# Critical thinking



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## Introduction

Critical thinking is a Stage 5 NSW Department of Education approved elective course.

The [Curriculum planning and programming, assessing and reporting to parents K-12 Policy](https://education.nsw.gov.au/policy-library/policies/pd-2005-0290) and the associated policy standards set out the requirements for schools regarding the mandatory hours for additional studies (electives) in Stage 5. Version 9.3 of the policy standards introduces the option of NSW Department of Education approved elective courses, which can make up a maximum of 200 hours of the mandatory 400 hours of electives.

If a school chooses to deliver a NSW Department of Education approved elective course, students and parents/carers need to be consulted and understand that the course will not be listed on the Record of School Achievement (RoSA).

### Rationale

Critical thinking is a form of purposeful thinking that emphasises evidence and reasoning. In today’s world, where information is readily available, critical thinking is becoming more important than remembering and recalling facts. Society values critical thinking because it is an interdisciplinary and transferable skill. It means that no matter what path or profession is pursued, critical thinking skills will always be relevant and useful.

Critical thinking skills include the ability to deconstruct, analyse, synthesise and reconstruct ideas while emphasising evidence and reasoning. Those skills are part of every toolkit for success in educational and professional arenas.

The Critical thinking course emphasises the fundamental attributes of critical thinkers and gives students a wide range of opportunities to transfer these skills across multiple disciplines. The course structure encourages students to think about thinking and transcend factual learning.

The core units introduce students to the key features of critical thinking, including how critical thinking is distinguished from other models of thinking. Students will learn about the process of argumentation and apply it to evaluate claims. Students will also gain practical research skills to collect information from various sources and evaluate their credibility.

A choice from the available options engages students in various areas of interest to reinforce the skills learnt from the core units. In addition, the options allow students and teachers to delve deeper into specific scenarios of interest. They will be guided to ask probing questions to strengthen their critical thinking skills and challenge their perceptions of the world around them.

After completing the Critical thinking elective, students will be able to apply critical thinking processes to analyse the strength and validity of information and claims. Those skills are valuable for learning in Stage 6. Critical and creative thinking is a general capability in most Stage 6 courses. By applying their critical thinking skills, students will deepen their understanding of content and skills across many disciplines.

### Aim

The course aims to engage and encourage students to develop their critical thinking skills and recognise the key aspects of a critical thinking mind. They will develop the essential skills to evaluate the vast and diverse amount of information they encounter in their daily lives. This will help them face future challenges in a continually evolving world.

### Purpose and audience

This resource communicates the outcomes and content students will engage with throughout their study of the course. It is developed for teachers to provide consistent advice in the subject selection process for Stage 5 students and for use when developing resources and implementing the course.

### When and how to use this document

This resource is an essential document to ensure that all material developed and used for this course meet the requirements for hours, outcomes, and content. Use this document when offering the course, when developing teaching and learning resources, and when maintaining records to indicate students have met the requirements for the course.

## Course structure and requirements

Students may undertake either 100 or 200 hours of study in critical thinking in Stage 5. Courses are structured in the following ways:

**100-hour course**

* both core units (70 hours for core 1 and 2)
* additional study of selected options to meet the 100-hour requirement (minimum of 2)

**200-hour course**

* both core units
* additional study of selected options to meet the 200-hour requirement (minimum of 4)

The core study topics are completed in order of core 1 and 2 followed by the options. However, only one school-developed option may be studied within this elective.

**Additional content**

Additional content points are provided in the options modules for some students to extend their learning by engaging with content beyond the mandatory activity descriptions. Teachers may develop extension units or incorporate additional content into their elective study units.

### Core

The core is divided into 2 units (35 indicative hours each):

* **Core 1: Critical thinking in action**
* What is critical thinking?
* Barriers to critical thinking
* Logical fallacies.
* **Core 2: Research skills to support the critical mind**
* A critical thinking portfolio
* Developing research skills
* A depth study: Dealing with misinformation.

### Options

The available options have been developed to allow students to apply their critical thinking skills in various scenarios.

