Critical and Creative Thinking scope and sequence: Foundation to Level 10

| **Foundation to Level 2** | **Levels 3 and 4** | **Levels 5 and 6** | **Levels 7 and 8** | **Levels 9 and 10** |
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| Achievement standard |
| By the end of Level 2, students construct and use questions with a range of stems. They generate ideas and possibilities that are new to them and identify the strategy used. They describe personal responses to ideas and possibilities and identify how these influenced their thinking.Students identify and use words that show reasons and conclusions and identify suitable examples to support claims when reasoning. They practise and use a range of simple general learning strategies and express and describe their thinking processes. Students propose a solution to a problem, describing how the solution was selected. | By the end of Level 4, students identify, construct and use open and closed questions for different purposes. They describe and use simple strategies to generate and evaluate new ideas and possibilities, reflecting on the effect of pre-established preferences.Students identify a conclusion justified by a range of reasons, and structure and communicate a conclusion justified by a range of reasons. They use evidence, values, criteria and ‘if-then’ thinking to support their reasoning and identify errors in examples of ‘if-then’ thinking.Students practise and use an extended range of general learning strategies. They represent and use thinking processes and describe how thinking processes facilitate thinking. They evaluate a proposed solution to a problem by considering given criteria. | By the end of Level 6, students identify, construct and use questions to focus or expand their thinking. They explain and use a range of strategies to generate and evaluate new ideas and possibilities, reflecting on the importance of setting aside preconceptions.Students identify an argument that uses sub-arguments that lead to a main conclusion. They structure and communicate an argument that uses sub-arguments that lead to a main conclusion. They use criteria and consider competing values and the strength of evidence when supporting, analysing and evaluating reasoning. They identify and describe simple reasoning errors and improve the reasoning involved.Students practise and use general and context-specific learning strategies. They explain, use and reflect on thinking processes suited to different contexts. They use criteria to identify and compare proposed solutions to a problem and to identify a suitable solution.  | By the end of Level 8, students construct and use main questions and sub-questions for different purposes. They select, use and reflect on a range of strategies to generate new ideas and possibilities, they suspend judgement to support generating and evaluating alternative ideas and possibilities and they reflect on the importance of suspending judgement.Students identify, structure and communicate a conclusion and a justification for the conclusion that involves analysis and evaluation of competing claims and grounds for these claims. They identify and use criteria to support, analyse, evaluate and improve reasoning. They identify and explain a range of reasoning errors and improve the reasoning involved.Students select, use and reflect on general and context-specific learning strategies. They identify, justify, use and reflect on thinking processes suited to different contexts. They develop and use criteria to evaluate proposed solutions to a problem, synthesise new knowledge and explain a suitable solution.  | By the end of Level 10, students construct, use and adapt questions to support thinking in different contexts. They select, justify, use and reflect on a range of strategies to generate new ideas and possibilities and critically reflect on suspension of judgement when generating and evaluating alternative ideas and possibilities from different perspectives.Students analyse and critically reflect on the structure, clarity, consistency and coherence of a conclusion and its justification in different contexts. They identify the qualities required when communicating a claim and grounds for a claim in different contexts and they analyse, evaluate and refine claims and grounds for a claim for required qualities when reasoning. They identify, use and refine criteria to support, analyse, evaluate and improve reasoning. They identify and analyse complex reasoning errors in different contexts and improve the reasoning involved.Students select, monitor and adapt general and context-specific learning strategies. They analyse, justify, use and reflect on thinking processes suited to different contexts. They develop, use and adapt criteria in different contexts to evaluate the viability and sustainability of proposed solutions to a problem and to justify a suitable solution. |
| Content descriptions |
| Strand: Questions and Possibilities |
| *Students learn about:* |
| different kinds of question stems for gathering information and ideasVC2CC2Q01 | the construction and use of open and closed questions for different purposesVC2CC4Q01 | the construction of questions for identifying and building understanding of information, possibilities, processes and activitiesVC2CC6Q01 | the construction of a main question and sub-questions for different purposesVC2CC8Q01 | the construction and adaptation of questions to suit different contexts VC2CC10Q01 |
