(no-code)

explain the roles and interactions of , and within a and how represent feeding

•
•

Elaborations

• describing how animals, including humans, obtain their food from plants and other animals
• observing living things in a local and categorising them as , or
• researching the different types of and their importance within a
• representing feeding of and as a food chain and comparing across different
• recognising how First Nations Australians perceive themselves as being an integral part of the
• investigating the impact of introduced predators such as foxes on small mammal species in Australia
• researching how the removal of a food source from within a , such as through an insect or rodent infestation, affected other living things within that

Students learn to:

explain the roles and interactions of consumers, producers and decomposers withi
food chains represent feeding relationships

(AC9S4U01)

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

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 .

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.

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.

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.

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.

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.
• 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.

World views

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

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

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.

Related content

This content description can be taught with the following content descriptions from other learning areas.
AC9HS4K05
AC9TDE4K03

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and explore relevant information from a range of sources, including visual information and digital sources
• identify and explain similarities and differences in selected information
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• condense and combine selected information related to the topic of study
• 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

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U01

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Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U01

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Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U01

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4U01

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U01

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Snapshot – Identify, process and evaluate information

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

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

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AC9S4U02

identify sources of water and describe key processes in the water cycle, including movement of water through the sky, landscape and ocean; ; ; and

•

Elaborations

• identifying everyday examples of (rain or snow), (wet washing or paint drying) and of water (water droplets on a cold water bottle)
• identifying local water sources and exploring how they change over time, such as rain puddles that evaporate or a local creek that flows faster after rain
• exploring where tap water comes from and predicting what happens to water that goes down the drain
• exploring a game or of the water cycle, identifying key processes and creating their own of the water cycle
• recognising that clouds are tiny water droplets suspended in air, observing a ‘cloud in a bottle’ demonstrated by a teacher and discussing what conditions are needed for clouds to form and for rain or snow to fall
• exploring First Nations Australians’ connections with and valuing of water and water resource management
• recognising First Nations Australians’ knowledges and understandings of and how the effect of can be reduced to conserve water, such as by covering surfaces

• considering why we are encouraged to save and recycle water, and actions people can take to reduce water consumption and waste

Students learn to:

identify sources of water and describe key processes in the water cycle, including r through the sky, landscape and ocean; precipitation; evaporation; and condensatio

(AC9S4U02)

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

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.

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.

Creating and exchanging

• Create, communicate and collaborate

Investigating

• Interpret data

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

Reading and viewing

• Understanding texts

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.

• 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.

Systems

• Sustainable patterns of living require the responsible use of resources, maintenance of clean air, water and soils, and preservation or restoration of healthy environments.

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.

Inquiring

• Identify, process and evaluate information

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.

Speaking and listening

• Interacting

Futures

• Sustainable futures require individuals to seek information, identify solutions, reflect on and evaluate past actions, and collaborate with and influence others as they work towards a desired change.

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.

Related content

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

AC9HS4K05

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U02

Continuum extract

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Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U02

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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4U02

Continuum extract

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

• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U02

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Snapshot – Identify, process and evaluate information

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

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AC9S4U02

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Snapshot – Create, communicate and collaborate

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

Content description

AC9S4U02

Continuum extract

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

• experiment with the features of familiar digital tools to create content
• use the core features of a range of digital tools to create content and communicate and collaborate with peers and trusted adults
• select and control a variety of features in appropriate digital tools to create content and communicate and collaborate with trusted groups

Snapshot – Interpret data

Digital Literacy: Investigating: Interpret data

Content description

AC9S4U02

Continuum extract

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

• classify and group data using digital familiar tools to answer simple questions
• organise, summarise and visualise data using a range of digital tools to identify patterns and answer questions
• analyse and visualise data using a range of digital tools to identify patterns and make predictions

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U02

Continuum extract

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

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Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S4U02

Learning progression extract

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

Comprehension

• reads and views simple texts and some elementary texts (see Text complexity)
• scans texts to locate specific information in an elementary print text
• recounts or describes the most relevant details from a text
• tracks ideas or information throughout the text
• identifies main idea by synthesising information across a simple text
• identifies the arguments in an elementary text
• identifies the purpose of elementary informative, imaginative and persuasive texts (e.g. uses verbs and dot points to identify a set of instructions)
• explains how inferences are drawn using background knowledge or language features (e.g. infers character's feelings from actions)
• makes connections between texts (e.g. compares 2 versions of a well-known story)
• integrates new learning from reading with current knowledge (e.g. "I know that insects have wings but I didn't know all insects have six legs")
• predicts the content and purpose of a text based on a range of text features

Processes

• uses a bank of phonic knowledge and word recognition skills and grammatical and contextual knowledge to read simple and elementary texts (see Phonic knowledge and word recognition)
• recognises when meaning breaks down, pauses and uses phonic knowledge, contextual knowledge, and strategies such as repeating words, re-reading and reading on to self-correct (see Phonic knowledge and word recognition)
• identifies parts of text used to answer literal and inferential questions
• uses cohesive devices to connect ideas or events (e.g. tracks pronoun referencing) (see Grammar)
• uses phrasing and punctuation to support reading for meaning (e.g. noun, verb and adjectival groups) (see Fluency and Grammar)

• identifies common features in similar texts (e.g. photographs in informative texts)

Vocabulary

• uses morphological knowledge to explain words (e.g. "help" [base] + "less" [suffix] = "helpless")
• interprets language devices (e.g. exaggeration or repetition)
• interprets simple imagery (e.g. simile, onomatopoeia)
• uses context and grammar knowledge to understand unfamiliar words (e.g. the word "vast" in the phrase "vast desert")
• identifies words that state opinions (e.g. "I think")
• understands the use of common idiomatic or colloquial language in texts (e.g. "get your head around it")

Comprehension

• reads and views elementary texts (see Text complexity)
• locates information or details embedded in the text
• identifies the main idea in an elementary text
• identifies the purpose of a broad range of informative, imaginative and persuasive texts (e.g. advertisements, diary entry)
• draws inferences and identifies supporting evidence in the text
• monitors the development of ideas using language and visual features (e.g. topic sentences, key verbs, graphs)
• recognises that texts can present different points of view
• distinguishes between fact and opinion in texts
• compares and contrasts texts on the same topic to identify how authors represent the same ideas differently

Processes

• integrates phonic knowledge, word recognition skills, grammatical and contextual knowledge to read elementary texts (see Phonic knowledge and word recognition and Fluency)
• identifies language features that signal purpose in an elementary text (e.g. diagrams, dialogue)
• uses strategies to predict and confirm meaning (e.g. uses sentence structure to predict how ideas will be developed)
• navigates texts using common signposting devices such as headings, subheadings, paragraphs, navigation bars and links

Vocabulary

• interprets creative use of figurative language (e.g. metaphor, simile, onomatopoeia)
• interprets unfamiliar words using grammatical knowledge, morphological knowledge and etymological knowledge
• describes the language and visual features of texts using metalanguage (e.g. grammatical terms such as "cohesion", "tense", "noun groups/phrases")
• recognises how synonyms are used to enhance a text (e.g. "transport", "carry", "transfer")
• draws on knowledge of word origin to work out meaning of discipline-specific terms (e.g. "universe")
• recognises how evaluative and modal words are used to influence the reader (e.g. "important", "should", "dirty")

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")

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and explore relevant information from a range of sources, including visual information and digital sources
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Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S4U02

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.
• listens actively to stay on topic in a small group discussion
• takes an active role in small group and whole-class discussion by volunteering ideas and opinions
• asks relevant questions for clarification or to find out others' ideas (e.g. "What do you think about that?")
• takes turns in interactions
• interacts using appropriate language in pairs or a small group to complete tasks
• interacts to extend and elaborate ideas in a discussion (e.g. provides an additional example)
• presents simple ideas clearly in group situations
• actively encourages or supports other speakers
• shows awareness of discussion conventions (e.g. uses appropriate language to express agreement and disagreement in class discussions)
• uses language to initiate interactions in a small group situation (e.g. "I have an idea")
• 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

AC9S4U03

identify how can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic on the motion of objects

•

Elaborations

• exploring the effect of magnets on other magnets and how magnetic can pull objects from a distance
• exploring the positive and negative effects of friction on their everyday experiences, such as how friction causes objects to slow down and stop
• recognising that gravity is the that pulls all objects to towards the centre of Earth and that gravitational acts on an object regardless of whether it is moving or not moving
• observing how the pushing of a liquid enables an object to float
• investigating the effect of on the movement of objects in traditional First Nations Australians' children's instructive toys and games
• examining shoe sole design and identifying in sole design and use related to friction
• watching a video of astronauts walking on the moon or dropping objects on its surface, and discussing the they are observing
• exploring how arrows can be used to represent the direction and magnitude of acting on an object

Students learn to:

identify how forces can be exerted by one object on another and investigate the effe frictional, gravitational and magnetic forces on the motion of objects

(AC9S4U03)

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

Inquiring

• Identify, process and evaluate information

Inquiring

• Identify, process and evaluate information

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.

Analysing

• Interpret concepts and problems

Speaking and listening

• Interacting

Inquiring

• Identify, process and evaluate information

Speaking and listening

• Interacting
• Speaking

Analysing

• Interpret concepts and problems

Related content

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

AC9HP4M03
AC9TDE4K02

Resources

Work Samples

WS01 - Amusement park ride

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U03

Continuum extract

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Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U03

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Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U03

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Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U03

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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 – Develop multiple perspectives

Intercultural Understanding: Engaging with cultural and linguistic diversity: Deve

perspectives

Content description

AC9S4U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify opinions on familiar topics and intercultural experiences, recognising reasons for different perspectives
• discuss different perspectives on familiar topics and intercultural experiences, describing how people's thinking and behaviour may be influenced by a range of factors
• examine how cultural beliefs or practices influence their own perspectives, and those of others, when discussing unfamiliar topics

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4U03

Continuum extract

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

• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S4U03

Learning progression extract

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

• listens actively to stay on topic in a small group discussion
• takes an active role in small group and whole-class discussion by volunteering ideas and opinions
• asks relevant questions for clarification or to find out others' ideas (e.g. "What do you think about that?")
• takes turns in interactions
• interacts using appropriate language in pairs or a small group to complete tasks
• interacts to extend and elaborate ideas in a discussion (e.g. provides an additional example)
• presents simple ideas clearly in group situations
• actively encourages or supports other speakers
• shows awareness of discussion conventions (e.g. uses appropriate language to express agreement and disagreement in class discussions)
• uses language to initiate interactions in a small group situation (e.g. "I have an idea")
• 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

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U03

Continuum extract

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

• identify and explore relevant information from a range of sources, including visual information and digital sources
• identify and explain similarities and differences in selected information
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• condense and combine selected information related to the topic of study
• 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

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S4U03

Learning progression extract

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

• listens actively to stay on topic in a small group discussion
• takes an active role in small group and whole-class discussion by volunteering ideas and opinions
• asks relevant questions for clarification or to find out others' ideas (e.g. "What do you think about that?")
• takes turns in interactions
• interacts using appropriate language in pairs or a small group to complete tasks
• interacts to extend and elaborate ideas in a discussion (e.g. provides an additional example)
• presents simple ideas clearly in group situations
• actively encourages or supports other speakers
• shows awareness of discussion conventions (e.g. uses appropriate language to express agreement and disagreement in class discussions)
• uses language to initiate interactions in a small group situation (e.g. "I have an idea")
• 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

Snapshot – Speaking

Literacy: Speaking and listening: Speaking

Content description

AC9S4U03

Learning progression extract

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

Crafting ideas

• creates spoken texts for a range of purposes across learning areas (e.g. explains how the mathematics problem was solved)
• uses complex sentence constructions including relative clauses (e.g. "The boy who drew the picture got a prize.") (see Grammar)
• adjusts register according to purpose and audience
• elaborates on ideas using a short sequence of sentences
• incorporates learnt content into spoken text
• sequences ideas and events appropriately
• uses mainly correct grammatical constructions (e.g. pronoun references; noun-verb agreement)
• varies volume and intonation to suit purpose and audience
• plans and delivers spoken presentations using appropriate structure and language
• includes video and audio enhancements to spoken texts, where appropriate (e.g. includes slides or pictures in a spoken presentation)

Vocabulary

• experiments with vocabulary drawn from a variety of sources
• uses adverbials to give more precise meaning to verbs (e.g. talking loudly) (see Grammar)
• uses a range of vocabulary to indicate connections (e.g. consequences)
• uses conditional vocabulary to expand upon ideas (e.g. "If Goldilocks ate all the porridge the bears would be hungry.")