* Option 1 – Strategies used in business and war
* Option 2 – Predicting the future: How certain can we be?
* Option 3 – Conspiracy theories: Where are the facts?
* Option 4 – Strategies and innovations in sports: The path to victory
* Option 5 – Advertising: Have they got your attention?
* Option 6 – Solving problems of today and tomorrow
* Option 7 – Recreating the human mind: The future of artificial intelligence (AI)
* Option 8 – Blind justice: You’ve been selected for jury duty
* Option 9 – School-developed option.

## Outcomes

A student:

* **CT5-1** distinguishes different modes of thinking and identifies the characteristics and perspectives that are central to critical thinking
* **CT5-2** evaluates a range of evidence to consider bias, generalisation, simplification, stereotyping and fallacies
* **CT5-3** constructs and builds stronger arguments with evidence-based decision making by discerning fact from fiction
* **CT5-4** undertakes research and engages in evident self-reflection throughout the critical thinking process
* **CT5-5** communicates arguments logically in a range of modes
* **CT5-6** analyses the key attributes of critical thinking in a variety of contexts or scenarios to develop ideas, solutions or further questions
* **CT5-7** evaluates the impact of critical thinking on society and explains the importance of transferable skills across disciplines.

Schools must ensure that the options chosen enable all outcomes to be addressed by the completion of the course.

## Core 1 – Understanding critical thinking

This core unit examines thinking as a human endeavour. Thinking is an intrinsic property of the human mind. However, there are different types of thinking. Higher-order thinking is purposeful thinking. Critical thinking is an example of higher-order thinking. In this unit, students will examine critical thinking dispositions and barriers to critical thinking such as bias and cognitive fallacies. Students will explore the features of argumentation to evaluate the validity of claims.

### Outcomes

A student:

* **CT5-1** distinguishes different modes of thinking and identifies the characteristics and perspectives that are central to critical thinking
* **CT5-2** evaluates a range of evidence to consider bias, generalisation, simplification, stereotyping and fallacies
* **CT5-3** constructs and builds stronger arguments with evidence-based decision making by discerning fact from fiction
* **CT5-4** undertakes research and engages in evident self-reflection throughout the critical thinking process
* **CT5-5** communicates arguments logically in a range of modes.

### Content

Students:

* reflect on and categorise the different types of thinking that they undertake in their lives
* learn about higher-order thinking skills, including the place of critical thinking in the thinking matrix
* define critical thinking and demonstrate an understanding of the dispositions that contribute to critical thinking
* appreciate the role of critical thinking in developing a deep understanding of content
* evaluate the barriers to critical thinking, including thinking biases and cognitive fallacies
* apply the Toulmin model of argumentation to demonstrate critical thinking in matters of personal, social, political, scientific, historical or sporting importance.

## Core 2 – Research skills to support the critical thinker

In this unit, students will develop skills that support critical thinking. They will document their learning journey in a ‘critical thinking portfolio’. The portfolio will be supported with information gathered through students’ research endeavours and represents a body of work that each student develops throughout this elective. Finally, students will apply their critical thinking skills to analyse misinformation in society. This learning activity constitutes a depth study, and students will make reasoned judgements on an issue of personal interest.

### Outcomes

A student:

* **CT5-1** distinguishes different modes of thinking and identifies the characteristics and perspectives that are central to critical thinking
* **CT5-2** evaluates a range of evidence to consider bias, generalisation, simplification, stereotyping and fallacies
* **CT5-3** constructs and builds stronger arguments with evidence-based decision making by discerning fact from fiction
* **CT5-4** undertakes research and engages in evident self-reflection throughout the critical thinking process
* **CT5-5** communicates arguments logically in a range of modes.

### Content

Students:

* develop an electronic portfolio to document their learning journey in this elective. This portfolio will be used for the core and options units in the elective
* engage in research-related activities to gather information on critical thinking
* develop skills in interrogating information sources, including information on the internet and in print media
* evaluate the credibility of information and its sources. The information gathered will be used to construct bodies of knowledge on various topics
* critically analyse misinformation in an area of personal interest
* evaluate the strength of the evidence presented and the validity of the arguments drawn.

