Critical and Creative
Thinking – a selection of classroom resources

Foundation to Level 10

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Introduction

The annotated selection of classroom resources in this document illustrates the kind of resources that can be drawn on when designing teaching and learning activities for Critical and Creative Thinking.

Each resource is aligned to one or more Critical and Creative Thinking strands. The resources can be used as a stimulus for explicit teaching of at least one of the content descriptions within the strand, either directly or with some adaptation. Teachers should carefully check the relevant content descriptions for alignment with the resource and adapt activities as necessary.

These resources may also be used to enrich the learning of knowledge and skills in other curriculum areas, enabling students to go deeper with their understanding of particular learning area contexts. These resources have been aligned to Critical and Creative Thinking content descriptions and teachers should use their own judgment to identify any links to other learning areas.

When designing learning activities the appropriate aspect of the relevant achievement standard should also be taken into account. For support with explicit teaching and assessment, see ‘Introduction to explicitly teaching and assessing the capabilities’ on the [Overview of the capabilities page of the VCAA website](https://www.vcaa.vic.edu.au/curriculum/foundation-10/resources/Pages/OverviewoftheCapabilities.aspx).

**Note:** The listed resources are provided as examples only. Teachers should review the appropriateness of each resource and use their own judgment to select resources and issues that best suit their school and student cohorts.

Overview of Critical and Creative Thinking strands

Questions and Possibilities

The Questions and Possibilities strand provides students with the knowledge and skills to develop effective questions, propose novel ideas, develop original artefacts and make new connections. The Questions and Possibilities strand supports students to develop their imaginative and intuitive capacity, as well as fostering a curious and speculative disposition.

Reasoning

The Reasoning strand provides students with the knowledge and skills to construct, analyse and evaluate ideas and arguments that may be unfamiliar. It underpins other areas of the curriculum in which students are required to gather, consider and evaluate data, evidence and propositions and then form conclusions.

Meta-Cognition

The Meta-Cognition strand provides students with the knowledge and skills to understand, manage and reflect on thinking and learning processes and problem solving. It fosters productive, purposeful and intentional thinking.

Summary of resource alignment to Critical and Creative Thinking strands

Note: Some picture books may be out of print or hard to find. These books may be accessed other ways, such as via read-aloud versions on YouTube.

| **Resource name(s)** | **Resource type(s)** | **Suitable as introductory stimulus** | **Critical and Creative Thinking strand** |
| --- | --- | --- | --- |
| **Questions and Possibilities** | **Reasoning** | **Meta-Cognition**  |
| *The Best Nest* | Picture book | ✓ | ✓ |  |  |
| *Twenty Thinking Tools* | Teacher reference; book  |  | ✓ | ✓ |  |
| *The Very Cranky Bear* | Picture book | ✓ | ✓ | ✓ |  |
| *If…* | Picture book | ✓ | ✓ |  |  |
| ‘How your brain takes good ideas and makes them better’ and ‘How the mind makes new ideas’ | Article and video | ✓ | ✓ |  |  |
| *Jumpstart! Creativity: Games and Activities for Ages 7–14* | Activity book | ✓ | ✓ | ✓ | ✓ |
| ‘Idea generation techniques among creative professionals’ | Teacher reference; academic paper |  | ✓ |  |  |
| ‘In praise of convergent thinking’ | Teacher reference; journal article |  | ✓ | ✓ | ✓ |
| Cool Australia | Online collection of teaching resources  | ✓ | ✓ |  | ✓ |
| Question Formulation Technique (QFT) teaching and learning resources | Online collection of resources | ✓ | ✓ |  |  |
| ‘SCAMPER a creative thinking technique’ | Video | ✓ | ✓ |  |  |
| *The Deductive Detective* | Picture book | ✓ |  | ✓ |  |
| ‘McKinsey for Kids: (Food) waste not, want not’ | Online interactive |  |  | ✓ |  |
| MindMup and Reasons.io | Software tools | ✓ |  | ✓ |  |
| Cranky Uncle | App | ✓ |  | ✓ |  |
| ‘Thou shalt not commit logical fallacies’ and ‘Using fallacies to teach critical thinking’ | Online interactive and article | ✓ |  | ✓ |  |
| ‘Facts are not always more important than opinions: here’s why’ | Teacher reference; article |  |  | ✓ |  |
| *Studies in Critical Thinking: 2nd edition* | Teacher reference; downloadable book with articles and practical tips |  | ✓ | ✓ |  |
| ‘Cognitive biases defined: 7 examples and resources’ | Article and videos |  |  | ✓ | ✓ |
| Source Checker | Online game | ✓ | ✓ | ✓ |  |
| ‘Metacognition and self-regulated learning’ | Teacher reference; guidance report |  |  |  | ✓ |
| ‘Project Zero’s Thinking Routine Toolbox’ | Teaching and learning tools | ✓ | ✓ | ✓ | ✓ |
| ‘d.school Public Library’ and ‘Library of Ambiguity’ | Annotated tools  |  |  |  | ✓ |
| Sprouts  | Video channel |  |  |  | ✓ |
| SOLO Taxonomy | Teacher resources |  |  |  | ✓ |
| *Rosie Revere, Engineer* and *The Most Magnificent Thing* | Picture books | ✓ |  |  | ✓ |
| Maker Challenges | Lesson plans |  |  | ✓ | ✓ |