Crafting ideas

• creates detailed spoken texts on a broad range of learning area topics
• includes details and elaborations to expand ideas
• uses connectives to signal a change in relationship (e.g. "however", "although", "on the other hand") or to show causal relationships (e.g. "due to", "since") (see Grammar)
• uses a range of expressions to introduce an alternative point of view (e.g. "in my opinion", "he did not agree with")
• rehearses spoken text to accommodate time and technology

• controls tone, volume, pitch and pace to suit content and audience
• uses technologies or audio and visual features to enhance spoken text (e.g. videos a spoken presentation with music, sound effect enhancements)

Vocabulary

• uses a broader range of more complex noun groups/phrases to expand description (e.g. "protective, outer covering")
• selects more specific and precise words to replace general words (e.g. uses "difficult" or "challenging" for "hard")
• uses some rhetorical devices (e.g. "don’t you agree?")

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")

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4U03

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Resource – WS01 - Amusement park ride

By the end of Year 4 students identify the roles of organisms in a habitat and construct food chains. They identify key processes in the water cycle and describe how water cycles through the environment. They identify forces acting on objects and describe their effect. They relate the uses of materials to their properties. They explain the role of data in science inquiry. They identify solutions based on scientific explanations and describe the needs these meet.

Students pose questions to identify patterns and relationships and make predictions based on observations. They plan investigations using planning scaffolds, identify key elements of fair tests and describe how they conduct investigations safely. They use simple procedures to make accurate formal measurements. They construct representations to organise data and information and identify patterns and relationships. They compare their findings with those of others, assess the fairness of their investigation, identify further questions for investigation and draw conclusions. They communicate ideas and findings for an identified audience and purpose, including using scientific vocabulary when appropriate.

AC9S4U03

identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects

AC9S4I06

write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate

AC9S4U04

examine the of natural and made including fibres, metals, glass and plastics and consider how these influence their use

•

Elaborations

• identifying and naming in the classroom, and grouping objects made of similar or combinations of
• exploring vocabulary for describing ; observing different fibres, metals, glass and plastics; and using appropriate terms to describe, compare and contrast their
• investigating familiar objects, such as shoes, drink containers or backpacks, examining the combination of from which they are made and suggesting reasons for those combinations based on of
• considering how First Nations Australians use for different purposes, such as tools, clothing and shelter, based on their
• designing, building and testing an object or structure for a specific purpose, such as a tent, lunchbox or bird feeder
• investigating which can be recycled and researching alternatives for such as single use plastics

Students learn to:

examine the properties of natural and made materials including fibres, metals, glass and consider how these properties influence their use

(AC9S4U04)

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

Inquiring

• Identify, process and evaluate information

Reading and viewing

• Understanding texts

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.

Generating

• Create possibilities

Reflecting

• Transfer knowledge

Analysing

• Interpret concepts and problems

Generating

• Consider alternatives

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.

Related content

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

AC9HS4K06
AC9TDE4K02
AC9TDE4P01

Snapshot – Create possibilities

Critical and Creative Thinking: Generating: Create possibilities

Content description

AC9S4U04

Continuum extract

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

• create possibilities by connecting or creatively expanding on ideas in ways that are new to them
• create possibilities by connecting or creatively expanding on new and known ideas in a variety of ways
• create possibilities by changing, combining, or elaborating on new and known ideas in a variety of creative ways

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U04

Continuum extract

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

• identify and explore relevant information from a range of sources, including visual information and digital sources
• identify and explain similarities and differences in selected information
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• condense and combine selected information related to the topic of study
• 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

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U04

Continuum extract

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

• identify and explore relevant information from a range of sources, including visual information and digital sources
• identify and explain similarities and differences in selected information
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• condense and combine selected information related to the topic of study
• 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

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U04

Continuum extract

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

• identify and explore relevant information from a range of sources, including visual information and digital sources
• identify and explain similarities and differences in selected information
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• condense and combine selected information related to the topic of study
• 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

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S4U04

Learning progression extract

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

Comprehension

• reads and views simple texts and some elementary texts (see Text complexity)
• scans texts to locate specific information in an elementary print text
• recounts or describes the most relevant details from a text
• tracks ideas or information throughout the text
• identifies main idea by synthesising information across a simple text
• identifies the arguments in an elementary text
• identifies the purpose of elementary informative, imaginative and persuasive texts (e.g. uses verbs and dot points to identify a set of instructions)
• explains how inferences are drawn using background knowledge or language features (e.g. infers character's feelings from actions)
• makes connections between texts (e.g. compares 2 versions of a well-known story)
• integrates new learning from reading with current knowledge (e.g. "I know that insects have wings but I didn't know all insects have six legs")
• predicts the content and purpose of a text based on a range of text features

Processes

• uses a bank of phonic knowledge and word recognition skills and grammatical and contextual knowledge to read simple and elementary texts (see Phonic knowledge and word recognition)
• recognises when meaning breaks down, pauses and uses phonic knowledge, contextual knowledge, and strategies such as repeating words, re-reading and reading on to self-correct (see Phonic knowledge and word recognition)
• identifies parts of text used to answer literal and inferential questions
• uses cohesive devices to connect ideas or events (e.g. tracks pronoun referencing) (see Grammar)
• uses phrasing and punctuation to support reading for meaning (e.g. noun, verb and adjectival groups) (see Fluency and Grammar)
• identifies common features in similar texts (e.g. photographs in informative texts)

Vocabulary

• uses morphological knowledge to explain words (e.g. "help" [base] + "less" [suffix] = "helpless")
• interprets language devices (e.g. exaggeration or repetition)
• interprets simple imagery (e.g. simile, onomatopoeia)
• uses context and grammar knowledge to understand unfamiliar words (e.g. the word "vast" in the phrase "vast desert")
• identifies words that state opinions (e.g. "I think")
• understands the use of common idiomatic or colloquial language in texts (e.g. "get your head around it")

Comprehension

• reads and views elementary texts (see Text complexity)
• locates information or details embedded in the text
• identifies the main idea in an elementary text
• identifies the purpose of a broad range of informative, imaginative and persuasive texts (e.g. advertisements, diary entry)
• draws inferences and identifies supporting evidence in the text
• monitors the development of ideas using language and visual features (e.g. topic sentences, key verbs, graphs)
• recognises that texts can present different points of view
• distinguishes between fact and opinion in texts
• compares and contrasts texts on the same topic to identify how authors represent the same ideas differently

Processes

• integrates phonic knowledge, word recognition skills, grammatical and contextual knowledge to read elementary texts (see Phonic knowledge and word recognition and Fluency)
• identifies language features that signal purpose in an elementary text (e.g. diagrams, dialogue)
• uses strategies to predict and confirm meaning (e.g. uses sentence structure to predict how ideas will be developed)
• navigates texts using common signposting devices such as headings, subheadings, paragraphs, navigation bars and links

Vocabulary

• interprets creative use of figurative language (e.g. metaphor, simile, onomatopoeia)
• interprets unfamiliar words using grammatical knowledge, morphological knowledge and etymological knowledge
• describes the language and visual features of texts using metalanguage (e.g. grammatical terms such as "cohesion", "tense", "noun groups/phrases")
• recognises how synonyms are used to enhance a text (e.g. "transport", "carry", "transfer")
• draws on knowledge of word origin to work out meaning of discipline-specific terms (e.g. "universe")
• recognises how evaluative and modal words are used to influence the reader (e.g. "important", "should", "dirty")

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")

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4U04

Continuum extract

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

• identify and explore relevant information from a range of sources, including visual information and digital sources
• identify and explain similarities and differences in selected information
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• condense and combine selected information related to the topic of study
• 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

Snapshot – Develop multiple perspectives

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

Content description

AC9S4U04

Continuum extract

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

• identify opinions on familiar topics and intercultural experiences, recognising reasons for different perspectives
• discuss different perspectives on familiar topics and intercultural experiences, describing how people’s thinking and behaviour may be influenced by a range of factors
• examine how cultural beliefs or practices influence their own perspectives, and those of others, when discussing unfamiliar topics

Snapshot – Create possibilities

Critical and Creative Thinking: Generating: Create possibilities

Content description

AC9S4U04

Continuum extract

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

• create possibilities by connecting or creatively expanding on ideas in ways that are new to them
• create possibilities by connecting or creatively expanding on new and known ideas in a variety of ways
• create possibilities by changing, combining, or elaborating on new and known ideas in a variety of creative ways

Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S4U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• use ideas and information from a previous experience to inform similar learning experiences
• use aspects of knowledge and skills gained in one setting to inform learning in a new setting or context
• apply aspects of knowledge and skills gained in one context to a new or unrelated context to achieve a specific purpose

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Consider alternatives

Critical and Creative Thinking: Generating: Consider alternatives

Content description

AC9S4U04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• consider alternatives and explore different or creative ways to approach a task or problem
• consider alternatives by comparing different or creative ways to approach a task, issue or problem and recommend a preferred option
• consider alternatives by challenging or creatively adjusting existing ideas in situations where current approaches do not work and recommend a preferred option

AC9S4H01

examine how people use to develop scientific

•

Elaborations

• examining age-appropriate scientific journal articles, identifying common text features and exploring why the scientific community might have conventions for sharing information about and
• viewing or listening to documentaries or news reports that feature researchers and identifying how they talk about their area of research, particularly references to , and
• investigating how ecologists use food chain to develop for population decline of native species such as the Richmond birdwing butterfly, and to develop strategies to increase their population
• explore how hydrologists use rainfall and water use to explain the amount of water flowing in rivers and why this changes over time
• investigating how First Nations Australians test predictions and gather in the development of technologies and processes

Students learn to:

examine how people use data to develop scientific explanations

(AC9S4H01)

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

Reflecting

• Transfer knowledge

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 .

Reading and viewing

• Understanding texts

Statistics and probability

• Interpreting and representing data

Reading and viewing

• Understanding texts

Statistics and probability

• Interpreting and representing data

Reading and viewing

• Understanding texts

Statistics and probability

• Interpreting and representing data

Statistics and probability

• Interpreting and representing data

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.

