Department of Education and Training

EARLY ADOLESCENCE (8-10) TECHNOLOGY AND ENTERPRISE SYLLABUS

The Department of Education and Training Western Australia acknowledges the Curriculum Council's support in the development of this document and in providing permission to incorporate into the text of this document extracts and summaries from the *Curriculum Framework; Curriculum Framework Progress Maps – Technology and Enterprise; Curriculum Framework Curriculum Guide – Technology and Enterprise;* and the *Getting Started – Technology and Enterprise, Curriculum Framework* support materials.

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1 Purpose of the *Early Adolescence (8-10) Technology and Enterprise Syllabus*

1.1 Introduction

The *Early Adolescence (8-10) Technology and Enterprise Syllabus* is part of a suite of complementary resources designed to support teachers to plan and deliver learning, teaching and assessment programs.

This syllabus contains information about:

- typical characteristics of students in the early adolescence phase of development and suggested approaches to learning, teaching and assessment
- content described in scope and sequence statements relevant to the phase. *National Consistency in Curriculum Outcomes* (NCCO) *Statements of Learning* have been embedded in the scope and sequence statements and have been identified with an asterisk
- curriculum planning
- monitoring and assessing student progress.

1.2 Connection with other curriculum policy and support documents

This syllabus provides scope and sequence statements of content that link to the outcomes in the *Curriculum Framework*.

Technology and Enterprise teachers can use this syllabus in conjunction with the *Curriculum Framework Curriculum Guide – Technology and Enterprise*. By using the *Guides* in conjunction with this syllabus, Technology and Enterprise teachers will have access to a range of content that meets the learning needs and interests of a range of students.

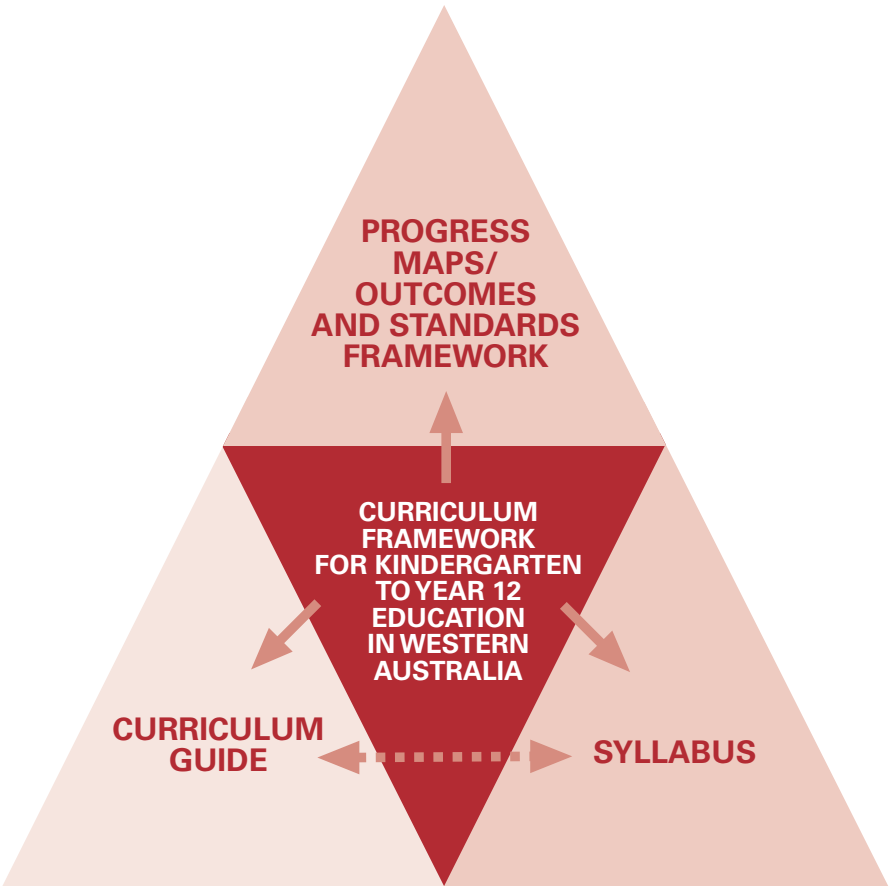
NCCO Statements of Learning were agreed by the Ministerial Council for Education, Employment, Training and Youth Affairs in April 2006. These *Statements of Learning* provide a means of achieving greater national consistency in curriculum outcomes across all States and Territories. *Statements of Learning* have been agreed for the following areas:

- Civics and Citizenship
- English
- Information and Communication Technologies (ICT)
- Mathematics
- Science.

Teachers continue to use progress maps *(Curriculum Framework Progress Maps – Technology and Enterprise/Outcomes and Standards Framework – Technology and Enterprise)* to monitor students' progressive achievement of learning outcomes and may use other tools as appropriate to students' development, achievement and the context of the school.

This syllabus provides advice on the year of schooling in which knowledge, skills and understandings would typically be introduced. Teachers' monitoring and assessment will inform their planning and assist with decisions about the specific knowledge, skills and understandings they teach their students. Technology and Enterprise teachers will continue to exercise their professional judgement in making these decisions.

The following diagram illustrates the connections among the *Curriculum Framework*, *Curriculum Framework Progress Maps – Technology and Enterprise*, *Curriculum Framework Curriculum Guide – Technology and Enterprise* and this syllabus.



Connections among curriculum policy and support documents

1.3 Inclusive planning

As they plan, Technology and Enterprise teachers recognise and accommodate the different starting points, learning rates and previous experiences of individuals or groups of students.

Ensuring that there is provision of a balanced curriculum for all students includes identifying the learning needs of individuals and groups as part of the process of classroom planning. Some groups or individuals, relatively few in number, may require a Documented Plan that provides a practical, explicit and succinct focus for learning. Most students will not require a long or detailed Plan.

Individuals and groups that could require a Documented Plan include:

- students for whom English is a second language or dialect
- students with disabilities
- students with learning difficulties
- gifted and talented students.

Documented Plans focus on learning and teaching adjustments in order to promote learning, participation or curriculum access, and may include:

- differences in the level of complexity of instructional materials or tasks
- alternative means of presentation or response to activities or assessments
- adapted content or expectations in class activities
- acceleration, which may be across the curriculum or single-subject acceleration
- flexible groupings within the class
- encouragement/explicit teaching of critical and creative thinking
- individual research
- enrichment and extension activities
- specialist support, such as visiting teachers or master classes
- teachers and parents planning together to ensure that learning outcomes and content reflect the learning needs of students.

2 Rationale for teaching Technology and Enterprise in the early adolescence phase of development

2.1 What is Technology and Enterprise about?

The Technology and Enterprise learning area relates to the processes of applying knowledge, skills and resources to satisfying human needs and wants, extending capabilities and realising opportunities.

Technology uses resources, including materials (both raw and processed), tools and machines, knowledge, skills and experiences, as well as investment of time, energy and money. It involves systems for collecting, transporting and transforming materials, for storing and processing information and resources, and for communicating and marketing the outcomes.

Technology also includes the processes and products that result from technological enterprise. Enterprise involves the development and application of skills and attitudes that enable people to actively respond to and be involved in social and economic change. Finally, technology and enterprise have consequences, costs and benefits that need to be considered carefully and responsibly before decisions are made.

2.2 Why teach Technology and Enterprise?

Teaching Technology and Enterprise provides students with opportunities to:

- develop life and vocational skills such as problem solving, negotiation and teamwork proficiency
- develop specific manipulative and technical skills and apply them to everyday situations
- develop technical literacy and the ability to communicate ideas effectively to a variety of audiences
- apply design and production skills to maximise benefits to consumers and minimise environmental impacts
- enhance understanding of enterprise and the interaction of technology with community, culture, values and attitudes
- develop safe and collaborative work habits using a variety of specialist materials and equipment
- extend their capabilities and specific technical skills to satisfy their personal interests and enhance career opportunities.

2.3 How is the Technology and Enterprise learning area structured?

The *Curriculum Framework Technology and Enterprise Learning Area Statement* consists of seven outcomes:

- Technology Process
- Materials
- Information
- Systems
- Enterprise
- Technology Skills
- Technology in Society.

