions. They construct evidence-based arguments to support conclusions and evaluate claims. They select and use language and text features appropriately for their purpose when communicating their ideas, findings and arguments to specific audiences.

AC9S8U05

classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems

AC9S8I01

develop investigable questions, reasoned predictions and hypotheses to explore scientific models, identify patterns and test relationships

AC9S8I02

plan and conduct reproducible investigations to answer questions and test hypotheses, including identifying variables and assumptions and, as appropriate, recognising and managing risks, considering ethical issues and recognising key considerations regarding heritage sites and artefacts on Country/Place

AC9S8I03

select and use equipment to generate and record data with precision, using digital tools as appropriate

AC9S8I04

select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information

AC9S8I05

analyse data and information to describe patterns, trends and relationships and identify anomalies

AC9S8I07

construct evidence-based arguments to support conclusions or evaluate claims and consider any ethical issues and cultural protocols associated with using or citing secondary data or information

AC9S8I08

write and create texts to communicate ideas, findings and arguments for specific purposes and audiences, including selection of appropriate language and text features, using digital tools as appropriate

AC9S8I02

plan and conduct to answer questions and test hypotheses, including identifying and and, as appropriate, recognising and managing risks, considering ethical issues and recognising key considerations regarding heritage sites and artefacts on

●

●

Elaborations

• designing that specifically test of the causal and control the remaining

• identifying related to testing a using analogous , such as using dialysis tubing to the of plant cell walls or a shake table to the effects of an earthquake on buildings

• explaining why safety procedures address identified risks

• considering ethical issues relating to the access to and use of biological and secondary

• acknowledging and recognising First Nations Australians' artefacts and heritage sites of significance such as ceremonial grounds and traditional quarries, and ensuring they cause no harm to heritage sites and artefacts

Students learn to:

plan and conduct reproducible investigations to answer questions and test hypothe identifying variables and assumptions and, as appropriate, recognising and managi considering ethical issues and recognising key considerations regarding heritage s on Country/Place

(AC9S8I02)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Responding to ethical issues

• Explore ethical perspectives and frameworks

• Making and reflecting on ethical decisions

Culture

• First Nations Australians' ways of life reflect unique ways of being, knowing, thinking and doing.

Country/Place

• First Nations communities of Australia maintain a deep connection to, and responsibility for, Country/Place and have holistic values and belief systems that are connected to the land, sea, sky and waterways.

People

• The significant and ongoing contributions of First Nations Australians and their histories and cultures are acknowledged locally, nationally and globally.

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Generating

• Put ideas into action

Statistics and probability

• Interpreting and representing data

Generating

• Put ideas into action

Generating

• Put ideas into action

Understanding ethical concepts and perspectives

• Explore ethical concepts

• Examine values, rights and responsibilities and ethical norms
Speaking and listening

• Interacting
Responding to ethical issues

• Explore ethical issues
Culture

• First Nations Australians' ways of life reflect unique ways of being, knowing, thinking and doing.
Country/Place

• First Nations communities of Australia maintain a deep connection to, and responsibility for, Country/Place and have holistic values and belief systems that are connected to the land, sea, sky and waterways.
People

• The significant and ongoing contributions of First Nations Australians and their histories and cultures are acknowledged locally, nationally and globally.
Related content

This content description can be taught with the following content descriptions from other learning areas.
AC9M8A03
AC9M8ST04
Resources
Work Samples

WS01 - Bouncing ball

Snapshot – Explore ethical perspectives and frameworks

Ethical Understanding: Responding to ethical issues: Explore ethical perspective

Content description

AC9S8I02
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• describe how ethical frameworks that use consequences, virtues and duties guide ethical decision-making
• explain how different ethical frameworks support developing ethical perspectives and inform ethical decision-making
• analyse and utilise different ethical frameworks when responding to ethical issues and making ethical decisions

Snapshot – Making and reflecting on ethical decisions

Ethical Understanding: Responding to ethical issues: Making and reflecting on et

Content description

AC9S8I02
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• consider alternative■ethical responses■to an issue when making and reflecting on ethical decisions
• consider how values and beliefs influence approaches to ethical issues, and■analyse■how these affect■outcomes
• analyse■biases■when applying ethical concepts,■values■and ethical frameworks,■in order to explore and evaluate ethical decisions

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S8I02
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• put ideas into action by predicting potential or future outcomes and systematically testing a

range of options
• put ideas into action by making predictions, testing and evaluating options, and reconsidering approaches in complex or unfamiliar situations
• put ideas into action by making predictions, testing and evaluating options, proposing modifications and adapting approaches in complex or unfamiliar situations

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S8I02

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Interpreting graphical representations

• uses features of graphical representations to make predictions (e.g. predicts audience numbers based on historical data; interprets a range of graphs to identify possible trends and make predictions such as economic growth, stock prices, interest rates, population growth)
• summarises data using fractions, percentages and decimals (e.g. 2 3 $\frac{2}{3}$ 3 2 ■ of a class live in the same suburb; represents road safety and sun safety statistics as a percentage of the Australian population)
• explains that continuous variables depicting growth or change often vary over time (e.g. creates growth charts to illustrate impacts of financial decisions; describes patterns in inflation rates, employment rates, migration rates over time; represents changes to fitness levels following the implementation of a personal fitness plan; interprets temperature charts)
• interprets graphs depicting motion such as distance–time and velocity–time graphs
• interprets and describes patterns in graphical representations of data from real-life situations such as the motion of a rollercoaster, flight trajectory of a basketball shot and the spread of disease
• investigates the association of 2 2 2 numerical variables through the representation and interpretation of bivariate data (e.g. uses scatter plots to represent bivariate data when investigating the relationship between 2 2 2 variables, such as income per capita, population density and life expectancy for different socio-economic groups)
• investigates, represents and interprets time series data (e.g. interrogates a time series graph showing the change in costs over time; uses a maximum daily temperature chart to determine the average temperature for the month)
• interprets the impact of changes to data (e.g. recognises the impact of outliers on a data set such as the income of a world-class professional athlete on the average income of players at the state/territory level; uses digital tools to enhance the quality of data in a science investigation)

Sampling

• considers the context when determining whether to use data from a sample or a population
• determines what type of sample to use from a population (e.g. decides to use a representative sample when conducting targeted market research or when researching beliefs about a health-related issue)
• makes reasonable statements about a population based on evidence from samples (e.g. considers accuracy of representation of marginalised individuals or population groups)
• plans, executes and reports on sampling-based investigations, taking into account validity of methodology and consistency of data, to answer questions formulated by the student

Recognising bias

• applies an understanding of distributions to evaluate claims based on data (e.g. recognises that the accuracy of using a sample for predicting population values depends on both the relative size of the sample and how well the characteristics of the sample reflect the characteristics of the population; critically analyses statistics that reinforce stereotypes; evaluates claims made by the media regarding young people in relation to drugs and/or risk-taking behaviours)
• identifies and explains bias as a possible source of error in media reports of survey data (e.g. uses data to evaluate veracity of review headlines such as "everybody's favourite game"; investigates media claims on attitudes to government responses to market failure or income redistribution)

• justifies criticisms of data sources that include biased statistical elements (e.g. inappropriate sampling from populations; identifying sources of uncertainty in a scientific investigation; checks the authenticity of a data set)

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S8I02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• put ideas into action by predicting potential or future outcomes and systematically testing a range of options
• put ideas into action by making predictions, testing and evaluating options, and reconsidering approaches in complex or unfamiliar situations
• put ideas into action by making predictions, testing and evaluating options, proposing modifications and adapting approaches in complex or unfamiliar situations

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S8I02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• put ideas into action by predicting potential or future outcomes and systematically testing a range of options
• put ideas into action by making predictions, testing and evaluating options, and reconsidering approaches in complex or unfamiliar situations
• put ideas into action by making predictions, testing and evaluating options, proposing modifications and adapting approaches in complex or unfamiliar situations

Snapshot – Explore ethical concepts

Ethical Understanding: Understanding ethical concepts and perspectives: Explor

Content description

AC9S8I02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and describe ethical concepts, such as truth and justice, and explain how perspectives may vary according to the situation or context
• analyse■the similarities and differences between ethical concepts, such as integrity, loyalty and equality, in a range of situations and contexts
• evaluate■the consistency in meaning of ethical concepts, such as trust, freedom and rights and responsibilities, in a range of situations and contexts

Snapshot – Examine values, rights and responsibilities and ethical norms

Ethical Understanding: Understanding ethical concepts and perspectives: Examir responsibilities and ethical norms

Content description

AC9S8I02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• describe how the relationships between values, rights and responsibilities, and ethical norms influence responses and decisions related to ethical issues
• describe the relationship between the role of individual and community values, rights and responsibilities, and ethical norms when responding to ethical issues
• describe the importance of values, rights and responsibilities when reaching a position on an ethical issue, and evaluate their role in challenging and defending ethical norms

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S8I02

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.
- critically evaluate ideas and claims made by a speaker
- explains new learning from interacting with others
- appropriately presents an alternative point to the previous speaker
- initiates interactions confidently in group and whole-class discussions
- poses pertinent questions to make connections between a range of ideas
- uses open questions to prompt a speaker to provide more information
- clarifies task goals and negotiates roles in group learning
- monitors discussion to manage digression from the topic
- identifies and articulates the perspective of a speaker, to move a conversation forward
- interacts within school context or the broader community, adjusting language and responses to suit purpose and audience
- synthesises ideas from group discussion into a common theme or hypothesis
- poses problems, hypothesises and formulates questions about abstract ideas in group situations
- restates different views and makes suggestions to negotiate agreement
- poses questions to clarify assumptions made by the speaker
- questions others to evaluate accuracy of thinking or problem-solving processes
- uses language to align the listener with personal position (e.g. "of course", "as you can imagine", "obviously")
- interacts strategically and confidently with a broad range of interactional partners
- gives an extended explanation and evaluation of a complex concept, issue or process
- justifies a personal stance, after analysis of arguments on a particular issue, using evidence and elaboration in a group situation
- uses language strategically to subtly align others to own perspective as appropriate to audience and purpose

Snapshot – Explore ethical issues

Ethical Understanding: Responding to ethical issues: Explore ethical issues

Content description

AC9S8I02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- describe how ethical perspectives or approaches to ethical issues may vary in different situations
- analyse■the relationships between values, ethical perspectives■and ethical frameworks when responding to ethical issues
- apply knowledge of ethical concepts, values, perspectives and frameworks when responding to ethical issues

AC9S8I03

select and use equipment to generate and record with , using as appropriate

-
-

Elaborations

- selecting and using equipment with required such as adjusting magnification to observe specific cell structures and recording this magnification and reading the bottom of the meniscus to determine the precise volume of liquid
- recording with appropriate to the instrument such as rounding up or down with finer graduations or estimating an intermediate value with coarser graduations
- using such as digital microscopes, and video-recording devices when appropriate to observe, measure and record qualitative and quantitative
- using conventions related to dependent and with relevant units when constructing tables and spreadsheets

• using appropriate positive and negative signs for standard units, number of decimal points and exponential notation where relevant when recording

Students learn to:

select and use equipment to generate and record data with precision, using digital t appropriate

(AC9S8I03)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Investigating

• Acquire and collate data

Number sense and algebra

• Number and place value

Statistics and probability

• Interpreting and representing data

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Generating

• Put ideas into action

Measurement and geometry

• Understanding units of measurement

Generating

• Put ideas into action

Measurement and geometry

• Understanding units of measurement

Number sense and algebra

• Number and place value

Investigating

• Acquire and collate data

Investigating

• Acquire and collate data

Number sense and algebra

• Number and place value

Resources

Work Samples

WS01 - Bouncing ball

Snapshot – Acquire and collate data

Digital Literacy: Investigating: Acquire and collate data

Content description

AC9S8I03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• collect and access data using a range of digital tools and methods in response to a defined question or problem