Reflecting on culture and cultural diversity

• Explore the influence of cultures on interactions

Culture

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

Snapshot – Create possibilities

Critical and Creative Thinking: Generating: Create possibilities

Content description

AC9S4H01

Continuum extract

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

• create possibilities by connecting or creatively expanding on ideas in ways that are new to them

• create possibilities by connecting or creatively expanding on new and known ideas in a variety of ways

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

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4H01

Continuum extract

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

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

• identify and explain similarities and differences in selected information

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

• condense and combine selected information related to the topic of study

• 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

Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S4H01

Continuum extract

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

• use ideas and information from a previous experience to inform similar learning experiences
• use aspects of knowledge and skills gained in one setting to inform learning in a new setting or context
• apply aspects of knowledge and skills gained in one context to a new or unrelated context to achieve a specific purpose

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S4H01

Learning progression extract

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

Comprehension

• reads and views simple texts independently (see Text complexity)
• locates directly stated information
• recounts or describes sequenced ideas or information
• identifies a clearly evident main idea in a simple text
• listens to texts to engage with learning area content (e.g. a text about family histories)
• reads and views the content of texts and describes new or learnt information
• expresses an opinion or preference for a topic or text with a supporting reason
• draws obvious inferences by integrating print, visual and audio aspects of simple texts (e.g. uses images and key words to infer a character's job)
• identifies some differences between imaginative and informative texts (e.g. different styles of images in a fairy tale and instructions for a game)

Processes

• uses phonic knowledge, word recognition, sentence structure, punctuation and contextual knowledge to read simple texts (see Phonic knowledge and word recognition) (see Text complexity)
• reads high-frequency words in continuous text
• reads using sentence features such as word order and sentence boundary punctuation (e.g. question marks)
• pauses when meaning breaks down and attempts to self-correct
• uses visual and auditory cues to build meaning (e.g. colour, shape and size of images, sound effects)
• selects appropriate reading paths when reading simple texts and navigates simple screen-based texts for specific purposes

Vocabulary

• identifies key words and the meaning they carry (e.g. nouns, verbs)
• makes plausible interpretations of the meaning of unfamiliar words
• understands simple qualifying or emotive words
• uses context to understand homonyms

Comprehension

• reads and views simple texts and some elementary texts (see Text complexity)
• scans texts to locate specific information in an elementary print text
• recounts or describes the most relevant details from a text
• tracks ideas or information throughout the text
• identifies main idea by synthesising information across a simple text
• identifies the arguments in an elementary text
• identifies the purpose of elementary informative, imaginative and persuasive texts (e.g. uses verbs and dot points to identify a set of instructions)
• explains how inferences are drawn using background knowledge or language features (e.g. infers character's feelings from actions)
• makes connections between texts (e.g. compares 2 versions of a well-known story)

• integrates new learning from reading with current knowledge (e.g. "I know that insects have wings but I didn't know all insects have six legs")
• predicts the content and purpose of a text based on a range of text features

Processes

• uses a bank of phonic knowledge and word recognition skills and grammatical and contextual knowledge to read simple and elementary texts (see Phonic knowledge and word recognition)
• recognises when meaning breaks down, pauses and uses phonic knowledge, contextual knowledge, and strategies such as repeating words, re-reading and reading on to self-correct (see Phonic knowledge and word recognition)
• identifies parts of text used to answer literal and inferential questions
• uses cohesive devices to connect ideas or events (e.g. tracks pronoun referencing) (see Grammar)
• uses phrasing and punctuation to support reading for meaning (e.g. noun, verb and adjectival groups) (see Fluency and Grammar)
• identifies common features in similar texts (e.g. photographs in informative texts)

Vocabulary

• uses morphological knowledge to explain words (e.g. "help" [base] + "less" [suffix] = "helpless")
• interprets language devices (e.g. exaggeration or repetition)
• interprets simple imagery (e.g. simile, onomatopoeia)
• uses context and grammar knowledge to understand unfamiliar words (e.g. the word "vast" in the phrase "vast desert")
• identifies words that state opinions (e.g. "I think")
• understands the use of common idiomatic or colloquial language in texts (e.g. "get your head around it")

Comprehension

• reads and views elementary texts (see Text complexity)
• locates information or details embedded in the text
• identifies the main idea in an elementary text
• identifies the purpose of a broad range of informative, imaginative and persuasive texts (e.g. advertisements, diary entry)
• draws inferences and identifies supporting evidence in the text
• monitors the development of ideas using language and visual features (e.g. topic sentences, key verbs, graphs)
• recognises that texts can present different points of view
• distinguishes between fact and opinion in texts
• compares and contrasts texts on the same topic to identify how authors represent the same ideas differently

Processes

• integrates phonic knowledge, word recognition skills, grammatical and contextual knowledge to read elementary texts (see Phonic knowledge and word recognition and Fluency)
• identifies language features that signal purpose in an elementary text (e.g. diagrams, dialogue)
• uses strategies to predict and confirm meaning (e.g. uses sentence structure to predict how ideas will be developed)
• navigates texts using common signposting devices such as headings, subheadings, paragraphs, navigation bars and links

Vocabulary

• interprets creative use of figurative language (e.g. metaphor, simile, onomatopoeia)
• interprets unfamiliar words using grammatical knowledge, morphological knowledge and etymological knowledge
• describes the language and visual features of texts using metalanguage (e.g. grammatical terms such as "cohesion", "tense", "noun groups/phrases")
• recognises how synonyms are used to enhance a text (e.g. "transport", "carry", "transfer")
• draws on knowledge of word origin to work out meaning of discipline-specific terms (e.g. "universe")
• recognises how evaluative and modal words are used to influence the reader (e.g. "important", "should", "dirty")

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S4H01

Learning progression extract

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

Collecting, displaying and interpreting categorical data

• designs survey questions to collect categorical data (e.g. creates a suite of survey questions to plan the end of year class party)
• collects, records and displays one-variable data in variety of ways such as tables, charts, plots and graphs using the appropriate digital tools (e.g. uses a spreadsheet to record data collected in a class survey and generates a column graph to display the results)
• displays and interprets categorical data in one-to-many data displays
• interprets and represents categorical data in simple displays such as bar and column graphs, pie charts, models, maps, colour wheels, and pictorial timelines, and makes simple inferences from such displays
• makes comparisons from categorical data displays using relative heights from a common baseline (e.g. compares the heights of the columns in a simple column graph to determine the tallest and recognises this as the most frequent response)

Collecting, displaying and interpreting numerical data

• collects and records discrete numerical data using an appropriate method for recording (e.g. uses a frequency table to record the experimental results for rolling a dice; records sample measurements taken during a science investigation)
• constructs graphical representations of numerical data and explains the difference between continuous and discrete data (e.g. explains that measurements such as length, mass and temperature are continuous data whereas a count such as the number of people in a queue is discrete)
• explains how data displays can be misleading (e.g. whether a scale should start at zero; not using uniform intervals on the axes)
• interprets visual representations of data displayed using a multi-unit scale, reading values between the marked units and describing any variation and trends in the data

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

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S4H01

Learning progression extract

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

Comprehension

• reads and views simple texts and some elementary texts (see Text complexity)
• scans texts to locate specific information in an elementary print text
• recounts or describes the most relevant details from a text
• tracks ideas or information throughout the text
• identifies main idea by synthesising information across a simple text
• identifies the arguments in an elementary text
• identifies the purpose of elementary informative, imaginative and persuasive texts (e.g. uses verbs and dot points to identify a set of instructions)
• explains how inferences are drawn using background knowledge or language features (e.g. infers character's feelings from actions)
• makes connections between texts (e.g. compares 2 versions of a well-known story)
• integrates new learning from reading with current knowledge (e.g. "I know that insects have wings but I didn't know all insects have six legs")
• predicts the content and purpose of a text based on a range of text features

Processes

• uses a bank of phonic knowledge and word recognition skills and grammatical and contextual knowledge to read simple and elementary texts (see Phonic knowledge and word recognition)
• recognises when meaning breaks down, pauses and uses phonic knowledge, contextual knowledge, and strategies such as repeating words, re-reading and reading on to self-correct (see Phonic knowledge and word recognition)
• identifies parts of text used to answer literal and inferential questions
• uses cohesive devices to connect ideas or events (e.g. tracks pronoun referencing) (see Grammar)
• uses phrasing and punctuation to support reading for meaning (e.g. noun, verb and adjectival groups) (see Fluency and Grammar)
• identifies common features in similar texts (e.g. photographs in informative texts)

Vocabulary

• uses morphological knowledge to explain words (e.g. "help" [base] + "less" [suffix] = "helpless")
• interprets language devices (e.g. exaggeration or repetition)
• interprets simple imagery (e.g. simile, onomatopoeia)
• uses context and grammar knowledge to understand unfamiliar words (e.g. the word "vast" in the phrase "vast desert")
• identifies words that state opinions (e.g. "I think")
• understands the use of common idiomatic or colloquial language in texts (e.g. "get your head around it")

Comprehension

• reads and views elementary texts (see Text complexity)
• locates information or details embedded in the text
• identifies the main idea in an elementary text
• identifies the purpose of a broad range of informative, imaginative and persuasive texts (e.g. advertisements, diary entry)
• draws inferences and identifies supporting evidence in the text
• monitors the development of ideas using language and visual features (e.g. topic sentences, key verbs, graphs)
• recognises that texts can present different points of view
• distinguishes between fact and opinion in texts
• compares and contrasts texts on the same topic to identify how authors represent the same ideas differently

Processes

• integrates phonic knowledge, word recognition skills, grammatical and contextual knowledge to read elementary texts (see Phonic knowledge and word recognition and Fluency)

• identifies language features that signal purpose in an elementary text (e.g. diagrams, dialogue)
• uses strategies to predict and confirm meaning (e.g. uses sentence structure to predict how ideas will be developed)
• navigates texts using common signposting devices such as headings, subheadings, paragraphs, navigation bars and links

Vocabulary

• interprets creative use of figurative language (e.g. metaphor, simile, onomatopoeia)
• interprets unfamiliar words using grammatical knowledge, morphological knowledge and etymological knowledge
• describes the language and visual features of texts using metalanguage (e.g. grammatical terms such as "cohesion", "tense", "noun groups/phrases")
• recognises how synonyms are used to enhance a text (e.g. "transport", "carry", "transfer")
• draws on knowledge of word origin to work out meaning of discipline-specific terms (e.g. "universe")
• recognises how evaluative and modal words are used to influence the reader (e.g. "important", "should", "dirty")

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")

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S4H01

Learning progression extract

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

Collecting, displaying and interpreting categorical data

• designs survey questions to collect categorical data (e.g. creates a suite of survey questions to plan the end of year class party)
• collects, records and displays one-variable data in variety of ways such as tables, charts, plots and graphs using the appropriate digital tools (e.g. uses a spreadsheet to record data collected in a class survey and generates a column graph to display the results)
• displays and interprets categorical data in one-to-many data displays
• interprets and represents categorical data in simple displays such as bar and column graphs, pie charts, models, maps, colour wheels, and pictorial timelines, and makes simple inferences from such displays
• makes comparisons from categorical data displays using relative heights from a common baseline (e.g. compares the heights of the columns in a simple column graph to determine the tallest and recognises this as the most frequent response)

Collecting, displaying and interpreting numerical data

• collects and records discrete numerical data using an appropriate method for recording (e.g. uses a frequency table to record the experimental results for rolling a dice; records sample measurements taken during a science investigation)
• constructs graphical representations of numerical data and explains the difference between continuous and discrete data (e.g. explains that measurements such as length, mass and temperature are continuous data whereas a count such as the number of people in a queue is discrete)
• explains how data displays can be misleading (e.g. whether a scale should start at zero; not using uniform intervals on the axes)
• interprets visual representations of data displayed using a multi-unit scale, reading values between the marked units and describing any variation and trends in the data

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)
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Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S4H01

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• predicts the content and purpose of a text based on a range of text features

Processes

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• reads and views elementary texts (see Text complexity)
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• 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)
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Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S4H01

