iSTEM – cyber security sample assessment package

Communication task

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# Advice to teachers

**Teacher note:** the examples in this package are provided so that schools and teachers may choose relevant information and adjust for their contexts and their school-based practices. Relevant information should be transferred into the school’s assessment task template.

The Cyber security specialised topic focuses on developing student understanding and skills to increase cyber security awareness and prepare them to respond to cyber security challenges. A cyber security challenge faced by all organisations is successfully training staff to perform business operations which minimise risks of a cyber breach and maintain security of systems and data. This task focuses on analysing human behaviour associated with these activities and creating evidence-based resources to guide and support staff to perform activities that minimise the risk of a cyber breach.

## Task

Students apply a design thinking process to define and identify the training needed to improve cyber security practices. They plan and conduct research into cyber security problems and their causes like human behaviour, impacts and possible solutions. Examples of behaviours and practices to develop through training are:

* using strong, unique passwords
* enabling multi-factor authentication (MFA)
* recognising and reporting phishing emails
* updating your device’s operating and application software.

Variations exist within these 4 examples to enable an increased range of options for students to be assigned (if required).

Equipped with research knowledge, students analyse industry practices and brainstorm strategies to encourage positive changes in attitude and behaviour towards cyber security practices. They identify current best practice(s) and design the structure, layout and delivery of content (or training) required based on data-informed instruction techniques. Students create their own quick reference guide (QRG). They collect critical friend feedback on their QRG from 2 of their peers to ensure instructions are clear, workable and easy to understand.

Students present their final version to the class. An extension option could be developing and delivering a training session.

## Evidence of learning

Students will demonstrate their understanding of cyber security knowledge and skills. They will demonstrate this through:

* researching an identified need or strategy to promote good cyber hygiene practices and research the human behaviour associated with these practices
* developing quick reference guides (or training resources) for staff on how to perform the selected activity
* presenting the guide (or training session) to the class or another audience
* evaluating their guide and/or presentation based on sample user feedback.

## Assessment type

This task is intended to directly contribute to the final course assessment, through formative (when developing student skills and knowledge), or summative assessments (when determining student achievement towards outcomes for this learning sequence).

Formative assessment is an active learning process that enables teachers to continuously gather evidence of learning and respond to student learning with the goal of improving student achievement (Cowie and Bell 2010). It is an interactive process that monitors student learning to provide ongoing feedback that can be used by teachers to improve their teaching and by students to improve their understanding.

## Duration and scheduling

Supporting practical activities for this assessment task are suggested in the [cyber security learning sequence](https://education.nsw.gov.au/content/dam/main-education/teaching-and-learning/curriculum/elective-courses/media/documents/istem-s5-ls-stem-cyber-security.DOCX) and can be adapted to suit the class context.

Assessment advice and due dates should be informed by school assessment procedures and assessment schedules.

## Weighting

Weightings are a school-based decision.

## Inclusion and wellbeing

This assessment package has been prepared by the NSW Department of Education. It has been developed as a model for teachers, to assist in the development of an assessment task that can be contextualised to an individual school’s needs.

Plan assessment tasks that are inclusive and accommodate the needs of all students in your classroom. Some students may require more specific adjustments and enhancements to allow them to participate on the same basis. The iSTEM [learning sequences](https://education.nsw.gov.au/teaching-and-learning/curriculum/department-approved-courses/istem#/asset4) have sample adjustments and enhancements. For further advice, see [Inclusive practice resources for secondary school](https://education.nsw.gov.au/campaigns/inclusive-practice-hub/secondary-school).

Outcomes referred to in this document are from the [iSTEM course document](https://education.nsw.gov.au/teaching-and-learning/curriculum/department-approved-courses/istem#/asset2) © NSW Department of Education for and on behalf of the Crown in the State of New South Wales, 2021.

# Advice to students

Teachers should include the details of due dates, weighting, and submission guidelines as per their school practice.

## Task details

**Type of task:** communication

**Format:** written guide and presentation

**Weighting:** school-based decision

**Submission:** students design and submit an individual quick reference guide (QRG) and complete a presentation on the guide’s key content.

