

Space Careers Wayfinder resources – Australian Curriculum links

Resource	Subject	Australian Curriculum links
Alice Fairey	Mathematics	<p>Recognise that the real number system includes the rational numbers and the irrational numbers, and solve problems involving real numbers using digital tools (AC9M9N01)</p> <p>Apply the exponent laws to numerical expressions with integer exponents and extend to variables (AC9M9A01)</p> <p>Use mathematical modelling to solve applied problems involving change including financial contexts; formulate problems, choosing to use either linear or quadratic functions; interpret solutions in terms of the situation; evaluate the model and report methods and findings (AC9M9A05)</p> <p>Solve problems involving very small and very large measurements, time scales and intervals expressed in scientific notation (AC9M9M02)</p> <p>Use mathematical modelling to solve practical problems involving direct proportion, rates, ratio and scale, including financial contexts; formulate the problems and interpret solutions in terms of the situation; evaluate the model and report methods and findings (AC9M9M05)</p> <p>Choose appropriate forms of display or visualisation for a given type of data; justify selections and interpret displays for a given context (AC9M9ST04)</p>
	Science	<p>Investigate Newton’s laws of motion and quantitatively analyse the relationship between force, mass and acceleration of objects (AC9S10U05)</p>
	English	<p>Understand that roles and relationships are developed and challenged through language and interpersonal skills (ACELA1551), (ACELA1564)</p> <p>Investigate how evaluation can be expressed directly and indirectly using devices, for example allusion, evocative vocabulary and metaphor (ACELA1552), (ACELA1565)</p> <p>Understand how paragraphs and images can be arranged for different purposes, audiences, perspectives and stylistic effects (ACELA1567)</p> <p>Compare and contrast the use of cohesive devices in texts, focusing on how they serve to signpost ideas, to make connections and to build semantic associations between ideas (ACELA1770)</p> <p>Understand how punctuation is used along with layout and font variations in constructing texts for different audiences and purposes (ACELA1556)</p> <p>Understand how certain abstract nouns can be used to summarise preceding or subsequent stretches of text (ACELA1559)</p> <p>Analyse and explain the use of symbols, icons and myth in still and moving images and how these augment meaning (ACELA1560)</p> <p>Identify how vocabulary choices contribute to specificity, abstraction and stylistic effectiveness (ACELA1561)</p> <p>Refine vocabulary choices to discriminate between shades of meaning, with deliberate attention to the effect on audiences (ACELA1571)</p>

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Brenan Dew	Digital Technologies	<p>Investigate how hardware and software manage, control and secure access to data in networked digital systems (AC9TDI10K01)</p> <p>Develop techniques to acquire, store and validate data from a range of sources using software, including spreadsheets and databases (AC9TDI10P01)</p> <p>Define and decompose real-world problems with design criteria and by interviewing stakeholders to create user stories (AC9TDI10P04)</p> <p>Design algorithms involving logical operators and represent them as flowcharts and pseudocode (AC9TDI10P05)</p> <p>Design and prototype the user experience of a digital system (AC9TDI10P07)</p> <p>Select and use emerging digital tools and advanced features to create and communicate interactive content for a diverse audience (AC9TDI10P11)</p> <p>Use simple project management tools to plan and manage individual and collaborative agile projects, accounting for risks and responsibilities (AC9TDI10P12)</p> <p>Apply the Australian Privacy Principles to critique and manage the digital footprint that existing systems and student solutions collect (AC9TDI10P14)</p>
	Design Technologies	<p>Analyse how people in design and technologies occupations consider ethical, security and sustainability factors to innovate and improve products, services and environments (AC9TDE10K01)</p> <p>Analyse and make judgements on how characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (AC9TDE10K06)</p> <p>Analyse needs or opportunities for designing; develop design briefs; and investigate, analyse and select materials, systems, components, tools and equipment to create designed solutions (AC9TDE10P01)</p> <p>Apply innovation and enterprise skills to generate, test, iterate and communicate design ideas, processes and solutions, including using digital tools (AC9TDE10P02)</p> <p>Develop design criteria independently including sustainability to evaluate design ideas, processes and solutions (AC9TDE10P04)</p> <p>Develop project plans for intended purposes and audiences to individually and collaboratively manage projects, taking into consideration time, cost, risk, processes and production of designed solutions (AC9TDE10P05)</p>
	Media Arts	<p>Investigate the ways that media artists use media arts concepts to construct representations in media arts works and practices across cultures, times, places and/or other contexts (AC9AMA10E01)</p>

