Achievement on a page: Year 10 – Learning area achievement standards

English

Receptive modes (listening, reading and viewing)
By the end of Year 10, students evaluate how text structures can be used in innovative ways by different authors. They explain how the choice of language features, images and vocabulary contributes to the development of individual style.

They develop and justify their own interpretations of texts. They evaluate other interpretations, analysing the evidence used to support them. They listen for ways features within texts can be manipulated to achieve particular effects.

Productive modes (speaking, writing and creating)
Students show how the selection of language features can achieve precision and stylistic effect. They explain different viewpoints, attitudes and perspectives through the development of cohesive and logical arguments. They develop their own style by experimenting with language features, stylistic devices, text structures and images.

Students create a wide range of texts to articulate complex ideas. They make presentations and contribute actively to class and group discussions, building on others' ideas, solving problems, justifying opinions and developing and expanding arguments. They demonstrate understanding of grammar, vary vocabulary choices for impact, and accurately use spelling and punctuation when creating and editing texts.

Mathematics

By the end of Year 10, students recognise the connection between simple and compound interest. They solve problems involving linear equations and inequalities. They make the connections between algebraic and graphical representations of relations. Students solve surface area and volume problems relating to composite solids. They recognise the relationships between parallel and perpendicular lines. Students apply deductive reasoning to proofs and numerical exercises involving plane shapes. They compare data sets by referring to the shapes of the various data displays. They describe bivariate data where the independent variable is time. Students describe statistical relationships between two continuous variables. They evaluate statistical reports.

Students expand binomial expressions and factorise monic quadratic expressions. They find unknown values after substitution into formulas. They perform the four operations with simple algebraic fractions. Students solve simple quadratic equations and pairs of simultaneous equations. They use triangle and angle properties to prove congruence and similarity. Students use trigonometry to calculate unknown angles in right-angled triangles. Students list outcomes for multi-step chance experiments and assign probabilities for these experiments. They calculate quartiles and inter-quartile ranges.

Science

By the end of Year 10, students analyse how the periodic table organises elements and use it to make predictions about the properties of elements. They explain how chemical reactions are used to produce particular products and how different factors influence the rate of reactions. They explain the concept of energy conservation and represent energy transfer and transformation within systems. They apply relationships between force, mass and acceleration to predict changes in the motion of objects. Students describe and analyse interactions and cycles within and between Earth's spheres. They evaluate the evidence for scientific theories that explain the origin of the universe and the diversity of life on Earth. They explain the processes that underpin heredity and evolution. Students analyse how the models and theories they use have developed over time and discuss the factors that prompted their review.

Students develop questions and hypotheses and independently design and improve appropriate methods of investigation, including field work and laboratory experimentation. They explain how they have considered reliability, safety, fairness and ethical actions in their methods and identify where digital technologies can be used to enhance the quality of data. When analysing data, selecting evidence and developing and justifying conclusions, they identify alternative explanations for findings and explain any sources of uncertainty. Students evaluate the validity and reliability of claims made in secondary sources with reference to currently held scientific views, the quality of the methodology and the evidence cited. They construct evidence-based arguments and select appropriate representations and text types to communicate science ideas for specific purposes.

History

By the end of Year 10, students refer to key events, the actions of individuals and groups, and beliefs and values to explain patterns of change and continuity over time. They analyse the causes and effects of events and developments and explain their relative importance. They explain the context for people's actions in the past. Students explain the significance of events and developments from a range of perspectives. They explain different interpretations of the past and recognise the evidence used to support these interpretations.

Students sequence events and developments within a chronological framework, and identify relationships between events across different places and periods of time. When researching, students develop, evaluate and modify questions to frame a historical inquiry. They process, analyse and synthesise information from a range of primary and secondary sources and use it as evidence to answer inquiry questions. Students analyse sources to identify motivations, values and attitudes. When evaluating these sources, they analyse and draw conclusions about their usefulness, taking into account their origin, purpose and context. They develop and justify their own interpretations about the past. Students develop texts, particularly explanations and discussions, incorporating historical argument. In developing these texts and organising and presenting their arguments, they use historical terms and concepts, evidence identified in sources, and they reference these sources.