| how personal responses may influence thinking about ideas and possibilitiesVC2CC2Q02 | how pre-established preferences may influence thinking when generating and responding to alternative ideas and possibilitiesVC2CC4Q02 | the importance of setting aside preconceptions; strategies for setting preconceptions aside when generating and evaluating alternative ideas and possibilitiesVC2CC6Q02 | when and how judgement is suspended to support generating and evaluating alternative ideas and possibilitiesVC2CC8Q02 | when and how to critically reflect on suspension of judgement when generating and evaluating alternative ideas and possibilities from different perspectivesVC2CC10Q02 |
| modification as a strategy to generate a new idea or possibilityVC2CC2Q03  | simple strategies for generating new ideas and possibilities, including repurposing or rearrangingVC2CC4Q03 | an extended range of strategies to generate new ideas and possibilities including forming a link between different information sourcesVC2CC6Q03 | strategies for generating new ideas and possibilities including identifying a pattern across multiple information sources VC2CC8Q03 | strategies for generating new ideas and possibilities including identifying links and patterns across multiple information sources and perspectives VC2CC10Q03 |
| Strand: Reasoning |
| *Students learn about:* |
| words that show reasons and conclusions, and examples of how to use themVC2CC2R01 | ways to identify, structure and communicate a conclusion justified by a range of reasonsVC2CC4R01 | ways to identify, structure and communicate an argument that uses sub-arguments leading to a main conclusionVC2CC6R01 | ways to identify, structure and communicate a conclusion and its justification where competing claims, and grounds for claims, are analysed and evaluatedVC2CC8R01 | ways to analyse and improve the structure, clarity, consistency and coherence of a conclusion and its justification in different contextsVC2CC10R01 |
| the use of examples to support claimsVC2CC2R02 | what is meant by evidence and what is meant by a value and how they are used to support reasoningVC2CC4R02 | ways to consider competing values and the strength of evidence when reasoningVC2CC6R02 | reasons for competing claims about matters of fact and matters of value, including consideration of evidence and expertise, and ways to analyse and evaluate competing claims and grounds for claimsVC2CC8R02 | ways to analyse and evaluate claims and grounds for claims for the qualities of accuracy, precision, depth or breadth when reasoning, and ways to identify what qualities are required in different contextsVC2CC10R02 |
|  | the use of ‘if-then’ thinking to come to a conclusion when reasoning, and simple errors that can be made when using this thinkingVC2CC4R03 | simple reasoning errors including hasty generalisations, false analogies and contradiction, and how reasoning associated with these errors can be improvedVC2CC6R03 | an extended range of reasoning errors including cause and effect fallacies and arguing from ignorance, and how reasoning associated with these errors can be improvedVC2CC8R03 | complex reasoning errors including false dichotomies and appeal to consensus, their significance and how reasoning associated with these errors can be improvedVC2CC10R03 |
|  | the basis for different kinds of criteria, such as desired qualities or given rules; and how criteria are used to help make judgements when reasoningVC2CC4R04 | the use of criteria to support analysis and evaluation when reasoningVC2CC6R04 | when and how criteria are selected to improve clarity and support analysis and evaluation, including of competing claims, when reasoningVC2CC8R04 | when and how criteria are refined to improve clarity and support analysis and evaluation, including of competing claims, when reasoningVC2CC10R04 |
| Strand: Metacognition |
| *Students learn about:* |
| simple general learning strategies including practising, narrating a process, rewording and reflecting on feelings about learningVC2CC2M01 | an extended range of general learning strategies including connecting to prior learning, self-questioning, self-explanation and peer instructionVC2CC4M01 | learning strategies suited to general and specific contexts, including different ways of identifying, expressing and organising key learning, and undertaking spaced practiceVC2CC6M01 | ways to select, use and reflect on general and context-specific learning strategiesVC2CC8M01 | ways to select, monitor and adapt general and context-specific learning strategiesVC2CC10M01 |
| verbal and non-verbal strategies to express and describe thinking processes, including for problem-solvingVC2CC2M02 | the use of thinking processes to facilitate thinking, including for problem-solving, and verbal and non-verbal strategies for representing thinking processesVC2CC4M02 | thinking processes suited to different contexts and when and how to use them, including for problem-solving VC2CC6M02 | broad strengths and limitations of thinking processes in different contexts, including problem-solvingVC2CC8M02 | the importance of critical analysis of thinking processes in different contexts, including for problem-solving, considering factors such as cognitive biases VC2CC10M02 |
| ways to make choices between alternative possibilities and propose a solutionVC2CC2M03 | how to evaluate a proposed solution using given criteriaVC2CC4M03 | the use of criteria to identify and compare proposed solutionsVC2CC6M03 | the development of criteria for evaluating a range of proposed solutions; ways to evaluate and incorporate new knowledge that could affect the final decisionVC2CC8M03 | the development and adaptation of criteria for evaluating the viability and sustainability of proposed solutions in different contextsVC2CC10M03 |