Learning progression extract

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

Collecting, displaying and interpreting categorical data

• designs survey questions to collect categorical data (e.g. creates a suite of survey questions to plan the end of year class party)
• collects, records and displays one-variable data in variety of ways such as tables, charts, plots and graphs using the appropriate digital tools (e.g. uses a spreadsheet to record data collected in a class survey and generates a column graph to display the results)
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displays
• makes comparisons from categorical data displays using relative heights from a common baseline (e.g. compares the heights of the columns in a simple column graph to determine the tallest and recognises this as the most frequent response)

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• explains how data displays can be misleading (e.g. whether a scale should start at zero; not using uniform intervals on the axes)
• interprets visual representations of data displayed using a multi-unit scale, reading values between the marked units and describing any variation and trends in the data

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)
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Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

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Collecting, displaying, interpreting and analysing numerical data

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Snapshot – Explore the influence of cultures on interactions

Intercultural Understanding: Reflecting on culture and cultural diversity: Explore cultures on interactions

Content description

AC9S4H01

Continuum extract

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

• describe how their cultural identities influence interactions with others
• understand how cultural and linguistic diversity affect interactions within their community
• examine the influence of cultural and linguistic diversity on familiar interactions, and identify opportunities or challenges for relationship-building

AC9S4H02

consider how people use scientific to meet a need or solve a problem

•

Elaborations

• investigating how knowledge of the role of has helped people design industrial composting to manage plant and animal waste
• investigating how First Nations Australians of arid regions of Australia use scientific knowledge to manage precious water resources

• considering how knowledges of plant biology enable First Nations Australians to sustainably harvest and use plants to make tools and weapons, musical instruments, clothing, cosmetics and artworks
• exploring how knowledge of the of plastic has influenced people to change how they purchase, use and dispose of plastic products
• examining how people use knowledge of friction to improve car or bicycle safety on slippery surfaces such as wet or icy roads
• investigating how knowledge of magnetic is used to sort metals in recycling, mining and food processing

Students learn to:

consider how people use scientific explanations to meet a need or solve a problem

(AC9S4H02)

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

Reflecting

• Transfer knowledge

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

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.

Culture

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

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.

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.

Systems

• Sustainable patterns of living require the responsible use of resources, maintenance of clean air, water and soils, and preservation or restoration of healthy environments.

Statistics and probability

• Interpreting and representing data

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.

Reflecting

• Transfer knowledge

Reading and viewing

• Understanding texts

Reflecting

• Transfer knowledge

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4H02

Continuum extract

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

• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4H02

Continuum extract

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

• identify and explore relevant information from a range of sources, including visual information and digital sources
• identify and explain similarities and differences in selected information
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• condense and combine selected information related to the topic of study
• 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

Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S4H02

Continuum extract

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

• use ideas and information from a previous experience to inform similar learning experiences
• use aspects of knowledge and skills gained in one setting to inform learning in a new setting or context
• apply aspects of knowledge and skills gained in one context to a new or unrelated context to achieve a specific purpose

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4H02

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

• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
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Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S4H02

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Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S4H02

Learning progression extract

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

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• 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

Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S4H02

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• use ideas and information from a previous experience to inform similar learning experiences
• use aspects of knowledge and skills gained in one setting to inform learning in a new setting or context
• apply aspects of knowledge and skills gained in one context to a new or unrelated context to achieve a specific purpose

Snapshot – Understanding texts

Literacy: Reading and viewing: Understanding texts

Content description

AC9S4H02

Learning progression extract

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

Comprehension

• reads and views simple texts and some elementary texts (see Text complexity)
• scans texts to locate specific information in an elementary print text
• recounts or describes the most relevant details from a text
• tracks ideas or information throughout the text
• identifies main idea by synthesising information across a simple text
• identifies the arguments in an elementary text
• identifies the purpose of elementary informative, imaginative and persuasive texts (e.g. uses verbs and dot points to identify a set of instructions)
• explains how inferences are drawn using background knowledge or language features (e.g. infers character's feelings from actions)
• makes connections between texts (e.g. compares 2 versions of a well-known story)
• integrates new learning from reading with current knowledge (e.g. "I know that insects have wings but I didn't know all insects have six legs")
• predicts the content and purpose of a text based on a range of text features

Processes

• uses a bank of phonic knowledge and word recognition skills and grammatical and contextual knowledge to read simple and elementary texts (see Phonic knowledge and word recognition)
• recognises when meaning breaks down, pauses and uses phonic knowledge, contextual knowledge, and strategies such as repeating words, re-reading and reading on to self-correct (see Phonic knowledge and word recognition)
• identifies parts of text used to answer literal and inferential questions
• uses cohesive devices to connect ideas or events (e.g. tracks pronoun referencing) (see Grammar)
• uses phrasing and punctuation to support reading for meaning (e.g. noun, verb and adjectival groups) (see Fluency and Grammar)
• identifies common features in similar texts (e.g. photographs in informative texts)

Vocabulary

• uses morphological knowledge to explain words (e.g. "help" [base] + "less" [suffix] = "helpless")
• interprets language devices (e.g. exaggeration or repetition)
• interprets simple imagery (e.g. simile, onomatopoeia)
• uses context and grammar knowledge to understand unfamiliar words (e.g. the word "vast" in the phrase "vast desert")
• identifies words that state opinions (e.g. "I think")

• understands the use of common idiomatic or colloquial language in texts (e.g. "get your head around it")

Comprehension

• reads and views elementary texts (see Text complexity)
• locates information or details embedded in the text
• identifies the main idea in an elementary text
• identifies the purpose of a broad range of informative, imaginative and persuasive texts (e.g. advertisements, diary entry)
• draws inferences and identifies supporting evidence in the text
• monitors the development of ideas using language and visual features (e.g. topic sentences, key verbs, graphs)
• recognises that texts can present different points of view
• distinguishes between fact and opinion in texts
• compares and contrasts texts on the same topic to identify how authors represent the same ideas differently

Processes

• integrates phonic knowledge, word recognition skills, grammatical and contextual knowledge to read elementary texts (see Phonic knowledge and word recognition and Fluency)
• identifies language features that signal purpose in an elementary text (e.g. diagrams, dialogue)
• uses strategies to predict and confirm meaning (e.g. uses sentence structure to predict how ideas will be developed)
• navigates texts using common signposting devices such as headings, subheadings, paragraphs, navigation bars and links

Vocabulary

• interprets creative use of figurative language (e.g. metaphor, simile, onomatopoeia)
• interprets unfamiliar words using grammatical knowledge, morphological knowledge and etymological knowledge
• describes the language and visual features of texts using metalanguage (e.g. grammatical terms such as "cohesion", "tense", "noun groups/phrases")
• recognises how synonyms are used to enhance a text (e.g. "transport", "carry", "transfer")
• draws on knowledge of word origin to work out meaning of discipline-specific terms (e.g. "universe")
• recognises how evaluative and modal words are used to influence the reader (e.g. "important", "should", "dirty")

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")

Snapshot – Transfer knowledge

Critical and Creative Thinking: Reflecting: Transfer knowledge

Content description

AC9S4H02

Continuum extract

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

• use ideas and information from a previous experience to inform similar learning experiences
• use aspects of knowledge and skills gained in one setting to inform learning in a new setting or context
• apply aspects of knowledge and skills gained in one context to a new or unrelated context to achieve a specific purpose

AC9S4I01

pose questions to explore observed and and make predictions based on

•

Elaborations

• posing questions about why some are used more often than others for particular products
• predicting the effect on when living things are removed from or die out in an area
• consulting with First Nations Australians about how to predict the location of water sources from of landscape features
• making predictions about the distances over which magnets will attract or repel each other

Students learn to:

pose questions to explore observed patterns and relationships and make predictior observations

(AC9S4I01)

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

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

Generating

• Put ideas into action

Speaking and listening

• Interacting

Culture

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

Generating

• Put ideas into action

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S4I01

Continuum extract

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

• put ideas into action by experimenting with options and predicting possible results

• put ideas into action by predicting an outcome, trialling options and assessing their effectiveness

• put ideas into action by predicting potential or future outcomes and systematically testing a range of options

Snapshot – Develop questions

Critical and Creative Thinking: Inquiring: Develop questions

Content description

AC9S4I01

Continuum extract

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

• develop questions to explore a familiar idea or topic

• questions developed are fit for the purpose of the investigation

• develop■questions to examine unfamiliar ideas and topics

• questions developed support the process of improving knowledge and understanding about a topic or investigation

• develop■questions to examine unfamiliar ideas and topics

• questions developed focus on improving understanding about a topic and clarifying information about processes or procedures

Snapshot – Develop questions

Critical and Creative Thinking: Inquiring: Develop questions

Content description

AC9S4I01

Continuum extract

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

• develop questions to explore a familiar idea or topic

• questions developed are fit for the purpose of the investigation

• develop■questions to examine unfamiliar ideas and topics

• questions developed support the process of improving knowledge and understanding about a topic or investigation

• develop■questions to examine unfamiliar ideas and topics

• questions developed focus on improving understanding about a topic and clarifying information about processes or procedures

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S4I01

Continuum extract

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

• put ideas into action by experimenting with options and predicting possible results

• put ideas into action by predicting an outcome, trialling options and assessing their effectiveness

• put ideas into action by predicting potential or future outcomes and systematically testing a range of options

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S4I01

Learning progression extract

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

• listens actively to stay on topic in a small group discussion
• takes an active role in small group and whole-class discussion by volunteering ideas and opinions
• asks relevant questions for clarification or to find out others' ideas (e.g. "What do you think about that?")
• takes turns in interactions
• interacts using appropriate language in pairs or a small group to complete tasks
• interacts to extend and elaborate ideas in a discussion (e.g. provides an additional example)
• presents simple ideas clearly in group situations
• actively encourages or supports other speakers
• shows awareness of discussion conventions (e.g. uses appropriate language to express agreement and disagreement in class discussions)
• uses language to initiate interactions in a small group situation (e.g. "I have an idea")
• 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

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S4I01

Continuum extract

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

• put ideas into action by experimenting with options and predicting possible results
• put ideas into action by predicting an outcome, trialling options and assessing their effectiveness
• put ideas into action by predicting potential or future outcomes and systematically testing a range of options

AC9S4I02

use provided scaffolds to plan and conduct to answer questions or test predictions, including identifying the elements of , and considering the safe use of and equipment

•

Elaborations

• using an scaffold to design a to identify which shoe provides the greatest or least friction or which are attracted to a magnet
• predicting the interactions of in a game or toy design, and building and testing a prototype
• predicting effects of changing numbers of or , and using a virtual or roleplay food chain to explore possible outcomes by running the multiple times
• following safety rules when conducting , such as wearing personal safety gear correctly, using equipment according to guidelines and demonstrating safe behaviours in field sites or when interacting with biological specimens

Students learn to:

use provided scaffolds to plan and conduct investigations to answer questions or t including identifying the elements of fair tests, and considering the safe use of mat equipment

(AC9S4I02)

General capabilities and cross-curriculum priorities

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

Generating

• Put ideas into action

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

Responding to ethical issues

• Making and reflecting on ethical decisions

Understanding ethical concepts and perspectives

• Explore ethical concepts

Generating

• Put ideas into action

Investigating

• Interpret data

Speaking and listening

• Speaking

Generating

• Put ideas into action

Related content

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

AC9M4ST03

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S4I02

Continuum extract

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

• put ideas into action by experimenting with options and predicting possible results

• put ideas into action by predicting an outcome, trialling options and assessing their effectiveness

• put ideas into action by predicting potential or future outcomes and systematically testing a range of options

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S4I02

Continuum extract

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

• put ideas into action by experimenting with options and predicting possible results

• put ideas into action by predicting an outcome, trialling options and assessing their effectiveness