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Brenan Dew (cont.)	Mathematics	<p>Solve problems involving the surface area and volume of composite objects using appropriate units (AC9M10M01)</p> <p>Solve spatial problems, applying angle properties, scale, similarity, Pythagoras' theorem and trigonometry in right-angled triangles (AC9M9M03)</p>
	Science	<p>Use wave and particle models to describe energy transfer through different mediums and examine the usefulness of each model for explaining phenomena (AC9S9U04)</p> <p>Apply the law of conservation of energy to analyse system efficiency in terms of energy inputs, outputs, transfers and transformations (AC9S9U05)</p> <p>Investigate Newton's laws of motion and quantitatively analyse the relationship between force, mass and acceleration of objects (AC9S10U05)</p> <p>Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering (AC9S9H02), (AC9S10H02)</p> <p>Examine how the values and needs of society influence the focus of scientific research (AC9S9H04), (AC9S10H04)</p> <p>Write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate (AC9S9I08), (AC9S10I08)</p>
	Economics & Business	<p>Processes that businesses use to create and maintain competitive advantage, including the role of entrepreneurs (AC9HE9K04), (AC9HE10K05)</p> <p>Develop and modify questions to investigate a contemporary economic and business issue (AC9HE9S01), (AC9HE10S01)</p> <p>Locate, select and analyse information and data from a range of sources (AC9HE9S02), (AC9HE10S02)</p> <p>Create descriptions, explanations and arguments, using economic and business knowledge, concepts and terms that incorporate and acknowledge research findings (AC9HE9S05), (AC9HE10S05)</p>

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Courtney Bright	Science	<p>Model the rearrangement of atoms in chemical reactions using a range of representations, including word and simple balanced chemical equations, and use these to demonstrate the law of conservation of mass (AC9S9U07)</p> <p>Identify patterns in synthesis, decomposition and displacement reactions and investigate the factors that affect reaction rates (AC9S10U07)</p> <p>Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering (AC9S9H02), (AC9S10H02)</p> <p>Examine how the values and needs of society influence the focus of scientific research (AC9S9H04), (AC9S10H04)</p>
	Mathematics	<p>Recognise that the real number system includes the rational numbers and the irrational numbers, and solve problems involving real numbers using digital tools (AC9M9N01)</p> <p>Apply the exponent laws to numerical expressions with integer exponents and extend to variables (AC9M9A01)</p> <p>Solve problems involving very small and very large measurements, time scales and intervals expressed in scientific notation (AC9M9M02)</p> <p>Use mathematical modelling to solve practical problems involving direct proportion, rates, ratio and scale, including financial contexts; formulate the problems and interpret solutions in terms of the situation; evaluate the model and report methods and findings (AC9M9M05)</p>
	Design Technologies	<p>Analyse the impact of innovation, enterprise and emerging technologies on designed solutions for global preferred futures (AC9TDE10K02)</p> <p>Analyse and make judgements on how characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (AC9TDE10K06)</p>
Deen Sanders	History	<p>Changing social, political, economic, cultural, environmental and technological conditions, and the causes of a major global influence in Australia (AC9HH10K17)</p> <p>The effects of global influences on Australia's changing identity as a nation and its international relationships (AC9HH10K19)</p>
	Civics & Citizenship	<p>The Australian Government's role and responsibilities at a regional and global level (AC9HC10K02)</p> <p>Create descriptions, explanations and arguments using civics and citizenship knowledge, concepts and terms that incorporate evidence (AC9HC9S05), (AC9HC10S05)</p>
	Geography	<p>The environmental world views of people and their implications for environmental management (AC9HG10K02)</p>

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Hayley Young	Science	<p>Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering (AC9S10H02)</p> <p>Develop investigable questions, reasoned predictions and hypotheses to test relationships and develop explanatory models (AC9S9I01), (AC9S10I01)</p> <p>Plan and conduct valid, reproducible investigations to answer questions and test hypotheses, including identifying and controlling for possible sources of error and, as appropriate, developing and following risk assessments, considering ethical issues, and addressing key considerations regarding heritage sites and artefacts on Country/Place (AC9S9I02), (AC9S10I02)</p> <p>Select and use equipment to generate and record data with precision to obtain useful sample sizes and replicable data, using digital tools as appropriate (AC9S9I03), (AC9S10I03)</p> <p>Select and construct appropriate representations, including tables, graphs, descriptive statistics, models and mathematical relationships, to organise and process data and information (AC9S9I04), (AC9S10I04)</p> <p>Analyse and connect a variety of data and information to identify and explain patterns, trends, relationships and anomalies (AC9S9I05), (AC9S10I05)</p> <p>Assess the validity and reproducibility of methods and evaluate the validity of conclusions and claims, including by identifying assumptions, conflicting evidence and areas of uncertainty (AC9S9I06), (AC9S10I06)</p> <p>Construct arguments based on analysis of a variety of evidence to support conclusions or evaluate claims, and consider any ethical issues and cultural protocols associated with accessing, using or citing secondary data or information (AC9S9I07), (AC9S10I07)</p> <p>Write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate (AC9S9I08), (AC9S10I08)</p>
	Design Technologies	<p>Analyse and make judgements on how the characteristics and properties of materials are combined with force, motion and energy to control engineered systems (AC9TDE10K03)</p> <p>Analyse and make judgements on how characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (AC9TDE10K06)</p> <p>Analyse needs or opportunities for designing; develop design briefs; and investigate, analyse and select materials, systems, components, tools and equipment to create designed solutions (AC9TDE10P01)</p>
Ilana Feain	Economics & Business	<p>Processes that businesses use to create and maintain competitive advantage, including the role of entrepreneurs (AC9HE9K04)</p> <p>Processes that businesses use to manage the workforce and improve productivity, including the role of entrepreneurs (AC9HE10K05)</p> <p>Locate, select and analyse information and data from a range of sources (AC9HE9S02), (AC9HE10S02)</p> <p>Create descriptions, explanations and arguments, using economic and business knowledge, concepts and terms that incorporate and acknowledge research findings (AC9HE9S05), (AC9HE10S05)</p>

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John Cherry	Science	<p>Compare the role of body systems in regulating and coordinating the body's response to a stimulus, and describe the operation of a negative feedback mechanism (AC9S9U01)</p> <p>Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering (AC9S9H02), (AC9S10H02)</p> <p>Examine how the values and needs of society influence the focus of scientific research (AC9S9H04), (AC9S10H04)</p> <p>Write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate (AC9S9I08), (AC9S10I08)</p>
Joice Mathew	Science	<p>Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering (AC9S10H02)</p> <p>Plan and conduct valid, reproducible investigations to answer questions and test hypotheses, including identifying and controlling for possible sources of error and, as appropriate, developing and following risk assessments, considering ethical issues, and addressing key considerations regarding heritage sites and artefacts on Country/Place (AC9S9I02), (AC9S10I02)</p> <p>Select and use equipment to generate and record data with precision to obtain useful sample sizes and replicable data, using digital tools as appropriate (AC9S9I03), (AC9S10I03)</p> <p>Select and construct appropriate representations, including tables, graphs, descriptive statistics, models and mathematical relationships, to organise and process data and information (AC9S9I04), (AC9S10I04)</p> <p>Analyse and connect a variety of data and information to identify and explain patterns, trends, relationships and anomalies (AC9S9I05), (AC9S10I05)</p> <p>Assess the validity and reproducibility of methods and evaluate the validity of conclusions and claims, including by identifying assumptions, conflicting evidence and areas of uncertainty (AC9S9I06), (AC9S10I06)</p> <p>Construct arguments based on analysis of a variety of evidence to support conclusions or evaluate claims, and consider any ethical issues and cultural protocols associated with accessing, using or citing secondary data or information (AC9S9I07), (AC9S10I07)</p> <p>Write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate (AC9S9I08), (AC9S10I08)</p>
	Design Technologies	<p>Analyse and make judgements on how the characteristics and properties of materials are combined with force, motion and energy to control engineered systems (AC9TDE10K03)</p> <p>Analyse and make judgements on how characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (AC9TDE10K06)</p> <p>Analyse needs or opportunities for designing; develop design briefs; and investigate, analyse and select materials, systems, components, tools and equipment to create designed solutions (AC9TDE10P01)</p>

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Luke Callaghan	Science	<p>Develop investigable questions, reasoned predictions and hypotheses to test relationships and develop explanatory models (AC9S10I01)</p> <p>Plan and conduct valid, reproducible investigations to answer questions and test hypotheses, including identifying and controlling for possible sources of error and, as appropriate, developing and following risk assessments, considering ethical issues, and addressing key considerations regarding heritage sites and artefacts on Country/Place (AC9S10I02)</p> <p>Select and construct appropriate representations, including tables, graphs, descriptive statistics, models and mathematical relationships, to organise and process data and information (AC9S10I04)</p> <p>Analyse and connect a variety of data and information to identify and explain patterns, trends, relationships and anomalies (AC9S10I05)</p>
Noelia Martinez	Mathematics	<p>Recognise that the real number system includes the rational numbers and the irrational numbers, and solve problems involving real numbers using digital tools (AC9M9N01)</p> <p>Solve problems involving very small and very large measurements, time scales and intervals expressed in scientific notation (AC9M9M02)</p> <p>Solve spatial problems, applying angle properties, scale, similarity, Pythagoras' theorem and trigonometry in right-angled triangles (AC9M9M03)</p> <p>Solve practical problems applying Pythagoras' theorem and trigonometry of right-angled triangles, including problems involving direction and angles of elevation and depression (AC9M10M03)</p> <p>Trigonometry to solve right-angled triangle problems (ACMMG224), (ACMMG245)</p>
	Science	<p>Use wave and particle models to describe energy transfer through different mediums and examine the usefulness of each model for explaining phenomena (AC9S9U04)</p> <p>Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering (AC9S9H02), (AC9S10H02)</p> <p>Examine how the values and needs of society influence the focus of scientific research (AC9S9H04), (AC9S10H04)</p> <p>Write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate (AC9S9I08), (AC9S9I08)</p>
	Design Technologies	<p>Analyse how people in design and technologies occupations consider ethical, security and sustainability factors to innovate and improve products, services and environments (AC9TDE10K01)</p> <p>Analyse the impact of innovation, enterprise and emerging technologies on designed solutions for global preferred futures (AC9TDE10K02)</p> <p>Analyse and make judgements on how characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (AC9TDE10K06)</p>

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Paddy Neumann	Mathematics	<p>Recognise that the real number system includes the rational numbers and the irrational numbers, and solve problems involving real numbers using digital tools (AC9M9N01)</p> <p>Solve problems involving very small and very large measurements, time scales and intervals expressed in scientific notation (AC9M9M02)</p> <p>Solve problems involving the surface area and volume of composite objects using appropriate units (AC9M10M01)</p>
	Science	<p>Apply the law of conservation of energy to analyse system efficiency in terms of energy inputs, outputs, transfers and transformations (AC9S9U05)</p> <p>Investigate Newton’s laws of motion and quantitatively analyse the relationship between force, mass and acceleration of objects (AC9S10U05)</p> <p>Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering (AC9S9H02), (AC9S10H02)</p> <p>Examine how the values and needs of society influence the focus of scientific research (AC9S9H04), (AC9S10H04)</p> <p>Write and create texts to communicate ideas, findings and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate (AC9S9I08), (AC9S10I08)</p>
Sweta Balakrishna and Tim Phillips	Geography	<p>The methods used to measure spatial variations in human wellbeing and development, and how these can be applied to determine differences between places at the global scale (AC9HG10K05)</p> <p>Develop a range of questions for a geographical inquiry related to a phenomenon or challenge (AC9HG9S01), (AC9HG10S01)</p> <p>Collect, represent and compare data and information from primary research methods, including fieldwork and secondary research materials, using geospatial technologies and digital tools as appropriate (AC9HG9S02), (AC9HG10S02)</p> <p>Evaluate geographical data and information to make generalisations and predictions, explain patterns and trends and infer relationships (AC9HG9S03), (AC9HG10S03)</p> <p>Evaluate data and information to justify conclusions (AC9HG9S04), (AC9HG10S04)</p> <p>Develop and evaluate strategies using environmental, economic or social criteria; recommend a strategy and explain the predicted impacts (AC9HG9S05), (AC9HG10S05)</p> <p>Create descriptions, explanations and responses, using geographical knowledge and geographical tools as appropriate, and concepts and terms that incorporate and acknowledge research findings (AC9HG9S06), (AC9HG10S06)</p>
	Science	<p>Investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering (AC9S9H02), (AC9S10H02)</p>