Selected classroom resources

**Resource name:** *The Best Nest*

**Resource type:** Picture book

**Source:** PD Eastman, 2007, *The Best Nest*, HarperCollins, UK

**About the resource:**

In this story Mr and Mrs Bird seek a new ‘best nest’ to replace the one that Mrs Bird has grown tired of. Teachers can guide students to consider how the reactions of the birds to the situations that they encountered influenced their thinking about which nest was best. Students could go on to consider examples from their own lives where personal reactions have influenced thinking.

**Resource name:** *Twenty Thinking Tools*

**Resource type:** Teacher reference; book

**Source:** Philip Cam, 2006, *Twenty Thinking Tools*, ACER Press

**About the resource:**

This book presents introductory, intermediate and advanced toolkits to support examination of issues and ideas. Each toolkit builds on the one before and explains different ways to strengthen student thinking. The introductory toolkit includes topics such as types of questions, generating suggestions, giving reasons and making distinctions; the intermediate toolkit includes topics such as developing and using criteria, giving counterexamples and making generalisations; and the advanced toolkit includes topics such as how to develop and sort different kinds of questions, deductive reasoning, and making and testing assumptions.

Tools are presented in a way that supports unpacking of a range of content descriptions and general lesson planning, and the progression of the toolkits supports differentiated teaching.

**Resource name:** *The Very Cranky Bear*

**Resource type:** Picture book

**Source:** Nick Bland, 2018, *The Very Cranky Bear*, Scholastic

**About the resource:**

In this story a group of animals try to help a bear who is feeling cranky. Students can be guided to think about the reactions of the zebra, moose and lion, who all guess that the bear might be cranky for reasons that would make them feel cranky, and to consider how this influences their thinking and then compare their reactions with the reaction of the sheep, who listens to what the bear says about feeling cranky. Students can also be guided to identify the conclusion in the argument that each animal is making and the underlying reason.

**Resource name:** *If…*

**Resource type:** Picture book

**Source:**  Sarah Perry, 1995, *If…*, Getty Publications

**About the resource:**

This book has a range of prompts that link two different things with an accompanying illustration, for example, ‘If caterpillars were toothpaste …’. Students could be prompted to think of a practical application inspired by each idea, for example, a toothpaste that could be formulated to better work its way into nooks and crannies as inspired by the wriggling of a caterpillar. They could reflect on how forming links can help to broaden ideas and how this requires managing preconceptions.

**Resource names:** ‘How your brain takes good ideas and makes them better’ and ‘How the mind makes new ideas’

**Resource types:** Article and video

**Sources:**  Anthony Brandt and David Eagleman, 2017, [‘How your brain takes good ideas and makes them better’](https://www.psychologytoday.com/us/blog/the-guest-room/201710/how-your-brain-takes-good-ideas-and-makes-them-better), Psychology Today, 10 October; and Big Think, 2018, [‘How the mind makes new ideas: Spider Goats, Mario Bros, Dick Cheney | David Eagleman | Big Think’](https://www.youtube.com/watch?app=desktop&v=lFpKkrvZfNk%20August%202018), YouTube

**About the resource:**

Anthony Brandt is a composer and professor at Rice University’s Shepherd School of Music and David Eagleman is a neuroscientist and professor at Stanford University. They collaborated to distil three strategies common to the Arts and Sciences for generating and evolving ideas: blending, breaking and bending. Both the article and video explain each strategy with illustrative examples.