• put ideas into action by predicting potential or future outcomes and systematically testing a range of options

Snapshot – Making and reflecting on ethical decisions

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

Content description

AC9S4I02

Continuum extract

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

• identify■examples of how perspectives and■values influence decision-making
• describe decision-making processes with reference to ethical perspective and■values
• consider alternative■ethical responses■to an issue when making and reflecting on ethical decisions

Snapshot – Explore ethical concepts

Ethical Understanding: Understanding ethical concepts and perspectives: Explor

Content description

AC9S4I02

Continuum extract

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

• identify ethical concepts, such as honesty and fairness, and describe actions and behaviours associated with these
• identify ethical concepts, such as respect and tolerance, and describe how a situation or context affects actions and behaviour
• identify and describe ethical concepts, such as truth and justice, and explain how perspectives may vary according to the situation or context

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S4I02

Continuum extract

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

• put ideas into action by experimenting with options and predicting possible results
• put ideas into action by predicting an outcome, trialling options and assessing their effectiveness
• put ideas into action by predicting potential or future outcomes and systematically testing a range of options

Snapshot – Interpret data

Digital Literacy: Investigating: Interpret data

Content description

AC9S4I02

Continuum extract

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

• classify and group data using digital familiar tools to answer simple questions
• organise, summarise and visualise data using a range of digital tools to identify patterns and answer questions
• analyse and visualise data using a range of digital tools to identify patterns and make predictions

Snapshot – Speaking

Literacy: Speaking and listening: Speaking

Content description

AC9S4I02

Learning progression extract

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

Crafting ideas

• creates short texts using a few connected sentences, on familiar and learnt topics (e.g. retells a familiar story or describes a process)
• speaks audibly and clearly to a familiar audience (e.g. own class)
• uses some extended sentences
• organises key ideas in logical sequence
• provides some supporting details

• expresses causal relationships (e.g. "when the egg cracked, the chicken came out")
• provides simple justifications (e.g. "I chose cherries because they are red.")
• uses some varying intonation or volume for emphasis
• regulates pace with pausing

Vocabulary

• uses some precise vocabulary from learning areas
• uses connectives to sequence ideas (e.g. "first", "then", "next", "finally") (see Grammar)
• uses vocabulary to express cause and effect (e.g. "The excursion was cancelled because it rained.")
• uses some modal language to influence or persuade (e.g. "should", "will") (see Grammar)

Crafting ideas

• creates spoken texts for a range of purposes across learning areas (e.g. explains how the mathematics problem was solved)
• uses complex sentence constructions including relative clauses (e.g. "The boy who drew the picture got a prize.") (see Grammar)
• adjusts register according to purpose and audience
• elaborates on ideas using a short sequence of sentences
• incorporates learnt content into spoken text
• sequences ideas and events appropriately
• uses mainly correct grammatical constructions (e.g. pronoun references; noun-verb agreement)
• varies volume and intonation to suit purpose and audience
• plans and delivers spoken presentations using appropriate structure and language
• includes video and audio enhancements to spoken texts, where appropriate (e.g. includes slides or pictures in a spoken presentation)

Vocabulary

• experiments with vocabulary drawn from a variety of sources
• uses adverbials to give more precise meaning to verbs (e.g. talking loudly) (see Grammar)
• uses a range of vocabulary to indicate connections (e.g. consequences)
• uses conditional vocabulary to expand upon ideas (e.g. "If Goldilocks ate all the porridge the bears would be hungry.")

Crafting ideas

• creates detailed spoken texts on a broad range of learning area topics
• includes details and elaborations to expand ideas
• uses connectives to signal a change in relationship (e.g. "however", "although", "on the other hand") or to show causal relationships (e.g. "due to", "since") (see Grammar)
• uses a range of expressions to introduce an alternative point of view (e.g. "in my opinion", "he did not agree with")
• rehearses spoken text to accommodate time and technology
• controls tone, volume, pitch and pace to suit content and audience
• uses technologies or audio and visual features to enhance spoken text (e.g. videos a spoken presentation with music, sound effect enhancements)

Vocabulary

• uses a broader range of more complex noun groups/phrases to expand description (e.g. "protective, outer covering")
• selects more specific and precise words to replace general words (e.g. uses "difficult" or "challenging" for "hard")
• uses some rhetorical devices (e.g. "don’t you agree?")

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S4I02

Continuum extract

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

• put ideas into action by experimenting with options and predicting possible results
• put ideas into action by predicting an outcome, trialling options and assessing their

effectiveness
• put ideas into action by predicting potential or future outcomes and systematically testing a range of options

AC9S4I03

follow procedures to make and record , including making using familiar scaled instruments and using as appropriate

•
•

Elaborations

• identifying animals in field locations using procedures such as direct or virtual , call or scat identification or pitfall traps
• using appropriate equipment to make and record , such as digital cameras, video, voice recorders and familiar scaled instruments with appropriate increments
• describing how to use rounding up or down when reading scaled instruments, and the effect of the scale size on the of the measurement
• constructing tables or graphic organisers to record

Students learn to:

follow procedures to make and record observations, including making formal meas

familiar scaled instruments and using digital tools as appropriate

(AC9S4I03)

General capabilities and cross-curriculum priorities

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

Investigating

• Acquire and collate data

Measurement and geometry

• Understanding units of measurement

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

Investigating

• Acquire and collate data

Investigating

• Acquire and collate data

Managing and operating

• Select and operate tools

Measurement and geometry

• Understanding units of measurement

Number sense and algebra

• Number and place value

Statistics and probability

• Interpreting and representing data

Related content

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

AC9HS4S02
AC9M4M01

Snapshot – Acquire and collate data

Digital Literacy: Investigating: Acquire and collate data

Content description

AC9S4I03

Continuum extract

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

• collect data by counting, measuring and observing with familiar digital tools

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

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

Snapshot – Understanding units of measurement

Numeracy: Measurement and geometry: Understanding units of measurement

Content description

AC9S4I03

Learning progression extract

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

Introducing metric units

• recognises standard metric units are used to measure attributes of shapes, objects and events (e.g. identifies units used to measure everyday items; recognises that distances in athletic events are measured in metres such as 100 and 200 metre races)

• uses the array structure to calculate area measured in square units (e.g. draws and describes the column and row structure to represent area as an array of square units, moving beyond counting of squares by ones)

• estimates the measurement of an attribute by visualising between known informal units (e.g. uses a cup to measure a half cup of rice; determines that about 3 3 3 sheets of paper would fit across a desk, and close to 6 6 6 might fit along it, so the area of the desk is about 18 18 1 8 sheets of paper)

• explains the difference between different attributes of the same shape or object and their associated metric units (e.g. length, mass and capacity)

Angles as measures of turn

• describes the size of an angle as a measure of turn and compares familiar measures of turn to known angles (e.g. the angle between the blades gets bigger as you open the scissors; a quarter turn creates a right angle)

Using metric units

• measures, compares and estimates length, perimeter and area of a surface using metric units (e.g. traces around their hand on centimetre grid paper and counts the number of squares to estimate the area of their hand print to be about 68 68 6 8 square centimetres)

• uses scaled instruments to measure length, mass, capacity and temperature, correctly interpreting any unlabelled calibrations (e.g. 3 3 3 marks between the numbered marks for kilograms means each gap represents 250 250 2 5 0 grams, so it’s divided into quarter kilogram intervals)

• estimates measurements of an attribute using metric units (e.g. estimates the width of their thumb is close to a centimetre; compares the mass of 2 2 2 bags of fruit by hefting and says "this one feels like it weighs more than a kilogram"; approximates capacities based on the known capacity of a 600 600 6 0 0 -millilitre bottle of water)

Angles as measures of turn

• compares angles to a right angle and classifies them as equal to, less than or greater than a right angle (e.g. directly compares the size of angles to a right angle, by using the corner of a book; uses reference to a right angle to describe body positions during a choreographed dance or when practising a skill for a particular sport)

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)

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S4I03

Learning progression extract

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

Collecting, displaying and interpreting categorical data

• designs survey questions to collect categorical data (e.g. creates a suite of survey questions to plan the end of year class party)
• collects, records and displays one-variable data in variety of ways such as tables, charts, plots and graphs using the appropriate digital tools (e.g. uses a spreadsheet to record data collected in a class survey and generates a column graph to display the results)
• displays and interprets categorical data in one-to-many data displays
• interprets and represents categorical data in simple displays such as bar and column graphs, pie charts, models, maps, colour wheels, and pictorial timelines, and makes simple inferences from such displays
• makes comparisons from categorical data displays using relative heights from a common baseline (e.g. compares the heights of the columns in a simple column graph to determine the tallest and recognises this as the most frequent response)

Collecting, displaying and interpreting numerical data

• collects and records discrete numerical data using an appropriate method for recording (e.g. uses a frequency table to record the experimental results for rolling a dice; records sample measurements taken during a science investigation)
• constructs graphical representations of numerical data and explains the difference between continuous and discrete data (e.g. explains that measurements such as length, mass and temperature are continuous data whereas a count such as the number of people in a queue is discrete)
• explains how data displays can be misleading (e.g. whether a scale should start at zero; not using uniform intervals on the axes)
• interprets visual representations of data displayed using a multi-unit scale, reading values between the marked units and describing any variation and trends in the data

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

Snapshot – Put ideas into action

Critical and Creative Thinking: Generating: Put ideas into action

Content description

AC9S4I03

Continuum extract

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

• put ideas into action by experimenting with options and predicting possible results

• put ideas into action by predicting an outcome, trialling options and assessing their effectiveness

• put ideas into action by predicting potential or future outcomes and systematically testing a range of options

Snapshot – Acquire and collate data

Digital Literacy: Investigating: Acquire and collate data

Content description

AC9S4I03

Continuum extract

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

• collect data by counting, measuring and observing with familiar digital tools

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

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

Snapshot – Acquire and collate data

Digital Literacy: Investigating: Acquire and collate data

Content description

AC9S4I03

Continuum extract

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

• collect data by counting, measuring and observing with familiar digital tools

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

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

Snapshot – Select and operate tools

Digital Literacy: Managing and operating: Select and operate tools

Content description

AC9S4I03

Continuum extract

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

• use familiar digital tools to complete tasks and consolidate learning

• attempt to solve a problem before seeking help

• select and use a range of digital tools to complete tasks

• attempt to solve a problem individually and with peers before seeking help

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

• troubleshoot basic problems and identify repetitive tasks to automate

Snapshot – Understanding units of measurement

Numeracy: Measurement and geometry: Understanding units of measurement

Content description

AC9S4I03

Learning progression extract

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

Introducing metric units

• recognises standard metric units are used to measure attributes of shapes, objects and events (e.g. identifies units used to measure everyday items; recognises that distances in athletic events are measured in metres such as 100 and 200 metre races)
• uses the array structure to calculate area measured in square units (e.g. draws and describes the column and row structure to represent area as an array of square units, moving beyond counting of squares by ones)
• estimates the measurement of an attribute by visualising between known informal units (e.g. uses a cup to measure a half cup of rice; determines that about 3 3 3 sheets of paper would fit across a desk, and close to 6 6 6 might fit along it, so the area of the desk is about 18 18 1 8 sheets of paper)
• explains the difference between different attributes of the same shape or object and their associated metric units (e.g. length, mass and capacity)

Angles as measures of turn

• describes the size of an angle as a measure of turn and compares familiar measures of turn to known angles (e.g. the angle between the blades gets bigger as you open the scissors; a quarter turn creates a right angle)