• collect and access data from a range of sources, using specialised digital tools in response to problems, and evaluate it for relevance

• collect and evaluate quantitative and qualitative data using specialised digital tools and processes in the context of identified problems

Snapshot – Number and place value

Numeracy: Number sense and algebra: Number and place value

Content description

AC9S8I03
Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Numeral recognition and identification

• identifies, reads and writes numerals, beyond 4 4 4 digits in length, with spacing after every 3 3 3 digits (e.g. 10 10 1 0 204 204 2 0 4 , 25 25 2 5 000 000 0 0 0 000 000 0 0 0 ; 12 12 1 2 230.25 230.25 2 3 0 . 2 5 ; reads 152 152 1 5 2 450 450 4 5 0 as "one hundred and 52 52 5 2 thousand 4 4 4 hundred and 50 50 5 0 "; compares the size of populations for different countries or the cost of expensive items with an advertised selling price in the millions)

• identifies, reads and writes decimals to one and 2 2 2 decimal places (e.g. reads 4.75 4.75 4 . 7 5 as "four point seven five" or 4 4 4 and 75 75 7 5 hundredths; writes 4 4 4 dollars and 5 5 5 cents as $ 4.05 \$4.05 $ 4 . 0 5)

Place value

• estimates and rounds natural numbers to the nearest 10 thousand, thousand etc. recognising the multiplicative relationships between the place value of the digits (e.g. estimates the crowd numbers at a football match; says that the $ 9863 \$9863 $ 9 8 6 3 raised at a charity event was close to $ 10 \$10 $ 1 0 000 000 0 0 0 ; recognises that 200 years is 10 times as large as 20 years, and applies this to environmental change)

• explains that the place value names for decimal numbers relate to the ones place value

• explains and demonstrates that the place value system extends beyond tenths to hundredths, thousandths … (e.g. uses decimals to represent part units of measurement for length, mass, capacity and temperature)

• represents, compares, orders and interprets decimals up to 2 2 2 decimal places (e.g. constructs a number line to include decimal values between zero and one, when asked "which is greater 0.19 0.19 0 . 1 9 or 0.2 0.2 0 . 2 ?", responds " 0.2 0.2 0 . 2 " ; interprets and compares measurements such as the temperature on different days or the change in height of a growing plant observed and recorded during science investigations)

• rounds decimals to the nearest natural number in order to estimate answers (e.g. estimates the length of material needed by rounding up the measurement to the nearest natural number)

Numeral recognition and identification

• identifies, reads, writes and interprets decimal numbers applying knowledge of the place value periods of tenths, hundredths and thousandths and beyond

Place value

• compares the size of decimals to other numbers including natural numbers and decimals expressed to different numbers of places (e.g. selects 0.35 0.35 0 . 3 5 as the greatest number from the set 0.2 , 0.125 , 0.35 0.2, 0.125, 0.35 0 . 2 , 0 . 1 2 5 , 0 . 3 5 ; explains that 2 2 2 is greater than 1.845 1.845 1 . 8 4 5)

• describes the multiplicative relationship between the adjacent positions in place value for decimals (e.g. understands that 0.2 0.2 0 . 2 is 10 10 1 0 times as great as 0.02 0.02 0 . 0 2 and that 100 100 1 0 0 times 0.005 0.005 0 . 0 0 5 is 0.5 0.5 0 . 5)

• compares and orders decimals greater than one including those expressed to an unequal number of places (e.g. compares the heights of students in the class that are expressed in metres such as 1.6 1.6 1 . 6 m is taller than 1.52 1.52 1 . 5 2 m; correctly orders the numbers 1.4 1.4 1 . 4 , 1.375 1.375 1 . 3 7 5 and 2.15 2.15 2 . 1 5 from least to greatest)

• rounds decimals to one and 2 decimal places for a purpose

Numeral recognition and identification

• reads, represents, interprets and uses negative numbers in computation (e.g. explains that the temperature – 10 10 1 0 °C is colder than the temperature – 2.5 2.5 2 . 5 °C; recognises that negative numbers are less than zero; locates – 12 12 1 2 on a number line)

Place value

• identifies that negative numbers are integers that represent both size and direction (e.g. uses a number line to represent position and order negative numbers; uses negative numbers in financial contexts such as to model an overdrawn account)

• understands that multiplying and dividing numbers by 10 , 100 , 1000 10, 100, 1000 1 0 , 1 0 0 , 1 0 0 0 changes the positional value of the digits (e.g. explains that 100 100 1 0 0 times 0.125 0.125

0 . 1 2 5 is 12.5 12.5 1 2 . 5 because each digit value in 0.125 0.125 0 . 1 2 5 is multiplied by 100 100 1 0 0 , so 100 × 0.1 100 \times 0.1 1 0 0 × 0 . 1 is 10 10 1 0 , 100 × 0.02 100 \times 0.02 1 0 0 × 0 . 0 2 is 2 2 2 and 100 × 0.005 100 \times 0.005 1 0 0 × 0 . 0 0 5 is 0.5 0.5 0 . 5 ; converts between units of centimetres and millimetres when planning, measuring and marking materials for cutting)

• rounds decimals to a specified number of decimal places for a purpose (e.g. the mean distance thrown in a school javelin competition was rounded to 2 2 2 decimal places; if the percentage profit was calculated as 12.467921 12.467921 1 2 . 4 6 7 9 2 1 %, rounds the calculation to 12.5 12.5 1 2 . 5 %)

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S8I03

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Interpreting graphical representations

• uses features of graphical representations to make predictions (e.g. predicts audience numbers based on historical data; interprets a range of graphs to identify possible trends and make predictions such as economic growth, stock prices, interest rates, population growth)

• summarises data using fractions, percentages and decimals (e.g. 2 3 \frac23 3 2 ■ of a class live in the same suburb; represents road safety and sun safety statistics as a percentage of the Australian population)

• explains that continuous variables depicting growth or change often vary over time (e.g. creates growth charts to illustrate impacts of financial decisions; describes patterns in inflation rates, employment rates, migration rates over time; represents changes to fitness levels following the implementation of a personal fitness plan; interprets temperature charts)

• interprets graphs depicting motion such as distance–time and velocity–time graphs

• interprets and describes patterns in graphical representations of data from real-life situations such as the motion of a rollercoaster, flight trajectory of a basketball shot and the spread of disease

• investigates the association of 2 2 2 numerical variables through the representation and interpretation of bivariate data (e.g. uses scatter plots to represent bivariate data when investigating the relationship between 2 2 2 variables, such as income per capita, population density and life expectancy for different socio-economic groups)

• investigates, represents and interprets time series data (e.g. interrogates a time series graph showing the change in costs over time; uses a maximum daily temperature chart to determine the average temperature for the month)

• interprets the impact of changes to data (e.g. recognises the impact of outliers on a data set such as the income of a world-class professional athlete on the average income of players at the state/territory level; uses digital tools to enhance the quality of data in a science investigation)

Sampling

• considers the context when determining whether to use data from a sample or a population

• determines what type of sample to use from a population (e.g. decides to use a representative sample when conducting targeted market research or when researching beliefs about a health-related issue)

• makes reasonable statements about a population based on evidence from samples (e.g. considers accuracy of representation of marginalised individuals or population groups)

• plans, executes and reports on sampling-based investigations, taking into account validity of methodology and consistency of data, to answer questions formulated by the student

Recognising bias

• applies an understanding of distributions to evaluate claims based on data (e.g. recognises that the accuracy of using a sample for predicting population values depends on both the relative size of the sample and how well the characteristics of the sample reflect the characteristics of the population; critically analyses statistics that reinforce stereotypes; evaluates claims made by the media regarding young people in relation to drugs and/or risk-taking behaviours)

- identifies and explains bias as a possible source of error in media reports of survey data (e.g. uses data to evaluate veracity of review headlines such as "everybody's favourite game"; investigates media claims on attitudes to government responses to market failure or income redistribution)
- justifies criticisms of data sources that include biased statistical elements (e.g. inappropriate sampling from populations; identifying sources of uncertainty in a scientific investigation; checks the authenticity of a data set)

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S8I03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- put ideas into action by predicting potential or future outcomes and systematically testing a range of options
- put ideas into action by making predictions, testing and evaluating options, and reconsidering approaches in complex or unfamiliar situations
- put ideas into action by making predictions, testing and evaluating options, proposing modifications and adapting approaches in complex or unfamiliar situations

Snapshot – Understanding units of measurement

Numeracy: Measurement and geometry: Understanding units of measurement

Content description

AC9S8I03

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Using metric units and formulas

- establishes and uses formulas for calculating the area of parallelograms, trapeziums, rhombuses and kites
- establishes and uses formulas for calculating the volume and surface area of a range of right prisms

Circle measurements

- informally estimates the circumference of a circle using the radius or diameter
- establishes the relationship between the circumference and the diameter of a circle as the constant π \pi π
- calculates the circumference and the area of a circle using π \pi π and a known diameter or radius

Using metric units and formulas

- uses dissection, rearrangement and estimation to calculate or approximate the area and volume of composite shapes and objects
- uses metric units and formulas to calculate the volume and surface area of right prisms, cylinders, cones and pyramids
- uses the conversion between units of volume and capacity to calculate the capacity of objects based on the internal volume and vice versa
- identifies appropriate metric units to use according to the level of precision required (e.g. building plans show measurements in millimetres, but to purchase enough carpet you need to measure the length and width of the room and round up to the nearest whole metre)
- uses and applies Pythagoras' theorem to authentic contexts (e.g. determines the length of a cross brace given the width of a gate is 1050 1050 1 0 5 0 millimetres and its height is 1450 1450 1 4 5 0 millimetres)
- uses and applies properties of congruent and similar triangles to authentic contexts to determine the size of unknown angles and lengths of sides
- uses trigonometry to calculate the unknown lengths or angles in authentic problems
- chooses an appropriate method to solve problems involving right triangles in authentic contexts

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S8I03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• put ideas into action by predicting potential or future outcomes and systematically testing a range of options
• put ideas into action by making predictions, testing and evaluating options, and reconsidering approaches in complex or unfamiliar situations
• put ideas into action by making predictions, testing and evaluating options, proposing modifications and adapting approaches in complex or unfamiliar situations

Snapshot – Understanding units of measurement

Numeracy: Measurement and geometry: Understanding units of measurement

Content description

AC9S8I03

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Using metric units

• calculates perimeter using properties of two-dimensional shapes to determine unknown lengths
• measures and calculates the area of different shapes using metric units and a range of strategies

Angles as measures of turn

• estimates and measures angles in degrees up to one revolution (e.g. uses a protractor to measure the size of an angle; estimates angles, such as those formed at the elbows when releasing an object; determines the effect of angles on the trajectory, height and distance of flight during jumps and throws in athletics)

Converting units

• converts between metric units of measurement of the same attribute (e.g. converts centimetres into millimetres by multiplying by 10 10 1 0 ; uses the consistent naming of metric prefixes to convert between adjacent units)
• describes and uses the relationship between metric units of measurement and the base- 10 10 1 0 place value system to accurately measure and record measurements using decimals

Using metric units and formulas

• establishes and uses formulas and metric units for calculating the area of rectangles and triangles