These resources can be used to support the unpacking of content descriptions and to support the design of learning activities, for example, to consolidate understanding of the strategies through identification of further examples or to apply and reflect on relevant strategies when problem solving. They could also be linked to well-known ideation techniques such as SCAMPER, to identify the underlying cognitive processes (see the [entry in this document for a video resource that explains how the SCAMPER technique works](#SCAMPER) and for an outline of this technique).

**Resource name:** *Jumpstart! Creativity: Games and Activities for Ages 7–14*

**Resource type:** Activity book

**Source:**  Stephen Bowkett, 2018, *Jumpstart! Creativity: Games and Activities for Ages 7–14*, Routledge

**About the resource:**

This book contains a series of short games and activities covering creative thinking, questioning, problem solving and wordplay, as well as reasoning. Activities are explained to support implementation in the classroom, with many including practical tips and ideas for extension. The games and activities can be used to support explicit unpacking of a range of content descriptions and to consolidate learning before the application of Critical and Creative Thinking knowledge and skills to a learning area context. Some activities can be directly adapted to any learning area context; for example, the ‘What if …?’ circle involves posing a ‘what if …’ scenario and then mapping the implications, from personal to global, noting the logical connections between each. In general, when introducing a new thinking tool, use a simple example that is based on a context familiar to students to introduce the tool, before application to an unfamiliar learning area scenario.

**Resource name:** ‘Idea generation techniques among creative professionals’

**Resource type:** Teacher reference; academic paper

**Source:** Scarlett R Herring, Brett R Jones and Brian P Bailey, 2009, ‘Idea generation techniques among creative professionals’, Proceedings of the 42nd Hawaii International Conference on System Sciences, <<http://orchid.cs.illinois.edu/publications/HICSS-idea-generation-2009.pdf>>

**About the resource:**

This academic paper presents findings of research into idea generation techniques that designers use. It includes some general discussion of factors that influence the capacity to generate ideas and processes for supporting idea generation, and it briefly discusses a range of techniques for generating ideas.

This paper can be used as background when planning learning activities that unpack content descriptions related to introducing effective idea generation techniques in problem-solving contexts and when guiding students to reflect on their application of these techniques.

**Resource name:** ‘In praise of convergent thinking’

**Resource type:** Teacher reference; journal article

**Source:** Arthur Cropley, 2006, ‘In praise of convergent thinking’, *Creativity Research Journal*, 18 (3): 391–404. DOI: [10.1207/s15326934crj1803\_13](http://dx.doi.org/10.1207/s15326934crj1803_13)

**About the resource:**

This journal article discusses the contribution of convergent thinking (deriving the single best answer to a clearly defined question) to creative output. It discusses the nature of convergent thinking and in particular the role of knowledge in creative output; the influence of convergent thinking on mechanisms of divergent thinking (producing multiple alternative answers), such as intuition; and how convergent and divergent thinking work together. It can be used as a background reference to support connecting all three Critical and Creative Thinking curriculum strands together in the context of problem solving.

**Resource name:** Cool Australia

**Resource type:** Online collection of teaching resources

**Source:** [coolaustralia.org](https://www.coolaustralia.org/)

**About the resource:**

Cool Australia is a national website that provides registered users with a range of units of work and single lessons with a sustainability focus. Each resource should be checked for alignment to the Victorian Curriculum F–10 before use. Relevant resources can be used to support the development of knowledge and skills when accompanied by explicit teaching of related content descriptions. Find [activities linked to *Bluey* episodes by searching by theme](https://www.coolaustralia.org/bluey-education-resources/), such as ‘problem solving’.

**Resource name:**Question Formulation Technique (QFT) teaching and learning resources

**Resource type:** Online collection of resources

**Source:** [The Right Question Institute](https://rightquestion.org/education/resources/)

**About the resource:**

The Right Question Institute is a US not-for-profit aimed at developing better questioning skills in citizens. The institute has developed a structured method for guiding students to generate and improve questions called the [Question Formulation Technique, or QFT](https://rightquestion.org/what-is-the-qft-2/), which is a process for generating and refining questions. The institute also provides a range of resources to support facilitators. Create a free account to access resources.