Using metric units

• measures, compares and estimates length, perimeter and area of a surface using metric units (e.g. traces around their hand on centimetre grid paper and counts the number of squares to estimate the area of their hand print to be about 68 68 6 8 square centimetres)
• uses scaled instruments to measure length, mass, capacity and temperature, correctly interpreting any unlabelled calibrations (e.g. 3 3 3 marks between the numbered marks for kilograms means each gap represents 250 250 2 5 0 grams, so it's divided into quarter kilogram intervals)
• estimates measurements of an attribute using metric units (e.g. estimates the width of their thumb is close to a centimetre; compares the mass of 2 2 2 bags of fruit by hefting and says "this one feels like it weighs more than a kilogram"; approximates capacities based on the known capacity of a 600 600 6 0 0 -millilitre bottle of water)

Angles as measures of turn

• compares angles to a right angle and classifies them as equal to, less than or greater than a right angle (e.g. directly compares the size of angles to a right angle, by using the corner of a book; uses reference to a right angle to describe body positions during a choreographed dance or when practising a skill for a particular sport)

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)

Snapshot – Number and place value

Numeracy: Number sense and algebra: Number and place value

Content description

AC9S4I03

Learning progression extract

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

Numeral recognition and identification

• identifies, reads, writes and interprets numerals beyond 1000 1000 1 0 0 0 applying knowledge of place value, including numerals that contain a zero (e.g. reads 1345 1345 1 3 4 5 as one thousand, 3 3 3 hundred and 45 45 4 5 ; reads one thousand and 15 15 1 5 and writes as 1015 1015 1 0 1 5 ; compares the size of populations of schools, suburbs, cities and ecosystems or the cost of items in shopping catalogues)

Place value

• represents, flexibly partitions and renames four-digit numbers into standard and non-standard place value partitions (e.g. uses grid paper to show the size of each digit in 2202 2202 2 2 0 2 ; renames 5645 5645 5 6 4 5 as 3645 3645 3 6 4 5 and 2000 2000 2 0 0 0 in order to subtract 1998 1998 1 9 9 8)
• estimates and rounds natural numbers to the nearest 10 10 1 0 or nearest 100 100 1 0 0 (e.g. pencils come in a pack of 10 10 1 0 , so estimates the number of packs required for 127 127 1 2 7 Year 6 6 6 students; to check the reasonableness of their solution to the computation 212 + 195 212 + 195 2 1 2 + 1 9 5 , rounds both numbers to 200 200 2 0 0)
• represents and names tenths as one out of 10 10 1 0 equal parts of a whole (e.g. uses a bar model to represent the whole and its parts; uses a straw that has been cut into 10 10 1 0 equal pieces to demonstrate that one piece is one-tenth of a whole straw and 2 2 2 pieces are two-tenths of the whole straw)
• represents and names one-tenth as its decimal equivalent (e.g. 0.1 0.1 0 . 1 , zero point one)
• extends the place value system to tenths

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

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S4I03

Learning progression extract

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

Collecting, displaying and interpreting categorical data

• designs survey questions to collect categorical data (e.g. creates a suite of survey questions to plan the end of year class party)
• collects, records and displays one-variable data in variety of ways such as tables, charts, plots and graphs using the appropriate digital tools (e.g. uses a spreadsheet to record data collected in a class survey and generates a column graph to display the results)
• displays and interprets categorical data in one-to-many data displays
• interprets and represents categorical data in simple displays such as bar and column graphs, pie charts, models, maps, colour wheels, and pictorial timelines, and makes simple inferences from such displays
• makes comparisons from categorical data displays using relative heights from a common baseline (e.g. compares the heights of the columns in a simple column graph to determine the tallest and recognises this as the most frequent response)

Collecting, displaying and interpreting numerical data

• collects and records discrete numerical data using an appropriate method for recording (e.g. uses a frequency table to record the experimental results for rolling a dice; records sample measurements taken during a science investigation)
• constructs graphical representations of numerical data and explains the difference between continuous and discrete data (e.g. explains that measurements such as length, mass and temperature are continuous data whereas a count such as the number of people in a queue is discrete)
• explains how data displays can be misleading (e.g. whether a scale should start at zero; not using uniform intervals on the axes)
• interprets visual representations of data displayed using a multi-unit scale, reading values between the marked units and describing any variation and trends in the data

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

AC9S4I04

construct and use , including tables, simple column and visual or physical , to organise and

information, show simple and identify

•

•

Elaborations

• using virtual or role-play food chain to explore effects of changing numbers of or in a

• using maps to locate water sources in the local area, or constructing maps to show sites of water wastage in the school grounds

• constructing column to compare numbers of objects made of particular or distances moved by objects experiencing frictional

• using arrows to show operating on objects

Students learn to:

construct and use representations, including tables, simple column graphs and visu models, to organise data and information, show simple relationships and identify pa

(AC9S4I04)

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

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

Statistics and probability

• Interpreting and representing data

Analysing

• Interpret concepts and problems

Measurement and geometry

• Positioning and locating

Analysing

• Interpret concepts and problems

Statistics and probability

• Interpreting and representing data

Analysing

• Interpret concepts and problems

Related content

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

AC9HS4S02

AC9M4ST01

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I04

Continuum extract

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

• identify the main parts of a concept or problem and describe how these relate to each other

• identify and prioritise significant elements and relationships within a concept or problem

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

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4I04

Continuum extract

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

• identify and explore relevant information from a range of sources, including visual information and digital sources
• identify and explain similarities and differences in selected information
• identify and examine relevant information and opinion from a range of sources, including visual information and digital sources
• condense and combine selected information related to the topic of study
• 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

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S4I04

Learning progression extract

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

Collecting, displaying and interpreting categorical data

• designs survey questions to collect categorical data (e.g. creates a suite of survey questions to plan the end of year class party)
• collects, records and displays one-variable data in variety of ways such as tables, charts, plots and graphs using the appropriate digital tools (e.g. uses a spreadsheet to record data collected in a class survey and generates a column graph to display the results)
• displays and interprets categorical data in one-to-many data displays
• interprets and represents categorical data in simple displays such as bar and column graphs, pie charts, models, maps, colour wheels, and pictorial timelines, and makes simple inferences from such displays
• makes comparisons from categorical data displays using relative heights from a common baseline (e.g. compares the heights of the columns in a simple column graph to determine the tallest and recognises this as the most frequent response)

Collecting, displaying and interpreting numerical data

• collects and records discrete numerical data using an appropriate method for recording (e.g. uses a frequency table to record the experimental results for rolling a dice; records sample measurements taken during a science investigation)
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• interprets visual representations of data displayed using a multi-unit scale, reading values between the marked units and describing any variation and trends in the data

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

Snapshot – Interpret data

Digital Literacy: Investigating: Interpret data

Content description

AC9S4I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• classify and group data using digital familiar tools to answer simple questions
• organise, summarise and visualise data using a range of digital tools to identify patterns and answer questions
• analyse and visualise data using a range of digital tools to identify patterns and make predictions

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S4I04

Learning progression extract

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

Collecting, displaying and interpreting categorical data

• designs survey questions to collect categorical data (e.g. creates a suite of survey questions to plan the end of year class party)
• collects, records and displays one-variable data in variety of ways such as tables, charts, plots and graphs using the appropriate digital tools (e.g. uses a spreadsheet to record data collected in a class survey and generates a column graph to display the results)
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• collects and records discrete numerical data using an appropriate method for recording (e.g. uses a frequency table to record the experimental results for rolling a dice; records sample measurements taken during a science investigation)
• constructs graphical representations of numerical data and explains the difference between continuous and discrete data (e.g. explains that measurements such as length, mass and temperature are continuous data whereas a count such as the number of people in a queue is discrete)
• explains how data displays can be misleading (e.g. whether a scale should start at zero; not using

uniform intervals on the axes)
• interprets visual representations of data displayed using a multi-unit scale, reading values between the marked units and describing any variation and trends in the data

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)
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Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Positioning and locating

Numeracy: Measurement and geometry: Positioning and locating

Content description

AC9S4I04

Learning progression extract

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

Using informal maps and plans

• draws an informal map or sketch to provide directions (e.g. draws a dance map when planning choreography; sketches the pathway to provide directions for a robotic vehicle to move from one location to another within a space)
• describes and locates relative positions on an informal map or plan (e.g. locates the starting position for the cross-country race using an informal map of the course; uses a seating plan to describe where they sit relative to the teacher’s desk)
• orients an informal map using recognisable landmarks and current location (e.g. orients a map to show the location of the audience and locates the entry and exit points of the school gymnasium)
• locates self on an informal map to select an appropriate path to a given location

Using formal maps and plans

• locates position on maps using grid references (e.g. locates the school in cell E5; uses grid

references to identify specific locations on a stage and when creating a stage plan, lighting design or prompt script)
• describes routes using landmarks and directional language including reference to quarter, half, three-quarter turns; turns to the left and right; clockwise and anticlockwise turns (e.g. communicates strategic plays in relation to coaching a team game or sport)
• interprets keys, simple scales and compass directions contained within a map to locate features (e.g. uses a map and compass directions when bush walking or orienteering)

Using proportional thinking for scaling

• interprets the scale used to create plans, drawings or maps (e.g. interprets scale to determine the approximate distance between two locations when orienteering)
• interprets and uses plans and maps involving scale (e.g. creates and interprets scale drawings when designing and making set pieces for a production)
• describes and interprets maps to determine the geographical location and positioning of states and territories within Australia and of countries relative to Australia
• interprets and uses more formal directional language such as compass bearings, degrees of turn, coordinates and distances to locate position or the distance from one location to another (e.g. identifies coordinates using GPS technologies)

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S4I04

Learning progression extract

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

Basic one-to-one data displays

• poses questions that could be investigated from a simple numerical or categorical data set (e.g. number of family members, types of pets, where people live)
• displays and describes one variable data in lists or tables
• communicates information through text, picture graphs and tables using numbers and symbols (e.g. creates picture graphs to display one-variable data)
• responds to questions and interprets general observations made about data represented in simple one-to-one data displays (e.g. responds to questions about the information represented in a simple picture graph that uses a one-to-one representation)

Collecting, displaying and interpreting categorical data

• designs survey questions to collect categorical data (e.g. creates a suite of survey questions to plan the end of year class party)
• collects, records and displays one-variable data in variety of ways such as tables, charts, plots and graphs using the appropriate digital tools (e.g. uses a spreadsheet to record data collected in a class survey and generates a column graph to display the results)
• displays and interprets categorical data in one-to-many data displays
• interprets and represents categorical data in simple displays such as bar and column graphs, pie charts, models, maps, colour wheels, and pictorial timelines, and makes simple inferences from such displays
• makes comparisons from categorical data displays using relative heights from a common baseline (e.g. compares the heights of the columns in a simple column graph to determine the tallest and

recognises this as the most frequent response)

Collecting, displaying and interpreting numerical data

• collects and records discrete numerical data using an appropriate method for recording (e.g. uses a frequency table to record the experimental results for rolling a dice; records sample measurements taken during a science investigation)
• constructs graphical representations of numerical data and explains the difference between continuous and discrete data (e.g. explains that measurements such as length, mass and temperature are continuous data whereas a count such as the number of people in a queue is discrete)
• explains how data displays can be misleading (e.g. whether a scale should start at zero; not using uniform intervals on the axes)
• interprets visual representations of data displayed using a multi-unit scale, reading values between the marked units and describing any variation and trends in the data

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I04

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

AC9S4I05

compare findings with those of others, consider if were fair, identify questions for further and draw

•
•

Elaborations

• identifying instances during where elements may have been changed in error, resulting in an unfair test
• comparing findings of water use surveys and discussing differences between home and school, or between each other's homes
• comparing designed solutions, such as toys, lunchboxes or structures, to determine fitness for purpose of selected
• comparing findings from with peers and asking questions about factors that may have led to any differences in findings
• identifying unexpected findings and posing questions for further
• drawing that reflect their and information

