**Year 4**

**Science**

**Achievement Standards related to this unit**

**By the end of Year 4 students**

* Identify the roles of organisms in a habitat and construct food chains.
* Pose questions to identify patterns and relationships
* Make predictions based on observations
* Plan investigations using planning scaffolds
* Describe how to conduct an investigation safely
* Construct representations, organise data and information,
* Identify patterns and relationships
* Compare findings, identify further questions for investigation, draw conclusions
* Communicate ideas/findings for an identified audience and purpose
* Use scientific vocabulary when appropriate

**Science Content Descriptors + elaborations**

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| **Strand: Science understanding** | **Year 4**  |
| **Sub-strand: Biological sciences** |
| **Content descriptions***Students learn to:* | **Content elaborations***This may involve students:* |
| explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships AC9S4U01 | describing how animals, including humans, obtain their food from plants and other animalsobserving living things in a local habitat and categorising them as producers, consumers or decomposersresearching the different types of decomposers and their importance within a habitatrepresenting feeding relationships of producers and consumers as a food chain and comparing food chains across different habitatsrecognising how First Nations Australians perceive themselves as being an integral part of the environmentinvestigating the impact of introduced predators such as foxes on small mammal species in Australiaresearching how the removal of a food source from within a habitat, such as through an insect or rodent infestation, affected other living things within that habitat |

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| **Strand: Science as a human endeavour** |
| **Sub-strand: Nature and development of science** |
| **Content descriptions***Students learn to:* | **Content elaborations***This may involve students:* |
| examine how people use data to develop scientific explanations AC9S4H01 | viewing or listening to documentaries or news reports that feature researchers and identifying how they talk about their area of research, particularly references to observations, data and evidenceinvestigating how ecologists use food chain data to develop explanations for population decline of native species, and to develop strategies to increase their population |
| **Sub-strand: Use and influence of science** |
| consider how people use scientific explanations to meet a need or solve a problem AC9S4H02 | investigating how knowledge of the natural resources in the granite belt environment and the impact of natural disasters has enabled scientists to explain the decline in numbers of native wildlife and plants |

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| **Sub-strand: Planning and conducting**  |
| use provided scaffolds to plan and conduct investigations to answer questions or test predictions, including identifying the elements of fair tests, and considering the safe use of materials and equipment AC9S4I02 | predicting effects of changing numbers of producers or consumers, and using a virtual or roleplay food chain simulation to explore possible outcomes by running the simulation multiple timesfollowing safety rules when conducting investigations, 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 |
| follow procedures to make and record observations, including making formal measurements using familiar scaled instruments and using digital tools as appropriate AC9S4I03 | identifying animals in field locations using procedures such as direct or virtual observation, call or scat identification or pitfall trapsusing appropriate equipment to make and record observations, such as digital cameras, video, voice recorders and familiar scaled instruments with appropriate incrementsdescribing how to use rounding up or down when reading scaled instruments, and the effect of the scale size on the accuracy of the measurementconstructing tables or graphic organisers to record observations |

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| **Sub-strand: Processing, modelling and analysing** |
| construct and use representations, including tables, simple column graphs and visual or physical models, to organise data and information, show simple relationships and identify patterns AC9S4I04 | using virtual or role-play food chain simulations to explore effects of changing numbers of producers or consumers in a habitat |
| **Sub-strand: Evaluating** |
| compare findings with those of others, consider if investigations were fair, identify questions for further investigation and draw conclusions AC9S4I05 | comparing findings from investigations with peers and asking questions about factors that may have led to any differences in findingsidentifying unexpected findings and posing questions for further investigationdrawing conclusions that reflect their data and information |
| **Sub-strand: Communicating** |
| write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate AC9S4I06 | discussing the purpose of a text and identifying vocabulary appropriate to the topic and audiencesharing ideas about ways to represent feeding relationships including using drawings, labels, images or modelsproducing an informative text using scientific vocabulary to explain the impact of introduced predators on food chains |

**Humanities and Social Sciences (HASS) Geography**

**HASS Achievement Standards related to this unit**

**Students**

* **Describe the importance of environments and sustainable allocation and management of resources**