Angles as measures of turn

• measures and uses key angles (45 45 4 5 ■, 90 90 9 0 ■, 180 180 1 8 0 ■, 360 360 3 6 0 ■) to define other angles according to their size (e.g. measures a right angle to be 90■ and uses this to determine if 2 2 2 lengths are perpendicular)

Using metric units and formulas

• establishes and uses formulas for calculating the area of parallelograms, trapeziums, rhombuses and kites
• establishes and uses formulas for calculating the volume and surface area of a range of right prisms

Circle measurements

• informally estimates the circumference of a circle using the radius or diameter
• establishes the relationship between the circumference and the diameter of a circle as the constant π \pi π
• calculates the circumference and the area of a circle using π \pi π and a known diameter or radius

Snapshot – Number and place value

Numeracy: Number sense and algebra: Number and place value

Content description

AC9S8I03

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Numeral recognition and identification

• identifies, reads and writes numerals, beyond 4 4 4 digits in length, with spacing after every 3 3 3 digits (e.g. 10 10 1 0 204 204 2 0 4 , 25 25 2 5 000 000 0 0 0 000 000 0 0 0 ; 12 12 1 2 230.25 230.25 2 3 0 . 2 5 ; reads 152 152 1 5 2 450 450 4 5 0 as "one hundred and 52 52 5 2 thousand 4 4 4 hundred and 50 50 5 0 "; compares the size of populations for different countries or the cost of expensive items with an advertised selling price in the millions)

• identifies, reads and writes decimals to one and 2 2 2 decimal places (e.g. reads 4.75 4.75 4 . 7 5 as "four point seven five" or 4 4 4 and 75 75 7 5 hundredths; writes 4 4 4 dollars and 5 5 5 cents as $ 4.05 \$4.05 $ 4 . 0 5)

Place value

• estimates and rounds natural numbers to the nearest 10 thousand, thousand etc. recognising the multiplicative relationships between the place value of the digits (e.g. estimates the crowd numbers at a football match; says that the $ 9863 \$9863 $ 9 8 6 3 raised at a charity event was close to $ 10 \$10 $ 1 0 000 000 0 0 0 ; recognises that 200 years is 10 times as large as 20 years, and applies this to environmental change)

• explains that the place value names for decimal numbers relate to the ones place value

• explains and demonstrates that the place value system extends beyond tenths to hundredths, thousandths … (e.g. uses decimals to represent part units of measurement for length, mass, capacity and temperature)

• represents, compares, orders and interprets decimals up to 2 2 2 decimal places (e.g. constructs a number line to include decimal values between zero and one, when asked "which is greater 0.19 0.19 0 . 1 9 or 0.2 0.2 0 . 2 ?", responds " 0.2 0.2 0 . 2 " ; interprets and compares measurements such as the temperature on different days or the change in height of a growing plant observed and recorded during science investigations)

• rounds decimals to the nearest natural number in order to estimate answers (e.g. estimates the length of material needed by rounding up the measurement to the nearest natural number)

Numeral recognition and identification

• identifies, reads, writes and interprets decimal numbers applying knowledge of the place value periods of tenths, hundredths and thousandths and beyond

Place value

• compares the size of decimals to other numbers including natural numbers and decimals expressed to different numbers of places (e.g. selects 0.35 0.35 0 . 3 5 as the greatest number from the set 0.2 , 0.125 , 0.35 0.2, 0.125, 0.35 0 . 2 , 0 . 1 2 5 , 0 . 3 5 ; explains that 2 2 2 is greater than 1.845 1.845 1 . 8 4 5)

• describes the multiplicative relationship between the adjacent positions in place value for decimals (e.g. understands that 0.2 0.2 0 . 2 is 10 10 1 0 times as great as 0.02 0.02 0 . 0 2 and that 100 100 1 0 0 times 0.005 0.005 0 . 0 0 5 is 0.5 0.5 0 . 5)

• compares and orders decimals greater than one including those expressed to an unequal number of places (e.g. compares the heights of students in the class that are expressed in metres such as 1.6 1.6 1 . 6 m is taller than 1.52 1.52 1 . 5 2 m; correctly orders the numbers 1.4 1.4 1 . 4 , 1.375 1.375 1 . 3 7 5 and 2.15 2.15 2 . 1 5 from least to greatest)

• rounds decimals to one and 2 decimal places for a purpose

Numeral recognition and identification

• reads, represents, interprets and uses negative numbers in computation (e.g. explains that the temperature − 10 10 1 0 °C is colder than the temperature − 2.5 2.5 2 . 5 °C; recognises that negative numbers are less than zero; locates − 12 12 1 2 on a number line)

Place value

• identifies that negative numbers are integers that represent both size and direction (e.g. uses a number line to represent position and order negative numbers; uses negative numbers in financial contexts such as to model an overdrawn account)

• understands that multiplying and dividing numbers by 10 , 100 , 1000 10, 100, 1000 1 0 , 1 0 0 , 1 0 0 0 changes the positional value of the digits (e.g. explains that 100 100 1 0 0 times 0.125 0.125 0 . 1 2 5 is 12.5 12.5 1 2 . 5 because each digit value in 0.125 0.125 0 . 1 2 5 is multiplied by 100 100 1 0 0 , so 100 × 0.1 100 \times 0.1 1 0 0 × 0 . 1 is 10 10 1 0 , 100 × 0.02 100 \times 0.02

100×0.02 is 2 and 100×0.005 100×0.005 100×0.005 is 0.5 0.5 0.5;
converts between units of centimetres and millimetres when planning, measuring and marking materials for cutting)
• rounds decimals to a specified number of decimal places for a purpose (e.g. the mean distance thrown in a school javelin competition was rounded to 2 2 decimal places; if the percentage profit was calculated as 12.467921 12.467921 12.467921 %, rounds the calculation to 12.5 12.5 12.5 %)

Snapshot – Acquire and collate data

Digital Literacy: Investigating: Acquire and collate data

Content description

AC9S8I03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• collect and access data using a range of digital tools and methods in response to a defined question or problem
• collect and access data from a range of sources, using specialised digital tools in response to problems, and evaluate it for relevance
• collect and evaluate quantitative and qualitative data using specialised digital tools and processes in the context of identified problems

Snapshot – Number and place value

Numeracy: Number sense and algebra: Number and place value

Content description

AC9S8I03

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Numeral recognition and identification

• reads, represents, interprets and uses negative numbers in computation (e.g. explains that the temperature -10 10 10 °C is colder than the temperature -2.5 2.5 2.5 °C; recognises that negative numbers are less than zero; locates -12 12 12 on a number line)

Place value

• identifies that negative numbers are integers that represent both size and direction (e.g. uses a number line to represent position and order negative numbers; uses negative numbers in financial contexts such as to model an overdrawn account)
• understands that multiplying and dividing numbers by 10, 100, 1000 $10, 100, 1000$ $10, 100, 1000$ changes the positional value of the digits (e.g. explains that 100 100 100 times 0.125 0.125 0.125 is 12.5 12.5 12.5 because each digit value in 0.125 0.125 0.125 is multiplied by 100 100 100, so 100×0.1 100×0.1 100×0.1 is 10 10 10, 100×0.02 100×0.02 100×0.02 is 2 and 100×0.005 100×0.005 100×0.005 is 0.5 0.5 0.5;
converts between units of centimetres and millimetres when planning, measuring and marking materials for cutting)
• rounds decimals to a specified number of decimal places for a purpose (e.g. the mean distance

thrown in a school javelin competition was rounded to 2 2 2 decimal places; if the percentage profit was calculated as 12.467921 12.467921 1 2 . 4 6 7 9 2 1 %, rounds the calculation to 12.5 12.5 1 2 . 5 %)

Numeral recognition and identification

• identifies, reads and interprets very large numbers and very small numbers (e.g. reads that the world population is estimated to be seven billion and interprets this to mean 7 7 7 000 000 0 0 0 000 000 0 0 0 000 000 0 0 0 or 7×10^9 7 \times 10^9 7 × 1 0 9 ; interprets the approximate mass of protons and neutrons as 1.67×10^{-24} 1.67 \times10^{-24} 1 . 6 7 × 1 0 − 2 4 g; identifies and interprets the value of national government debt)

Place value

• compares and orders very large numbers and very small numbers (e.g. understands the relative size of very large time scales such as a millennium)

• relates place value parts to exponents (e.g. 1000 1000 1 0 0 0 is 100 100 1 0 0 times greater than 10 10 1 0 , and that is why $10 \times 10^2 = 10^3$ 10 \times 10^2 = 10^3 1 0 × 1 0 2 = 1 0 3 and why 1 0 3 10^3 1 0 3 divided by 10 10 1 0 is equal to 1 0 2 10^2 1 0 2)

• expresses numbers in scientific notation (e.g. when calculating the distance of the Earth from the sun uses 1.5×10^8 1.5\times 10^8 1 . 5 × 1 0 8 as an approximation; a nanometre has an order of magnitude of − 9 9 9 and is represented as 1 0 − 9 10^{-9} 1 0 − 9)

AC9S8I04

select and construct appropriate , including tables, , and mathematical , to organise and process and information

•

•

Elaborations

• using simple formulas in spreadsheets to organise and process collected

• using visual displays of large sets, such as maps showing the location of volcanoes and earthquakes, charts showing the structure of body and showing energy production, to identify temporal and spatial

• constructing using correct conventions such as naming the and labelling the axes, using the horizontal axis for the and the vertical axis for the

• constructing energy flow diagrams to represent energy changes in a such as a rollercoaster or rocket launch

• constructing of chemical and physical changes, such as creating a visual or symbolic

• collating from a number of sources such as different groups in the class who performed the same to create a summary

• examining the strengths and limitations of such as physical , diagrams and virtual and selecting the most appropriate to use

Students learn to:

select and construct appropriate representations, including tables, graphs, models relationships, to organise and process data and information

(AC9S8I04)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Number sense and algebra

• Number patterns and algebraic thinking

Statistics and probability

• Interpreting and representing data

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to

general capabilities and cross-curriculum priorities. Content elaborations are optional .

Investigating

• Interpret data

Number sense and algebra

• Number patterns and algebraic thinking

Analysing

• Interpret concepts and problems

Number sense and algebra

• Number patterns and algebraic thinking

Generating

• Create possibilities

Inquiring

• Identify, process and evaluate information

Analysing

• Draw conclusions and provide reasons

Inquiring

• Identify, process and evaluate information

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Investigating

• Interpret data

Writing

• Creating texts

Related content

This content description can be taught with the following content descriptions from other learning areas.