Students learn to:

compare findings with those of others, consider if investigations were fair, identify q

further investigation and draw conclusions

(AC9S4I05)

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

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

• Interpret concepts and problems

Analysing

• Interpret concepts and problems

Statistics and probability

• Interpreting and representing data

Analysing

• Interpret concepts and problems

Speaking and listening

• Interacting

Analysing

• Interpret concepts and problems

• Draw conclusions and provide reasons

Analysing

• Interpret concepts and problems

Analysing

• Interpret concepts and problems

• Draw conclusions and provide reasons

Speaking and listening

• Interacting

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I05

Continuum extract

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

• identify the main parts of a concept or problem and describe how these relate to each other

• identify and prioritise significant elements and relationships within a concept or problem

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

Snapshot – Identify, process and evaluate information

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

Content description

AC9S4I05

Continuum extract

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

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

• identify and explain similarities and differences in selected information

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

• condense and combine selected information related to the topic of study

• 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

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S4I05

Learning progression extract

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

• listens actively to stay on topic in a small group discussion

• takes an active role in small group and whole-class discussion by volunteering ideas and opinions
• asks relevant questions for clarification or to find out others' ideas (e.g. "What do you think about that?")
• takes turns in interactions
• interacts using appropriate language in pairs or a small group to complete tasks
• interacts to extend and elaborate ideas in a discussion (e.g. provides an additional example)
• presents simple ideas clearly in group situations
• actively encourages or supports other speakers
• shows awareness of discussion conventions (e.g. uses appropriate language to express agreement and disagreement in class discussions)
• uses language to initiate interactions in a small group situation (e.g. "I have an idea")
• 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

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Interpreting and representing data

Numeracy: Statistics and probability: Interpreting and representing data

Content description

AC9S4I05

Learning progression extract

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

Basic one-to-one data displays

• poses questions that could be investigated from a simple numerical or categorical data set (e.g. number of family members, types of pets, where people live)
• displays and describes one variable data in lists or tables
• communicates information through text, picture graphs and tables using numbers and symbols (e.g. creates picture graphs to display one-variable data)
• responds to questions and interprets general observations made about data represented in simple

one-to-one data displays (e.g. responds to questions about the information represented in a simple picture graph that uses a one-to-one representation)

Collecting, displaying and interpreting categorical data

• designs survey questions to collect categorical data (e.g. creates a suite of survey questions to plan the end of year class party)
• collects, records and displays one-variable data in variety of ways such as tables, charts, plots and graphs using the appropriate digital tools (e.g. uses a spreadsheet to record data collected in a class survey and generates a column graph to display the results)
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Collecting, displaying and interpreting numerical data

• collects and records discrete numerical data using an appropriate method for recording (e.g. uses a frequency table to record the experimental results for rolling a dice; records sample measurements taken during a science investigation)
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• explains how data displays can be misleading (e.g. whether a scale should start at zero; not using uniform intervals on the axes)
• interprets visual representations of data displayed using a multi-unit scale, reading values between the marked units and describing any variation and trends in the data

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S4I05

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.
• listens actively to stay on topic in a small group discussion
• takes an active role in small group and whole-class discussion by volunteering ideas and opinions
• asks relevant questions for clarification or to find out others' ideas (e.g. "What do you think about that?")
• takes turns in interactions
• interacts using appropriate language in pairs or a small group to complete tasks
• interacts to extend and elaborate ideas in a discussion (e.g. provides an additional example)
• presents simple ideas clearly in group situations
• actively encourages or supports other speakers
• shows awareness of discussion conventions (e.g. uses appropriate language to express agreement and disagreement in class discussions)
• uses language to initiate interactions in a small group situation (e.g. "I have an idea")

• 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

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Draw conclusions and provide reasons

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

Content description

AC9S4I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• draw conclusions and make choices when completing tasks and explain the reasons for choices made
• draw conclusions and make choices when completing tasks, using observation and prior knowledge to provide reasons and construct arguments for choices made
• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Interpret concepts and problems

Critical and Creative Thinking: Analysing: Interpret concepts and problems

Content description

AC9S4I05

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify the main parts of a concept or problem and describe how these relate to each other
• identify and prioritise significant elements and relationships within a concept or problem
• identify the relevant and significant aspects of a concept or problem, understanding that approaches may change depending on the subject or learning area

Snapshot – Draw conclusions and provide reasons

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

Content description

AC9S4I05

Continuum extract

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

• draw conclusions and make choices when completing tasks and explain the reasons for choices made
• draw conclusions and make choices when completing tasks, using observation and prior knowledge to provide reasons and construct arguments for choices made
• draw conclusions and make choices when completing tasks, using discipline knowledge to provide reasons and evaluate arguments for choices made

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S4I05

Learning progression extract

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

• listens actively to stay on topic in a small group discussion
• takes an active role in small group and whole-class discussion by volunteering ideas and opinions
• asks relevant questions for clarification or to find out others' ideas (e.g. "What do you think about that?")
• takes turns in interactions
• interacts using appropriate language in pairs or a small group to complete tasks
• interacts to extend and elaborate ideas in a discussion (e.g. provides an additional example)
• presents simple ideas clearly in group situations
• actively encourages or supports other speakers
• shows awareness of discussion conventions (e.g. uses appropriate language to express agreement and disagreement in class discussions)
• uses language to initiate interactions in a small group situation (e.g. "I have an idea")
• 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

AC9S4I06

write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and as appropriate

•
•

Elaborations

• discussing the purpose of a text and identifying vocabulary appropriate to the topic and audience
• acknowledging and learning about First Nations Australians' ways of representing and sharing information about water sources
• sharing ideas about ways to represent feeding including using drawings, labels, images or
• producing an informative text using scientific vocabulary to explain the impact of introduced predators on
• constructing a report using scientific vocabulary to explain which are best suited to be used for making particular products, such as nylon for tents, rubber for shoes or wool for warm clothing
• creating posters, a song, slideshow or performance to encourage the school community to save water

Students learn to:

write and create texts to communicate findings and ideas for identified purposes an

using scientific vocabulary and digital tools as appropriate

(AC9S4I06)

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

Managing and operating

• Select and operate tools

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 .

Writing

• Creating texts

Social management

• Communication

Engaging with cultural and linguistic diversity

• Communicate responsively

Culture

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

Social management

• Collaboration

Speaking and listening

• Interacting

Writing

• Creating texts

Writing

• Creating texts

Futures

• Sustainable futures require individuals to seek information, identify solutions, reflect on and evaluate past actions, and collaborate with and influence others as they work towards a desired change.

Resources

Work Samples

WS01 - Amusement park ride

Snapshot – Create, communicate and collaborate

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

Content description

AC9S4I06

Continuum extract

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

• experiment with the features of familiar digital tools to create content
• use the core features of a range of digital tools to create content and communicate and collaborate with peers and trusted adults
• select and control a variety of features in appropriate digital tools to create content and communicate and collaborate with trusted groups

Snapshot – Respect intellectual property

Digital Literacy: Creating and exchanging: Respect intellectual property

Content description

AC9S4I06

Continuum extract

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

• recognise ownership of products that others produce or that are produced collaboratively

• respect products created by someone else by acknowledging when they use them and use strategies such as indicating the source

• respect intellectual property by identifying the legal obligations regarding the ownership and appropriate use of products, exploring copyright protocols and applying some referencing conventions

Snapshot – Select and operate tools

Digital Literacy: Managing and operating: Select and operate tools

Content description

AC9S4I06

Continuum extract

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

• use familiar digital tools to complete tasks and consolidate learning

• attempt to solve a problem before seeking help

• select and use a range of digital tools to complete tasks

• attempt to solve a problem individually and with peers before seeking help

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

• troubleshoot basic problems and identify repetitive tasks to automate

Snapshot – Communication

Personal and Social capability: Social management: Communication

Content description

AC9S4I06

Continuum extract

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

• use a range of skills to enhance verbal and non-verbal communication

• apply verbal and non-verbal communication skills when responding to others

• apply skills to address factors that influence verbal and non-verbal communication

Snapshot – Creating texts

Literacy: Writing: Creating texts

Content description

AC9S4I06

Learning progression extract

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

Crafting ideas

• creates a text including 2 or 3 related ideas for a familiar purpose such as recounting an event, telling a story, expressing thoughts, feelings and opinions

• includes beginning structural features (e.g. statement of an opinion, a heading, description of an event linked to time and place)

• creates texts for learning area purposes (e.g. labelling a simple diagram, ordering events on a timeline)

Text forms and features

• writes simple sentences made up of basic verb groups, noun groups and phrases (e.g. "We visited my aunty’s house last week.")

• writes compound sentences using common conjunctions (e.g. "My house is big but the garden is small.")

• makes plausible attempts to write unfamiliar words phonetically (e.g. "enjn" for "engine") (see Spelling)

• uses capital letters correctly to indicate proper nouns (see Punctuation)

• uses capital letters at the start and full stops at the end of sentences (see Punctuation)

• spells some high-frequency words correctly (see Spelling)

• uses appropriate key words to represent simple concepts (e.g. "aunty", "sister", "cousin" in a

text about family)

Vocabulary

• uses adjectives to add meaning by describing qualities or features (e.g. "small", "long", "red") (see Grammar)
• uses words in own writing adopted from other writers
• uses simple words to add clarity to ideas (e.g. modifying and qualifying words such as "very")

Crafting ideas

• creates texts for a range of purposes such as observing and describing, providing reasons, expressing thoughts and feelings about a topic
• includes 4 or more simply stated and clearly connected ideas (e.g. introduces a topic and includes one or 2 facts; states an opinion with a reason; gives a recount of an event)
• includes a simple introduction to orient the reader (e.g. states a fact to introduce a report; states an opinion to introduce an argument; introduces a character to begin a narrative)
• writes ideas appropriate to a task or topic in sequenced sentences (e.g. writes informative texts with all the facts related to the topic)
• selects and discards ideas to make texts suitable for familiar audiences and purposes

Text forms and features

• writes simple, compound and some complex sentences related to a topic using a broader range of conjunctions (e.g. "and", "but", "so", "because", "when") (see Grammar)
• maintains tense within a sentence (see Grammar)
• selects images to complement writing
• spells many high-frequency words correctly (see Spelling)
• uses sentence punctuation correctly (e.g. !, ?) (see Punctuation)
• uses noun groups/phrases to add detail (e.g. "the tomato plant in the pot") (see Grammar)
• uses a range of simple cohesive devices such as pronoun referencing and sequencing connectives
• uses adverbs to give precise meaning to verbs (e.g. "talking loudly") (see Grammar)

Vocabulary

• uses a range of qualifying words (e.g. "every day"; "action movie")
• selects more specific adjectives (e.g. "giant" for "tall"; "golden" for "yellow")
• uses learning area topic vocabulary (e.g. "natural")
• uses common homophones correctly (e.g. "two", "too", "to")
• uses common idiomatic and colloquial phrases (e.g. "a piece of cake")

Crafting ideas

• creates informative, imaginative and persuasive texts for a range of learning area purposes, such as to recount a sequence of events; to describe a person, thing or process; to explain a process; to argue with evidence or reasons; to express emotions
• includes learnt ideas on a range of topics from learning areas
• stages text using typical or familiar features such as an introduction and body paragraphs
• supports ideas with some detail and elaboration (e.g. expands on a topic sentence by adding more details in following sentences)
• uses sources to support ideas (e.g. introduces ideas from a shared text to add detail and engage the reader)