**Description**: in this task you are assuming the role of an employee in the <insert name> organisation’s cyber security team. Read the scenario to see what your work assignment is for this assessment.

**Scenario:** recent assessment of the organisation’s cyber posture has revealed poor cyber hygiene behaviour among staff at alarming levels. As part of the cyber awareness and uplift team, you are tasked with creating reference guides (or training) to educate staff on cyber safe practices. Areas of concern have been highlighted with a need to develop a QRG in one of the areas listed below. Other data-informed options may be proposed as suitable alternatives. Focusing on one area from this list, research and analyse human behaviour which increases cyber risks and discuss issues and barriers to changing attitudes, behaviour and work practices.

Design and produce a QRG on how to do one of the following:

* create a strong password
* configure multi-factor authentication (MFA) – also known as two-factor authentication
* configure device to receive software updates
* recognise and report phishing emails.

Collect and review critical friend feedback to ensure instructions are clear and workable. Make appropriate changes to instructions as needed. In this task you must provide constructive feedback on a fellow student’s QRG.

Present the finished guide to the class, highlighting key points and providing persuasive arguments to change work practices.

**Outcomes assessed:**

* **ST5-1** designs and develops creative, innovative, and enterprising solutions to a wide range of STEM-based problems
* **ST5-4** works independently and collaboratively to produce practical solutions to real-world scenarios
* **ST5-5** analyses a range of contexts and applies STEM principles and processes
* **ST5-8** uses a range of techniques and technologies, to communicate design solutions and technical information for a range of audiences
* **ST5-9** collects, organises, and interprets data sets, using appropriate mathematical and statistical methods to inform and evaluate design decisions

[iSTEM course document](https://education.nsw.gov.au/teaching-and-learning/curriculum/department-approved-courses/istem#/asset2) © NSW Department of Education for and on behalf of the Crown in the State of New South Wales, 2021.

## Creating your quick reference guide (QRG)

**You will need to complete the following:**

* Research selected improvement strategy.
* Analyse the impacts of both exemplar and incorrect human behaviour associated with selected cyber-related work practice.
* Design the quick reference guide (QRG).
* Create the QRG.
* Collect and review critical friend feedback to ensure instructions are clear and workable.
* Present finished QRG to class.

**Things to check:**

* Instructions are complete and concise to carry out processes.
* Instructions align with industry practice.
* Test and confirm the instructions work and that there are no critical steps missing.
* QRG has styling consistent with industry practice.
* Guide document complies with accessibility standards.
* Grammar and spelling is correct.
* Critical friends have tested and confirmed the instructions work.

**What to submit:**

* QRG in Word or PDF format
* Documentation demonstrating
* a list of relevant research undertaken (can be placed at the end of the QRG or in separate documentation)
* an analysis of human behaviour leading to unsafe practices
* justification for design of the QRG (or training)
* a review of critical friend feedback applying changes as appropriate.

## Providing your critical friend feedback

**In industry, it is common practice to seek feedback from a subject matter expert or a colleague.** **In this task you will provide feedback on a fellow student’s QRG. It is important to be respectful of the work of others and provide feedback that is constructive.** Feedback should take the form of comments such as ‘have you considered …’, or ‘I like … but you might want to …’. Feedback should not involve marking or assigning a grade to your ‘colleague’s’ QRG.

**You will need to complete the following:**

* Select a peer’s QRG document to provide feedback on.
* Follow the instructions on the QRG.
* Consider the instructions and how you interpreted the instructions
* Provide positive comments for parts you found easier to follow.
* Provide suggestions for improvement for sections you found challenging to follow.

**Things to check:**

* Instructions to carry out processes are complete and concise.
* Instructions align with industry practice.
* Test and confirm the instructions work and that there are no critical steps missing.

**What to submit:**

* Your constructive feedback is provided to your peer who created the QRG and a copy of your feedback is to be submitted with your task. Comments can either be
* added to the QRG Word document using the comments feature by right-clicking on a section of text and selecting **New Comment**
* annotated on a printed copy.