AC9HG8S02
AC9HG8S03
AC9M8A03

Resources

Work Samples

WS01 - Bouncing ball

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context

• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatio

Content description

AC9S8I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify and examine relevant information and opinion from a range of sources, including visual

information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Number patterns and algebraic thinking

Numeracy: Number sense and algebra: Number patterns and algebraic thinking

Content description

AC9S8I04

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Algebraic expressions

• creates and identifies algebraic equations from word problems involving one or more operations (e.g. if a taxi charges $\$5$ call out fee then a flat rate of $\$2.30$ per km travelled, represents this algebraically as $C = 5 + 2.3d$ where d is the distance travelled in km and C is the total cost of the trip)
• identifies and justifies equivalent algebraic expressions
• interprets a table of values in order to plot points on a graph

Algebraic relationships

• interprets and uses formulas and algebraic equations that describe relationships in various contexts (e.g. uses $A = \mathrm{\pi r}^2$ to calculate the area of a circular space; uses $A = P(1+\frac{r}{n})^{nt}$ when working with compound interest; uses $v = u + at$ to calculate the velocity of an object
• plots relationships on a graph using a table of values representing authentic data (e.g. uses data recorded in a spreadsheet to plot results of a science experiment)

Linear and non-linear relationships

• identifies the difference between linear and non-linear relationships in everyday contexts (e.g. explains that in a linear relationship, the rate of change is constant such as the cost of babysitting by the hour, whereas in a non-linear relationship the rate of change will vary and it could grow multiplicatively or exponentially such as a social media post going viral)
• describes and interprets the graphical features of linear and non-linear growth in authentic problems (e.g. compares simple and compound interest graphs; describes the relationship between scientific data plotted on a graph; analyses a graph to identify the inverse relationship between price and quantity demanded or the relationship between Human Development Index (HDI) and standards of living)

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S8I04

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Interpreting graphical representations

• uses features of graphical representations to make predictions (e.g. predicts audience numbers based on historical data; interprets a range of graphs to identify possible trends and make predictions such as economic growth, stock prices, interest rates, population growth)
• summarises data using fractions, percentages and decimals (e.g. $\frac{2}{3}$ of a class live in the same suburb; represents road safety and sun safety statistics as a percentage of the Australian population)
• explains that continuous variables depicting growth or change often vary over time (e.g. creates

growth charts to illustrate impacts of financial decisions; describes patterns in inflation rates, employment rates, migration rates over time; represents changes to fitness levels following the implementation of a personal fitness plan; interprets temperature charts)
• interprets graphs depicting motion such as distance–time and velocity–time graphs
• interprets and describes patterns in graphical representations of data from real-life situations such as the motion of a rollercoaster, flight trajectory of a basketball shot and the spread of disease
• investigates the association of 2 2 2 numerical variables through the representation and interpretation of bivariate data (e.g. uses scatter plots to represent bivariate data when investigating the relationship between 2 2 2 variables, such as income per capita, population density and life expectancy for different socio-economic groups)
• investigates, represents and interprets time series data (e.g. interrogates a time series graph showing the change in costs over time; uses a maximum daily temperature chart to determine the average temperature for the month)
• interprets the impact of changes to data (e.g. recognises the impact of outliers on a data set such as the income of a world-class professional athlete on the average income of players at the state/territory level; uses digital tools to enhance the quality of data in a science investigation)

Sampling
• considers the context when determining whether to use data from a sample or a population
• determines what type of sample to use from a population (e.g. decides to use a representative sample when conducting targeted market research or when researching beliefs about a health-related issue)
• makes reasonable statements about a population based on evidence from samples (e.g. considers accuracy of representation of marginalised individuals or population groups)
• plans, executes and reports on sampling-based investigations, taking into account validity of methodology and consistency of data, to answer questions formulated by the student

Recognising bias
• applies an understanding of distributions to evaluate claims based on data (e.g. recognises that the accuracy of using a sample for predicting population values depends on both the relative size of the sample and how well the characteristics of the sample reflect the characteristics of the population; critically analyses statistics that reinforce stereotypes; evaluates claims made by the media regarding young people in relation to drugs and/or risk-taking behaviours)
• identifies and explains bias as a possible source of error in media reports of survey data (e.g. uses data to evaluate veracity of review headlines such as "everybody's favourite game"; investigates media claims on attitudes to government responses to market failure or income redistribution)
• justifies criticisms of data sources that include biased statistical elements (e.g. inappropriate sampling from populations; identifying sources of uncertainty in a scientific investigation; checks the authenticity of a data set)

Snapshot – Interpret data

Digital Literacy: Investigating: Interpret data

Content description
AC9S8I04

Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• analyse and visualise data using a range of digital tools to identify patterns and make predictions
• analyse and visualise data by selecting and using a range of digital tools to infer relationships and make predictions
• analyse and visualise multidimensional data by selecting and using a range of interactive tools to draw conclusions and make predictions

Snapshot – Number patterns and algebraic thinking

Numeracy: Number sense and algebra: Number patterns and algebraic thinking

Content description
AC9S8I04

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Algebraic expressions

• creates and identifies algebraic equations from word problems involving one or more operations (e.g. if a taxi charges $ 5 \$5 $ 5 call out fee then a flat rate of $ 2.30 \$2.30 $ 2 . 3 0 per km travelled, represents this algebraically as C = 5 + 2.3 d C=5+2.3d C = 5 + 2 . 3 d where d d d is the distance travelled in km and C C C is the total cost of the trip)
• identifies and justifies equivalent algebraic expressions
• interprets a table of values in order to plot points on a graph

Algebraic relationships

• interprets and uses formulas and algebraic equations that describe relationships in various contexts (e.g. uses A = π r 2 \mathrm A=\mathrm{πr}^2 A = π r 2 to calculate the area of a circular space; uses A = P (1 + r n) n t \mathrm A=\mathrm P(1+\frac{\mathrm r}{\mathrm n})^{\mathrm{nt}} A = P (1 + n r ■) n t when working with compound interest; uses v = u + a t v=u+at v = u + a t to calculate the velocity of an object
• plots relationships on a graph using a table of values representing authentic data (e.g. uses data recorded in a spreadsheet to plot results of a science experiment)

Linear and non-linear relationships

• identifies the difference between linear and non-linear relationships in everyday contexts (e.g. explains that in a linear relationship, the rate of change is constant such as the cost of babysitting by the hour, whereas in a non-linear relationship the rate of change will vary and it could grow multiplicatively or exponentially such as a social media post going viral)
• describes and interprets the graphical features of linear and non-linear growth in authentic problems (e.g. compares simple and compound interest graphs; describes the relationship between scientific data plotted on a graph; analyses a graph to identify the inverse relationship between price and quantity demanded or the relationship between Human Development Index (HDI) and standards of living)

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Number patterns and algebraic thinking

Numeracy: Number sense and algebra: Number patterns and algebraic thinking

Content description

AC9S8I04

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Algebraic expressions

• creates and identifies algebraic equations from word problems involving one or more operations (e.g. if a taxi charges $ 5 \$5 $ 5 call out fee then a flat rate of $ 2.30 \$2.30 $ 2 . 3 0 per km travelled, represents this algebraically as C = 5 + 2.3 d C=5+2.3d C = 5 + 2 . 3 d where d d d is the distance travelled in km and C C C is the total cost of the trip)
• identifies and justifies equivalent algebraic expressions
• interprets a table of values in order to plot points on a graph

Algebraic relationships
• interprets and uses formulas and algebraic equations that describe relationships in various contexts (e.g. uses $\mathrm{A}=\mathrm{\pi r}^2$ to calculate the area of a circular space; uses $\mathrm{A}=\mathrm{P}(1+\frac{\mathrm r}{\mathrm n})^{\mathrm{nt}}$ when working with compound interest; uses $v=u+at$ to calculate the velocity of an object
• plots relationships on a graph using a table of values representing authentic data (e.g. uses data recorded in a spreadsheet to plot results of a science experiment)

Linear and non-linear relationships
• identifies the difference between linear and non-linear relationships in everyday contexts (e.g. explains that in a linear relationship, the rate of change is constant such as the cost of babysitting by the hour, whereas in a non-linear relationship the rate of change will vary and it could grow multiplicatively or exponentially such as a social media post going viral)
• describes and interprets the graphical features of linear and non-linear growth in authentic problems (e.g. compares simple and compound interest graphs; describes the relationship between scientific data plotted on a graph; analyses a graph to identify the inverse relationship between price and quantity demanded or the relationship between Human Development Index (HDI) and standards of living)

Snapshot – Create possibilities

Critical and Creative Thinking: Generating: Create possibilities

Content description
AC9S8I04

Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• create possibilities by changing, combining, or elaborating on new and known ideas in a variety of creative ways
• create possibilities by adapting, combining or elaborating on new and known ideas, and proposing a range of different or creative combinations
• create possibilities by connecting or adapting complex ideas and proposing innovative and detailed variations or combinations

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description
AC9S8I04

Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Draw conclusions and provide reasons

Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

Content description
AC9S8I04

Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks by connecting evidence from within and

across discipline areas to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks, using analysis of complex evidence and arguments before making recommendations

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area
• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati

Content description

AC9S8I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• compare information and opinion that can be verified against claims based on personal preference
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study
• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

Snapshot – Interpret data

Digital Literacy: Investigating: Interpret data

Content description

AC9S8I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• analyse and visualise data using a range of digital tools to identify patterns and make predictions

• analyse and visualise data by selecting and using a range of digital tools to infer relationships and make predictions
• analyse and visualise multidimensional data by selecting and using a range of interactive tools to draw conclusions and make predictions

Snapshot – Creating texts

Literacy: Writing: Creating texts

Content description

AC9S8I04

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Crafting ideas

• creates informative texts for a broader range of learning area purposes (e.g. explains a life cycle of a butterfly, recounts a process, describes an artwork)
• includes structural features appropriate to the type of text and task such as opening statements to define the topic and at least 2 body paragraphs
• includes ideas which are relevant to the topic and purpose of the text
• organises information into paragraphs to support the reader
• includes a relevant graphic to support the reader (e.g. diagram or photo)

Text forms and features

• uses cohesive devices to signpost sections of text (e.g. uses text connectives such as "finally", "as a result", "in addition")
• uses present or timeless present tense consistently throughout text (e.g. "bears hibernate in winter") (see Grammar)
• selects visual and audio features to expand ideas in written texts (e.g. diagrams, tables, images)
• uses adjectives to create more accurate description (e.g. "the warm-blooded mammal") (see Grammar)

Vocabulary

• uses a range of technical and subject specific words to add detail and authority to information (e.g. "hibernate" instead of "sleep")

Crafting ideas

• creates informative texts that describe, explain and document (e.g. describe an artwork, document the materials and explain why it was created)
• selects structural elements to comprehensively and accurately represent the information (e.g. a fact sheet includes an opening statement, labelled diagrams and text boxes)
• orients the reader to the topic or concept using a definition or classification
• develops ideas with details and examples
• uses ideas derived from research
• uses written and visual supporting evidence

Text forms and features

• uses cohesive devices to link concepts across texts (e.g. uses lexical cohesion such as word associations and synonyms)
• uses cohesive devices to express cause and effect (e.g. uses text connectives such as "therefore", "subsequently")
• includes salient visual and audio features to expand on written information (e.g. creates graphs and other technical diagrams from authentic data)
• uses language to compare (e.g. "alternatively", "whereas")
• uses formatting appropriately to reference and label graphics

Vocabulary

• uses a range of learnt, technical and discipline-specific terms (e.g. "adapt", "survive")
• uses more sophisticated words to express cause and effect (e.g. "therefore", "subsequently")

Crafting ideas

• creates informative texts to explain and analyse (e.g. analyses how artists use visual conventions in artworks)
• creates texts to compare and contrast phenomena (e.g. identify the similarities and differences between species of animals)

- orients the reader clearly to the topic or concept (e.g. using a definition or classification in the opening paragraph)
- intentionally selects structural elements for effect (e.g. includes an effective conclusion that synthesises complex ideas)
- uses evidence and research including digital resources to expand upon information and elaborate concepts

Text forms and features
- varies sentence structure for effect (see Grammar)
- judiciously uses language, visual and audio features to emotionally or intellectually affect the reader
- uses more elaborate noun groups/phrases that include classifying adjectives and specific nouns (e.g. "mineral component of sedimentary rocks")
- creates cohesive flow by condensing previous information into a summarising noun (e.g. "A series of tumultuous events culminated in the outbreak of WWI - modern history's turning point.")
- uses passive voice and nominalisation to write succinctly (e.g. "the results were analysed") (see Grammar)

Vocabulary
- uses discipline-specific terminology to provide accurate and explicit information (e.g. "discipline metalanguage")
- uses a range of synonyms for frequently occurring words, in a longer text (e.g. "repair", "fix", "remedy")
- uses vocabulary to indicate and describe relationships (e.g. "additionally", "similarly")

AC9S8I05

analyse and information to describe , and and identify anomalies

-

Elaborations

- identifying correlational in such as: 'Dropping a from a greater height produces a larger indentation' and analysing this for causality
- describing measures of central tendency such as mean, mode and median and identifying for quantitative
- using spreadsheets to analyse second-hand such as daily power output of solar panels and examining anomalies such as periods of reduced output
- analysing changes in battery energy output following recharging over many cycles and relating to available chemical potential energy
- comparing temperature differences obtained by reacting different proportions of the same chemicals to determine if there is a

Students learn to:

analyse data and information to describe patterns, trends and relationships and ide

(AC9S8I05)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Analysing
- Interpret concepts and problems

Inquiring
- Identify, process and evaluate information

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Analysing
- Interpret concepts and problems

Inquiring
- Identify, process and evaluate information

Statistics and probability
- Interpreting and representing data

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Statistics and probability

• Interpreting and representing data

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Investigating

• Interpret data

Reflecting

• Transfer knowledge

Analysing

• Interpret concepts and problems

Inquiring

• Identify, process and evaluate information

Related content

This content description can be taught with the following content descriptions from other learning areas.