Text forms and features

• writes a range of compound and complex sentences (see Grammar)
• uses pronouns correctly to link to an object or person across the text (see Grammar)
• uses images to reinforce ideas in written text
• maintains consistent tense within and between sentences (see Grammar)
• groups sentences on related ideas into simple paragraphs
• uses cohesive vocabulary to indicate order, cause and effect (e.g. uses text connectives such as "next", "since")
• correctly spells some words with irregular spelling patterns (e.g. "cough") (see Spelling)
• applies learnt spelling generalisations
• accurately spells high-frequency words (see Spelling)
• consistently uses correct simple punctuation (e.g. uses commas in a list) (see Punctuation)

Vocabulary

• uses expressive words to describe action and affect the reader (e.g. "tiptoed" instead of

"walked")
• uses vocabulary creatively to affect the reader (e.g. repetition, alliteration)
• uses synonyms to replace common and generic words and avoid repetition across a text (e.g. "thrilled" for "excited")
• uses a range of learning area topic words (e.g. "environment", "equipment")

Snapshot – Communication

Personal and Social capability: Social management: Communication

Content description

AC9S4I06

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• use a range of skills to enhance verbal and non-verbal communication
• apply verbal and non-verbal communication skills when responding to others
• apply skills to address factors that influence verbal and non-verbal communication

Snapshot – Communicate responsively

Intercultural Understanding: Engaging with cultural and linguistic diversity: Comm responsively

Content description

AC9S4I06

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• identify and use verbal and non-verbal communication, recognising that these may have different meanings for familiar cultural and linguistic groups
• initiate verbal and non-verbal communication, comparing how members of familiar cultural and linguistic groups respond
• select strategies for open, flexible and focused communication in unfamiliar settings, considering their effect on building understanding

Snapshot – Collaboration

Personal and Social capability: Social management: Collaboration

Content description

AC9S4I06

Continuum extract

The following continuum extract shows the alignment of the continuum with this content.
• participate cooperatively in groups on common tasks and activities
• perform designated roles within groups, appreciating everyone’s contributions to a shared outcome
• coordinate contributions of group members, suggesting improvements to ways of working and collaborative outputs

Snapshot – Interacting

Literacy: Speaking and listening: Interacting

Content description

AC9S4I06

Learning progression extract

The following learning progression extract shows the alignment of the learning progression with this content.
• listens actively to stay on topic in a small group discussion
• takes an active role in small group and whole-class discussion by volunteering ideas and opinions
• asks relevant questions for clarification or to find out others’ ideas (e.g. "What do you think about that?")
• takes turns in interactions
• interacts using appropriate language in pairs or a small group to complete tasks
• interacts to extend and elaborate ideas in a discussion (e.g. provides an additional example)
• presents simple ideas clearly in group situations
• actively encourages or supports other speakers

• shows awareness of discussion conventions (e.g. uses appropriate language to express agreement and disagreement in class discussions)
• uses language to initiate interactions in a small group situation (e.g. "I have an idea")
• 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

Snapshot – Creating texts

Literacy: Writing: Creating texts

Content description

AC9S4I06

Learning progression extract

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

Crafting ideas

• writes ideas in sentence fragments or a simple sentence (e.g. "I am 6.")
• explains the purpose and audience of familiar imaginative and informative texts
• creates short texts in different forms such as a simple recount
• combines visuals with written text where appropriate
• reads back own writing word by word
• talks about own text and describes subject matter and images

Text forms and features

• writes some appropriate letter combinations to represent less familiar words (see Spelling and Phonic knowledge and word recognition)
• writes with noun-verb agreement (e.g. "I am"), articles (e.g. "a man") and personal pronouns (e.g. "my mum") (see Grammar)
• writes from left to right using spaces between attempted words
• uses basic noun groups/phrases (e.g. "my house") (see Grammar)
• uses some sentence punctuation (e.g. capital letters at the beginning of a text)

Vocabulary

• writes simple familiar words (e.g. "saw", "food", "they")
• includes some learning area vocabulary in own texts (e.g. "season")
• uses taught high-frequency words

Crafting ideas

• creates a text including 2 or 3 related ideas for a familiar purpose such as recounting an event, telling a story, expressing thoughts, feelings and opinions
• includes beginning structural features (e.g. statement of an opinion, a heading, description of an event linked to time and place)
• creates texts for learning area purposes (e.g. labelling a simple diagram, ordering events on a timeline)

Text forms and features

• writes simple sentences made up of basic verb groups, noun groups and phrases (e.g. "We visited my aunty’s house last week.")
• writes compound sentences using common conjunctions (e.g. "My house is big but the garden is small.")
• makes plausible attempts to write unfamiliar words phonetically (e.g. "enjn" for "engine") (see Spelling)
• uses capital letters correctly to indicate proper nouns (see Punctuation)
• uses capital letters at the start and full stops at the end of sentences (see Punctuation)
• spells some high-frequency words correctly (see Spelling)

• uses appropriate key words to represent simple concepts (e.g. "aunty", "sister", "cousin" in a text about family)

Vocabulary

• uses adjectives to add meaning by describing qualities or features (e.g. "small", "long", "red") (see Grammar)
• uses words in own writing adopted from other writers
• uses simple words to add clarity to ideas (e.g. modifying and qualifying words such as "very")

Crafting ideas

• creates texts for a range of purposes such as observing and describing, providing reasons, expressing thoughts and feelings about a topic
• includes 4 or more simply stated and clearly connected ideas (e.g. introduces a topic and includes one or 2 facts; states an opinion with a reason; gives a recount of an event)
• includes a simple introduction to orient the reader (e.g. states a fact to introduce a report; states an opinion to introduce an argument; introduces a character to begin a narrative)
• writes ideas appropriate to a task or topic in sequenced sentences (e.g. writes informative texts with all the facts related to the topic)
• selects and discards ideas to make texts suitable for familiar audiences and purposes

Text forms and features

• writes simple, compound and some complex sentences related to a topic using a broader range of conjunctions (e.g. "and", "but", "so", "because", "when") (see Grammar)
• maintains tense within a sentence (see Grammar)
• selects images to complement writing
• spells many high-frequency words correctly (see Spelling)
• uses sentence punctuation correctly (e.g. !, ?) (see Punctuation)
• uses noun groups/phrases to add detail (e.g. "the tomato plant in the pot") (see Grammar)
• uses a range of simple cohesive devices such as pronoun referencing and sequencing connectives
• uses adverbs to give precise meaning to verbs (e.g. "talking loudly") (see Grammar)

Vocabulary

• uses a range of qualifying words (e.g. "every day"; "action movie")
• selects more specific adjectives (e.g. "giant" for "tall"; "golden" for "yellow")
• uses learning area topic vocabulary (e.g. "natural")
• uses common homophones correctly (e.g. "two", "too", "to")
• uses common idiomatic and colloquial phrases (e.g. "a piece of cake")

Snapshot – Creating texts

Literacy: Writing: Creating texts

Content description

AC9S4I06

Learning progression extract

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

Crafting ideas

• writes ideas in sentence fragments or a simple sentence (e.g. "I am 6.")
• explains the purpose and audience of familiar imaginative and informative texts
• creates short texts in different forms such as a simple recount
• combines visuals with written text where appropriate
• reads back own writing word by word
• talks about own text and describes subject matter and images

Text forms and features

• writes some appropriate letter combinations to represent less familiar words (see Spelling and Phonic knowledge and word recognition)
• writes with noun-verb agreement (e.g. "I am"), articles (e.g. "a man") and personal pronouns (e.g. "my mum") (see Grammar)
• writes from left to right using spaces between attempted words
• uses basic noun groups/phrases (e.g. "my house") (see Grammar)
• uses some sentence punctuation (e.g. capital letters at the beginning of a text)

Vocabulary

• writes simple familiar words (e.g. "saw", "food", "they")
• includes some learning area vocabulary in own texts (e.g. "season")
• uses taught high-frequency words

Crafting ideas

• creates a text including 2 or 3 related ideas for a familiar purpose such as recounting an event, telling a story, expressing thoughts, feelings and opinions
• includes beginning structural features (e.g. statement of an opinion, a heading, description of an event linked to time and place)
• creates texts for learning area purposes (e.g. labelling a simple diagram, ordering events on a timeline)

Text forms and features

• writes simple sentences made up of basic verb groups, noun groups and phrases (e.g. "We visited my aunty's house last week.")
• writes compound sentences using common conjunctions (e.g. "My house is big but the garden is small.")
• makes plausible attempts to write unfamiliar words phonetically (e.g. "enjn" for "engine") (see Spelling)
• uses capital letters correctly to indicate proper nouns (see Punctuation)
• uses capital letters at the start and full stops at the end of sentences (see Punctuation)
• spells some high-frequency words correctly (see Spelling)
• uses appropriate key words to represent simple concepts (e.g. "aunty", "sister", "cousin" in a text about family)

Vocabulary

• uses adjectives to add meaning by describing qualities or features (e.g. "small", "long", "red") (see Grammar)
• uses words in own writing adopted from other writers
• uses simple words to add clarity to ideas (e.g. modifying and qualifying words such as "very")

Crafting ideas

• creates texts for a range of purposes such as observing and describing, providing reasons, expressing thoughts and feelings about a topic
• includes 4 or more simply stated and clearly connected ideas (e.g. introduces a topic and includes one or 2 facts; states an opinion with a reason; gives a recount of an event)
• includes a simple introduction to orient the reader (e.g. states a fact to introduce a report; states an opinion to introduce an argument; introduces a character to begin a narrative)
• writes ideas appropriate to a task or topic in sequenced sentences (e.g. writes informative texts with all the facts related to the topic)
• selects and discards ideas to make texts suitable for familiar audiences and purposes

Text forms and features

• writes simple, compound and some complex sentences related to a topic using a broader range of conjunctions (e.g. "and", "but", "so", "because", "when") (see Grammar)
• maintains tense within a sentence (see Grammar)
• selects images to complement writing
• spells many high-frequency words correctly (see Spelling)
• uses sentence punctuation correctly (e.g. !, ?) (see Punctuation)
• uses noun groups/phrases to add detail (e.g. "the tomato plant in the pot") (see Grammar)
• uses a range of simple cohesive devices such as pronoun referencing and sequencing connectives
• uses adverbs to give precise meaning to verbs (e.g. "talking loudly") (see Grammar)

Vocabulary

• uses a range of qualifying words (e.g. "every day"; "action movie")
• selects more specific adjectives (e.g. "giant" for "tall"; "golden" for "yellow")
• uses learning area topic vocabulary (e.g. "natural")
• uses common homophones correctly (e.g. "two", "too", "to")
• uses common idiomatic and colloquial phrases (e.g. "a piece of cake")

Resource – WS01 - Amusement park ride

By the end of Year 4 students identify the roles of organisms in a habitat and construct food chains. They identify key processes in the water cycle and describe how water cycles through the environment. They identify forces acting on objects and describe their effect. They relate the uses of materials to their properties. They explain the role of data in science inquiry. They identify solutions based on scientific explanations and describe the needs these meet.

Students pose questions to identify patterns and relationships and make predictions based on observations. They plan investigations using planning scaffolds, identify key elements of fair tests and describe how they conduct investigations safely. They use simple procedures to make accurate formal measurements. They construct representations to organise data and information and identify patterns and relationships. They compare their findings with those of others, assess the fairness of their investigation, identify further questions for investigation and draw conclusions. They communicate ideas and findings for an identified audience and purpose, including using scientific vocabulary when appropriate.

AC9S4U03

identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects

AC9S4I06

write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate