# Stage 5 Computing Technology 7-10 (100 hours): Sample assessment schedule



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## Rationale

All NSW public schools need to plan curriculum and develop teaching programs consistent with the Education Act 1990 (NSW) and the NSW Education Standards Authority (NESA) syllabuses and credentialing requirements.

Developing an assessment schedule may assist schools to:

* promote high expectations for student learning
* identify opportunities for explicit teaching
* create opportunities for students to receive feedback on their learning
* systematically plan for and undertake assessment
* collaborate with other teachers to plan for quality teaching and learning.

This resource has been developed to assist teachers in NSW Department of Education schools to create learning that is contextualised to their classroom. It can be used as a basis for the teacher’s own program, assessment, or scope and sequence, or be used as an example of how the curriculum could be implemented. The resource has suggested timeframes that may need to be adjusted by the teacher to meet the needs of their students.

## Stage 5 Computing Technology 7-10 – Assessment schedule

### Year 9

Table 1 – Computing Technology 100-hour assessment schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Task | Outcomes | Date | Weighting (%) |
| 1 | **Enterprise Information Systems:** Research analysing data careers task | CT5-EVL-01, CT5-COM-01. | Term 1, Week 10 | 15 |
| 2 | **Enterprise Information Systems:** Analysing data project | CT5-DPM-01, CT5-DAT-01, CT5-COM-01, CT5-THI-01, CT5-DAT-02. | Term 2, Week 8 | 35 |
| 3 | **Software Development:**Mechatronic and automated systems research task | CT5-EVL-01, CT5-THI-01. | Term 3, Week 8 | 20 |
| 4 | **Software Development:**Mechatronic and automated systems project - model and documentation | CT5-DPM-01, CT5-COL-01, CT5-OPL-01, CT5-THI-01. | Term 4, Week 8 | 30 |

### Reporting outcomes

#### Semester 1

* **CT5-DPM-01** applies iterative processes to define problems and plan, design, develop and evaluate computing solutions
* **CT5-EVL-01** understands how innovation, enterprise and automation have inspired the evolution of computing technology
* **CT5-DAT-01** explains how data is stored, transmitted and secured in digital systems and how information is communicated in a range of contexts
* **CT5-COM-01** communicates ideas, processes and solutions using appropriate media
* **CT5-THI-01** applies computational, design and systems thinking to the development of computing solutions
* **CT5-DAT-02** acquires, represents, analyses and visualises simple and structured data

#### Semester 2

* **CT5-DPM-01** applies iterative processes to define problems and plan, design, develop and evaluate computing solutions
* **CT5-COL-01** manages, documents and explains individual and collaborative work practices
* **CT5-EVL-01** understands how innovation, enterprise and automation have inspired the evolution of computing technology
* **CT5-OPL-01** designs, produces and evaluates algorithms and implements them in a general-purpose and/or object-oriented programming language
* **CT5-THI-01** applies computational, design and systems thinking to the development of computing solutions

Outcomes and other elements of syllabus references in this document are from the [Computing Technology 7-10 Syllabus](https://curriculum.nsw.edu.au/syllabuses/computing-technology-7-10-2022) © 2022 NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales, 2022.

## Additional information

For additional support or advice, contact the TAS (Technological and Applied Studies) curriculum team by emailing TAS@det.nsw.edu.au.

### Further implementation support

Curriculum design and implementation is a dynamic and contextually-specific process. The department is committed to supporting teachers to 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 sample program of learning.

When establishing an assessment schedule, consider how student achievement will be evidenced and determined. NESA advice on [Determining Stage 5 grades](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/understanding-the-curriculum/awarding-grades/advice-stage-5/determining/%21ut/p/z1/pZHNDoIwEIQfqdtf8FgUWyhJQSFiL4aTaaLowfj8EuIFoxXj3Db5Zic7ixxqkeu7uz92N3_pu9Mw7504sEwDUCBFLMgKKkY1T9WCbhVHuxEgEgusGTYQxRhkzZjha8DKcOT-8ENGf_RbNfotFiSPiG1m5sMHSZjnDwAuvH6H3DRC1XIJMjFFWkpK4lK8AlYkEcica1vaDakMfQKhH4SAseQp8KbFb3dcz82gFnzmswdOi3XW/#Making-an-onbalance-professional-judgement) can be used as part of this planning process.

### The teaching and learning cycle

Planning learning experiences in a program of learning is complex. Rosenshine (2012:14) indicates that ‘teaching in small steps and then guiding student practice represents an appropriate way of dealing with the limitation of our working memory’. Explicit and targeted lesson sequences that activate prior knowledge provides opportunity for students to experience high rates of success and master difficult concepts with guidance and support. It is important to note that this cycle is recursive, and a range of iterations will be present throughout a program.

Figure 1 – Teaching and learning cycle



### Formative assessment and evidence of learning

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.

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

Wiliam (2013:15) suggests ‘The term formative should apply not to the assessment but to the function that the evidence generated by the assessment actually serves.’ This concept further supports the practice of gathering ongoing evidence of learning and adjusting teaching to support learning. Ongoing formative assessment can be considered ‘checkpoints’ within a learning sequence or unit. Strategies to elicit evidence of learning allow teachers to determine the next steps in learning and assists them in evaluating the impact of teaching and learning activities. Strategies that can be used 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.

Tracking ongoing evidence of learning through formative assessment provides opportunity for teachers to understand if students have mastered their learning, moving it into long term memory, or if they have developed misconceptions (Rosenshine 2012).

### Differentiation and adjustments

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

Differentiated learning should be enabled throughout the assessment process. 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). Additionally, refer to [Collaborative curriculum planning](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/diversity-in-learning/special-education/collaborative-curriculum-planning) when determining the most appropriate adjustments for students with a disability.

## Support and alignment

**Resource evaluation and support:** 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 TAS curriculum team by emailing TAS@det.nsw.edu.au.

**Alignment to system priorities and/or needs:** [School Excellence Policy](https://education.nsw.gov.au/policy-library/policies/pd-2016-0468), [School Success Model](https://education.nsw.gov.au/public-schools/school-success-model/school-success-model-explained)

**Alignment to the School Excellence Framework:** This resource supports the [School Excellence Framework](https://education.nsw.gov.au/teaching-and-learning/school-excellence-and-accountability/sef-evidence-guide/resources/about-sef) elements of curriculum (curriculum provision, teaching and learning programs) and effective classroom practice (lesson planning).

**Alignment to Australian Professional Teaching Standards:** This resource supports teachers to address [Australian Professional Teaching Standards](https://educationstandards.nsw.edu.au/wps/portal/nesa/teacher-accreditation/meeting-requirements/the-standards/proficient-teacher) 2.2.2, 3.2.2.

**Consulted with:** Curriculum and Reform

**NSW syllabus:** Computing Technology 7-10

**Syllabus outcomes:** CT5-DPM-01, CT5-COL-01, CT5-EVL-01, CT5-DAT-01, CT5-COM-01, CT5-OPL-01, CT5-THI-01, CT5-DAT-02.

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**Resource:** Assessment schedule

**Related resources:** Further resources to support Stage 5 TAS can be found on the [TAS curriculum page](https://education.nsw.gov.au/teaching-and-learning/curriculum/tas).

**Professional learning:** Relevant professional learning is available through the [TAS statewide staffroom](https://education.nsw.gov.au/teaching-and-learning/curriculum/statewide-staffrooms).

**Universal Design for Learning:** [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.

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## Evidence base

These sources have been consulted when developing this resource.

[NSW Computing Technology 7-10 Syllabus](https://curriculum.nsw.edu.au/syllabuses/computing-technology-7-10-2022) © 2022 NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales.

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