3 Technology and Enterprise in the early adolescence phase of development

3.1 Typical characteristics of students in the early adolescence phase of development

In this phase of development, students are experiencing adolescence and the accompanying emotional and physical changes. The early adolescent learner typically:

- learns to form, articulate and manage relationships
- develops greater independence in their lives
- questions schooling and their engagement with it
- reflects on who they are, where they belong, what they value and where they are going
- develops their own voice, often challenging the voices of their parents/ caregivers, teachers and society
- aims for a stronger sense of belonging through interaction with their peers in wider adolescent cultures
- becomes aware that they can make changes for themselves and others.

3.2 The early adolescent in Technology and Enterprise

In Technology and Enterprise, the early adolescent typically progresses with increasing skill, knowledge, understanding, creativity and confidence to create solutions for the needs and wants of individuals and communities.

During this phase, the early adolescent typically begins to move from reflecting on local and real-world experiences to considering increasingly complex technological challenges, concepts and ideas.

Students come to understand that needs are met in different ways and recognise that individual and group values determine how technologies are used, developed and modified to meet those needs. They value opportunities to explore new ideas in depth and to cooperate with their peers to achieve more complex technological goals. Students' approaches to Technology and Enterprise relate to their expanding interests and knowledge of their future lives, including potential career choices.

Students explore the relationship between individual, family or community needs and the availability, types and costs of resources in the use of particular technologies within the contexts of agriculture, business education, design and technology, home economics, and information technology.

By the end of this phase, early adolescents begin to identify advantages and disadvantages of technologies.

Students justify their design selections on the basis of a range of criteria, including examination of: suitability for intended purpose; appropriateness to environments; ethical issues; and practicality. They critically assess many aspects of their technological world and understand the effects of actions on others. Students are objectively critical of their work and make comparisons with similar commercial products.

Students recognise the relationship between technology and enterprise, and gain experience in realising opportunities for enterprising behaviours as they become innovative, adaptable and reflective. They may pursue these experiences within personal, academic and vocational contexts. Students consider their future pathways into related senior secondary courses and specialised Vocational and Educational Training programs.

3.3 Learning and teaching

The *Curriculum Framework* provides advice about approaches to learning and teaching that are based on research and professional knowledge about learning.

When using this syllabus to plan, Technology and Enterprise teachers can make reference to the sections on learning and teaching in the *Curriculum Framework* overarching and learning area statements. This will assist with ensuring that pedagogical approaches are relevant to students' developmental stages as well as to learning within and across outcomes and learning areas.

The following table outlines suggestions for incorporation of the *Curriculum Framework's* principles of effective learning and teaching in Technology and Enterprise in the early adolescence phase.