**HASS Content Descriptors + elaborations**

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| **Sub-strand: Geography** |
| the importance of environments, including natural vegetation and water sources, to people and animals in Australia and on another continent AC9HS4K05 | * exploring how vegetation has an important role in sustaining the environment by producing oxygen, protecting food-producing land from erosion, retaining rainfall, providing habitat for animals, sheltering crops and livestock, providing shade for people, cooling urban places, producing medicines, wood and fibre, and making places appear more attractive
* exploring strategies to protect particular environments that provide habitats for animals; for example, planting bird-attracting vegetation
* identifying the importance of water to the environment and to sustaining the lives of people and animals
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**ENGLISH**

**English Achievement Standards related to this unit**

By the end of Year 4, students

* share and extend ideas, opinions and information with audiences, using relevant details from learnt topics, topics of interest or texts.
* use text structures to organise and link ideas.
* use language features including subjective and objective language, topic-specific vocabulary and literary devices, and/or visual features and features of voice.
* read, view and comprehend texts created to inform, influence and/or engage audiences.
* describe the characteristic features of different text structures..
* create written and/or multimodal texts including stories for purposes and audiences, where they develop ideas using details from learnt topics, topics of interest or texts.
* use topic-specific vocabulary and/ visual features.

**English Content Descriptors + elaborations**

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| **Sub-strand: Language for interacting with others** |
| **Content descriptions***Students learn to:* | **Content elaborations***This may involve students:* |
| identify the subjective language of opinion and feeling, and the objective language of factual reporting AC9E4LA02 | * identifying ways thinking verbs are used to express opinions; for example, “I think”, “I believe”, and ways summary verbs are used to report findings; for example, “we concluded”
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| **Sub-strand: Creating texts** |
| plan, create, edit and publish written and multimodal imaginative, informative and persuasive texts, using visual features, relevant linked ideas, complex sentences, appropriate tense, synonyms and antonyms, correct spelling of multisyllabic words and simple punctuation AC9E4LY06 | * using research to gather ideas for writing and integrating information from a range of sources which may include those found online
* selecting text structure and planning how to group ideas into paragraphs to sequence content
* using topic-specific, precise and varied vocabulary
* revising written texts to improve the selection of words used to connect ideas and improve the cohesion of the text
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| plan, create, rehearse and deliver structured oral and/or multimodal presentations to report on a topic, tell a story, recount events or present an argument using subjective and objective language, complex sentences, visual features, tone, pace, pitch and volume AC9E4LY07 | * reporting on a topic in an organised manner, providing relevant facts and descriptive detail to support audience understanding, and using references to reliable sources to support claims
* choosing a variety of appropriate words and phrases, including descriptive words and some technical vocabulary, to communicate meaning accurately
* rehearsing a presentation with a peer and sharing feedback about tone, pace, pitch and volume appropriate to audience
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**THE ARTS**

**Visual Arts (Yrs. 3 and 4)**

**THE ARTS Achievement Standards related to this unit**

By the end of Year 4, students

* use arts knowledge and skills to create arts works in a range of forms that communicate ideas, perspectives and/or meaning.
* present and/or perform their work in informal settings.

**The Arts Content Descriptors + elaborations**

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| **Strand: Creating and making** | **Years 3–4** |
| **Content descriptions***Students learn to:* | **Content elaborations***This may involve students:* |
| use visual conventions, visual arts processes and materials to create artworks that communicate ideas, perspectives and/or meaningAC9AVA4C01 | * drawing on a selection of topics they may be exploring in other subjects, mind-mapping some ideas that link to these topics, using Viewpoints to explore multiple possibilities such as, “What are my questions about this topic?”, “What visual conventions could communicate ideas about this topic?”, “What do I already know about this?”, extending the ideas to arrive at 3 compositional ideas, selecting one idea, documenting their reasons for the selection and making the artwork
* exploring tools and awareness of measured and freeform perspectives; for example, using digital and/or analog tools to reference a special place near their school, and dividing the scene, surface or paper into foreground, middle ground and background sections to consider how to create depth in their artwork
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