The portfolio represents a collection of activities that students engage in during the course of the elective. This could include research tasks to gather and evaluate information from various sources or the evaluation of claims using critical thinking routines and argumentation. If teachers determine that the portfolio should be used as an assessment tool, students could be assessed on their ability to:

* gather and analyse information
* research information
* communicate information.

## Option 1 – Strategies used in business and war

Students compare the common principles used across military and business thinking and how critical thinking is important for decision making across both areas. Whilst both disciplines seem very different, they both share common thought patterns and applications of ideas. Ideas such as why, when, and how are explored in staging a military exercise or business decision. An in-depth comparison is made between the 2 areas by applying original ideas across historical case studies and hypothetical events.

### Outcomes

A student:

* **CT5-3** constructs and builds stronger arguments with evidence-based decision making by discerning fact from fiction
* **CT5-4** undertakes research and engages in evident self-reflection throughout the critical thinking process
* **CT5-5** communicates arguments logically in a range of modes
* **CT5-7** evaluates the impact of critical thinking on society and explains the importance of transferable skills across disciplines.

### Content

Students:

* compare and contrast a range of strategies and thinking used in business to the ideas in Sun Tzu’s The Art of War to identify parallels between them
* research and assess the strength of evidence used in strategic decisions in either business and/or military action to justify the choices made
* investigate the factors and decisions which resulted in a failed venture in business and/or war. Discuss deeply why it ultimately failed and what they could have done better to avoid this outcome
* develop an evidence-based proposal for a new business venture to target prospective investors. Include details such as
* the aim or purpose of the business venture
* associated risks
* benefits
* strength of evidence
* how possible challenges will be overcome.

**Additional content**

Additional content may be used to broaden and deepen students’ skills, knowledge and understanding.

Students:

* critically examine Sun Tzu’s The Art of War to assess its application to modern warfare and/or business decisions
* debate the idea that similar thinking and strategies can be employed in business and war.

## Option 2 – Predicting the future: How certain can we be?

As a society, predicting the future has become an obsession for some to make decisions, evaluate risks or plan for the future. The emergence of technology and big data has had a significant impact on how we predict future events. In this option, students will explore how predictions are made and evaluate their effectiveness.

### Outcomes

A student:

* **CT5-2** evaluates a range of evidence to consider bias, generalisation, simplification, stereotyping and fallacies
* **CT5-5** communicates arguments logically in a range of modes
* **CT5-6** analyses the key attributes of critical thinking in a variety of contexts or scenarios to develop ideas, solutions or further questions
* **CT5-7** evaluates the impact of critical thinking on society and explains the importance of transferable skills across disciplines.

### Content

Students:

* explain the difference between guessing, possibility, and probability as methods of predicting the future, using specific examples to illustrate the differences
* evaluate a variety of methods used through human history to predict future events in a wide range of contexts, for example
* natural phenomena to influence decisions
* prophecies
* experiences, observations, and pattern-seeking
* mathematical models and forecast (data-driven).
* investigate the evolution and refinement of explanatory models over time and the impact they have on individuals and society, for example
* weather prediction and climate modelling
* using trends and patterns in investment (for example, property, stock market)
* epidemiological modelling.

**Additional content**

Additional content may be used to broaden and deepen students’ skills, knowledge and understanding.

Students:

* research and justify what an aspect of today's societies will be like in the distant future
* investigate ‘Gambler’s fallacy’ and/or ‘Prisoner’s fallacy’ and/or ‘Base rate fallacy’
* evaluate the use of polls to predict the likely winner of an election.

## Option 3 – Conspiracy theories: Where are the facts?

Explanations to questions can either be straightforward or clouded in a fog of uncertainty. Some explanations go against commonly held beliefs and challenge the evidence presented. For example, ‘Is the earth flat?’ ‘Was the moon landing a fake?’ ‘Are there aliens in Area 51?’ are some of the questions which have strong conspiracy theories attached to them. Students evaluate a range of conspiracy theories to assess the strengths of the arguments from the established ideas against the thinking used to support a conspiracy theory.

### Outcomes

A student:

* **CT5-2** evaluates a range of evidence to consider bias, generalisation, simplification, stereotyping and fallacies
* **CT5-3** constructs and builds stronger arguments with evidence-based decision making by discerning fact from fiction
* **CT5-5** communicates arguments logically in a range of modes
* **CT5-6** analyses the key attributes of critical thinking in a variety of contexts or scenarios to develop ideas, solutions or further questions.

### Content

Students:

* investigate why conspiracy theories begin and why they can gather a large following despite being contrary to evidence and widely held belief
* evaluate the evidence used to support and debunk a conspiracy theory to assess its strength using a critical thinking approach
* apply the methods of Socratic Questioning to identify the validity of conspiracy theories and identify the core ideas behind their origins.

**Additional content**

Additional content may be used to broaden and deepen students’ skills, knowledge and understanding.

Students:

* investigate the impact of media and the internet on conspiracy theories, for example
* social media
* news
* YouTube
* Podcasts.
* research the use of memes in transferring cultural information and their connection to conspiracy theories.

## Option 4 – Strategies and innovations in sports: The path to victory

The urge to win is strong in both traditional sports and e-sports. In e-sports and online gaming, ideas, rules and gameplay evolve continually. This is based on carefully thought-out decisions and innovative approaches to foster success. Students explore the ideas which have changed the direction and designs in the field of competition. This can cover picking the right player for a game or which player to buy next. Which tactics should be used and why? Do rules need to be changed? How can technology be used to improve performance? Students will explore these questions and explore the thinking used in this industry.

### Outcomes

A student:

* **CT5-4** undertakes research and engages in evident self-reflection throughout the critical thinking process
* **CT5-5** communicates arguments logically in a range of modes
* **CT5-6** analyses the key attributes of critical thinking in a variety of contexts or scenarios to develop ideas, solutions or further questions
* **CT5-7** evaluates the impact of critical thinking on society and explains the importance of transferable skills across disciplines.

### Content

Students:

* research the impact innovative ideas, rule changes and strategic development can have on the success of a team or individual using specific examples
* investigate the role science, technology, psychology, and statistics play in providing evidence to
* improve gameplay and performance
* support the development of new sports, for example, introduction of T20 cricket
* enhance outcomes in sports.
* critically analyse an unsuccessful situation in sport and evaluate a range of recommendations to improve performance when considering technology advancement, strategy and tactics, or data analysis.

**Additional content**

Additional content may be used to broaden and deepen students’ skills, knowledge and understanding.

Students:

* debate how successful past champion teams or individuals would perform in the current era of their chosen sport
* examine the thinking and evidence used to select the players and recruit new players into a team
* develop and justify a strategic plan/tactic that can help a team or individual achieve success in a single game, tournament, or season
* evaluate the role coaches, managers and team owners play in successful and unsuccessful teams or individuals.

## Option 5 – Advertising: Have they got your attention?

Students explore claims made by advertising in a wide range of mediums and assess the techniques they use to capture your attention. This will include examining traditional advertising methods, product placement, and the rise in social media to sell products. Students will be able to think about the product, the sales pitch, and the truth behind the marketing companies’ strategies to influence purchasing decisions.

### Outcomes

A student:

* **CT5-2** evaluates a range of evidence to consider bias, generalisation, simplification, stereotyping and fallacies
* **CT5-3** constructs and builds stronger arguments with evidence-based decision making by discerning fact from fiction
* **CT5-5** communicates arguments logically in a range of modes
* **CT5-6** analyses the key attributes of critical thinking in a variety of contexts or scenarios to develop ideas, solutions or further questions.

### Content

Students:

* research how an understanding of human psychology and behaviour has been utilised in marketing and advertising, for example
* companies making false product claims
* the Halo Effect
* cultural influences on choice
* socioeconomic influences on choice.
* conduct primary investigations to test product claims and evaluate the ethics of advertising strategies, for example, the nutritional content or efficacy of a product
* investigate how technology and data have been employed in modern marketing and advertising to influence decision making, for example
* data-driven advertising
* search algorithms
* social media platforms.

**Additional content**

Additional content may be used to broaden and deepen students’ skills, knowledge and understanding.

Students:

* compare traditional and modern methods/strategies in advertising and assess the change in thinking used
* research the change in ethics and rules that advertising companies must comply with and debate their effectiveness
* research how companies, individuals or groups use advertising strategies to create a positive public image.

## Option 6 – Solving problems of today and tomorrow

As society has expanded in a global community and our way of life changes, new challenges must be overcome. In this option, students assess the thinking behind the solutions used to better our lives and the way we do things. Strategies developed today may pre-empt problems in the future and help society prosper. Students will research how developing creative solutions requires different types of higher-order thinking. For example, critical thinking is important in the early stages of the conception of an idea and its development, while problem-solving dominates the latter stages as the project takes shape.

### Outcomes

A student:

* **CT5-2** evaluates a range of evidence to consider bias, generalisation, simplification, stereotyping and fallacies
* **CT5-3** constructs and builds stronger arguments with evidence-based decision making by discerning fact from fiction
* **CT5-5** communicates arguments logically in a range of modes
* **CT5-7** evaluates the impact of critical thinking on society and explains the importance of transferable skills across disciplines.

### Content

Students:

* examine potential problems (risk matrix) that society may face in the future based on current direction and understanding
* explore ‘wicked problems’ and justify viable solutions and actions which could be taken to address a problem
* develop and propose a plan of action to future-proof a current organisation, business, or government agency from current or potential future events.

**Additional content**

Additional content may be used to broaden and deepen students’ skills, knowledge and understanding.

Students:

* research and assess the impact of developing original ideas or inventions ahead of their time, whose values or utility become evident only later
* investigate how new companies have challenged the established order and changed the landscape in their market area (groundbreaking innovations) and what they will need to do for continued success.

## Option 7 – Recreating the human mind: The future of artificial intelligence (AI)

In this option, the notion of human thought and machine thinking is explored to address whether machines can think like us. Not everyone is comfortable with AI and the potential impact of this technology in society. Students will infer the possible jobs that would be made obsolete in the future as AI becomes increasingly sophisticated and ubiquitous. Students will also explore the human impacts of AI.

### Outcomes

A student:

* **CT5-3** constructs and builds stronger arguments with evidence-based decision making by discerning fact from fiction
* **CT5-4** undertakes research and engages in evident self-reflection throughout the critical thinking process
* **CT5-5** communicates arguments logically in a range of modes
* **CT5-6** analyses the key attributes of critical thinking in a variety of contexts or scenarios to develop ideas, solutions or further questions
* **CT5-7** evaluates the impact of critical thinking on society and explains the importance of transferable skills across disciplines.

### Content

Students:

* define AI and explore various manifestations of AI in modern society
* review how AI is portrayed in popular media and assess its relevance to the real world
* compare the current applications of AI and robotics and evaluate their impact on society, for example
* current jobs and future employment
* education
* medicine and health
* environmental issues.
* debate if ethical thinking should be incorporated into the development and use of AI, including the possible impacts this may have, for example
* legal, social, and moral implications
* will AI systems be the next generation of slaves?
* if AI systems develop consciousness, should they be accorded (human) rights?
* if an AI system is responsible for damages or death, is it liable?

**Additional content**

Additional content may be used to broaden and deepen students’ skills, knowledge and understanding.

Students:

* debate Isaac Asimov’s 3 rules of robotics and their relevance to modern-day research into AI
* debate the idea that AI will be able to supersede the human mind
* compare how traditional robotics differs from AI and what issues are being faced when developing AI
* investigate current research in AI to discuss potential issues that are being overcome.

## Option 8 – Blind justice: You’ve been selected for jury duty

Students look at the application of the legal system and court proceedings through the eyes of a jury. Students explore how a jury member would navigate and assess the strength of evidence, testimonies and arguments presented to decide on a verdict. In addition, students utilise and critically engage with case studies to assess the outcome of cases that used a jury.

### Outcomes

A student:

* **CT5-2** evaluates a range of evidence to consider bias, generalisation, simplification, stereotyping and fallacies
* **CT5-3** constructs and builds stronger arguments with evidence-based decision making by discerning fact from fiction
* **CT5-5** communicates arguments logically in a range of modes
* **CT5-7** evaluates the impact of critical thinking on society and explains the importance of transferable skills across disciplines.