Geography

By the end of Year 10, students explain how interactions between geographical processes at different scales change the characteristics of places. Students identify, analyse and explain significant interconnections between people, places and environments and explain changes that result from these interconnections and their consequences. They predict changes in the characteristics of places and environments over time, across space and at different scales and explain the predicted consequences of change. They evaluate alternative views on a geographical challenge and alternative strategies to address this challenge using environmental, economic, political and social criteria and draw a reasoned conclusion.

Students use initial research to develop and modify geographically significant questions to frame an inquiry. They critically evaluate a range of primary and secondary sources to select and collect relevant, reliable and unbiased geographical information and data. Students record and represent multi-variable data in of the most appropriate digital and non-digital forms, including a range of graphs and maps that use suitable scales and comply with cartographic conventions. They use a range of methods and digital technologies to interpret and analyse maps, data and other information to make generalisations and inferences, propose explanations for significant patterns, trends, relationships and anomalies across time and space and at different scales, and predict outcomes. They analyse and synthesise data and other information to draw reasoned conclusions, taking into account alternative perspectives. Students present findings, arguments and explanations using relevant geographical terminology and graphic representations and digital technologies in a range of selected and appropriate communication forms. They evaluate their findings and propose action in response to a contemporary geographical challenge, taking account of environmental, economic, political and social considerations. They explain the predicted outcomes and consequences of their proposal.

Civics and Citizenship

By the end of Year 10, students compare and evaluate the key features and values of systems of government, and analyse the Australian Government's global roles and responsibilities. They analyse the role of the High Court and explain how Australia's international legal obligations influence law and government policy. Students evaluate a range of factors that sustain democratic societies.

When researching, students evaluate a range of questions to investigate Australia's political and legal systems and critically analyse information gathered from different sources for relevance, reliability and omission. They account for and evaluate different interpretations and points of view on civics and citizenship issues. When planning for action, students take account of multiple perspectives and ambiguities, use democratic processes, and negotiate solutions to an issue. Students develop and present evidenced-based arguments incorporating different points of view on civics and citizenship issues. They use appropriate texts, subject-specific language and concepts. They evaluate ways they can be active and informed citizens in different contexts.

Economics and Business

By the end of Year 10, students explain why and how governments manage economic performance to improve living standards. They give explanations for variations in economic performance and standards of living within and between economies. They analyse factors that influence major consumer and financial decisions and explain the short- and long-term effects of these decisions. They explain how businesses respond to changing economic conditions and improve productivity. Students evaluate the effect of organisational and workforce management on business performance.

When researching, students develop questions and formulate hypotheses to frame an investigation of an economic or business issue or event. They gather and analyse reliable data and information from different sources to identify trends, explain relationships and make predictions. Students generate alternative responses to an issue, taking into account multiple perspectives. They use cost-benefit analysis and appropriate criteria to propose and justify a course of action. They apply economics and business knowledge, skills and concepts to familiar, unfamiliar and complex hypothetical problems. Students develop and present evidence-based conclusions and reasoned arguments incorporating different points of view. They use appropriate texts, subject-specific language, conventions and concepts. They analyse the intended and unintended effects of economic and business decisions and the potential consequences of alternative actions.

Achievement on a page: Year 10 – Subject specific achievement standards are provided as an option

Health and Physical Education – Years 9-10

By the end of Year 10, students critically analyse contextual factors that influence identities, relationships, decisions and behaviours. They analyse the impact attitudes and beliefs about diversity have on community connection and wellbeing. They evaluate the outcomes of emotional responses to different situations. Students access, synthesise and apply health information from credible sources to propose and justify responses to health situations. Students propose and evaluate interventions to improve fitness and physical activity levels in their communities. They examine the role physical activity has played historically in defining cultures and cultural identities.

Students demonstrate leadership, fair play and cooperation across a range of movement and health contexts. They apply decision-making and problem-solving skills when taking action to enhance their own and others' health, safety and wellbeing. They apply and transfer movement concepts and strategies to new and challenging movement situations. They apply criteria to make judgements about and refine their own and others' specialised movement skills and movement performances. They work collaboratively to design and apply solutions to movement challenges.

