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**CONSUMER AND FINANCIAL LITERACY**

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| Key Aspects | |
| Personal finance | Understanding and being able to effectively manage your personal finance in a modern world requires a combination of knowledge, skills and dispositions to make informed, responsible financial decisions. Having financial confidence and being adaptable to change, as the digital revolution influences the way we manage our money day-to-day, enables us to make sound financial choices and set solid financial goals for the future.  In this key aspect, students explore the knowledge and skills required to make personal financial decisions. Students learn about the difference between wants and needs, and understand spending, saving, investing and borrowing money. They have opportunities to engage with money and other financial transactions such as those conducted online and with digital systems. They understand varied payment methods such as cash, debit cards, credit cards, gift cards, buy now and pay later schemes, in-app and online payments.  Students understand a range of concepts related to finance such as earning money (including payslips, tax and superannuation), budgeting, spending and saving priorities (including loans, subscriptions and payment plans), operating securely and safely with their money online, and the importance of long-term planning. |
| Roles, rights and responsibilities | Awareness of the roles, rights and responsibilities that relate to consumer and financial literacy fosters students’ understanding of their rights and responsibilities as consumers. This can help students make fair and informed decisions about their future finances. As consumers, they also have a right to privacy. They need to adopt protective strategies and mitigate risk when sharing or exchanging personal information and financial data.  In this key aspect, students explore how governments, financial institutions, employers, consumer and financial literacy service providers and other key stakeholders have a responsibility to consumers. Through understanding the different roles, rights and responsibilities of each party, students are empowered to make informed, responsible financial decisions, recognise scams and plan their future finances. |
| Economic environment | Developing consumer and financial capability in young people is a strong investment in Australia’s social and economic prosperity. Economic awareness includes knowledge of basic economic principles and how factors such as inflation, the cost of living and interest rates impact personal finances.  In this key aspect, students explore the complexity of the economic environment and how it is globally connected. They learn how it can be affected by geopolitical shifts, technological change and global events.  Students identify economic indicators such as economic growth rates, interest rates, unemployment trends, inflation rates and sustainability indexes. They understand how these influence government economic decision-making. They understand how the Australian government may intervene in response to economic environment changes, such as responding to a decline in Gross Domestic Product (GDP). |
| Enterprise | In an increasingly complex, globalised and rapidly changing world, it is critical for every young Australian to not only be able to cope with life’s challenges but also to flourish as a financially literate and enterprising citizen in the 21st century. All young people need opportunities to develop financial and enterprising capabilities that enable them to confidently operate in a complex, information-rich financial world.  In this key aspect, students explore enterprise skills and how these can be used to create innovative approaches to processes and solutions. They also explore how these skills can contribute to success in their future careers. They have opportunities to develop these skills including problem-solving, decision-making, communication, initiative, resilience, adaptability and commercial awareness through rich connections between learning area content, the general capabilities and authentic financial contexts.  Students explore different types of enterprise including business enterprise and social enterprise. They identify processes that businesses use to create competitive advantage, including using digital tools and digital systems, optimising costs and managing the workforce to improve productivity. |

For more information:

<https://v9.australiancurriculum.edu.au/content/acara-curriculum/au/en/teacher-resources/understand-this-curriculum-connection/consumer-and-financial-literacy/>

**CONSUMER AND FINANCIAL LITERACY: years 7 and 8**

The following tables identify how the key aspects of consumer and financial literacy are evident in content descriptions from across the Australian Curriculum Version 9.0. From this information, teachers can develop a sequential program for learning about consumer and financial literacy by connecting the key aspects of learning with learning area and subject-specific content descriptions. *NB: Banded subjects will appear in both Years 7 and Year 8 tables.*

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| Year 7 | | | | | |
| Key aspect 1: Personal finance | | | | | |
| Learning area/subject | | Strand/sub-strand | Content descriptions | | Content elaborations |
| **HASS**  Economics and Business | | **Knowledge and understanding** | why opportunity cost exists as decisions are made to allocate limited resources to meet unlimited needs and wants  AC9HE7K01 | | * identifying the needs and wants of a local community, and exploring how limited resources are currently used to meet unlimited needs and wants |
| the reasons individuals work, the types of work they are involved in, and how they may derive an income  AC9HE7K04 | | * identifying different types of work; for example, full-time, part-time, casual, at home, paid, unpaid, unrecognised and volunteer, to appreciate the reasons individuals work or contribute to community organisations |
| **Skills**  Interpreting and analysing | interpret information and data to identify economic and business issues, trends and economic cause-and-effect relationships  AC9HE7S03 | | * interpreting visual displays of multi-variable data to identify a cause-and-effect relationship within an economic and business issue, such as the relationship between income earned by an individual and levels of saving and spending |
| **Skills**  Evaluating, concluding and decision-making | develop a response to an economic and business issue, identifying potential costs and benefits  AC9HE7S04 | | * developing a response to an issue by combining known knowledge with new ideas; for example, when purchasing a mobile phone, use the product statement and personal budget to identify benefits and costs |
| **Skills**  Communicating | create descriptions and explanations, using economic and business knowledge, concepts and terms, and referencing information and data from sources  AC9HE7S05 | | * explaining ideas and decisions with details and examples, using data and information presented in appropriate formats; for example, visual displays, tables and graphs, or budget and savings plans, and research findings presented in appropriate formats, such as a graphic organiser or summary |
| **Mathematics** | | **Number** | round decimals to a given accuracy appropriate to the context and use appropriate rounding and estimation to check the reasonableness of solutions  AC9M7N05 | |  |
| use the 4 operations with positive rational numbers including fractions, decimals and percentages to solve problems using efficient calculation strategies  AC9M7N06 | | * carry out calculations to solve problems using the representation that makes computations efficient such as 12.5% of 96 is more efficiently calculated as 18 of 96, including contexts such as comparing land-use by calculating the total local municipal area set aside for parkland or manufacturing and retail, the amount of protein in daily food intake across several days, or increases/decreases in energy accounts each account cycle |
| recognise, represent and solve problems involving ratios  AC9M7N08 | | * sharing quantities in a given ratio; for example, sharing an amount of money in a given ratio, such as sharing $20 in the ratio 2:3 |
| use mathematical modelling to solve practical problems, involving rational numbers and percentages, including financial contexts; formulate problems, choosing representations and efficient calculation strategies, using digital tools as appropriate; interpret and communicate solutions in terms of the situation, justifying choices made about the representation  AC9M7N09 | | * modelling financial problems involving profit and loss, credits and debits, gains and losses; for example, holding a fundraising sausage sizzle and determining whether the event made a percentage profit or loss |
| describe relationships between variables represented in graphs of functions from authentic data  AC9M7A04 | | * using graphs to analyse a building’s electricity or gas usage over a period of time, the value of shares on a stock market, or the temperature during a day, interpreting and discussing the relationships they represent |
| recognise and use variables to represent everyday formulas algebraically and substitute values into formulas to determine an unknown  AC9M7A01 | | * substituting numerical values for variables when using formulas and calculating the value of an unknown in practical situations; for example, calculating weekly wage W given base wage b and overtime hours h at 1.1.5 times rate W=b+1.5×h×r, using values for mass m and volume v to determine density d of a substance where d= vm |
| **Statistics** | plan and conduct statistical investigations involving samples of a population; use ethical and fair methods to make inferences about the population and report findings, acknowledging uncertainty  AC9M8ST04 | | * identifying situations where the collection of data from a sample is necessary due to efficiency, cost or restricted time for collection of data, and sufficiently reliable for making inferences about a population |
| **Digital Technologies** | | **Knowledge and understanding**  Digital systems | explain how hardware specifications affect performance and select appropriate hardware for particular tasks and workloads  AC9TDI8K01 | | * selecting appropriate hardware for particular tasks, for example choosing a powerful graphics card for computer gaming or large external storage for video editing |
| investigate how data is transmitted and secured in wired and wireless networks including the internet  AC9TDI8K02 | | * explaining why cryptography is necessary for securing data, for example transmitting credit card details over the internet * exploring simple encryption and decryption algorithms, for example ROT13 and XOR |
| Key aspect 2: Roles, rights and responsibilities | | | | | |
| Learning area/subject | Strand/sub-strand | | Content descriptions | | Content elaborations |
| **HASS**  Economics and Business | **Knowledge and understanding** | | the reasons individuals work, the types of work they are involved in, and how they may derive an income  AC9HE7K04 | | * analysing the contribution that work can make to an individual’s identity and role within a community; for example, earning an income, contributing to self-esteem and happiness, supporting the community through volunteering, enhancing material and non-material living standards |
| the rights and responsibilities of individuals and businesses in relation to consumer and financial products and services  AC9HE7K05 | | * distinguishing the difference between rights and responsibilities, and creating a list of the rights and responsibilities of individuals and businesses * explaining the rights of individuals and businesses in relation to consumer and financial products and services; for example, warranties, cooling-off periods and processes for returning goods * discussing the responsibilities of businesses in relation to consumer and financial products and services, such as the role of mandatory and voluntary standards, and product safety recalls * explaining the importance of developing personal or business budgets or savings plans before making decisions in relation to consumer and financial products and services |
| **Skills**  Questioning and researching | | develop questions to investigate a contemporary economic and business issue  AC9HE7S01 | | * developing questions to form the basis of an investigation; for example, “How does an understanding of consumer rights and responsibilities impact on decision-making?” and “What are the attributes of an entrepreneur?” |
| **HASS**  Civics and Citizenship | **Knowledge and understanding**  Government and democracy | | the key features of Australia's system of government, including democracy, the Australian Constitution, responsible government and federalism  AC9HC7K01 | | * describing Australia’s system of responsible and representative government set out in the Australian Constitution, with a focus on the roles of the Governor-General, the Senate and the House of Representatives, the Prime Minister and Cabinet, the Opposition and the members of parliament * explaining the origins of the Australian system of government by acknowledging the aspects of the Westminster and Washington systems in the overall model of Australia’s Federation * exploring key democratic concepts, including popular sovereignty, representation, accountability and a partial separation of powers through the election of members of a legislative branch who answer to the people and from whom the executive branch is drawn * investigating Australia as a federation with a division of powers and responsibilities between Commonwealth and state/territory governments |
| the key principles and features of the Australian legal system, including the Australian Constitution, the rule of law and the court system  AC9HC7K03 | | * explaining the principles of justice, fairness, equality, the rule of law and the importance of equal access to the protections provided by the law * making connections between a fair and just legal system and democratic principles * explaining Australia’s legal and justice system, including the principles of the rule of law, presumption of innocence, burden of proof, and right to a fair trial and legal representation * exploring how Australians can receive access to justice and can apply for legal representation, such as through legal aid |
| **Knowledge and understanding**  Questioning and researching | | develop questions to investigate Australia’s political and legal systems, and contemporary civic issues  AC9HC7S01 | | * developing a key question related to a specific investigation; for example, “What is the ‘rule of law’ and how does it apply to Australia’s legal system?” or “How does Australia’s federal system of government divide powers between states and territories?” * using current events to generate questions that apply to the wider investigation; for example, “How is Australians’ freedom of expression protected and limited in cases of incorrect information being published or distributed?” |
| **Mathematics** | **Number** | | use the 4 operations with positive rational numbers including fractions, decimals and percentages to solve problems using efficient calculation strategies  AC9M7N06 | | * carry out calculations to solve problems using the representation that makes computations efficient such as 12.5% of 96 is more efficiently calculated as 18 of 96, including contexts such as comparing land-use by calculating the total local municipal area set aside for parkland or manufacturing and retail, the amount of protein in daily food intake across several days, or increases/decreases in energy accounts each account cycle |
| describe relationships between variables represented in graphs of functions from authentic data  AC9M7A04 | | * using graphs to analyse a building’s electricity or gas usage over a period of time, the value of shares on a stock market, or the temperature during a day, interpreting and discussing the relationships they represent |
| **Digital Technologies** | **Process and production skills**  Privacy and security | | explain how multi-factor authentication protects an account when the password is compromised and identify phishing and other cyber security threats  AC9TDI8P13 | | * explaining how multi-factor authentication prevents unauthorised access by prompting the account owner for a token or single-use password, for example demonstrating how a funds transfer from their bank account requires not only logging in, but provision of a one-time password received via SMS * identifying the common techniques used in phishing scams to identify and exploit susceptible users, for example using an email address from an unofficial domain when pretending to be an online retailer, or including grammatical errors to help filter out users who are more likely to detect the scam |
| investigate and manage the digital footprint existing systems and student solutions collect and assess if the data is essential to their purpose  AC9TDI8P14 | | * investigating the ethical obligations of individuals and organisations regarding ownership and privacy of data and information by researching an online platform’s privacy policy for data collection, use and storage information and discussing impacts on digital footprint * reviewing and managing their digital footprint across online digital tools that they use, for example selecting their default privacy and sharing settings on social media accounts * explaining the risks associated with sharing personal data due to the ease with which generative AI models can create new content; for example, from short videos and audio recordings it is possible for convincing deep fake videos to be generated and distributed for malicious purposes |
| Key aspect 3: Economic environment | | | | | |
| Learning area/subject | | Strand/sub-strand | Content descriptions | Content elaborations | |
| **HASS**  Economics and Business | | **Knowledge and understanding** | why opportunity cost exists as decisions are made to allocate limited resources to meet unlimited needs and wants  AC9HE7K01 | * explaining the concept of “economic scarcity” in relation to “What to produce?”, “How to produce?” or “For whom to produce?” * explaining how economic resources might be used more sustainably to meet needs and wants into the future * investigating how First Nations communities use exchange systems (barter) or networks (partnerships) to decide about the use of limited resources in sustainable ways * explaining the concept of “opportunity cost” in relation to a choice; for example, if a student chooses to spend their time (resource) riding their bike after school, they cannot go for a swim (trade-off) | |
| **Skills**  Interpreting and analysing | interpret information and data to identify economic and business issues, trends and economic cause-and-effect relationships  AC9HE7S03 | * interpreting multi-variable data by using interactive digital tools to identify trends and to answer questions such as “For a 10-year period, to what extent has the number of people in casual work changed?” | |
| **Skills**  Evaluating, concluding and decision-making | develop a response to an economic and business issue, identifying potential costs and benefits  AC9HE7S04 | * explaining how making an economic and business decision involves selecting one alternative over another; for example, to satisfy a particular want, a selection of goods or services is preferred or purchased over another | |
| **Skills**  Communicating | create descriptions and explanations, using economic and business knowledge, concepts and terms, and referencing information and data from sources  AC9HE7S05 | * developing a response to an issue that orients the audience (for example, peers or community members) to the issue, using relevant economic and business concepts and terms such as “market”, “income”, “business”, “goods and services” and “costs and benefits” | |
| **Mathematics** | | **Number** | use the 4 operations with positive rational numbers including fractions, decimals and percentages to solve problems using efficient calculation strategies  AC9M7N06 | * carry out calculations to solve problems using the representation that makes computations efficient such as 12.5% of 96 is more efficiently calculated as 18 of 96, including contexts such as comparing land-use by calculating the total local municipal area set aside for parkland or manufacturing and retail, the amount of protein in daily food intake across several days, or increases/decreases in energy accounts each account cycle | |

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|  |  | use mathematical modelling to solve practical problems, involving rational numbers and percentages, including financial contexts; formulate problems, choosing representations and efficient calculation strategies, using digital tools as appropriate; interpret and communicate solutions in terms of the situation, justifying choices made about the representation  AC9M7N09 | * modelling financial problems involving profit and loss, credits and debits, gains and losses; for example, holding a fundraising sausage sizzle and determining whether the event made a percentage profit or loss |
| describe relationships between variables represented in graphs of functions from authentic data  AC9M7A04 | * using graphs to analyse a building’s electricity or gas usage over a period of time, the value of shares on a stock market, or the temperature during a day, interpreting and discussing the relationships they represent |
| Key aspect 4: Enterprise | | | |
| Learning area/subject | Strand/sub-strand | Content descriptions | Content elaborations |
| **HASS**  Economics and Business | **Knowledge and understanding** | the reasons businesses exist and how different types of businesses provide goods and services  AC9HE7K02 | * identifying why businesses exist; for example, to produce goods and services, to make a profit, to provide employment, and investigating the different ways that goods and services are provided to people, such as through shopping centres, local markets, online, small independent stores and remote community stores * identifying the features of different types of businesses, including sole proprietorship, partnership, cooperative, corporation, franchise and not-for-profit organisation * investigating a business owned by First Nations Australians, exploring the types of goods and services offered and why this business was started * identifying examples of different types of businesses that sell goods and/or services in the local community; for example, a sole proprietor operating a car yard, a partnership providing legal services or a corporation selling groceries through a chain of supermarkets |
| characteristics of entrepreneurs and how these influence the success of a business  AC9HE7K03 | * identifying examples of entrepreneurs and the entrepreneurial knowledge and skills that they bring to their business, such as recognising opportunities, establishing a shared vision and making decisions about how the business is run * describing the characteristics of First Nations Australian entrepreneurs; for example, community-run companies such as the Gumatj Aboriginal Corporation and individuals such as Dean Foley and Tahnee Edwards, by asking questions such as “What is their story?”, “How did they achieve success?” and “What processes did they apply?” * analysing the influence of values on entrepreneurial decision-making; for example, identifying and taking advantage of an opportunity, negotiating with stakeholders, and complying with the law and regulations * combining knowledge, skills and attitudes demonstrated by entrepreneurs with observations of successful local businesses to explain factors that contribute to success, such as seeing and taking advantage of an opportunity or demonstrating initiative and innovation |
| the reasons individuals work, the types of work they are involved in, and how they may derive an income  AC9HE7K04 | * identifying the ways people derive an income, such as working for a wage or salary, owning a business, being a shareholder, providing a rental service or receiving a social security benefit * describing examples of how continuity of cultural practices and management of Country/Place contributes to and sustains First Nations communities; for example, regional tourism ventures, coaching and mentoring initiatives, and fostering entrepreneurial and start-up cultures in regional and remote communities |
| **Skills**  Questioning and researching | develop questions to investigate a contemporary economic and business issue  AC9HE7S01 | * developing questions, using economic and business concepts and terms; for example, “How do businesses decide what to produce?”, “What is economic scarcity?” and “Why can individuals not have all the items they want, meaning they must choose?” |
| locate, select and organise information and data from a range of sources  AC9HE7S02 | * locating online sources; for example, using advanced search functions: “define: market” or targeted criteria: “allintext: successful Australian entrepreneurs” * collaborating and safely exchanging information online with an entrepreneur to identify attributes that built success |
| **Skills**  Interpreting and analysing | interpret information and data to identify economic and business issues, trends and economic cause-and-effect relationships  AC9HE7S03 | * interpreting information to identify economic and business issues; for example, inferring the effect of growth in shopping online on the number of customers entering stores |
| **Skills**  Evaluating, concluding and decision-making | develop a response to an economic and business issue, identifying potential costs and benefits  AC9HE7S04 | * identifying and describing reasons that inform the response to an issue; for example, the reasons for using recyclable materials in packaging as a way to support sustainable use of economic resources to meet needs and wants into the future * identifying the potential costs and benefits of a decision; for example, deciding whether to work part-time involves identifying benefits such as earning money and recognising costs such as time on the weekend devoted to travelling to and from work |
| **Mathematics** | **Number** | use mathematical modelling to solve practical problems, involving rational numbers and percentages, including financial contexts; formulate problems, choosing representations and efficient calculation strategies, using digital tools as appropriate; interpret and communicate solutions in terms of the situation, justifying choices made about the representation  AC9M7N09 | * modelling financial problems involving profit and loss, credits and debits, gains and losses; for example, holding a fundraising sausage sizzle and determining whether the event made a percentage profit or loss |
| **Digital Technologies** | **Process and production skills**  Generating and designing | design algorithms involving nested control structures and represent them using flowcharts and pseudocode  AC9TDI8P05 | * designing an algorithm or modifying an existing algorithm to fix an error or change functionality, for example calculating the coins and notes needed for an amount of money and changing the algorithm to handle new denominations * describing algorithms precisely in pseudocode (structured English) or with flowcharts for each part of the problem, for example using separate flowcharts to describe the purchase of an item and the giving of change during the purchase * describing algorithms with nested control structures, including a nested if, for example IF it is raining THEN [IF parents are home THEN drive to school]; or an IF inside a loop, for example REPEAT [select the largest coin smaller than the remaining total, and subtract it] UNTIL the remainder is zero |
| trace algorithms to predict output for a given input and to identify errors  AC9TDI8P06 | * specifying test cases and comparing the expected and actual output to determine the correctness of an algorithm, for example a test case of the change-calculating algorithm could have input $1.45 and expected output 1 x $1, 2 x 20c and 1 x 5c coins |
| **Process and production skills**  Evaluating | evaluate existing and student solutions against the design criteria, user stories and possible future impact  AC9TDI8P10 | * evaluating how an existing solution ensures users can control their safety and experience online as described in the Safety by Design Vision for Young People, for example ensuring privacy settings are comprehensive, easy to use and set to maximum protection by default |
| **Process and production skills**  Collaborating and managing | select and use a range of digital tools efficiently, including unfamiliar features, to create, locate and communicate content, consistently applying common conventions  AC9TDI8P11 |  |
| select and use a range of digital tools efficiently and responsibly to share content online, and plan and manage individual and collaborative agile projects  AC9TDI8P12 |  |
| **Design and Technologies** | **Knowledge and understanding**  Technologies and society | analyse the impact of innovation and the development of technologies on designed solutions for global preferred futures  AC9TDE8K02 | * considering factors that impact on innovation, for example developing novel ideas, responding quickly to change, creating a point of differentiation, adding value for society, reducing costs and improving efficiency |
| **Process and production skills**  Collaborating and managing | develop project plans to individually and collaboratively manage time, cost and production of designed solutions  AC9TDE8P05 | * identifying risks and how to minimise them, organising time, evaluating decisions and managing resources to ensure successful project completion, for example using digital tools to keep track of tasks, resources, expenses and deadlines |

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| Year 8 | | | | | |
| Key aspect 1: Personal finance | | | | | |
| Learning area/subject | | Strand/sub-strand | Content descriptions | | Content elaborations |
| **HASS**  Economics and Business | | **Knowledge and understanding** | the importance of Australia’s system of taxation and how this system affects decision-making by individuals and businesses  AC9HE8K04 | | * identifying the rights and obligations of individuals in relation to taxation by asking questions such as, “When should I apply for a tax file number?”, “How is income tax calculated?”, “What should I do when an employer is not deducting the right amount of tax?” and “How do I lodge a tax return?” |
| processes that individuals and/or businesses use to plan and budget to achieve short-term and long-term financial objectives  AC9HE8K05 | | * identifying ways short- and long-term personal financial objectives can be achieved; for example, through developing a budget and having a savings plan |
| **Skills**  Interpreting and analysing | interpret information and data to identify economic and business issues, trends and economic cause-and-effect relationships  AC9HE8S03 | | * interpreting multi-variable data to identify a cause-and-effect relationship within an economic and business issue; for example, an increase in income earned by an individual and taxation paid, or when the supply of a good and service increases, the price adjusts |
| **Skills**  Evaluating, concluding and decision-making | develop a response to an economic and business issue, identifying potential costs and benefits  AC9HE8S04 | | * developing a response to an issue by combining known knowledge with new ideas; for example, using a personal budget and savings plan to decide whether to purchase a good or service * identifying the potential costs and benefits of a decision; for example, doing casual work involves identifying benefits such as money earned, and costs such as less certainty about work hours each week * explaining that making an economic and business decision involves choice and foregoing an alternative want; for example, the goods and/or services they must forgo or give up in order to satisfy a particular want |
| **Mathematics** | | **Number** | use mathematical modelling to solve practical problems involving rational numbers and percentages, including financial contexts; formulate problems, choosing efficient calculation strategies and using digital tools where appropriate; interpret and communicate solutions in terms of the situation, reviewing the appropriateness of the model  AC9M8N05 | | * modelling situations that involve percentage increases or decreases and explaining why it is an increase or decrease, such as mark-ups, discounts, Goods and Services Tax, changes in populations or recycling rates * modelling situations involving percentage increase or decrease such as market trends, effects on population, or effects on the environment over extended time periods |
| **Algebra** | use mathematical modelling to solve applied problems involving linear relations, including financial contexts; formulate problems with linear functions, choosing a representation; interpret and communicate solutions in terms of the situation, reviewing the appropriateness of the model  AC9M8A03 | | * modelling situations involving linear functions, including practical contexts such as taxi fares involving flag fall fees, motion in a straight line at a constant speed, trade quotes involving call out fees, cooking that includes resting or cooling times, or water leakage from water tanks, interpreting the constant rate of change and initial value in context, and identifying when values of a model lie within a given range * modelling financial problems involving pay rates, using a table of values to represent the pay amounts and hours worked using an hourly rate of pay, and graphing the relationship to make inferences |
| experiment with linear functions and relations using digital tools, making and testing conjectures and generalising emerging patterns  AC9M8A04 | | * exploring how linear functions are used in linear regression models as a statistical technique in machine learning of artificial intelligence agents; for example, linear functions are used to model the relationship between input variables and a target variable, to predict stock or house prices in the financial and real-estate sectors |
| **Measurement** | recognise and use rates to solve problems involving the comparison of 2 related quantities of different units of measure  AC9M8M05 | | * identifying examples of rates in the real world, including constant rates, rate of pay, cost per kilogram, recipes, simple interest and average rates * applying rates to solve problems involving the conversion between different units of measure; for example, using a conversion rate to convert distances from miles into kilometres; using currency exchange rates to determine the price of items * applying rates to calculate solutions to problems in different contexts; for example, required run rates in cricket, dilution of concentrated chemicals and comparing the petrol consumption rates of different vehicles * using taxation tables to calculate an individual's annual income tax |
| use mathematical modelling to solve practical problems involving ratios and rates, including financial contexts; formulate problems; interpret and communicate solutions in terms of the situation, reviewing the appropriateness of the model  AC9M8M07 | | * modelling problems involving converting money amounts using different exchange rates and applying them when planning and budgeting for overseas travel * modelling situations involving financial contexts; for example, income tax, using taxation rates on annual income, comparing different taxation brackets and rates of pay; comparing the benefits of different phone plans using different call rates and associated fees to determine the best plan |
| **Statistics** | plan and conduct statistical investigations involving samples of a population; use ethical and fair methods to make inferences about the population and report findings, acknowledging uncertainty  AC9M8ST04 | | * identifying situations where the collection of data from a sample is necessary due to efficiency, cost or restricted time for collection of data, and sufficiently reliable for making inferences about a population |
| **Digital Technologies** | | **Knowledge and understanding**  Digital systems | explain how hardware specifications affect performance and select appropriate hardware for particular tasks and workloads  AC9TDI8K01 | | * selecting appropriate hardware for particular tasks, for example choosing a powerful graphics card for computer gaming or large external storage for video editing |
| investigate how data is transmitted and secured in wired and wireless networks including the internet  AC9TDI8K02 | | * explaining why cryptography is necessary for securing data, for example transmitting credit card details over the internet * exploring simple encryption and decryption algorithms, for example ROT13 and XOR |
| Key aspect 2: Roles, rights and responsibilities | | | | | |
| Learning area/subject | Strand/sub-strand | | Content descriptions | | Content elaborations |
| **HASS**  Economics and Business | **Knowledge and understanding** | | the importance of Australia’s system of taxation and how this system affects decision-making by individuals and businesses  AC9HE8K04 | | * explaining how, when and why young Australians pay tax, and the type of government services provided to them |
| **Skills**  Questioning and researching | | develop questions to investigate a contemporary economic and business issue  AC9HE8S01 | | * developing a range of questions to form the basis of an investigation; for example, “Why does an individual or group establish a business?” and “How are consumers’ rights protected?” |
| **HASS**  Civics and Citizenship | **Knowledge and understanding**  Government and democracy | | the role of political parties and independent representatives in Australian democracy, including elections and the formation of governments  AC9HC8K02 | | * investigating the roles of political parties and elected representatives, including independents |
| **Knowledge and understanding**  Laws and citizens | | the characteristics of laws and how laws are made in Australia through parliaments (statutory law) and through the courts (common law)  AC9HC8K03 | | * exploring the characteristics of laws, such as reflecting society’s values; being enforceable; being known, clear and understood; and being relatively stable * questioning whether laws are affected by different cultural or social perspectives, such as those of First Nations Australians |
| the types of law in Australia, including criminal law and civil law, and the place of First Nations Australian customary law  AC9HC8K04 | | * explaining the fundamental difference between criminal law and civil law and their role in the protection of rights and freedoms |
| **Mathematics** | **Number** | | use mathematical modelling to solve practical problems involving rational numbers and percentages, including financial contexts; formulate problems, choosing efficient calculation strategies and using digital tools where appropriate; interpret and communicate solutions in terms of the situation, reviewing the appropriateness of the model  AC9M8N05 | | * modelling situations that involve percentage increases or decreases and explaining why it is an increase or decrease, such as mark-ups, discounts, Goods and Services Tax, changes in populations or recycling rates * modelling situations involving percentage increase or decrease such as market trends, effects on population, or effects on the environment over extended time periods |
| **Algebra** | | use mathematical modelling to solve applied problems involving linear relations, including financial contexts; formulate problems with linear functions, choosing a representation; interpret and communicate solutions in terms of the situation, reviewing the appropriateness of the model  AC9M8A03 | | * modelling situations involving linear functions, including practical contexts such as taxi fares involving flag fall fees, motion in a straight line at a constant speed, trade quotes involving call out fees, cooking that includes resting or cooling times, or water leakage from water tanks, interpreting the constant rate of change and initial value in context, and identifying when values of a model lie within a given range |
| experiment with linear functions and relations using digital tools, making and testing conjectures and generalising emerging patterns  AC9M8A04 | | * exploring how linear functions are used in linear regression models as a statistical technique in machine learning of artificial intelligence agents; for example, linear functions are used to model the relationship between input variables and a target variable, to predict stock or house prices in the financial and real-estate sectors |
| Key aspect 3: Economic environment | | | | | |
| Learning area/subject | | Strand/sub-strand | Content descriptions | Content elaborations | |
| **HASS**  Economics and Business | | **Knowledge and understanding** | how markets influence decisions about the allocation of resources to the production of goods and services, and the effect of prices on these decisions  AC9HE8K01 | * identifying who is involved in the market system in Australia and explaining how the market operates through the interactions of participants (household, business, finance and government sectors) * explaining how price is the means by which the decisions of consumers and businesses interact to determine the allocation of resources; for example, when the price of a good or service rises, resources are redirected to produce additional goods and services | |