The QFT method can be used to scaffold critical reflection for students as they develop and refine questions in different learning area contexts, and the method could be adapted to suit different levels. Many of the online resources unpack the method and demonstrate its use in primary and secondary settings, which can support lesson planning.

**Resource name:** ‘SCAMPER a creative thinking technique’

**Resource type:**  Video

**Source:**  Amanda Graham, 2013, [‘SCAMPER a creative thinking technique’](https://www.youtube.com/watch?app=desktop&v=G8w0rJhztJ4), YouTube

**About the resource:**

This short video uses thematic illustrations to introduce SCAMPER, a series of ideation strategies: Substitute; Combine; Adapt, Modify, maximise or minimise; Put to other uses; Eliminate; and Reverse or rearrange. SCAMPER can be used to support the unpacking of relevant content descriptions. Different strategies can be focused on in more depth, depending on the level. For example, the Combine strategy involves merging two or more ideas and for Levels 7 and 8 students could be guided to understand how to find appropriate links and patterns between sources and to synthesise information.

**Resource name:** *The Deductive Detective*

**Resource type:** Picture book

**Source:** Brian Rock and Sherry Rogers, 2013, Sylvan Dell Publishing (now Arbordale Publishing)

**About the resource:**

In this story Duck has to solve the crime of who stole one of the cakes from the cake contest. Students could be guided to recognise why Duck is called the deductive detective; set out the arguments for eliminating each suspect, discussing whether the reasoning is logical and the premises are true in each case (that is, if the argument is sound); and consider how the strength of evidence used within the arguments could be evaluated.

**Resource name:** ‘McKinsey for Kids: (Food) waste not, want not’

**Resource type:** Online interactive

**Source:** McKinsey for Kids, 2021, [‘McKinsey for Kids: (Food) waste not, want not’](https://www.mckinsey.com/featured-insights/mckinsey-for-kids/food-waste-not-want-not), McKinsey and Company

**About the resource:**

‘McKinsey for Kids ‘(Food) waste not, want not’ is an interactive that explores the life cycle of food. It demonstrates how students could use reasoning to engage with an apparent inconsistency in the context of a current issue. In this case, teachers could guide students to think about two facts: there is a lot of food waste *and* there is a lot of significant hunger. Teachers could guide students to resolve how both these could be true at the same time.

**Resource names:** MindMup and Reasons.io

**Resource type:** Software tools

**Sources:** MindMup at [Philosophy Mapped](https://maps.simoncullen.org/software) and Reasons.io at Dave Kinead’s [reasons.io](https://reasons.io/learn)

**About the resources:**

MindMup and Reasons.io are open-source argument visualisation software tools. Students can use argument mapping to structure their own arguments or to identify and analyse given arguments from a stimulus text in which arguments are more discursively presented.

MindMup is available on the Philosophy Mapped website, which is maintained by Princeton University academics. The website also contains a basic tutorial and examples. It is aimed at tertiary philosophy students so examples that are suitable for school students may need to be constructed by teachers. Although designed for philosophical arguments, MindMup is suited to constructing and analysing any argument with at least one premise and a conclusion.

Reasons.io was developed by Dave Kinead for the University of Queensland Critical Thinking Project. It includes pre-populated templates and a blank template. It also includes short introductions as to how arguments are constructed, which could be used to introduce students to concepts such as hidden assumptions or different types of premises.

Further information on the use of software as an effective way to structure and analyse arguments can be found in Chapter 10 of *Studies in Critical Thinking: 2nd edition* (see the [entry for this resource](#StudiesInCritical) in this document).

**Resource name:** Cranky Uncle

**Resource type:**  App

**Source:** John Cook’s [Cranky Uncle](https://crankyuncle.com/game/)

**About the resource:**

Scientist John Cook developed this app with the support of George Mason University and Monash University. The app teaches a range of reasoning errors, employing humour and gameplay elements. It uses science-based contexts but it could be used as part of learning activities to teach reasoning errors in general. Exercises are divided into different categories: fake experts, logical fallacies, impossible expectations, cherry picking and conspiracy theories.