### Content

Students:

* examine techniques utilised by legal teams to influence a jury’s decision when considering various strategies, for example
* the locations of trials
* jury composition
* arguments utilised
* presentation of evidence, witnesses and experts.
* analyse the evidence presented in a court study that involves a jury
* develop a range of questions to determine the strength of evidence and the validity of the final verdict
* debate the idea that justice is blind and the use of juries is necessary to obtain a fair verdict.

**Additional content**

Additional content may be used to broaden and deepen students’ skills, knowledge and understanding.

Students explore how various personalities or media impact a jury decision and influence the course of justice.

## Option 9 – School-developed option

Schools may address some or all of the outcomes identified as relevant to the study of the school-developed option. This option provides students with the opportunity to develop their knowledge and understanding of a particular area of critical thinking and/or area of inquiry that caters for their interests, needs and resources. This study also provides an opportunity to investigate a critical thinking issue in-depth.

The focus of study chosen in the school-developed option must not overlap or significantly duplicate any of the contexts studied in other Stage 5 electives or Stage 6 syllabus.

### Outcomes

Schools may address some or all of the outcomes as relevant to the study developed.

A student:

* **CT5-1** distinguishes different modes of thinking and identifies the characteristics and perspectives that are central to critical thinking
* **CT5-2** evaluates a range of evidence to consider bias, generalisation, simplification, stereotyping and fallacies
* **CT5-3** constructs and builds stronger arguments with evidence-based decision making by discerning fact from fiction
* **CT5-4** undertakes research and engages in evident self-reflection throughout the critical thinking process
* **CT5-5** communicates arguments logically in a range of modes
* **CT5-6** analyses the key attributes of critical thinking in a variety of contexts or scenarios to develop ideas, solutions or further questions
* **CT5-7** evaluates the impact of critical thinking on society and explains the importance of transferable skills across disciplines.

### Content

Students:

* identify a problem, question or specific area of interest in critical thinking
* explain the issue, question or area of interest
* discuss the key concepts related to the issue, question or area of interest
* examine the critical thinking related to the issue, question or area of interest
* participate in at least one community of inquiry that examines the issue, question or area of interest
* evaluate the learning achieved in the process of completing this study, for example
* change in personal values, beliefs or assumptions
* development of thinking and reasoning skills.

## Additional information

Please complete the following [feedback form](https://forms.office.com/Pages/ResponsePage.aspx?id=muagBYpBwUecJZOHJhv5kbKo2q_ZUXlHndJMnh2Wd8NUOUk0VTIzUDVVSlVFQVM5MkdOMkJGTjVKNCQlQCN0PWcu) to help us improve our resources and support.

Curriculum design and implementation is a dynamic and contextually specific process. The department is committed to supporting teachers meet the needs of all students. The advice below on assessment and planning for the needs of every student may be useful when considering the material presented in this resource.

### Assessment for learning

Possible formative assessment strategies that could be included:

* Learning intentions and success criteria assist educators to articulate the purpose of a learning task to make judgements about the quality of student learning. These help students focus on the task or activity taking place and what they are learning and provide a framework for reflection and feedback. [Online tools](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/622) can assist implementation of this formative assessment strategy.
* Eliciting evidence strategies allow teachers to determine the next steps in learning and assist teachers in evaluating the impact of teaching and learning activities. Strategies that may be added to a learning sequence to elicit evidence include all student response systems, [exit tickets](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/543), mini whiteboards (actual or [digital](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/575)), [hinge questions](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/557), [Kahoot](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Card/621), [Socrative](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Card/587), or quick quizzes to ensure that individual student progress can be monitored and the lesson sequence adjusted based on formative data collected.
* Feedback is designed to close the gap between current and desired performance by informing teacher and student behaviour (AITSL 2017). AITSL provides a [factsheet to support evidence-based feedback](https://www.aitsl.edu.au/teach/improve-practice/feedback#:~:text=FEEDBACK-,Factsheet,-A%20quick%20guide).
* [Peer feedback](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/549) is a structured process where students evaluate the work of their peers by providing valuable feedback in relation to learning intentions and success criteria. It can be supported by [online tools](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=1d29b).
* Self-regulated learning opportunities assist students in taking ownership of their own learning. A variety of strategies can be employed and some examples include reflection tasks, [Think-Pair-Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645), [KWLH charts](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/562), [learning portfolios](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/583) and [learning logs](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/564).