| the importance of Australia’s system of taxation and how this system affects decision-making by individuals and businesses  AC9HE8K04 | * discussing why the government collects taxation revenue and provides services to individuals and communities; for example, the provision of health, education, paid parental leave, childcare, aged care and infrastructure * identifying examples of taxes paid by individuals and businesses, and explaining how they may influence decision-making about spending; for example, the effect of income tax, import duties or excise duties on price of goods and services * explaining how the collection of taxes and the provision of services supports individual human and financial wellbeing, communities and Australian society | |
| **Skills**  Questioning and researching | develop questions to investigate a contemporary economic and business issue  AC9HE8S01 | * developing targeted or key questions using economics and business concepts and terms, such as, “How is the price of goods and services determined?” and “Why do changes in market price act as a signal about how scarce resources should be allocated?” | |
| **Skills**  Interpreting and analysing | interpret information and data to identify economic and business issues, trends and economic cause-and-effect relationships  AC9HE8S03 | * interpreting information to identify economic and business issues; for example, inferring a change in the price of a key commodity as a signal about scarcity of resources or increasing consumer expenditure * interpreting data displayed in tables and graphs to identify trends and answer questions such as, “For a 10-year period, what is the trend in the percentage of people over 60 paying income tax?” | |
| **Skills**  Evaluating, concluding and decision-making | develop a response to an economic and business issue, identifying potential costs and benefits  AC9HE8S04 | * identifying and describing reasons informing a recommendation; for example, the reasons the government collects taxation revenue and provides services to individuals and communities | |
| **HASS**  Geography | | **Knowledge and understanding**  Changing nations | causes of urbanisation and its impacts on places and environments, drawing on a study from a country such as the United States of America, and its implications  AC9HG8K06 | * explaining the connections between urbanisation and economic and social opportunities; for example, the location of universities, sporting stadiums or parliaments in capital cities | |
| differences in the distribution of urban settlements and urban concentration in Australia compared with another country such as the United States of America, and their implications  AC9HG8K07 | * examining the causes of urban concentration in Australia; for example, the history of European settlement, migration, the export orientation of the economy, the centralisation of state governments, environmental constraints and the shape of transportation networks | |
| strategies to manage the sustainability of Australia’s changing urban places  AC9HG8K09 | * examining a strategy used by local, state or national governments to manage projected population growth in one of Australia’s cities or regional urban centres, and identifying implications for sustainability (environmental, economic and social factors) and liveability | |
| Key aspect 4: Enterprise | | | | | | |
| Learning area/subject | | | Strand/sub-strand | Content descriptions | Content elaborations | |
| **HASS**  Economics and Business | | | **Knowledge and understanding** | how markets influence decisions about the allocation of resources to the production of goods and services, and the effect of prices on these decisions  AC9HE8K01 | * explaining how interaction between buyers and sellers enables the allocation of resources to the production of goods and services; that is, “What to produce?”, “How to produce?” and “For whom to produce?” | |
| different ways that businesses adapt to opportunities in the market and respond to the changing nature of work  AC9HE8K02 | * discussing how businesses identify needs, niches and gaps in established markets to guide the development of specific services or products to address these opportunities; for example, electric cars and solar power * identifying where businesses have used technologies to streamline or gain efficiencies in existing business models; for example, ride share, food delivery applications and online retail * explaining current influences on the ways people work; for example, technological change, outsourced labour in the global economy, rapid communication changes, casualisation of the workforce * identifying and explaining changes to the workforce over time; for example, the jobs available, the way individuals or businesses value particular work, career length and human resource development, changing demography, corporate social responsibility, sustainability practices, changes to workplace laws | |
| how First Nations Australian businesses and entrepreneurs develop opportunities in the market  AC9HE8K03 | * investigating how First Nations Australian businesses and entrepreneurs establish partnerships or cooperatives to provide goods and services such as farming, fashion, design or tourism * investigating how First Nations Australian communities participate in contemporary markets; for example, producing, buying and selling goods and services; approaches to marketing, employment and social contribution; and strategies to overcome difficulties in accessing markets * investigating how First Nations Australian businesses and entrepreneurs use connection to, and responsibility for, Country/Place to make innovations in the production and distribution of goods and services; for example, medicines and food derived from the environment or cultural tourism | |
| processes that individuals and/or businesses use to plan and budget to achieve short-term and long-term financial objectives  AC9HE8K05 | * explaining how financial records, such as income statements, balance sheets, budgets and cash flow statements, inform business decision-making * identifying and explaining business processes that are used to manage finances and plan in the short- and long-term; for example, devising a business plan, borrowing from a financial institution, building savings by earning interest | |
| **Skills**  Questioning and researching | locate, select and organise information and data from a range of sources  AC9HE8S02 | * organising data into appropriate formats using specialised digital tools; for example, constructing a diagram modelling the relationship between consumers, producers and workers in a market or a table showing the features of different ways businesses adapt to opportunities in the market | |