AC9M8ST01

Resources

Work Samples

WS01 - Bouncing ball

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context

• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatio

Content description

AC9S8I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources

• compare information and opinion that can be verified against claims based on personal preference

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the accuracy, validity and relevance of the information and opinion to the topic of study

• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources

• evaluate the information selected to determine bias and reliability

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate information

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• evaluate the information selected to determine bias and reliability

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S8I05

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Collecting, displaying, interpreting and analysing numerical data

• poses questions based on variations in continuous numerical data and chooses the appropriate method to collect and record data (e.g. collects information on the heights of buildings or daily temperatures, tabulates the results and represents these graphically; uses a survey to collect primary data or secondary data extracted from census data)
• uses numerical and graphical representations relevant to the purpose of the collection of the data and explains their reasoning (e.g. "I can't use a frequency histogram for categorical data because there is no numerical connection between the categories"; converts their data to percentages in order to compare the girls' results to those of the boys, as the total number of boys and girls who participated in the survey was different)
• determines and calculates the most appropriate statistic to describe the spread of data (e.g. when creating an infographic, uses the mean of the data to describe household income and the median of the data for house prices)
• calculates simple descriptive statistics such as mode, mean or median as measures to represent typical values of a distribution (e.g. describes the mean kilojoule intake and median hours of exercise of a sample population when investigating community health and wellbeing; describes central tendency when analysing road safety statistics)
• compares the usefulness of different representations of the same data (e.g. chooses to use a line graph to illustrate trends, a bar graph to compare the living standards of different economies and a histogram to show income distribution)
• describes the spread of a data distribution in terms of the range, clusters, skewness and symmetry

of the graphical display, and determines and makes connections to the mode, median and mean of the data

Interpreting graphical representations

• uses features of graphical representations to make predictions (e.g. predicts audience numbers based on historical data; interprets a range of graphs to identify possible trends and make predictions such as economic growth, stock prices, interest rates, population growth)
• summarises data using fractions, percentages and decimals (e.g. 2 3 \frac23 3 2 ■ of a class live in the same suburb; represents road safety and sun safety statistics as a percentage of the Australian population)
• explains that continuous variables depicting growth or change often vary over time (e.g. creates growth charts to illustrate impacts of financial decisions; describes patterns in inflation rates, employment rates, migration rates over time; represents changes to fitness levels following the implementation of a personal fitness plan; interprets temperature charts)
• interprets graphs depicting motion such as distance–time and velocity–time graphs
• interprets and describes patterns in graphical representations of data from real-life situations such as the motion of a rollercoaster, flight trajectory of a basketball shot and the spread of disease
• investigates the association of 2 2 2 numerical variables through the representation and interpretation of bivariate data (e.g. uses scatter plots to represent bivariate data when investigating the relationship between 2 2 2 variables, such as income per capita, population density and life expectancy for different socio-economic groups)
• investigates, represents and interprets time series data (e.g. interrogates a time series graph showing the change in costs over time; uses a maximum daily temperature chart to determine the average temperature for the month)
• interprets the impact of changes to data (e.g. recognises the impact of outliers on a data set such as the income of a world-class professional athlete on the average income of players at the state/territory level; uses digital tools to enhance the quality of data in a science investigation)

Sampling

• considers the context when determining whether to use data from a sample or a population
• determines what type of sample to use from a population (e.g. decides to use a representative sample when conducting targeted market research or when researching beliefs about a health-related issue)
• makes reasonable statements about a population based on evidence from samples (e.g. considers accuracy of representation of marginalised individuals or population groups)
• plans, executes and reports on sampling-based investigations, taking into account validity of methodology and consistency of data, to answer questions formulated by the student

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S8I05

Continuum extract

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• identify the objective and subjective aspects of a complex concept or problem, with sensitivity to context

Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

Content description

AC9S8I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and examine relevant information and opinion from a range of sources, including visual

information and digital sources
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Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

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Snapshot – Identify, process and evaluate information

Critical and Creative Thinking: Inquiring: Identify, process and evaluate informatic

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Snapshot – Interpret data

Digital Literacy: Investigating: Interpret data

Content description

AC9S8I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
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- analyse and visualise data by selecting and using a range of digital tools to infer relationships and make predictions
- analyse and visualise multidimensional data by selecting and using a range of interactive tools to

draw conclusions and make predictions
Snapshot – Transfer knowledge
Critical and Creative Thinking: Reflecting: Transfer knowledge
Content description
AC9S8I05
Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• apply aspects of knowledge and skills gained in one context to a new or unrelated context to achieve a specific purpose
• transfer knowledge and skills gained in previous experiences to both similar and different contexts, and explain reasons for decisions and choices made
• identify, plan and justify opportunities to transfer knowledge into new contexts

Snapshot – Interpret concepts and problems
Critical and Creative Thinking: Analysing: Interpret concepts and problems
Content description
AC9S8I05
Continuum extract
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• identify the relevant aspects of a concept or problem, recognising gaps or missing elements necessary for understanding by using approaches and strategies suitable for the context
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Snapshot – Identify, process and evaluate information
Critical and Creative Thinking: Inquiring: Identify, process and evaluate informati
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• identify and clarify significant information and opinion from a range of sources, including visual information and digital sources
• evaluate the information selected to determine bias and reliability

AC9S8I06

analyse methods, and for , possible sources of error, conflicting and unanswered questions
•
•

Elaborations
• identifying then examining if extra controls are required and how these might affect the and
• identifying sources of error in methods such as inconsistent control and inaccuracies in procedures or measurements, and explaining how the method could be improved
• comparing results with other groups or secondary sources to examine consistency and describing where there may be conflicting results or
• analysing or to determine if there are further questions which should be explored to verify the or
• analysing to identify facts or premises that are taken for granted to be true, and discussing the reasonableness of those with others
Students learn to:

analyse methods, conclusions and claims for assumptions, possible sources of err[...] evidence and unanswered questions

(AC9S8I06)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Analysing

• Draw conclusions and provide reasons

• Evaluate actions and outcomes

Speaking and listening

• Interacting

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Analysing

• Evaluate actions and outcomes

Analysing

• Draw conclusions and provide reasons

• Evaluate actions and outcomes

Analysing

• Draw conclusions and provide reasons

• Evaluate actions and outcomes

Analysing

• Draw conclusions and provide reasons

• Evaluate actions and outcomes

Reading and viewing

• Understanding texts

Snapshot – Draw conclusions and provide reasons

Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

Content description

AC9S8I06

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made

• draw conclusions and make choices when completing tasks by connecting evidence from within and across discipline areas to provide reasons and evaluate arguments for choices made

• draw conclusions and make choices when completing tasks, using analysis of complex evidence and arguments before making recommendations

Snapshot – Evaluate actions and outcomes

Critical and Creative Thinking: Analysing: Evaluate actions and outcomes

Content description

AC9S8I06

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• evaluate the effectiveness of a course of action or the outcome of a task, including using a given or co-developed set of criteria to support decisions

• evaluate the effectiveness of a course of action or the outcome of a task and account for expected and unexpected results, including using a given or co-developed set of criteria to support decisions

• evaluate the effectiveness of a course of action to achieve desired outcomes and suggest improvements, including using a personally developed set of criteria to support judgements and decisions

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S8I06

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.
• critically evaluate ideas and claims made by a speaker
• explains new learning from interacting with others
• appropriately presents an alternative point to the previous speaker
• initiates interactions confidently in group and whole-class discussions
• poses pertinent questions to make connections between a range of ideas
• uses open questions to prompt a speaker to provide more information
• clarifies task goals and negotiates roles in group learning
• monitors discussion to manage digression from the topic
• identifies and articulates the perspective of a speaker, to move a conversation forward
• interacts within school context or the broader community, adjusting language and responses to suit purpose and audience
• synthesises ideas from group discussion into a common theme or hypothesis
• poses problems, hypothesises and formulates questions about abstract ideas in group situations
• restates different views and makes suggestions to negotiate agreement
• poses questions to clarify assumptions made by the speaker
• questions others to evaluate accuracy of thinking or problem-solving processes
• uses language to align the listener with personal position (e.g. "of course", "as you can imagine", "obviously")
• interacts strategically and confidently with a broad range of interactional partners
• gives an extended explanation and evaluation of a complex concept, issue or process
• justifies a personal stance, after analysis of arguments on a particular issue, using evidence and elaboration in a group situation
• uses language strategically to subtly align others to own perspective as appropriate to audience and purpose

Snapshot – Evaluate actions and outcomes

Critical and Creative Thinking: Analysing: Evaluate actions and outcomes

Content description

AC9S8I06

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The following continuum extract shows the alignment of the continuum with this content.
• evaluate the effectiveness of a course of action or the outcome of a task, including using a given or co-developed set of criteria to support decisions
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• evaluate the effectiveness of a course of action to achieve desired outcomes and suggest improvements, including using a personally developed set of criteria to support judgements and decisions

Snapshot – Draw conclusions and provide reasons

Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

Content description

AC9S8I06

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks by connecting evidence from within and across discipline areas to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks, using analysis of complex evidence and

arguments before making recommendations

Snapshot – Evaluate actions and outcomes

Critical and Creative Thinking: Analysing: Evaluate actions and outcomes

Content description

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Snapshot – Draw conclusions and provide reasons

Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

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Snapshot – Evaluate actions and outcomes

Critical and Creative Thinking: Analysing: Evaluate actions and outcomes

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Snapshot – Draw conclusions and provide reasons

Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

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• draw conclusions and make choices when completing tasks, using analysis of complex evidence and arguments before making recommendations

Snapshot – Evaluate actions and outcomes

Critical and Creative Thinking: Analysing: Evaluate actions and outcomes

Content description

AC9S8I06

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The following continuum extract shows the alignment of the continuum with this content.
• evaluate the effectiveness of a course of action or the outcome of a task, including using a given or co-developed set of criteria to support decisions
• evaluate the effectiveness of a course of action or the outcome of a task and account for expected and unexpected results, including using a given or co-developed set of criteria to support decisions
• evaluate the effectiveness of a course of action to achieve desired outcomes and suggest improvements, including using a personally developed set of criteria to support judgements and decisions

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S8I06

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Comprehension

• reads and views some moderately complex texts (see Text complexity)
• accurately retells a text including most relevant details
• identifies main idea and related or supporting ideas in moderately complex texts (see Text complexity)
• evaluates the accuracy within and across texts on the same topic
• explains how authors use evidence and supporting detail to build and verify ideas
• draws inferences and verifies using textual evidence

Processes

• monitors reading for meaning using grammatical and contextual knowledge (see Fluency)
• explains how textual features support the text's purpose
• identifies and explains techniques used to present perspective (e.g. emotive or descriptive language, order in which ideas are presented)
• predicts the development of ideas based on a partial read (e.g. predicts the final chapter of a narrative, drawing on understanding of the textual features in the previous chapters)
• uses prior knowledge and context to read unknown words (e.g. uses morphemic knowledge of "explosion" to decode "explosive" and uses context and knowledge of metaphorical use of language to understand "explosive outburst")
• uses knowledge of cohesive devices to track meaning throughout a text (e.g. connectives such as "however", "on the other hand") (see Grammar)
• uses knowledge of the features and conventions of the type of text to build meaning (e.g. recognises that the beginning of a persuasive text may introduce the topic and the line of argument)
• identifies language features used to present opinions or points of view
• skims and scans texts for key words to track the development of ideas
• uses sophisticated punctuation to support meaning (e.g. commas to separate clauses in complex sentences)

Vocabulary

• uses knowledge of prefixes and suffixes to read and interpret unfamiliar words
• identifies how technical and discipline-specific words develop meaning in texts
• analyses the effect of antonyms, synonyms and idiomatic language
• understands precise meaning of words with similar connotations (e.g. "generous", "kind-hearted", "charitable")

Comprehension

• reads and views complex texts (see Text complexity)
• identifies the main themes or concepts in complex texts by synthesising key ideas or information
• summarises the text, identifying key details only
• draws inferences, synthesising clues and evidence across a text

- builds meaning by actively linking ideas from a number of texts or a range of digital sources
- distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)
- identifies different interpretations of the text citing evidence from a text
- evaluates language features for relevance to purpose and audience
- analyses texts that have more than one purpose and explains how parts of the text support a particular purpose
- analyses the use of language appropriate to different types of texts (e.g. compare the use of pun in imaginative and persuasive texts)
- identifies techniques used to obscure author's purpose (e.g. inclusion or omission of content)

Processes

- uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning
- uses knowledge of a broader range of cohesive devices to track meaning (e.g. word associations) (see Grammar)
- selects reading or viewing strategies appropriate to reading purpose (e.g. scans text for evidence)
- judiciously selects texts for learning area tasks and purposes

Vocabulary

- identifies language used to create tone or atmosphere
- analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)
- applies knowledge of base words and word origins to understand the meaning of unfamiliar, discipline-specific words
- uses a range of context and grammatical cues to understand unfamiliar words
- interprets complex figurative language (e.g. euphemisms, hyperbole)

Comprehension

- reads and views complex or some highly complex texts (see Text complexity)
- interprets abstract concepts integrating complex ideas
- analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)
- draws inferences using evidence from the text and discounting possible inferences that are not supported by the text
- applies and articulates criteria to evaluate the language structures and features for relevance to purpose and audience
- evaluates the reasoning and evidence in a persuasive text
- explains how context (e.g. time, place, situation) influences interpretations of a text
- analyses the author's perspectives in complex or some highly complex texts
- analyses the techniques authors use to position readers
- recognises when ideas or evidence have been omitted from a text to position the reader

Processes

- automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning
- describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")
- navigates extended texts including complex digital texts

Vocabulary

- demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")
- verifies interpretations of unfamiliar words using grammatical and contextual cues

AC9S8I07

construct evidence-based to support or evaluate and consider any ethical issues and cultural protocols associated with using or citing secondary or information

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-

Elaborations

• evaluating the quality of of primary and secondary sources used when constructing an to support a
or
• examining competing ideas, differences in methods and sources of error when constructing an
• acknowledging and considering the ethical issues or cultural protocols when using or citing secondary , such as acknowledging sources and respecting cultural protocols around sharing of particular information
• analysing what would be necessary to support the that all buildings in an earthquake area should be made of bamboo
• evaluating a that one brand of battery lasts longer than another brand of battery
Students learn to:

construct evidence-based arguments to support conclusions or evaluate claims and ethical issues and cultural protocols associated with using or citing secondary dat

(AC9S8I07)

General capabilities and cross-curriculum priorities

This content description connects to the following general capabilities and cross-curriculum priorities.

Analysing

• Draw conclusions and provide reasons
• Evaluate actions and outcomes

Understanding ethical concepts and perspectives

• Examine values, rights and responsibilities and ethical norms
• Recognise influences on ethical behaviour and perspectives

Elaborations

Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .

Analysing

• Draw conclusions and provide reasons
• Evaluate actions and outcomes

Reading and viewing

• Understanding texts

Analysing

• Draw conclusions and provide reasons
• Evaluate actions and outcomes

Reading and viewing

• Understanding texts

Responding to ethical issues

• Explore ethical issues

People

• The significant and ongoing contributions of First Nations Australians and their histories and cultures are acknowledged locally, nationally and globally.

Analysing

• Draw conclusions and provide reasons

Analysing

• Draw conclusions and provide reasons

Related content

This content description can be taught with the following content descriptions from other learning areas.
AC9M8ST04

Snapshot – Draw conclusions and provide reasons

Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

Content description

AC9S8I07

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks by connecting evidence from within and across discipline areas to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks, using analysis of complex evidence and arguments before making recommendations

Snapshot – Evaluate actions and outcomes

Critical and Creative Thinking: Analysing: Evaluate actions and outcomes

Content description

AC9S8I07

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• evaluate the effectiveness of a course of action or the outcome of a task, including using a given or co-developed set of criteria to support decisions
• evaluate the effectiveness of a course of action or the outcome of a task and account for expected and unexpected results, including using a given or co-developed set of criteria to support decisions
• evaluate the effectiveness of a course of action to achieve desired outcomes and suggest improvements, including using a personally developed set of criteria to support judgements and decisions

Snapshot – Examine values, rights and responsibilities and ethical norms

Ethical Understanding: Understanding ethical concepts and perspectives: Examin responsibilities and ethical norms

Content description

AC9S8I07

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• describe how the relationships between values, rights and responsibilities, and ethical norms influence responses and decisions related to ethical issues
• describe the relationship between the role of individual and community values, rights and responsibilities, and ethical norms when responding to ethical issues
• describe the importance of values, rights and responsibilities when reaching a position on an ethical issue, and evaluate their role in challenging and defending ethical norms

Snapshot – Recognise influences on ethical behaviour and perspectives

Ethical Understanding: Understanding ethical concepts and perspectives: Recog ethical behaviour and perspectives

Content description

AC9S8I07

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• explain how habits and behaviour shape character and examine how they inform ethical perspectives
• explain how different traits, such as■honesty, trust, courage and selfishness interact with responsibilities or duties to determine ethically appropriate responses
• explore and analyse examples of the tensions between conflicting positions on issues of personal, social and global importance

Snapshot – Draw conclusions and provide reasons

Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

Content description

AC9S8I07

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made

• draw conclusions and make choices when completing tasks by connecting evidence from within and across discipline areas to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks, using analysis of complex evidence and arguments before making recommendations

Snapshot – Evaluate actions and outcomes

Critical and Creative Thinking: Analysing: Evaluate actions and outcomes

Content description

AC9S8I07

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• evaluate the effectiveness of a course of action or the outcome of a task, including using a given or co-developed set of criteria to support decisions
• evaluate the effectiveness of a course of action or the outcome of a task and account for expected and unexpected results, including using a given or co-developed set of criteria to support decisions
• evaluate the effectiveness of a course of action to achieve desired outcomes and suggest improvements, including using a personally developed set of criteria to support judgements and decisions

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S8I07

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Comprehension

• reads and views some moderately complex texts (see Text complexity)
• accurately retells a text including most relevant details
• identifies main idea and related or supporting ideas in moderately complex texts (see Text complexity)
• evaluates the accuracy within and across texts on the same topic
• explains how authors use evidence and supporting detail to build and verify ideas
• draws inferences and verifies using textual evidence

Processes

• monitors reading for meaning using grammatical and contextual knowledge (see Fluency)
• explains how textual features support the text's purpose
• identifies and explains techniques used to present perspective (e.g. emotive or descriptive language, order in which ideas are presented)
• predicts the development of ideas based on a partial read (e.g. predicts the final chapter of a narrative, drawing on understanding of the textual features in the previous chapters)
• uses prior knowledge and context to read unknown words (e.g. uses morphemic knowledge of "explosion" to decode "explosive" and uses context and knowledge of metaphorical use of language to understand "explosive outburst")
• uses knowledge of cohesive devices to track meaning throughout a text (e.g. connectives such as "however", "on the other hand") (see Grammar)
• uses knowledge of the features and conventions of the type of text to build meaning (e.g. recognises that the beginning of a persuasive text may introduce the topic and the line of argument)
• identifies language features used to present opinions or points of view
• skims and scans texts for key words to track the development of ideas
• uses sophisticated punctuation to support meaning (e.g. commas to separate clauses in complex sentences)

Vocabulary

• uses knowledge of prefixes and suffixes to read and interpret unfamiliar words
• identifies how technical and discipline-specific words develop meaning in texts
• analyses the effect of antonyms, synonyms and idiomatic language
• understands precise meaning of words with similar connotations (e.g. "generous", "kind-hearted",

"charitable")
Comprehension
• reads and views complex texts (see Text complexity)
• identifies the main themes or concepts in complex texts by synthesising key ideas or information
• summarises the text, identifying key details only
• draws inferences, synthesising clues and evidence across a text
• builds meaning by actively linking ideas from a number of texts or a range of digital sources
• distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)
• identifies different interpretations of the text citing evidence from a text
• evaluates language features for relevance to purpose and audience
• analyses texts that have more than one purpose and explains how parts of the text support a particular purpose
• analyses the use of language appropriate to different types of texts (e.g. compare the use of pun in imaginative and persuasive texts)
• identifies techniques used to obscure author's purpose (e.g. inclusion or omission of content)

Processes
• uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning
• uses knowledge of a broader range of cohesive devices to track meaning (e.g. word associations) (see Grammar)
• selects reading or viewing strategies appropriate to reading purpose (e.g. scans text for evidence)
• judiciously selects texts for learning area tasks and purposes

Vocabulary
• identifies language used to create tone or atmosphere
• analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)
• applies knowledge of base words and word origins to understand the meaning of unfamiliar, discipline-specific words
• uses a range of context and grammatical cues to understand unfamiliar words
• interprets complex figurative language (e.g. euphemisms, hyperbole)

Comprehension
• reads and views complex or some highly complex texts (see Text complexity)
• interprets abstract concepts integrating complex ideas
• analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)
• draws inferences using evidence from the text and discounting possible inferences that are not supported by the text
• applies and articulates criteria to evaluate the language structures and features for relevance to purpose and audience
• evaluates the reasoning and evidence in a persuasive text
• explains how context (e.g. time, place, situation) influences interpretations of a text
• analyses the author's perspectives in complex or some highly complex texts
• analyses the techniques authors use to position readers
• recognises when ideas or evidence have been omitted from a text to position the reader

Processes
• automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning
• describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")
• navigates extended texts including complex digital texts

Vocabulary
• demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")
• verifies interpretations of unfamiliar words using grammatical and contextual cues