Suggested approaches to learning and teaching

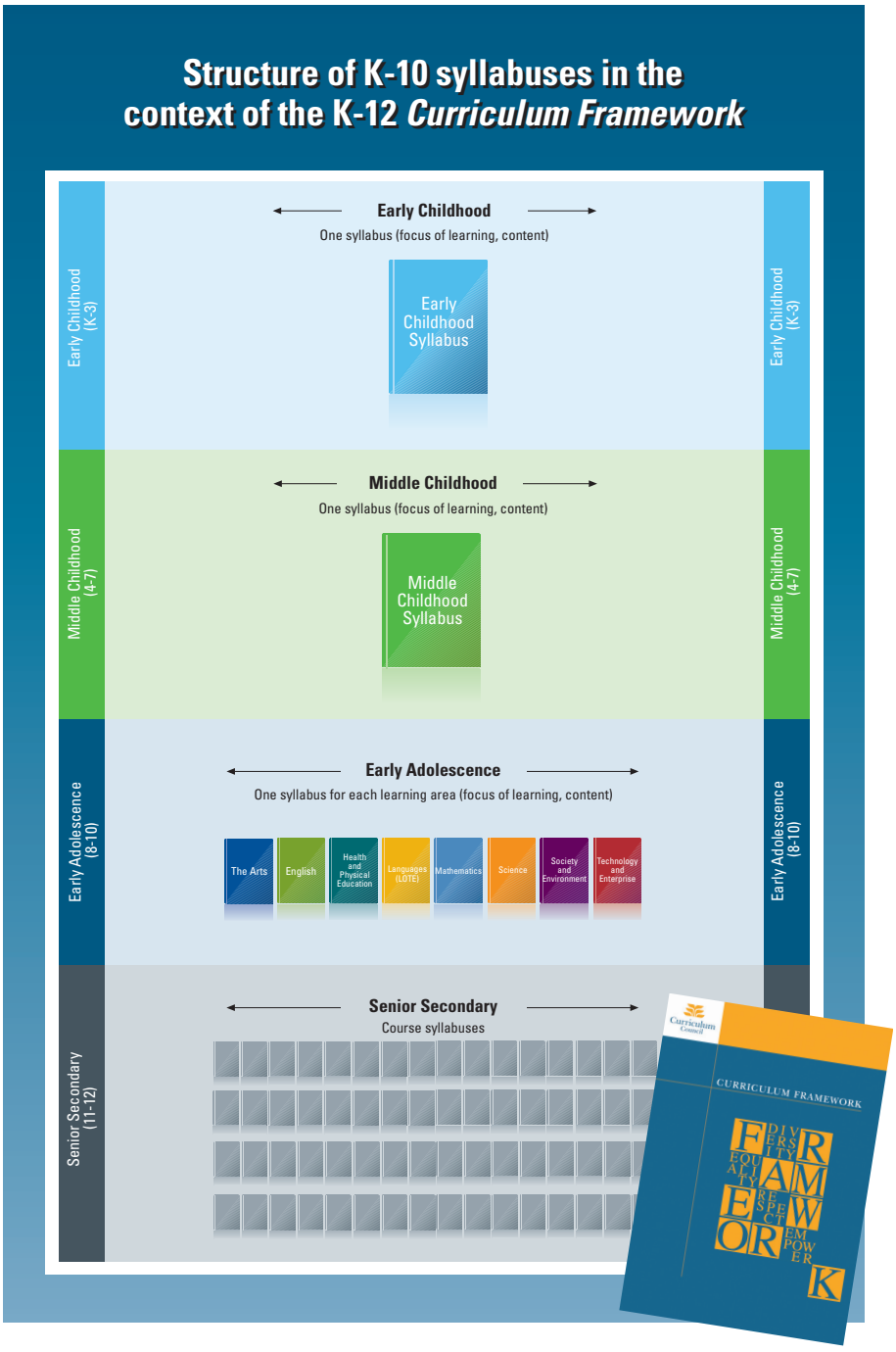
Principles of learning and teaching	Strategies years 8-10 teachers of Technology and Enterprise can use to implement the principles
Opportunity to learn Learning experiences should enable students to observe and practise the actual processes, products, skills and values which are expected of them.	• Provide opportunities for students to observe, practise, select and use a range of processes, skills, equipment and technologies. • Provide opportunities for students to work on open-ended tasks which require them to investigate, evaluate, create, adapt, select and use technologies. • Model and demonstrate Technology and Enterprise skills and procedures. • Provide opportunities for students to apply Technology and Enterprise skills in the wider community.
Connection and challenge Learning experiences should connect with students' existing knowledge, skills and values while extending and challenging their current ways of thinking and acting.	• Connect Technology and Enterprise concepts and skills to students' background knowledge and personal interests. • Connect Technology and Enterprise concepts and skills to students' learning in other curriculum areas. • Encourage students to think creatively and devise alternative solutions for technology challenges. • Encourage students to be innovative in their work. • Provide access to ICT, illustrating the potential and possible limitations of this technology. • Encourage alternative perspectives and views. • Illustrate how ways of thinking about Technology and Enterprise have been, and are, subject to challenge and change.
Action and reflection Learning experiences should be meaningful and encourage both action and reflection on the part of the learner.	• Provide opportunities for students to critically examine the social and environmental impacts of technologies. • Provide opportunities for students to reflect on and monitor their performance and progress. • Make assessment criteria explicit and create opportunities for self-assessment.

Suggested approaches to learning and teaching (continued)