The Arts – Years 9-10

Dance	Drama	Media Arts	Music	Visual Arts
By the end of Year 10, students analyse the choreographer's use of the elements of dance, choreographic devices, form and production elements to communicate choreographic intent in dances they make, perform and view. They evaluate the impact of dance from different cultures, places and times on Australian dance.	By the end of Year 10, students analyse the elements of drama, forms and performance styles and evaluate meaning and aesthetic effect in drama they devise, interpret, perform and view. They use their experiences of drama practices from different cultures, places and times to evaluate drama from different viewpoints.	By the end of Year 10, students analyse how social and cultural values and alternative points of view are portrayed in media artworks they make, interact with and distribute. They evaluate how genre and media conventions and technical and symbolic elements are manipulated to make representations and meaning. They evaluate how social, institutional and ethical issues influence the making and use of media artworks.	By the end of Year 10, students analyse different scores and performances aurally and visually. They evaluate the use of elements of music and defining characteristics from different musical styles. They use their understanding of music making in different cultures, times and places to inform and shape their interpretations, performances and compositions.	By the end of Year 10, students evaluate how representations communicate artistic intentions in artworks they make and view. They evaluate artworks and displays from different cultures, times and places. They analyse connections between visual conventions, practices and viewpoints that represent their own and others' ideas. They identify influences of other artists on their own artworks.
Students choreograph dances by manipulating and combining the elements of dance, choreographic devices, form and production elements to communicate their choreographic intent. They choreograph, rehearse and perform dances, demonstrating technical and expressive skills appropriate to the genre and style.	Students develop and sustain different roles and characters for given circumstances and intentions. They perform devised and scripted drama in different forms, styles and performance spaces. They collaborate with others to plan, direct, produce, rehearse and refine performances. They select and use the elements of drama, narrative and structure in directing and acting to engage audiences. They refine performance and expressive skills in voice and movement to convey dramatic action.	Students produce representations that communicate alternative points of view in media artworks for different community and institutional contexts. They manipulate genre and media conventions and integrate and shape the technical and symbolic elements for specific purposes, meaning and style. They collaboratively apply design, production and distribution processes.	Students interpret, rehearse and perform solo and ensemble repertoire in a range of forms and styles. They interpret and perform music with technical control, expression and stylistic understanding. They use aural skills to recognise elements of music and memorise aspects of music such as pitch and rhythm sequences. They use knowledge of the elements of music, style and notation to compose, document and share their music.	Students manipulate materials, techniques and processes to develop and refine techniques and processes to represent ideas and subject matter in their artworks.

Technologies – Years 9-10

Design and Technologies

By the end of Year 10, students explain how people working in design and technologies occupations consider factors that impact on design decisions and the technologies used to produce products, services and environments. They identify the changes necessary to designed solutions to realise preferred futures they have described. When producing designed solutions for identified needs or opportunities, students evaluate the features of technologies and their appropriateness for purpose for one or more of the technologies contexts.

Students create designed solutions for one or more of the technologies contexts based on a critical evaluation of needs or opportunities. They establish detailed criteria for success, including sustainability considerations, and use these to evaluate their ideas and designed solutions and processes. They create and connect design ideas and processes of increasing complexity and justify decisions. Students communicate and document projects, including marketing for a range of audiences. They independently and collaboratively apply sequenced production and management plans when producing designed solutions, making adjustments to plans when necessary. They select and use appropriate technologies skilfully and safely to produce high-quality designed solutions suitable for the intended purpose.

Digital Technologies

By the end of Year 10, students explain the control and management of networked digital systems and the security implications of the interaction between hardware, software and users. They explain simple data compression, and why content data are separated from presentation. Students plan and manage digital projects using an iterative approach. They define and decompose complex problems in terms of functional and non-functional requirements.

Students design and evaluate user experiences and algorithms. They design and implement modular programs, including an object-oriented program, using algorithms and data structures involving modular functions that reflect the relationships of real-world data and data entities. They take account of privacy and security requirements when selecting and validating data. Students test and predict results and implement digital solutions. They evaluate information systems and their solutions in terms of risk, sustainability and potential for innovation and enterprise. They share and collaborate online, establishing protocols for the use, transmission and maintenance of data and projects.