## Creating your presentation

**You will need to complete the following:**

* Create a presentation that demonstrates how to access the QRG and features the essential content of the guide.

**Things to check:**

* Presentation covers essential content related to changing human behaviour which causes security vulnerabilities
* Presentation uses persuasive arguments for adopting new practices
* Presentation aligns with industry practice
* Maximum duration of presentation, as set by the teacher

**What to submit:**

* PowerPoint or PDF document

# Marking rubric

**Note:** the criteria and outcomes presented in this table are not mandatory for assessing the task. Teachers are encouraged to select or adjust criteria based on their students’ needs and the assessment and reporting requirements of their school.

Table 1 – marking rubric

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Criteria | A | B | C | D | E |
| Research of background information  ST5-5 | Synthesises sufficient, credible, relevant research and/or industry ‘best practice’ from a range of sources and explicitly relates synthesis to the problem area.  Clearly and compellingly articulates why this research is essential to influencing positive changes in attitudes and behaviour. | Summarises credible, relevant research from a range of sources. Identifies and describes previous learning in the problem area.  Discusses why this research is essential to influencing changes towards more secure cyber work practices. | Presents sufficient, credible, relevant research from a range of sources.  Explains why this research is relevant and/or important. | Presents relevant research from a range of sources.  Describes the research. | Presents information based on opinion or unknown sources. |
| Analysis of process and human behaviour  ST5-4, ST5-8 | Demonstrates high degree of critical thinking with insightful analysis of impacts of both exemplar and incorrect human behaviour associated with selected cyber-related work practice.  Discusses issues and barriers to changing attitudes, behaviour and work practices in this context. | Demonstrates considerable critical thinking with logical analysis of the impacts of human behaviour associated with selected cyber-related work practice.  Describes barriers/blockers to changing work practices in this context. | Demonstrates critical thinking with analysis of human behaviour associated with selected cyber-related work practice.  Identifies impact of making incorrect decisions in this context. | Describes typical human behaviour associated with selected cyber-related work practice. | Identifies typical human behaviour associated with selected cyber-related work practice. |
| Organisation and structure of guide  ST5-4, ST5-8 | Logical sequence of information creatively presented with judiciously curated screenshots and images. | Logical sequence of information presented with appropriately curated screenshots and images. | Logical sequence of information with appropriate screenshots and/or images included. | Guide is organised with some structure but not all required content is addressed. | Limited sequencing of information and ideas.  Content is disorganised and lacks coherence. |
| Clarity of instructions  ST5-4, ST5-8 | Clear and precise steps documenting process according to accepted industry practice.  Content is clear, coherent, and free of grammatical errors and spelling mistakes.  Language choice is appropriate to the audience.  Technical terms used where necessary. Unknown terms/concepts explained in clear and accessible language.  Instructions supported with explanations. | Detailed steps documenting process according to accepted industry practice.  Content is clear and free of grammatical errors and spelling mistakes.  Language choice is appropriate to the audience.  Technical terms used where necessary. Unknown terms/concepts explained in clear and accessible language. | Complete steps provided for process according to accepted industry practice.  Essentially free of grammatical errors and spelling mistakes.  Language choice is appropriate to the audience.  Definitions of technical terms given. | Insufficient detail in some steps or missing some steps required to perform cyber-related work process.  Grammatical errors and spelling mistakes evident.  Some concepts not explained, or knowledge is assumed. | Insufficient detail in all steps or missing steps required to perform cyber-related work process. |
| Screenshots and additional images/graphics  ST5-4, ST5-8 | Annotated screenshots are clear and legible.  Additional images are purposefully included to support instruction, build context and persuade the reader.  Image citations provided.  Image captions convey relevant information. | Annotated screenshots are clear and legible.  Additional images are purposefully included to support instruction.  Image citations provided.  Captions are used for all images. | Annotated screenshots are clear and legible.  Additional images are relevant to the context of QRG document topic.  Image citations provided.  Captions are used for most images. | Uses screenshot(s) relevant to performing cyber-related work process. | Provides a screenshot. |
| Layout and style guide  ST5-4, ST5-8 | Layout of text and images is consistent with the order of steps required to perform process and enhances readability of document.  Page numbering, headings and styles used to provide structure.  Layout demonstrates creativity with sophisticated desktop publishing principles. | Layout of text and images is consistent with the order of steps required to perform process and enhances readability of document.  Page numbering, headings and styles used to provide structure.  Layout demonstrates desktop publishing principles. | Layout of text and images is consistent with the order of steps required to perform process.  Selected styles appropriate for business QRG document. | QRG document contains text and images. | Simple layout and one image are provided. |
| Document accessibility  ST5-4, ST5-8 | QRG document complies with all accessibility standards, including:   * font sizes * alt text for images * good colour contrast used * properly formatted tables (if table required). | QRG document complies with most accessibility standards, for example:   * font sizes * alt text for images * good colour contrast used. | QRG document complies with a range of accessibility standards, for example:   * font sizes * alt text for images. | QRG document complies with some accessibility standards, for example alt text for some images. | QRG document uses default typeface and font size for body text. |
| Presentation (content)  ST5-8 | Logical sequence of information creatively presented with appropriate images and screenshots.  Content persuasively argues a link between identified need (context) and using the QRG to develop safer practices. | Logical sequence of information presented with appropriate images and screenshots.  Content confirms a link between identified need (context) and using the QRG to develop safer practices. | Logical sequence of information with some images and/or screenshots from QRG included.  Presentation content establishes a link between identified need (context) and using the QRG to develop safer practices. | Sequence of information is not evident, and some content (speaking) points may be incomplete. | Relevance to QRG document is unclear. |
| Presentation (delivery)  ST5-8 | Creative and engaging presentation concisely highlights the essential QRG content.  Compelling and persuasive delivery by presenter.  Where applicable, posture, gesture, eye contact and vocal expressiveness used to great effect. | Presentation systematically and concisely highlights the essential QRG content.  Confident delivery by presenter. | Presentation comprehensively covers QRG content. | Presentation follows the required format. | A presentation is delivered but does not follow the required format. |
| Critical friend (peer) feedback provided  ST5-4 | Feedback for peer provided and represents deep critical thinking.  Feedback provided is positive, constructive, accurate and actionable. | Feedback for peer provided.  Feedback provided is positive, constructive, accurate or actionable. | Feedback for peer provided.  Feedback provided is positive. | Minimal feedback for peer evidenced. | Feedback for peer not present. |
| Critical friend (peer) feedback collected  ST5-9 | Evidence of feedback collected, resulting in appropriate remediation.  Demonstrates actions to confirm amendments resolved identified issue(s). | Evidence of feedback collected, resulting in appropriate remediation. | Evidence of feedback collected from at least 2 critical friends resulting in appropriate remediation. | Evidence of feedback collected from at least one critical friend. Some remediation evident. | Minimal feedback obtained. No remediation evident. |