The primary role of assessment is to establish where individuals are in their learning so that teaching can be differentiated and further learning progress can be monitored over time.

Feedback that focuses on improving tasks, processes and student self-regulation is the most effective. Students engaging with feedback can take many forms including formal, informal, formative, summative, interactive, demonstrable, visual, written, verbal and non-verbal.

[What works best: 2020 update](https://education.nsw.gov.au/about-us/educational-data/cese/publications/research-reports/what-works-best-2020-update) (CESE 2020a)

### Differentiation

Differentiated learning can be enabled by differentiating the teaching approach to content, process, product and the learning environment. For more information on differentiation go to [Differentiating learning](https://education.nsw.gov.au/teaching-and-learning/professional-learning/teacher-quality-and-accreditation/strong-start-great-teachers/refining-practice/differentiating-learning) and [Differentiation](https://education.nsw.gov.au/campaigns/inclusive-practice-hub/primary-school/teaching-strategies/differentiation).

When using these resources in the classroom, it is important for teachers to consider the needs of all students in their class, including:

* **Aboriginal and Torres Strait Islander students**. Targeted [strategies](https://education.nsw.gov.au/teaching-and-learning/aec/aboriginal-education-in-nsw-public-schools) can be used to achieve outcomes for Aboriginal students in K-12 and increase knowledge and understanding of Aboriginal histories and cultures. Teachers should utilise students’ Personalised Learning Pathways to support individual student needs and goals.
* **EAL/D learners**. EAL/D learners will require explicit English language support and scaffolding, informed by the [EAL/D enhanced teaching and learning cycle](https://education.nsw.gov.au/teaching-and-learning/curriculum/literacy-and-numeracy/resources-for-schools/eald/enhanced-teaching-and-learning-cycle) and the student’s phase on the [EAL/D Learning Progression](https://education.nsw.gov.au/teaching-and-learning/curriculum/multicultural-education/english-as-an-additional-language-or-dialect/planning-eald-support/english-language-proficiency). In addition, teachers can access information about [supporting EAL/D learners](https://education.nsw.gov.au/teaching-and-learning/curriculum/multicultural-education/english-as-an-additional-language-or-dialect/planning-eald-support/english-language-proficiency) and [literacy and numeracy support specific to EAL/D learners](https://education.nsw.gov.au/teaching-and-learning/curriculum/literacy-and-numeracy/resources-for-schools/eald).
* **Students with additional learning needs**. Learning adjustments enable students with disability and additional learning and support needs to access syllabus outcomes and content on the same basis as their peers. Teachers can use a range of [adjustments](https://education.nsw.gov.au/teaching-and-learning/disability-learning-and-support/personalised-support-for-learning/adjustments-to-teaching-and-learning) to ensure a personalised approach to student learning. In addition, the [Universal Design for Learning planning tool](https://education.nsw.gov.au/teaching-and-learning/learning-from-home/teaching-at-home/teaching-and-learning-resources/universal-design-for-learning) can be used to support the diverse learning needs of students using inclusive teaching and learning strategies. Subject specific curriculum considerations can be found on the [Inclusive Practice hub](https://education.nsw.gov.au/campaigns/inclusive-practice-hub/primary-school/teaching-strategies/differentiation).
* **High potential and gifted learners**. [Assessing and identifying high potential and gifted learners](https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/supporting-educators/assess-and-identify#Assessment1) will help teachers decide which students may benefit from extension and additional challenge. [Effective strategies and contributors to achievement](https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/supporting-educators/evaluate) for high potential and gifted learners help teachers to identify and target areas for growth and improvement. In addition, the [Differentiation Adjustment Tool](https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/supporting-educators/implement/differentiation-adjustment-strategies) can be used to support the specific learning needs of high potential and gifted students. The [High Potential and Gifted Education Professional Learning and Resource Hub](https://schoolsnsw.sharepoint.com/sites/HPGEHub/SitePages/Home.aspx) supports school leaders and teachers to effectively implement the High Potential and Gifted Education Policy in their unique contexts.