| **Skills**  Evaluating, concluding and decision-making | develop a response to an economic and business issue, identifying potential costs and benefits  AC9HE7S04 | * identifying and describing reasons that inform the response to an issue; for example, the reasons for using recyclable materials in packaging as a way to support sustainable use of economic resources to meet needs and wants into the future * identifying the potential costs and benefits of a decision; for example, deciding whether to work part-time involves identifying benefits such as earning money and recognising costs such as time on the weekend devoted to travelling to and from work | |
| **Mathematics** | | | **Number** | use mathematical modelling to solve practical problems involving rational numbers and percentages, including financial contexts; formulate problems, choosing efficient calculation strategies and using digital tools where appropriate; interpret and communicate solutions in terms of the situation, reviewing the appropriateness of the model  AC9M8N05 | * modelling situations that involve percentage increases or decreases and explaining why it is an increase or decrease, such as mark-ups, discounts, Goods and Services Tax, changes in populations or recycling rates * modelling situations involving percentage increase or decrease such as market trends, effects on population, or effects on the environment over extended time periods | |
| **Algebra** | use mathematical modelling to solve applied problems involving linear relations, including financial contexts; formulate problems with linear functions, choosing a representation; interpret and communicate solutions in terms of the situation, reviewing the appropriateness of the model  AC9M8A03 | * modelling situations involving linear functions, including practical contexts such as taxi fares involving flag fall fees, motion in a straight line at a constant speed, trade quotes involving call out fees, cooking that includes resting or cooling times, or water leakage from water tanks, interpreting the constant rate of change and initial value in context, and identifying when values of a model lie within a given range | |
| experiment with linear functions and relations using digital tools, making and testing conjectures and generalising emerging patterns  AC9M8A04 | * exploring how linear functions are used in linear regression models as a statistical technique in machine learning of artificial intelligence agents; for example, linear functions are used to model the relationship between input variables and a target variable, to predict stock or house prices in the financial and real-estate sectors | |
| **Measurement** | use mathematical modelling to solve practical problems involving ratios and rates, including financial contexts; formulate problems; interpret and communicate solutions in terms of the situation, reviewing the appropriateness of the model  AC9M8M07 | * modelling problems involving converting money amounts using different exchange rates and applying them when planning and budgeting for overseas travel * modelling situations involving financial contexts; for example, income tax, using taxation rates on annual income, comparing different taxation brackets and rates of pay; comparing the benefits of different phone plans using different call rates and associated fees to determine the best plan | |
| **Statistics** | plan and conduct statistical investigations involving samples of a population; use ethical and fair methods to make inferences about the population and report findings, acknowledging uncertainty  AC9M8ST04 | * identifying situations where the collection of data from a sample is necessary due to efficiency, cost or restricted time for collection of data, and sufficiently reliable for making inferences about a population | |
| **Digital Technologies** | | | **Process and production skills**  Generating and designing | design algorithms involving nested control structures and represent them using flowcharts and pseudocode  AC9TDI8P05 | * designing an algorithm or modifying an existing algorithm to fix an error or change functionality, for example calculating the coins and notes needed for an amount of money and changing the algorithm to handle new denominations * describing algorithms precisely in pseudocode (structured English) or with flowcharts for each part of the problem, for example using separate flowcharts to describe the purchase of an item and the giving of change during the purchase * describing algorithms with nested control structures, including a nested if, for example IF it is raining THEN [IF parents are home THEN drive to school]; or an IF inside a loop, for example REPEAT [select the largest coin smaller than the remaining total, and subtract it] UNTIL the remainder is zero | |
| trace algorithms to predict output for a given input and to identify errors  AC9TDI8P06 | * specifying test cases and comparing the expected and actual output to determine the correctness of an algorithm, for example a test case of the change-calculating algorithm could have input $1.45 and expected output 1 x $1, 2 x 20c and 1 x 5c coins | |
| **Process and production skills**  Evaluating | evaluate existing and student solutions against the design criteria, user stories and possible future impact  AC9TDI8P10 | * evaluating how an existing solution ensures users can control their safety and experience online as described in the Safety by Design Vision for Young People, for example ensuring privacy settings are comprehensive, easy to use and set to maximum protection by default | |
| **Process and production skills**  Collaborating and managing | select and use a range of digital tools efficiently, including unfamiliar features, to create, locate and communicate content, consistently applying common conventions  AC9TDI8P11 |  | |
| select and use a range of digital tools efficiently and responsibly to share content online, and plan and manage individual and collaborative agile projects  AC9TDI8P12 |  | |
| **Design and Technologies** | | | **Knowledge and understanding**  Technologies and society | analyse the impact of innovation and the development of technologies on designed solutions for global preferred futures  AC9TDE8K02 | * considering factors that impact on innovation, for example developing novel ideas, responding quickly to change, creating a point of differentiation, adding value for society, reducing costs and improving efficiency | |
| **Process and production skills**  Collaborating and managing | develop project plans to individually and collaboratively manage time, cost and production of designed solutions  AC9TDE8P05 | * identifying risks and how to minimise them, organising time, evaluating decisions and managing resources to ensure successful project completion, for example using digital tools to keep track of tasks, resources, expenses and deadlines | |