Principles of learning and teaching	Strategies years 8-10 teachers of Technology and Enterprise can use to implement the principles
Motivation and Purpose Learning experiences should be motivating and their purpose clear to the student.	• Illustrate real life applications and future uses of Technology and Enterprise skills and understandings students are developing. • Connect learning in Technology and Enterprise to students' lives and local environments. • Connect learning in Technology and Enterprise to further education and career pathways. • Involve students in planning learning experiences in Technology and Enterprise.
Inclusivity and difference Learning experiences should respect and accommodate differences between learners.	• Design activities which cater for different learning styles, values, gender, abilities, interests, cultures and family backgrounds. • Design activities which take into account students' differing physical, mental and emotional development.
Independence and collaboration Learning experiences should encourage students to learn both independently and from and with others.	• Design learning experiences which allow students flexibility in learning styles and task structure. • Design learning experiences which allow students to work cooperatively and collaboratively with other students.
Supportive environment The school and classroom setting should be safe and conducive to effective learning.	• Create a classroom climate based on mutual respect and tolerance. • Ensure students are provided with a safe environment, understand and comply with safety rules and are adequately supervised at all times. • Actively recognise and encourage achievement and progress. • Reassure students that mistakes are an opportunity to learn and improve. • Promote school policies which support positive attitudes towards Technology and Enterprise.

3.4 The place of the Early Adolescence (8-10) *Technology and Enterprise Syllabus* in the K-12 curriculum

This syllabus articulates content and approaches to learning, teaching and assessment that are a part of the kindergarten to year 12 approach embodied in the *Curriculum Framework*. The following diagram indicates the place of this syllabus in the overall K-12 curriculum for Western Australian schools.



The place of the *Early Adolescence (8-10) Technology and Enterprise Syllabus* in the K-12 curriculum

3.5 Connection to Technology and Enterprise learning in other phases of development

The *Early Adolescence (8-10) Technology and Enterprise Syllabus* forms part of the continuum of Technology and Enterprise learning from kindergarten to year 12. To ensure continuity, this syllabus builds on the focus of learning in the middle childhood phase. The understandings and skills developed in the early adolescence phase provide the basis for achievement in the Curriculum Council's current and proposed senior secondary courses.

Middle childhood phase of development

In the middle childhood phase, the Technology Process has a practical and real-life focus. Students want to know how things work and want to make things that work. They require encouragement to develop and maintain the ability to speculate, while being provided with a framework of knowledge, constraints and practical limitations.

Enterprise is encouraged through working with real products, materials, information and systems, and in the application of the Technology Process to develop practical solutions. Technology and Enterprise teachers may use approaches to making links to other learning areas, or organising learning programs. The range of Technology and Enterprise areas for integration may include personal, home, recreational, community, environmental, business, or industrial themes to integrate learning into rich tasks.

Late adolescence phase of development

In the late adolescence phase, content becomes more specialised and diverse. Students choose specific pathways in agriculture, aviation, business education, design and technology, home economics and information technology.

In Technology and Enterprise the current senior secondary courses are:

- Accounting - D200, E200
  Part A - D242
- Administrative Systems - D230, E230
  Part A - D240
  Part B - D241
- Animal Husbandry and Enterprise:
  Equine - D918, E918
- Animal Production and Enterprise
  - D722, E722
- Animal Production and Enterprise
  - Introduction - D721
- Animal Production and Marketing
  - D260, E260
  Part A - D262
- Applied Equine Vocation - D749
- Applied Land and Resource
  Management - Introduction - D997
- Applied Land and Resource
  Management - E997

- Applied Technology - D280, E280
- Aspects of the Tourism Industry - D713, E713
  Part A - D943
  Part B - D944
- Audio and Word Processing Skills - E880
- Automotive Servicing and Systems - D960
- Automotive Workshop - D289, E289
  Part A - D288
- Aviation
- Basic Construction Materials - D936
- Building and Construction - D270, E270
  Part A - D276
- Business Financial Management - D727, E727
- Business Information and Technology - E231
- Calculations and Construction Tools - D935
- Catering - D715
- Child Care - D742, E742
- Composite Materials - E716
- Composite Materials, Machining and Fabrication - E714
- Computer Assisted Drawing and Design - Introduction - D886
- Computer Assisted Drawing and Design - D734, E734
- Computer Fundamentals - E705
- Computerised Accounting - D728
- Digital Media - D236
- Early Childhood Studies - D656, E656
  Part A - D670
  Part B - D671
- Electrical Foundations - D735
- Engineering Studies
- Fabrics Design and Technology - E290
- Facilities Development - D723
- Facilities Development and Maintenance - D724, E724
- Farm Practice - D266, E266
- Financial Management - Computerised - E882
- Financial Procedures and Records Management - D704
- Food Production - D709, E709
- Food Science and Nutrition - D710, E710
- Food Technology - D291, E291
- Furniture Design and Technology - E271
- General Workshop - D717, E717
- Graphics Technology - D286, E286
- Independent Living - D665, E665
  Part A - D674
  Part B - D675
- Industry Information Technology - E234
- Information Systems - E238
- Interactive Media - E237

