

Year 5 Australian Curriculum Descriptions

How Can We Manage the Pests and Threats in the Marine Environment?

Science

- Living things have structural features and adaptations that help them to survive in their [environment](#) ([ACSSU043](#))
- Solids, liquids and gases have different [observable](#) properties and behave in different ways ([ACSSU077](#))
- Science involves testing predictions by gathering [data](#) and using [evidence](#) to develop explanations of events and phenomena ([ACSHE098](#))
- Scientific understandings, discoveries and inventions are used to solve problems that directly affect peoples' lives ([ACSHE100](#))

Geography

- The influence of people, including Aboriginal and Torres Strait Islander Peoples, on the environmental characteristics of Australian places ([ACHGK027](#))
- The influence people have on the human [characteristics of places](#) and the management of spaces within them ([ACHGK029](#))
- Collect and record relevant geographical [data](#) and information, using [ethical protocols](#), from primary and [secondary sources](#), for example, people, maps, plans, photographs, satellite images, statistical sources and reports ([ACHGS034](#))
- Interpret geographical [data](#) and other information, using digital and [spatial technologies](#) as appropriate, and identify spatial distributions, patterns and [trends](#), and infer relationships to draw conclusions ([ACHGS037](#))
- Present findings and ideas in a range of communication forms, for example, written, oral, graphic, tabular, visual and maps; using geographical terminology and digital technologies as appropriate ([ACHGS038](#))

English

- Explain sequences of images in print texts and compare these to the ways hyperlinked [digital texts](#) are organised, explaining their effect on viewers' interpretations ([ACELA1511](#))
- Clarify understanding of content as it unfolds in formal and informal situations, connecting ideas to students' own experiences and present and justify a [point of view](#) ([ACELY1699](#))
- Plan, draft and publish imaginative, informative and persuasive print and multimodal texts, choosing [text](#) structures, [language features](#), images and sound appropriate to purpose and [audience](#) ([ACELY1704](#))

Maths

- Pose questions and collect categorical or [numerical data](#) by observation or survey ([ACMSP118](#))
- Construct displays, including column graphs, dot plots and tables, appropriate for [data](#) type, with and without the use of digital technologies ([ACMSP119](#))
- Describe and interpret different [data](#) sets in context ([ACMSP120](#))

Digital Technologies

- Explain how developed solutions and existing [information systems](#) are [sustainable](#) and meet local community needs, considering opportunities and consequences for future applications ([ACTDIP021](#))

Year 6 Australian Curriculum Descriptions

How Can We Manage the Pests and Threats in the Marine Environment?

Science

- The growth and survival of living things are affected by the physical conditions of their [environment \(ACSSU094\)](#)
- Changes to materials can be reversible, such as melting, freezing, evaporating; or irreversible, such as burning and rusting [\(ACSSU095\)](#)
- Science involves testing predictions by gathering [data](#) and using [evidence](#) to develop explanations of events and phenomena [\(ACSHE098\)](#)
- Scientific understandings, discoveries and inventions are used to solve problems that directly affect peoples' lives [\(ACSHE100\)](#)
- Scientific knowledge is used to inform personal and community decisions [\(ACSHE220\)](#)

Geography

- The effects that people's connections with, and proximity to, places throughout the world have on shaping their awareness and opinion of those places [\(ACHGK036\)](#)

English

- Identify and explain how analytical images like figures, tables, diagrams, maps and graphs contribute to our understanding of verbal information in factual and persuasive texts [\(ACELA1524\)](#)
- Participate in and contribute to discussions, clarifying and interrogating ideas, developing and supporting arguments, sharing and evaluating information, experiences and opinions [\(ACELY1709\)](#)
- Plan, draft and publish imaginative, informative and persuasive texts, choosing and experimenting with [text](#) structures, [language features](#), images and digital resources appropriate to purpose and [audience \(ACELY1714\)](#)

Mathematics

- Solve problems involving the comparison of lengths and areas using appropriate units [\(ACMMG137\)](#)
- Interpret and compare a range of [data](#) displays, including side-by-side column graphs for two categorical variables [\(ACMSP147\)](#)

Digital Technologies

- Explain how developed solutions and existing [information systems](#) are [sustainable](#) and meet local community needs, considering opportunities and consequences for future applications [\(ACTDIP021\)](#)

Year 7 Australian Curriculum Descriptions

How Can We Manage the Pests and Threats in the Marine Environment?

Science

- Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions ([ACSSU112](#))
- Mixtures, including solutions, contain a combination of pure substances that can be separated using a range of techniques ([ACSSU113](#))
- Predictable phenomena on Earth, including seasons and eclipses, are caused by the relative positions of the sun, Earth and the moon ([ACSSU115](#))
- Science and [technology](#) contribute to finding solutions to a range of contemporary issues; these solutions may impact on other areas of society and involve ethical considerations ([ACSHE120](#))
- Science understanding influences the development of practices in areas of human activity such as industry, agriculture and marine and terrestrial resource management ([ACSHE121](#))