**Resource names:** ‘Thou shalt not commit logical fallacies’ and ‘Using fallacies to teach critical thinking’

**Resource types:** Online interactive and article

**Sources:** School of Thought International, [‘Thou shalt not commit logical fallacies’](https://yourlogicalfallacyis.com/), yourlogicalfallacyis.com; and Dave Kinead, 2021, [‘Using fallacies to teach critical thinking’](https://criticalthinking.org.au/using-fallacies-to-teach-critical-thinking/), The Centre for Critical and Creative Thinking

**About the resource:**

The School of Thought International is a not-for-profit that provides some free and some paid resources to support the teaching of reasoning, such as explanations and examples of common logical fallacies and cognitive biases.

The online interactive ‘Thou shalt not commit logical fallacies’ could be used to introduce and discuss a range of selected reasoning errors as part of an investigation of poor reasoning in general. Students could go on to build a folio of their own examples of arguments or points of view that have reasoning weaknesses and be guided to consider how each argument could be strengthened. They could also collect examples that are well argued and reflect on why each is well argued.

The Centre for Critical and Creative Thinking is a consultancy of Australian critical thinking academics, many with school education backgrounds, which provides a range of resources suited to school use. In the article ‘Using fallacies to teach critical thinking’, Dave Kinead provides tips for classroom teachers on how to work with logical fallacies and cautions against merely teaching students about a range of fallacies as a means to understand poor argumentation.

**Resource name:** ‘Facts are not always more important than opinions: here’s why’

**Resource type:**  Teacher reference; article

**Source:** Peter Ellerton, 2017, [‘Facts are not always more important than opinions: here’s why’](https://theconversation.com/facts-are-not-always-more-important-than-opinions-heres-why-76020), The Conversation, 18 April

**About the resource:**

Peter Ellerton is a lecturer in critical thinking at the University of Queensland, with a primary school teaching and science background. This short article discusses the distinction between fact and opinion, as well as the reliability of facts and opinions. It can be used as part of the unpacking of content descriptions to do with settling matters of fact and value, to nuance a basic understanding.

**Resource name:** *Studies in Critical Thinking: 2nd edition*

**Resource type:** Teacher reference; downloadable book with articles and practical tips

**Source:** J Anthony Blair (ed.), 2021, [*Studies in Critical Thinking: 2nd edition*](https://windsor.scholarsportal.info/omp/index.php/wsia/catalog/book/106)*,* Open Monograph Press, Windsor Studies in Argumentation

**About the resource:**

This book is a collaboration between tertiary educators in critical thinking and is aimed at teachers of critical thinking in tertiary and school settings. It begins with a discussion of the concept of critical thinking; Part 2 covers pedagogy and Parts 3 and 4 cover argumentation. There are a range of practical exercises, tips for instructors and theoretical discussions. The book can be downloaded by chapter or as a whole.

This resource can be used to help unpack content descriptions and to stimulate the design of effective learning activities. Some exercises could be used directly in class while others would need adaptation.

**Resource name:** ‘Cognitive biases defined: 7 examples and resources’

**Resource type:** Article and videos

**Source:** Alicia Nortje, 2022, [‘Cognitive biases defined: 7 examples and resources’](https://positivepsychology.com/cognitive-biases/), PositivePsychology.com, 14 February

**About the resource:**

This article provides an overview of categories of cognitive bias, types within each category and examples from different contexts. It also provides advice on overcoming biases and provides commentary on bias modification apps and books. Relevant TED Talks are also listed.

This resource can be used to assist in unpacking content descriptions. Students could go on to consider which biases might be relevant to an issue they are investigating and consider how to identify them in sources and prevent them in their own responses.

**Resource name:** Source Checker

**Resource type:** Online game

**Source:** [ABC Education](https://games.abc.net.au/res/media-literacy/source-checker/index.html)

**About the resource:**

This game is aimed at assisting students to identify sources in a news story and to determine how reliable they are. It includes ‘easy’, ‘harder’ and ‘tricky’ levels and is self-paced with the option to find out more about reliability of sources or to go on and complete quiz-style questions based on short case studies. Errors are annotated to assist in filling gaps in understanding.

This resource can be used to help unpack content descriptions, and students could go on to find and annotate their own news stories with the range of sources and reliability of those sources.