- Introduction to the Hospitality Sector - D711
- Introduction to Workplace Skills - D931
- Legal Fundamentals - D729
- Management and Marketing - D232, E232
- Metal Machining and Fabrication - E718
- Metals Technology - E272
- Mining Machinery and Maintenance - E904
- Nautical Studies - E258
- Office Administration - D707, E707
- Pastoral Industries - E752
- Plant Production and Enterprise - Introduction - D725
- Plant Production and Enterprise - D726, E726
- Plant Production and Enterprise: Viticulture - D921
- Plant Production and Marketing - D261, E261
  Part A - D264
- Presentation for Retail - D748
- Reception and Customer Service - E914
- Records Management - E883
- Small Business Management and Enterprise - D235, E235
  Part A - D239
- Systems Technology - D281, E281
- Technical Graphics - D282, E282
  Part A - D287
- The Study of Teaching - D745, E745
- Trade Drawing - D719, E719
- Visual Communication - Photography - D283, E283
- Vocational Community Networking - E910
- Vocational Community Networking 1 - D910
- Vocational Community Networking 2 - D911
- Wood Fabrication - E720
- Work Studies - E686
- Workplace and Health Issues - D712
- Workplace Background - E913
- Workshop Practice and Electrical Fabrication - D737.

The proposed senior secondary Technology and Enterprise courses are designed to facilitate students' achievement of specific Technology and Enterprise learning outcomes. Technology and Enterprise courses currently in development by the Curriculum Council are:

- Accounting and Finance
- Animal Production Systems
- Applied Information Technology
- Automotive Engineering and Technology

- Building and Construction
- Business Management and Enterprise
- Career and Enterprise
- Children, Family and the Community
- Computer Science
- Design
- Food Science and Technology
- Marine and Maritime Technology
- Materials Design and Technology
- Plant Production Systems
- Politics, Law and the Workplace.

Technology and Enterprise courses, Vocational Education and Training (VET) versions, currently in development by the Curriculum Council are:

- Agriculture
- Applied Information Technology
- Automotive Engineering and Technology
- Building and Construction
- Business Management and Enterprise
- Children, Family and the Community
- Computer Science
- Food Science and Technology
- Marine and Maritime Technology
- Materials Design and Technology
- Media Production and Analysis.

4 Content

4.1 Focus of learning

Technology and Enterprise teachers and schools are integral to planning that provides a balanced curriculum to maximise students' achievement of the learning outcomes in the *Curriculum Framework*.

Using this syllabus, Technology and Enterprise teachers and schools will be able to:

- connect with learning in the middle childhood phase of development and the senior secondary years of schooling
- continue to use the *Curriculum Framework* and the *Curriculum Framework Curriculum Guide – Technology and Enterprise* to plan balanced learning, teaching and assessment programs that meet the developmental learning needs of students in the context of each school.

4.2 National and state priorities for learning

Content has been embedded, where relevant, across all scope and sequence statements within this syllabus in accordance with agreed national and state priorities.

The following cross-curriculum areas provide a basis for developing the knowledge, skills and understandings that will enable students to participate and prosper in society. Further advice about integration across learning areas is provided in Part 5 of this syllabus: Planning for learning in Technology and Enterprise.

Literacy

Literacy is the ability to read and use written information and to write appropriately in a range of contexts. It also involves the integration of speaking, listening, viewing and critical thinking with reading and writing. It includes the cultural knowledge that enables a speaker, writer or reader to recognise and use language appropriate to different social situations.

The development of students' literacy skills and understandings is the responsibility of all teachers in all learning areas, and opportunities should be provided for students to develop literacy across the curriculum. The teaching of English, however, plays a particularly important role.