Snapshot – Draw conclusions and provide reasons
Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons
Content description
AC9S8I07
Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks by connecting evidence from within and across discipline areas to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks, using analysis of complex evidence and arguments before making recommendations

Snapshot – Evaluate actions and outcomes
Critical and Creative Thinking: Analysing: Evaluate actions and outcomes
Content description
AC9S8I07
Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• evaluate the effectiveness of a course of action or the outcome of a task, including using a given or co-developed set of criteria to support decisions
• evaluate the effectiveness of a course of action or the outcome of a task and account for expected and unexpected results, including using a given or co-developed set of criteria to support decisions
• evaluate the effectiveness of a course of action to achieve desired outcomes and suggest improvements, including using a personally developed set of criteria to support judgements and decisions

Snapshot – Understanding texts
Literacy: Reading and viewing: Understanding texts
Content description
AC9S8I07
Learning progression extract
The following learning progression extract shows the alignment of the learning progression with this content.
Comprehension
• reads and views complex texts (see Text complexity)
• identifies the main themes or concepts in complex texts by synthesising key ideas or information
• summarises the text, identifying key details only
• draws inferences, synthesising clues and evidence across a text
• builds meaning by actively linking ideas from a number of texts or a range of digital sources
• distils information from a number of texts according to task and purpose (e.g. uses graphic organisers)
• identifies different interpretations of the text citing evidence from a text
• evaluates language features for relevance to purpose and audience
• analyses texts that have more than one purpose and explains how parts of the text support a particular purpose
• analyses the use of language appropriate to different types of texts (e.g. compare the use of pun in imaginative and persuasive texts)
• identifies techniques used to obscure author's purpose (e.g. inclusion or omission of content)
Processes
• uses processes such as predicting, confirming predictions, monitoring, and connecting relevant elements of the text to build or repair meaning
• uses knowledge of a broader range of cohesive devices to track meaning (e.g. word associations) (see Grammar)
• selects reading or viewing strategies appropriate to reading purpose (e.g. scans text for evidence)

• judiciously selects texts for learning area tasks and purposes
Vocabulary
• identifies language used to create tone or atmosphere
• analyses language and visual features in texts using metalanguage (e.g. cohesion, interpretation, figurative)
• applies knowledge of base words and word origins to understand the meaning of unfamiliar, discipline-specific words
• uses a range of context and grammatical cues to understand unfamiliar words
• interprets complex figurative language (e.g. euphemisms, hyperbole)
Comprehension
• reads and views complex or some highly complex texts (see Text complexity)
• interprets abstract concepts integrating complex ideas
• analyses how language features are used to support the point of view in a text (e.g. the strategic use of images such as a cartoon in an editorial)
• draws inferences using evidence from the text and discounting possible inferences that are not supported by the text
• applies and articulates criteria to evaluate the language structures and features for relevance to purpose and audience
• evaluates the reasoning and evidence in a persuasive text
• explains how context (e.g. time, place, situation) influences interpretations of a text
• analyses the author's perspectives in complex or some highly complex texts
• analyses the techniques authors use to position readers
• recognises when ideas or evidence have been omitted from a text to position the reader
Processes
• automatically integrates a range of processes such as predicting, confirming predictions, monitoring and connecting relevant elements of the text, to build meaning
• describes how sophisticated cohesive devices establish patterns of meaning (e.g. "class" – "subclass")
• navigates extended texts including complex digital texts
Vocabulary
• demonstrates an understanding of nuances and subtleties in words of similar meaning (e.g. "frustrated", "discouraged", "baffled")
• verifies interpretations of unfamiliar words using grammatical and contextual cues
Comprehension
• reads and views highly complex texts (see Text complexity)
• interprets symbolism in texts, providing evidence to justify interpretation
• judiciously selects and synthesises evidence from multiple texts to support ideas and arguments
• analyses the credibility and validity of primary and secondary sources
• evaluates the use of devices such as analogy, irony, rhetoric and satire, and how they contribute to an author's individual style
• analyses the cumulative impact of use of language features and vocabulary across texts
• explains assumptions, beliefs and implicit values in texts (e.g. "economic growth is always desirable")
• evaluates the social, moral and ethical positions taken in texts
Processes
• strategically adjusts the processes of reading and viewing to build meaning according to the demands of tasks and texts
• identifies subtle contradictions and inconsistencies in texts
Vocabulary
• interprets complex, formal and impersonal language in academic texts
• uses lexical cues to interpret unfamiliar vocabulary
• demonstrates self-reliance in exploration and application of word learning strategies

Snapshot – Explore ethical issues

Ethical Understanding: Responding to ethical issues: Explore ethical issues

Content description

AC9S8I07
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• describe how ethical perspectives or approaches to ethical issues may vary in different situations
• analyse■the relationships between values, ethical perspectives■and ethical frameworks when responding to ethical issues
• apply knowledge of ethical concepts, values, perspectives and frameworks when responding to ethical issues

Snapshot – Draw conclusions and provide reasons
Critical and Creative Thinking: Analysing: Draw conclusions and provide reasons

Content description

AC9S8I07
Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks by connecting evidence from within and across discipline areas to provide reasons and evaluate arguments for choices made
• draw conclusions and make choices when completing tasks, using analysis of complex evidence and arguments before making recommendations

AC9S8I08

write and create texts to communicate ideas, findings and for specific purposes and audiences, including selection of appropriate language and text features, using as appropriate

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•

Elaborations

• exploring the role of active and passive voice in scientific writing and analysing contemporary journal articles to identify the use of such as voice or tense
• writing a report on a scientific using appropriate scientific conventions and , including a discussion of how and possible sources of error may have affected the results
• modifying the method for an and explaining where and why the original was changed with reference to any and sources of error
• constructing a persuasive text on the use of artificial organs including scientific and principles to influence a specified audience
• filming a documentary on the dynamic nature of the geosphere and selecting appropriate language, or analogies to engage a specific audience
• creating a digital infographic to compare and contrast different forms of energy, highlighting examples of energy transfer and transformations within each
• acknowledging and exploring First Nations Australians' ways of communicating their understanding of the internal of organisms

Students learn to:
write and create texts to communicate ideas, findings and arguments for specific pu

audiences, including selection of appropriate language and text features, using digi appropriate

(AC9S8I08)
General capabilities and cross-curriculum priorities
This content description connects to the following general capabilities and cross-curriculum priorities.
Creating and exchanging
• Create, communicate and collaborate
• Respect intellectual property
Writing
• Creating texts
Elaborations
Content elaborations provide suggestions of ways to teach the content description and connect it to general capabilities and cross-curriculum priorities. Content elaborations are optional .
Social management
• Communication
Social management
• Communication
Writing
• Creating texts
Speaking and listening
• Speaking
Writing
• Creating texts
Speaking and listening
• Speaking
Social management
• Communication
Creating and exchanging
• Create, communicate and collaborate
Writing
• Creating texts
Social management
• Communication
Culture
• First Nations Australians' ways of life reflect unique ways of being, knowing, thinking and doing.
People
• Australia has 2 distinct First Nations Peoples; each encompasses a diversity of nations across Australia. Aboriginal Peoples are the first peoples of Australia and have occupied the Australian continent for more than 60,000 years. Torres Strait Islander Peoples are the First Nations Peoples of the Torres Strait and have occupied the region for over 4,000 years.
Snapshot – Create, communicate and collaborate
Digital Literacy: Creating and exchanging: Create, communicate and collaborate
Content description
AC9S8I08
Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• select and control a variety of features in appropriate digital tools to create content and communicate and collaborate with trusted groups
• select and control advanced features of appropriate digital tools to independently create content and effectively communicate and collaborate with wider groups
• select and control the features of digital tools to purposefully create content and effectively communicate and collaborate, inclusive of diverse groups

Snapshot – Respect intellectual property
Digital Literacy: Creating and exchanging: Respect intellectual property
Content description
AC9S8I08
Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• respect intellectual property by identifying the legal obligations regarding the ownership and appropriate use of products, exploring copyright protocols and applying some referencing conventions
• respect intellectual property by applying practices that comply with ethical and legal obligations, referencing conventions and copyright protocols
• respect intellectual property by identifying and applying practices that meet legal and ethical obligations, referencing conventions, copyright and trademark protocols

Snapshot – Creating texts
Literacy: Writing: Creating texts
Content description
AC9S8I08
Learning progression extract
The following learning progression extract shows the alignment of the learning progression with this content.
Generic indicators
• uses tense with variable accuracy throughout the text (see Grammar)
• consistently writes sentences correctly and uses a greater range of complex sentences (see Grammar)
• uses a variety of sentence structures and sentence beginnings
• spells some complex words with complex letter patterns correctly (e.g. correctly adds prefixes and suffixes to base words) (see Spelling)
• uses all sentence punctuation, simple punctuation and some complex punctuation correctly (e.g. uses commas to separate clauses) (see Punctuation)
• uses articles accurately (e.g. "a", "an", "the") (see Grammar)
• uses adverbial phrases to support the staging of the text (e.g. "before lunch", "after midnight")
Generic indicators
• maintains appropriate tense throughout the text (see Grammar)
• uses a range of sentences including correctly structured complex sentences (see Grammar)
• spells simple, most complex and some challenging words correctly (see Spelling)
• uses all simple and complex punctuation correctly (e.g. semi colons) apostrophes of possession) (see Punctuation)
• writes cohesive paragraphs that develop one main idea
Generic indicators
• organises related information and ideas into paragraphs/sections
• uses a range of complex punctuation flexibly and correctly to pace and control the reading of a text (see Punctuation)
• spells complex and most challenging words correctly (see Spelling)
• uses a range of sentence types for effect

Snapshot – Communication
Personal and Social capability: Social management: Communication
Content description
AC9S8I08
Continuum extract
The following continuum extract shows the alignment of the continuum with this content.
• apply skills to address factors that influence verbal and non-verbal communication
• demonstrate communication skills in a range of contexts, responding to the enablers of, and barriers to, effective verbal and non-verbal communication
• devise strategies that apply effective verbal and non-verbal communication in response to feedback

Snapshot – Communication

Personal and Social capability: Social management: Communication

Content description

AC9S8I08

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• apply skills to address factors that influence verbal and non-verbal communication

• demonstrate communication skills in a range of contexts, responding to the enablers of, and barriers to, effective verbal and non-verbal communication

• devise strategies that apply effective verbal and non-verbal communication in response to feedback

Snapshot – Creating texts

Literacy: Writing: Creating texts

Content description

AC9S8I08

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Crafting ideas

• creates informative texts for a broader range of learning area purposes (e.g. explains a life cycle of a butterfly, recounts a process, describes an artwork)

• includes structural features appropriate to the type of text and task such as opening statements to define the topic and at least 2 body paragraphs

• includes ideas which are relevant to the topic and purpose of the text

• organises information into paragraphs to support the reader

• includes a relevant graphic to support the reader (e.g. diagram or photo)

Text forms and features

• uses cohesive devices to signpost sections of text (e.g. uses text connectives such as "finally", "as a result", "in addition")

• uses present or timeless present tense consistently throughout text (e.g. "bears hibernate in winter") (see Grammar)

• selects visual and audio features to expand ideas in written texts (e.g. diagrams, tables, images)

• uses adjectives to create more accurate description (e.g. "the warm-blooded mammal") (see Grammar)

Vocabulary

• uses a range of technical and subject specific words to add detail and authority to information (e.g. "hibernate" instead of "sleep")

Crafting ideas

• creates informative texts that describe, explain and document (e.g. describe an artwork, document the materials and explain why it was created)

