Tools for review

Technology (mandatory)

- tools for reviewing teaching and assessment plans, units of work and assessment tasks in this Stage 4 technology subject

- key resources and specific policy links

TECHNOLOGY (MANDATORY) YEARS 7-8 SYLLABUS

OVERVIEW
The Technology (Mandatory) Years 7-8 course enables students to develop a way of thinking and doing to create quality solutions to everyday problems, opportunities and needs. Students work through a design process to develop and realise ideas, manage resources and processes, and evaluate technology and design including social and environmental consequences. The Technology (Mandatory) Years 7-8 course builds on skills and understandings developed in primary school in the K-6 Science and Technology syllabus.

TEACHING AND ASSESSMENT PROGRAM

Does the teaching program (including course plan and units of work):
- demonstrate how all syllabus requirements are met? (syllabus page 14)
    - minimum of four and a maximum of eight design projects over the course
    - each design project requires student to develop a quality solution and a design folio which documents the design process
    - minimum of one and a maximum of three design projects from each area of study. (the area of study sets the context for the design project)
    - each design specialisation can only be studied once
    - minimum of six technologies must be covered by the end of the course. (the technology-specific content outlines the learning regarding the materials, tools and techniques that students will be working with in the design projects)
    - design-related content to be integrated throughout each design project
    - 200 hours course time.
- focus on the deep and significant skills and understandings of the course?
- recognise and build on student interests and prior learning?
- have units of work that are based on design projects involving designing and producing quality solutions to meet authentic needs?
- incorporate design tasks and related learning activities that will be significant, engaging and challenging to students and allow for student negotiation and self directed learning?
- allocate the majority of course time to practical work including exploring and defining tasks, generating, developing and testing ideas and producing solutions
- demonstrate a logical flow of relevant learning and ideas within each unit and from unit to unit?
- reflect the available school resources (staff expertise, facilities, equipment, organisational structure)?
- demonstrate a progression of student learning over the course towards more sophisticated, deeper understandings and skills?
- identify appropriate assessment opportunities for students to demonstrate the skills and conceptual understandings that are significant in the course? (assessment will occur throughout the course and address learning related to both the design process and the final product or solution).

Does the assessment program/plan/scheme for the course:
- outline the assessment tasks to be used in each reporting period and directly link to school reporting requirements?
- use a balanced range of assessment strategies that reflect the most significant learning in the syllabus?
- specify the targeted syllabus outcomes/content?
- include a timeframe?
- demonstrate student progression over the course?
- facilitate consistent teacher judgement across the year
- appear to be manageable for students and teachers?
- addresses the school assessment and reporting policy and supports the allocation of course performance descriptors for the School Certificate?

Does each assessment task:
- focus on specific syllabus outcomes and content?
- focus on depth of understanding and skill of a manageable number of key concepts?
- assess knowledge and skills that students have had an opportunity to learn?
- provide students with clear expectations about requirements?
- include explicit assessment criteria that identify the features of successful student work?
- allow students to demonstrate achievement at each level of performance?
- allow for meaningful feedback to be provided to the student?

TEACHING PRACTICE

In an effective Technology Mandatory classroom the following features may be evident:

Students
- each student will be engaged in their project work and may be working on different aspects of their project at different times to other students
- students will be asking for regular feedback from peers and teachers and at times will be having conversations about the project directions and decisions
- students will be applying safe work practices to all practical activities
- students may be moving around the classroom as they get resources, move to different activities or seek feedback from the teacher
- mistakes may be made as students test new ideas and evaluate how these learnings can be applied to design projects
- students are responsible for their own work areas and manage their time to leave the room ready for the next class.

Teachers
- the teacher can clearly articulate what they want the students to learn and why this learning matters
- the teacher can identify the relationship between the lesson and the teaching program and justify any variations to the program
- the teacher is aware of what students know and can do, how student learning is progressing and adjust teaching in relation to this understanding
- the teacher can justify their choice of learning activities in relation to the needs and interests of their students and the programmed learning
- the teacher uses a variety of senses to monitor the classroom and to inform their practice including the look, sounds and smells etc of the classroom
- the teacher assesses risks in an ongoing manner and if a particular student is identified as unsafe then immediately takes action to change or modify the activity for that student
- the teacher is aware of and provides feedback to students about their progress in the design project. the teacher allows some student direction of ideas and decisions and uses questioning to challenge and identify issues that the student may need to consider
- the teacher may be instructing individual students, small groups or the whole class or may be circulating about the room observing and interacting with students as they work.

Learning environment
- the classroom has available resources such as materials, chemicals, equipment and information that are appropriate to the project
- equipment, materials and or equipment that may present hazards has been risk assessed and relevant DET policy and guidance advice followed
- the relationship in the classroom between teacher and students is productive and the teacher promotes constructive relationships and feedback between students about their project work.

REFERENCES

- **Board of Studies advice:**
  Syllabus and support document, assessment advice
  http://www.boardofstudies.nsw.edu.au/syllabus_sc/#techdraw
  Assessment Resource Centre
  http://arc.boardofstudies.nsw.edu.au/go/7-8/tech/

- **Curriculum K-12 Directorate programming and assessment advice:**
  Programming tools and templates, sample course plans, units of work, assessment plans, assessment tasks and teaching ideas
  http://www.curriculumsupport.education.nsw.gov.au/secondary/technology/7_10/technology/index.htm

DET POLICIES/GUIDELINES

- Teaching and assessment programs and practice should reflect relevant DET policies available at:
  https://detwww.det.nsw.edu.au/policiesintra/atoz/search.do?level=
- Specific policies and related support materials to note include *Occupational health and safety* policy, *Chemical safety in Schools* and *Animal Welfare guidelines*.

Checklist of course requirements

Areas of Study

Provide the situation or context for each design project.

Minimum of one **and** maximum of three **design projects from each** area of study.

A design specialisation can only be studied once.

Built Environments The focus of this area is on space, place and use.	**Products** The focus of this unit is on objects, systems and artifacts.	Information and Communications **The focus of this area is on various types of data and information for the purposes of conveying a message.**
Design Specialisation • Architectural Design • Environmental Design • Interior Design • Landscape Design • Structural Design	Design Specialisation • Accessories Design • Agricultural Product Design • Fashion Design • Food Design • Industrial Design • Jewellery Design	Design Specialisation • Communication Systems Design • Information Systems Design • Promotional Design • Software Design • Digital Media Design

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Minimum of four and **maximum of eight** design projects **over the course.**

Design Projects

For each design project students will develop a quality solution and a design folio that documents the application of a design process and the specific technologies used in this process.

Essential Content - Integrated into design projects

Design–related content Design related content assists students to understand the application of design processes in the completion of design projects. It must be included in all design projects.	*Technologies–specific content* **All** content from a minimum of 6 technologies must be covered by the end of the course.
• Design processes • Factors influencing design • Roles of designers • Generating and communicating design ideas and solutions • Research and experimentation • Responsible and safe use of tools, materials and techniques • Innovation and emerging technologies and their impact on society and the environment • Managing quality design projects • Producing quality design projects • Evaluation techniques • Ethical, social, environmental sustainability considerations	• Animal production technologies • Control technologies • Electronics technologies • Food technologies • Graphics technologies • Information technologies • Media technologies • Metals technologies • Mixed material technologies • Model–making technologies • Plant production technologies • Polymer technologies • Textile technologies • Timber technologies • School–developed technologies