**Resource name:** ‘Metacognition and self-regulated learning’

**Resource type:** Teacher reference; guidance report

**Source:** Evidence for Learning, 2019, [‘Metacognition and self-regulated learning’](https://evidenceforlearning.org.au/guidance-reports/metacognition-and-selfregulated-learning/), Evidence for Learning

**About the resource:**

This guidance report distils evidence about metacognition and self-regulated learning into seven recommendations. Each recommendation and a set of common misconceptions are unpacked in the guidance report, with practical examples, strategies and suggestions for reflection questions for students. The definition of metacognition used in the report relates to the students’ ability to monitor, direct and review their learning. It should be noted that this conception of metacognition maps not only to the Meta-Cognition strand in Critical and Creative Thinking but also to the Development of resilience sub-strand in Personal and Social Capability.

Evidence for Learning has also produced a companion self-assessment guide to support schools to implement strategies for developing metacognition and self-regulated learning.

**Resource name:** ‘Project Zero’s Thinking Routine Toolbox’

**Resource type:** Teaching and learning tools

**Source:** Harvard Graduate School of Education, [‘Project Zero’s Thinking Routine Toolbox’](http://www.pz.harvard.edu/thinking-routines), Harvard Graduate School of Education

**About the resource:**

Project Zero from the Harvard Graduate School of Education provides a wide range of tools that make thinking processes more transparent. Its thinking routines can support development of metacognition when they include explicit teaching about the purpose, strengths and limitations of the process and student reflection on the use of a tool. They can support the development of other strands of the curriculum when linked to explicit teaching of knowledge and skills that underlie the design and use of a thinking routine.

**Resource names:** ‘d.school Public Library’ and ‘Library of Ambiguity’

**Resource type:** Annotated tools

**Sources:** Hasso Plattner Institute of Design at Stanford University, [‘d.school Public Library’](https://dschool.stanford.edu/resources/public-library), and [‘Library of Ambiguity’](https://dschool.stanford.edu/resources/library-of-ambiguity)

**About the resources:**

The Stanford University d.school draws on design methodology to help people develop their creative abilities in general problem-solving contexts. It includes a range of tools and resources, many of which are annotated with notes for the teacher and linked to [eight core abilities](https://dschool.stanford.edu/about/#about-8-core-abilities): navigate ambiguity; learn from others; synthesise information; experiment rapidly; move between concrete and abstract; build and craft intentionally; communicate deliberately; and design your design work.

These tools can support development of metacognition when they include explicit teaching about the purpose, strengths and limitations of the process and student reflection on the use of a tool.

**Resource name:** Sprouts

**Resource type:** Video channel

**Source:** [Sprouts](https://www.youtube.com/c/SproutsVideos/featured) channel, YouTube

**About the resource:**

Sprouts produce a range of short videos covering topics related to metacognition, such as an introduction to design thinking, learning strategies, cognitive biases and techniques such as brainstorming. These videos can be used to help unpack content descriptions and inform the design of learning activities.

**Resource name:** SOLO Taxonomy

**Resource type:** Teacher resources

**Source:** Pam Hook, [HookED](https://pamhook.com)

**About the resource:**

SOLO taxonomy is typically used by teachers to develop assessment rubrics. Pam Hook has augmented this approach with advice on how students can use SOLO as a reflection tool. This can develop metacognition when explicitly taught as a strategy to support learner agency and when opportunity is provided for students to reflect on the strengths and limitations of the taxonomy.

**Resource names:** *Rosie Revere, Engineer* and *The Most Magnificent Thing*

**Resource type:** Picture books

**Sources:** Andrea Beaty and David Roberts, 2013 *Rosie Revere, Engineer*, Abrams Books; andAshley Spires, 2014, *The Most Magnificent Thing,* Kids Can Press

**About the resources:**

Both these picture books focus on learning from mistakes and accepting mistakes as a normal part of problem solving; they demonstrate how setbacks can provide opportunities and inspire problem solving. Students could be guided to consider how each story links to a problem-solving process and dispositions that enable problem solving. Students could also be scaffolded to consider how learning from mistakes is a learning strategy in general.

**Resource name:** Maker Challenges

**Resource type:** Lesson plans

**Source:** [TeachEngineering](https://www.teachengineering.org/curriculum/browse?collection=MakerChallenges), University of Colorado

**About the resource:**

These challenges are aimed at primary and secondary students and are linked to a problem-solving process. They demonstrate how lessons can be constructed to have a problem-solving focus. They can be used to provide an opportunity to develop metacognition when there is explicit teaching and reflection on the process used. Critically examining the result of the process can provide an opportunity to link to the Reasoning strand.