• selects structural elements to comprehensively and accurately represent the information (e.g. a fact sheet includes an opening statement, labelled diagrams and text boxes)

• orients the reader to the topic or concept using a definition or classification

• develops ideas with details and examples

• uses ideas derived from research

• uses written and visual supporting evidence

Text forms and features

• uses cohesive devices to link concepts across texts (e.g. uses lexical cohesion such as word associations and synonyms)

• uses cohesive devices to express cause and effect (e.g. uses text connectives such as "therefore", "subsequently")

• includes salient visual and audio features to expand on written information (e.g. creates graphs and other technical diagrams from authentic data)

• uses language to compare (e.g. "alternatively", "whereas")

• uses formatting appropriately to reference and label graphics

Vocabulary

• uses a range of learnt, technical and discipline-specific terms (e.g. "adapt", "survive")

• uses more sophisticated words to express cause and effect (e.g. "therefore", "subsequently")

Crafting ideas

• creates informative texts to explain and analyse (e.g. analyses how artists use visual conventions in artworks)

• creates texts to compare and contrast phenomena (e.g. identify the similarities and differences between species of animals)

• orients the reader clearly to the topic or concept (e.g. using a definition or classification in the opening paragraph)

• intentionally selects structural elements for effect (e.g. includes an effective conclusion that synthesises complex ideas)

• uses evidence and research including digital resources to expand upon information and elaborate concepts

Text forms and features

• varies sentence structure for effect (see Grammar)

• judiciously uses language, visual and audio features to emotionally or intellectually affect the reader

• uses more elaborate noun groups/phrases that include classifying adjectives and specific nouns (e.g. "mineral component of sedimentary rocks")

• creates cohesive flow by condensing previous information into a summarising noun (e.g. "A series of tumultuous events culminated in the outbreak of WWI - modern history's turning point.")

• uses passive voice and nominalisation to write succinctly (e.g. "the results were analysed") (see Grammar)

Vocabulary

• uses discipline-specific terminology to provide accurate and explicit information (e.g. "discipline metalanguage")

• uses a range of synonyms for frequently occurring words, in a longer text (e.g. "repair", "fix", "remedy")

• uses vocabulary to indicate and describe relationships (e.g. "additionally", "similarly")

Snapshot – Speaking

Literacy: Speaking and listening: Speaking

Content description

AC9S8I08

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Crafting ideas

• creates spoken texts responsive to audience and a broad range of learning area topics, clearly articulating words and ideas

• organises more complex ideas or concepts logically, selecting details to accentuate key points

• speaks audibly and coherently to a less familiar audience for a sustained period

• shows increasing awareness of audience by moderating length, content and delivery of spoken texts

• adjusts register according to purpose and audience

• does research to prepare spoken texts

• uses a range of technology, and audio and visual resources to engage audience and enhance content

Vocabulary

• varies vocabulary to add interest and to describe with greater precision (e.g. uses topic-specific noun groups/phrases such as "exploitation of resources") (see Grammar)

• uses language creatively (e.g. "the moon shines bravely")

• uses sensory vocabulary to engage the audience (e.g. "a gasp of dismay")

• uses technical vocabulary to demonstrate topic knowledge (e.g. "deforestation")

• consistently uses a range of synonyms to add variety and precision to spoken text

• uses abstractions (e.g. "freedom", "fairness")

Crafting ideas

• creates spoken texts which explore and interpret concepts drawn from research or learning area content

• selects voice appropriate to purpose (e.g. third person to create distance and authority or first

person to achieve personal connection)
- develops complex ideas or a central theme across a spoken text
- uses language features according to purpose, to impact the audience (e.g. uses more complex connectives such as "consequently", "accordingly" to explain)
- rephrases or clarifies to repair or refine meaning
- uses language structures and features appropriate to learning area content
- uses technologies and visual and audio resources to enhance meaning and effect in presentations

Vocabulary

- selects vocabulary to intensify and sharpen the focus (e.g. "scarcely", "absolutely", "real", "simply")
- uses a range of evaluative language to express opinions or convey emotion (e.g. "significant benefits", "devastating consequences")
- uses a range of emotive language appropriate to topic, purpose and audience
- uses rich, evocative, descriptive language
- uses figurative language (e.g. "hungry for success")

Crafting ideas

- creates complex and creative spoken texts which analyse and evaluate issues drawn from research or learning area content
- includes a range of alternative viewpoints in spoken texts, where appropriate
- controls and manipulates a sophisticated range of language features to affect the audience
- uses a range of rhetorical devices and humour to engage an audience
- references and quotes authorities or statistics to add authority (e.g. "according to a recent OECD report")
- delivers spoken text flexibly, allowing for questions and maintaining the flow of ideas

Snapshot – Creating texts

Literacy: Writing: Creating texts

Content description

AC9S8I08

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Crafting ideas

- creates informative texts for a broader range of learning area purposes (e.g. explains a life cycle of a butterfly, recounts a process, describes an artwork)
- includes structural features appropriate to the type of text and task such as opening statements to define the topic and at least 2 body paragraphs
- includes ideas which are relevant to the topic and purpose of the text
- organises information into paragraphs to support the reader
- includes a relevant graphic to support the reader (e.g. diagram or photo)

Text forms and features

- uses cohesive devices to signpost sections of text (e.g. uses text connectives such as "finally", "as a result", "in addition")
- uses present or timeless present tense consistently throughout text (e.g. "bears hibernate in winter") (see Grammar)
- selects visual and audio features to expand ideas in written texts (e.g. diagrams, tables, images)
- uses adjectives to create more accurate description (e.g. "the warm-blooded mammal") (see Grammar)

Vocabulary

- uses a range of technical and subject specific words to add detail and authority to information (e.g. "hibernate" instead of "sleep")

Crafting ideas

- creates informative texts that describe, explain and document (e.g. describe an artwork, document the materials and explain why it was created)
- selects structural elements to comprehensively and accurately represent the information (e.g. a fact sheet includes an opening statement, labelled diagrams and text boxes)
- orients the reader to the topic or concept using a definition or classification

- develops ideas with details and examples
- uses ideas derived from research
- uses written and visual supporting evidence

Text forms and features

- uses cohesive devices to link concepts across texts (e.g. uses lexical cohesion such as word associations and synonyms)
- uses cohesive devices to express cause and effect (e.g. uses text connectives such as "therefore", "subsequently")
- includes salient visual and audio features to expand on written information (e.g. creates graphs and other technical diagrams from authentic data)
- uses language to compare (e.g. "alternatively", "whereas")
- uses formatting appropriately to reference and label graphics

Vocabulary

- uses a range of learnt, technical and discipline-specific terms (e.g. "adapt", "survive")
- uses more sophisticated words to express cause and effect (e.g. "therefore", "subsequently")

Crafting ideas

- creates informative texts to explain and analyse (e.g. analyses how artists use visual conventions in artworks)
- creates texts to compare and contrast phenomena (e.g. identify the similarities and differences between species of animals)
- orients the reader clearly to the topic or concept (e.g. using a definition or classification in the opening paragraph)
- intentionally selects structural elements for effect (e.g. includes an effective conclusion that synthesises complex ideas)
- uses evidence and research including digital resources to expand upon information and elaborate concepts

Text forms and features

- varies sentence structure for effect (see Grammar)
- judiciously uses language, visual and audio features to emotionally or intellectually affect the reader
- uses more elaborate noun groups/phrases that include classifying adjectives and specific nouns (e.g. "mineral component of sedimentary rocks")
- creates cohesive flow by condensing previous information into a summarising noun (e.g. "A series of tumultuous events culminated in the outbreak of WWI - modern history's turning point.")
- uses passive voice and nominalisation to write succinctly (e.g. "the results were analysed") (see Grammar)

Vocabulary

- uses discipline-specific terminology to provide accurate and explicit information (e.g. "discipline metalanguage")
- uses a range of synonyms for frequently occurring words, in a longer text (e.g. "repair", "fix", "remedy")
- uses vocabulary to indicate and describe relationships (e.g. "additionally", "similarly")

Snapshot – Speaking

Literacy: Speaking and listening: Speaking

Content description

AC9S8I08

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.

Crafting ideas

- creates spoken texts responsive to audience and a broad range of learning area topics, clearly articulating words and ideas
- organises more complex ideas or concepts logically, selecting details to accentuate key points
- speaks audibly and coherently to a less familiar audience for a sustained period
- shows increasing awareness of audience by moderating length, content and delivery of spoken texts

- adjusts register according to purpose and audience
- does research to prepare spoken texts
- uses a range of technology, and audio and visual resources to engage audience and enhance content

Vocabulary

- varies vocabulary to add interest and to describe with greater precision (e.g. uses topic-specific noun groups/phrases such as "exploitation of resources") (see Grammar)
- uses language creatively (e.g. "the moon shines bravely")
- uses sensory vocabulary to engage the audience (e.g. "a gasp of dismay")
- uses technical vocabulary to demonstrate topic knowledge (e.g. "deforestation")
- consistently uses a range of synonyms to add variety and precision to spoken text
- uses abstractions (e.g. "freedom", "fairness")

Crafting ideas

- creates spoken texts which explore and interpret concepts drawn from research or learning area content
- selects voice appropriate to purpose (e.g. third person to create distance and authority or first person to achieve personal connection)
- develops complex ideas or a central theme across a spoken text
- uses language features according to purpose, to impact the audience (e.g. uses more complex connectives such as "consequently", "accordingly" to explain)
- rephrases or clarifies to repair or refine meaning
- uses language structures and features appropriate to learning area content
- uses technologies and visual and audio resources to enhance meaning and effect in presentations

Vocabulary

- selects vocabulary to intensify and sharpen the focus (e.g. "scarcely", "absolutely", "real", "simply")
- uses a range of evaluative language to express opinions or convey emotion (e.g. "significant benefits", "devastating consequences")
- uses a range of emotive language appropriate to topic, purpose and audience
- uses rich, evocative, descriptive language
- uses figurative language (e.g. "hungry for success")

Crafting ideas

- creates complex and creative spoken texts which analyse and evaluate issues drawn from research or learning area content
- includes a range of alternative viewpoints in spoken texts, where appropriate
- controls and manipulates a sophisticated range of language features to affect the audience
- uses a range of rhetorical devices and humour to engage an audience
- references and quotes authorities or statistics to add authority (e.g. "according to a recent OECD report")
- delivers spoken text flexibly, allowing for questions and maintaining the flow of ideas

Snapshot – Communication

Personal and Social capability: Social management: Communication

Content description

AC9S8I08

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
- apply skills to address factors that influence verbal and non-verbal communication
- demonstrate communication skills in a range of contexts, responding to the enablers of, and barriers to, effective verbal and non-verbal communication
- devise strategies that apply effective verbal and non-verbal communication in response to feedback

Snapshot – Create, communicate and collaborate

Digital Literacy: Creating and exchanging: Create, communicate and collaborate

Content description

AC9S8I08

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.

• select and control a variety of features in appropriate digital tools to create content and communicate and collaborate with trusted groups
• select and control advanced features of appropriate digital tools to independently create content and effectively communicate and collaborate with wider groups
• select and control the features of digital tools to purposefully create content and effectively communicate and collaborate, inclusive of diverse groups

Snapshot – Creating texts

Literacy: Writing: Creating texts

Content description

AC9S8I08

Learning progression extract

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Crafting ideas

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Vocabulary

• uses a range of learnt, technical and discipline-specific terms (e.g. "adapt", "survive")
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Crafting ideas

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Snapshot – Communication

Personal and Social capability: Social management: Communication

Content description

AC9S8I08

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