# Additional information

The information below can be used to support teachers when using this assessment package for iSTEM.

## Rationale

Australian businesses competing in a global economy will need more employees trained in science, technology, engineering, and mathematics (STEM). Research indicates that 75% of the fastest growing occupations require STEM skills. Global accounting firm PwC (formerly known as PricewaterhouseCoopers) produced a report titled ‘[A smart move](https://www.pwc.com.au/publications/a-smart-move.html)’ where it found that shifting just 1% of the Australian workforce into STEM roles would add $57.4 billion to the Gross Domestic Product (GDP) (net present value over 20 years).

iSTEM is a student-centred Stage 5 elective course that delivers science, technology, engineering, and mathematics education in an interdisciplinary, innovative, and integrated fashion. It was developed in direct response to industry’s urgent demand for young people skilled in science, technology, engineering, and mathematics.

The course was developed in collaboration with, and is supported by industry, business, government, and universities, ensuring that students develop future-focused STEM skills. The course has a number of specialised topics, many of which are aligned with NSW State Government priority industries, identified in the [NSW Industry Development Framework](https://www.investment.nsw.gov.au/living-working-and-business/nsw-industry-development-framework/).

iSTEM develops enabling skills and knowledge that increasingly underpin many professions and trades, and the skills of a technologically enabled workforce. It provides students with learning opportunities to develop knowledge and skills to use the most up-to-date technologies including additive manufacturing (3D printing), laser cutters, augmented and virtual reality, drones, smart robotics and automation systems, Artificial Intelligence (AI) and a range of digital systems.