All students need to be challenged and engaged to develop their potential fully. A culture of high expectations needs to be supported by strategies that both challenge and support student learning needs, such as through appropriate curriculum differentiation (CESE 2020a:6).

## About this resource

All curriculum resources are prepared through a rigorous process. Resources are periodically reviewed as part of our ongoing evaluation plan to ensure currency, relevance and effectiveness. For additional support or advice contact the Teaching and Learning Curriculum team by emailing secondaryteachingandlearning@det.nsw.edu.au.

**Alignment to system priorities and/or needs**:

This resource aligns to the School Excellence Framework elements of curriculum (curriculum provision) and effective classroom practice (lesson planning, explicit teaching).

This resource supports teachers to address Australian Professional Teaching Standards 2.1.2, 2.3.2, 3.2.2, 7.2.2.

This resource has been designed to support schools with successful implementation of new curriculum, specifically the NSW Department of Education approved elective course, Critical thinking © 2021 NSW Department of Education for and on behalf of the Crown in right of the State of New South Wales.

The resource is produced to assist schools with promoting and implementing the course for the first time. As the course may be taught by teachers from a range of key learning areas, the resource is designed to support teachers from a variety of KLA expertise.

**Department approved elective course**: Critical thinking

**Course outcomes**: CT5-1, CT5-2, CT5-3, CT5-4, CT5-5, CT5-6, CT5-7

**Author**: Curriculum Secondary Learners

**Publisher**: State of NSW, Department of Education

**Resource**: Course document

**Related resources**: Further resources to support Critical thinking can be found on the Department approved elective courses webpage including course document, sample scope and sequences, assessment materials and other learning sequences.

**Professional Learning**: Join the [Teaching and Learning 7-12 statewide staffroom](https://education.nsw.gov.au/teaching-and-learning/curriculum/statewide-staffrooms) for information regarding professional learning opportunities.

**Universal Design for Learning Tool**: [Universal Design for Learning planning tool](https://education.nsw.gov.au/teaching-and-learning/learning-from-home/teaching-at-home/teaching-and-learning-resources/universal-design-for-learning). Support the diverse learning needs of students using inclusive teaching and learning strategies.

**Consulted with**: Aboriginal Outcomes and Partnerships, Inclusion and Wellbeing, EAL/D, and Warrawong High School

**Reviewed by**: This resource was reviewed by Curriculum Secondary Learners and by subject matter experts in schools to ensure accuracy of content.

**Creation date**: 22 September 2021

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**Evidence Base**:

‘The long-term vision is for a curriculum that supports teachers to nurture wonder, ignite passion and provide every young person with knowledge, skills and attributes that will help prepare them for a lifetime of learning, meaningful adult employment and effective future citizenship’ (NESA 2020:xi).

The development of the course and the course document as part of department approved electives aims to respond to the goals articulated in NESA’s curriculum review. Consistent messages from the review include:

* ‘flexibility’ was the word most used by teachers to describe the systemic change they want
* teachers need more time to teach important knowledge and skills
* students want authentic learning with real-world application.

This course and the department approved electives provide teachers with flexibility in the curriculum and authentic learning experiences. They allow for ‘increased local decision making in relation to the curriculum’ as this ‘is associated with higher levels of student performance’ (NESA 2020:52).

This resource has been developed so that teachers are able to use the principles of what works best. Explicit teaching using ‘the language of the syllabus to increase students’ familiarity with the vocabulary so students can unpack assessment questions and understand exactly what they are being asked to do’ (CESE 2020b:11).

Essential elements to be included in a school’s documented curriculum:

* syllabus outcomes and scope of learning for each KLA for each year
* a scope and sequence and associated learning programs for each course, including teaching activities mapped against NESA syllabus outcomes and content, and including registration and evaluation (NSW Department of Education 2021:7).

## References

**Links to third-party material and websites**

Please note that the provided (reading/viewing material/list/links/texts) are a suggestion only and implies no endorsement, by the New South Wales Department of Education, of any author, publisher, or book title. School principals and teachers are best placed to assess the suitability of resources that would complement the curriculum and reflect the needs and interests of their students.

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