Geography

- The classification of [environmental resources](#) and the forms that water takes as a resource ([ACHGK037](#))
- The ways that flows of water connect places as it moves through the [environment](#) and the way this affects places ([ACHGK038](#))
- The quantity and variability of Australia's water resources compared with those in other continents ([ACHGK039](#))
- Develop geographically significant questions and plan an inquiry, using appropriate geographical methodologies and concepts ([ACHGS047](#))
- Collect, select and record relevant geographical [data](#) and information, using [ethical protocols](#), from appropriate primary and [secondary sources](#) ([ACHGS048](#))
- Analyse geographical [data](#) and other information using qualitative and [quantitative methods](#), and digital and [spatial technologies](#) as appropriate, to identify and propose explanations for spatial distributions, patterns and [trends](#) and infer relationships ([ACHGS051](#))
- Present findings, arguments and ideas in a range of communication forms selected to suit a particular audience and purpose; using geographical terminology and digital technologies as appropriate ([ACHGS053](#))

English

- Use [comprehension strategies](#) to interpret, analyse and synthesise ideas and information, critiquing ideas and issues from a variety of textual sources ([ACELY1723](#))
- Plan, draft and publish imaginative, informative and persuasive texts, selecting aspects of [subject matter](#) and particular language, visual, and audio features to convey information and ideas ([ACELY1725](#))

Mathematics

- Identify and investigate issues involving [numerical data](#) collected from primary and secondary sources ([ACMSP169](#))
- Calculate [mean](#), [median](#), [mode](#) and range for sets of [data](#). Interpret these statistics in the context of [data](#) ([ACMSP171](#))
- Describe and interpret [data](#) displays using [median](#), [mean](#) and range ([ACMSP172](#))

Digital Technologies

- Acquire [data](#) from a range of sources and evaluate authenticity, accuracy and timeliness ([ACTDIP025](#))

- Evaluate how well developed solutions and existing [information systems](#) meet needs, are innovative and take account of future risks and sustainability ([ACTDIP031](#))

Year 8 Australian Curriculum Descriptions

How Can We Manage the Pests and Threats in the Marine Environment?

Science

- Chemical change involves substances reacting to form new substances ([ACSSU225](#))
- Science understanding influences the development of practices in areas of human activity such as industry, agriculture and marine and terrestrial resource management ([ACSHE136](#))
- People use understanding and skills from across the disciplines of science in their occupations ([ACSHE227](#))

Geography

- The aesthetic, cultural and spiritual value of landscapes and landforms for people, including Aboriginal and Torres Strait Islander Peoples ([ACHGK049](#))
- The human causes and effects of [landscape](#) degradation ([ACHGK051](#))
- The ways of protecting significant landscapes ([ACHGK052](#))
- The causes, impacts and responses to a geomorphological hazard ([ACHGK053](#))
- Collect, select and record relevant geographical [data](#) and information, using [ethical protocols](#), from appropriate primary and [secondary sources](#) ([ACHGS056](#))
- Analyse geographical [data](#) and other information using qualitative and [quantitative methods](#), and digital and [spatial technologies](#) as appropriate, to identify and propose explanations for spatial distributions, patterns and [trends](#) and infer relationships ([ACHGS059](#))
- Present findings, arguments and ideas in a range of communication forms selected to suit a particular audience and purpose, using geographical terminology and digital technologies as appropriate ([ACHGS061](#))

English

- Recognise and explain differing viewpoints about the world, cultures, individual people and concerns represented in texts ([ACELT1807](#))
- [Create](#) imaginative, informative and persuasive texts that raise issues, report events and advance opinions, using deliberate language and textual choices, and including digital elements as appropriate ([ACELY1736](#))
- Experiment with [text](#) structures and [language features](#) to refine and clarify ideas to improve the effectiveness of students' own texts ([ACELY1810](#))

Mathematics

- Investigate techniques for collecting [data](#), including [census](#), sampling and observation ([ACMSP284](#))
- Explore the practicalities and implications of obtaining [data](#) through sampling using a variety of investigative processes ([ACMSP206](#))
- Explore the variation of means and proportions of random samples drawn from the same [population](#) ([ACMSP293](#))

Digital Technologies

- Acquire [data](#) from a range of sources and evaluate authenticity, accuracy and timeliness ([ACTDIP025](#))
- Evaluate how well developed solutions and existing [information systems](#) meet needs, are innovative and take account of future risks and sustainability ([ACTDIP031](#))

Year 9 Australian Curriculum Descriptions

How Can We Manage the Pests and Threats in the Marine Environment?

Science

- Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their [environment \(ACSSU175\)](#)
- Ecosystems consist of communities of interdependent organisms and abiotic components of the [environment](#); [matter](#) and energy flow through these systems [\(ACSSU176\)](#)
- Chemical reactions involve rearranging atoms to form new substances; during a chemical reaction mass is not created or destroyed [\(ACSSU178\)](#)

Geography

- The distribution and characteristics of biomes as regions with distinctive climates, soils, vegetation and productivity [\(ACHGK060\)](#)
- The human alteration of biomes to produce food, industrial materials and fibres, and the environmental effects of these alterations [\(ACHGK061\)](#)
- The challenges to food production, including [land and water degradation](#), shortage of fresh water, competing land uses, and [climate change](#), for Australia and other areas of the world [\(ACHGK063\)](#)

English

- Interpret, analyse and evaluate how different perspectives of issue, event, situation, individuals or groups are constructed to serve specific purposes in texts [\(ACELY1742\)](#)
- [Create](#) imaginative, informative and persuasive texts that present a [point of view](#) and advance or illustrate arguments, including texts that integrate visual, print and/or audio features [\(ACELY1746\)](#)

Maths

- Investigate very small and very large time scales and intervals [\(ACMMG219\)](#)
- Identify everyday questions and issues involving at least one numerical and at least one [categorical variable](#), and collect [data](#) directly and from secondary sources [\(ACMSP228\)](#)