Students gain and apply knowledge, deepen their understanding, and develop collaborative, creative and critical thinking skills within authentic, real-world contexts. The course uses inquiry, problem, and project-based learning approaches to solve problems and produce practical solutions utilising engineering design processes.

iSTEM is aligned to the concept of ‘[Industry 4.0](https://www.weforum.org/agenda/2019/01/why-companies-should-strive-for-industry-4-0/)’ which refers to a new and emerging phase in the industrial revolution that heavily focuses on interconnectivity, automation, machine learning and real-time data.

iSTEM has been developed to meet the goals of National Federation Reform Council (NFRC) Education Council’s [National STEM School Education Strategy (2016-2026)](https://www.education.gov.au/education-ministers-meeting/resources/national-stem-school-education-strategy), and supports the NSW Government’s [NSW Industry Development Framework](https://www.investment.nsw.gov.au/living-working-and-business/nsw-industry-development-framework/), the NSW Department of Education’s [Rural and Remote Education Strategy (2021-2024)](https://education.nsw.gov.au/about-us/strategies-and-reports/rural-and-remote-education-strategy-2021-24) and the [High Potential and Gifted Education Policy](https://education.nsw.gov.au/policy-library/policies/pd-2004-0051).

## Aim

The aim of the course is to engage and encourage student interest and skills in STEM, appreciate the scope, impact and pathways into STEM careers and learn how to work collaboratively, entrepreneurially, and innovatively to solve real-world problems.

## Purpose and audience

This assessment package provides a range of assessment strategies and supplementary material that can be used to support student achievement in the task outlined. This resource is for teachers when creating a program of assessment for the iSTEM course.

## When and how to use this document

Use the assessment package in the context that best supports your school context.

## 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/560), [Kahoot](https://kahoot.com/), [Socrative](https://www.socrative.com/), 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/583).

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 update 2020](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/enhanced-teaching-and-learning-cycle).
* **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, [Curriculum planning for every student in every classroom](https://education.nsw.gov.au/teaching-and-learning/curriculum/planning-programming-and-assessing-k-12) 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).
* **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 helps 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](mailto: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 Standards for Teachers](https://educationstandards.nsw.edu.au/wps/portal/nesa/teacher-accreditation/meeting-requirements/the-standards/proficient-teacher) 5.1.2, 5.5.2.

This resource has been designed to support schools with successful implementation of new curriculum, specifically the NSW Department of Education approved elective course, iSTEM © 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**: iSTEM

**Course outcomes**: ST5-1, ST5-4, ST5-5, ST5-8, ST5-9

**Author**: Curriculum Secondary Learners

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

**Resource**: Assessment resource

**Related resources**: further resources to support iSTEM can be found on the [Department approved elective courses](https://education.nsw.gov.au/teaching-and-learning/curriculum/department-approved-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.

**Consulted with**: Aboriginal Outcomes and Partnerships, Inclusion and Wellbeing, and EAL/D.

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

**Creation date**: 8 November 2023

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**Evidence base**:

The range of assessment strategies outlined in the advice encourages ‘a variety of assessment methods each lesson to check for students’ understanding and inform what should be taught next’ (CESE 2020a:22). The assessment strategies outlined are student-centred, providing ‘students with opportunities to reflect on their progress to inform future learning goals’ (CESE 2020a:22).

The assessment strategies outlined provide teachers with important information about whether students learned what was intended. Wiliam (2013) claims ‘the term formative should apply not to the assessment but to the function that the evidence generated by the assessment actually serves’.

# References

AITSL (Australian Institute for Teaching and School Leadership (2017) ‘[Feedback Factsheet](https://www.aitsl.edu.au/teach/improve-practice/feedback#:~:text=FEEDBACK-,Factsheet,-A%20quick%20guide)’, AITSL, accessed 25 October 2023.

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