In Technology and Enterprise students apply literacy skills by:

- accessing, interpreting, assembling and communicating information using a range of language, tables, graphs, diagrams, illustrations and presenting it through a variety of mediums and technologies
- listening to a variety of instructions, explanations, warnings and advice through the workshop and classroom sessions
- using a range of appropriate oral communication techniques to enable then to work effectively in different contexts
- communicating concepts and ideas to teachers, individual students and larger class groups
- reading to gain knowledge of processes, concepts and ideas, reading to gain insights into others' challenges and achievements and reading to elicit information about skills, materials and equipment
- interpreting language in relation to the context in which it is used
- writing to effectively communicate depending on context, purpose and audience
- incorporating text, pictures, detailed and dimensioned drawings, lists, graphs, technical terms and notations and photographs to explain ideas and concepts to a wide audience.

Numeracy

Numeracy is the ability to effectively apply Mathematics in everyday, recreational, work and civic life. It is vital to the quality of participation in society.

In order to be numerate, students have the right to learn Mathematics and the language of Mathematics, to make sense of Mathematics, to be confident in their use of Mathematics, and to see how it can help them make sense of their world and the world of others.

Numeracy is a fundamental component of learning across all areas of the curriculum. The development and enhancement of students' numeracy skills and understandings is the responsibility of all teachers. The teaching of Mathematics, however, plays a particularly important role.

In Technology and Enterprise students apply mathematical skills and understandings by:

- calculating length, area, volume, mass, force, angle, time and temperature
- using a variety of mental, paper and computational strategies when problem solving
- gauging the reasonableness of measurements and results because they are being applied in a logical and practical manner
- visualising and representing 3D shapes and objects using various drawing techniques

- estimating quantities and using alternative units of measure
- applying proportional ratios and scale.

Civics and Citizenship

All students need opportunities to develop their understandings of, and commitment to, Australia's democratic system of government, law and civic life.

Technology and Enterprise teachers can achieve this by assisting students to develop the capacity to clarify and critically examine values and principles of Australian democracy and the ways in which it contributes to a fair and just society and a sustainable future. As well, Technology and Enterprise teachers should assist students to develop the knowledge, skills and values that enable them to act as informed and responsible citizens.

In Technology and Enterprise students apply Civics and Citizenship values by:

- demonstrating an understanding of the concept of limited resources and striving to meet needs efficiently and with minimal negative impacts
- demonstrating an understanding that the application of suitable technologies can alleviate disadvantage and increase productivity
- selecting materials and processes taking into account environmental impact and ecological sustainability
- forming cooperative teams and allocating limited space, tools, materials and equipment in an equitable manner
- exploring the ways in which media and ICT are used by individuals, groups and governments to exert influence, shape opinion and manage controversy.

Information and Communication Technologies (ICT)

Applying ICT as a tool for learning provides students with opportunities to become competent, discriminating, creative and productive users of ICT. Students' learning can be enhanced through integration of ICT across the curriculum, as they develop knowledge, skills and the capacity to select and use ICT to inquire, develop new understandings, create, and communicate with others.

Through learning with ICT, students have opportunities to understand the impact of ICT on society and to use ICT as a means of participating in society.

Technology and Enterprise teachers play a leading role in developing students' ICT knowledge, skills and understandings by:

- integrating the use of ICT across the learning area
- developing an understanding of ICT hardware, software and networking functions and capabilities
- encouraging ethical use of ICT

- integrating the use of ICT through Computer Aided Design, Computer Numeric Controlled machining, graphic manipulation, data storage, transfer and presentation
- utilising ICT to distribute information, to collaborate, to exchange ideas and to problem solve with others locally and globally.

Values

People's values influence their behavior and give meaning and purpose to their lives. While there is a range of value positions in society, there is also a core of shared values. These values are embedded in the learning outcomes in the *Curriculum Framework.* These shared values can be summarised as follows:

- a pursuit of knowledge and a commitment to achievement of potential
- self acceptance and respect of self
- respect and concern for others and their rights
- social and civic responsibility
- environmental responsibility.

These shared values can be reinforced and enhanced in Technology and Enterprise by:

- encouraging students to develop complex and imaginative solutions to design challenges
- encouraging students to treat others with respect and consideration
- ensuring students follow occupational safety and health guidelines
- encouraging students to share equipment and resources equitably
- developing students' understanding of social and civic responsibility
- ensuring students understand how to minimise impact on the environment and how to best use finite resources.

Physical activity

Physical activity is movement of the body that expends energy. It includes high intensity activities such as sports and dance, as well as low intensity activities such as walking, climbing and exploring. Physical education is an essential part of quality physical activity opportunities. Physical activity can be incorporated into learning across the curriculum, providing students with opportunities to practise skills and increase fitness levels. Students are required to participate in at least two hours of physical activity per week.

4.3 Organisation of content

Content in this syllabus is organised into:

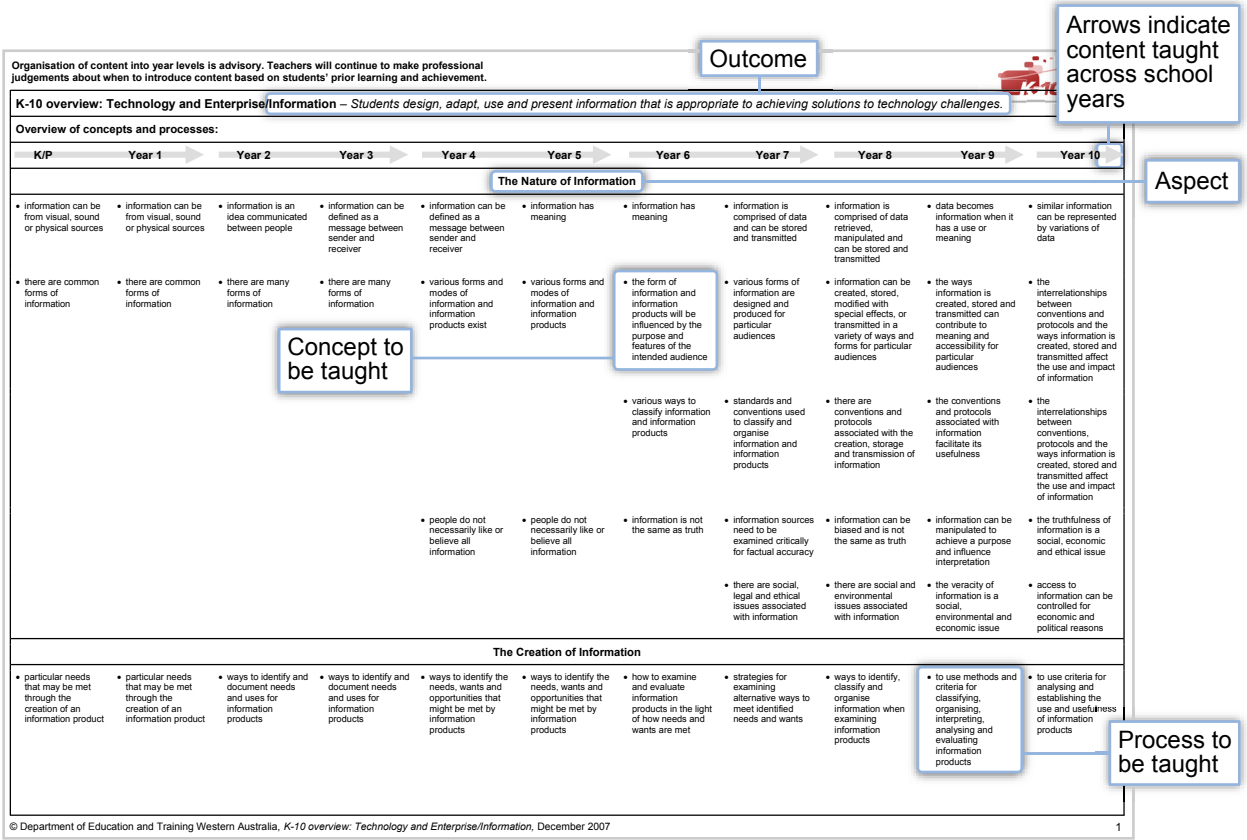
- K-10 overviews
- scope and sequence statements.

K-10 overviews

Kindergarten to year 10 overviews are provided to facilitate developmentally appropriate planning and delivery of learning, teaching and assessment programs. These overviews are designed to provide Technology and Enterprise teachers with a clear map of the progression of concepts and processes. They will enable Technology and Enterprise teachers to select content from syllabuses for other phases of development, if this is appropriate to support student learning.

The K-10 overviews outline the generic concepts and processes in the scope and sequence statements for each of the following contexts: agriculture, business education, design and technology, home economics and information technology.

The following graphic identifies the key features of the Technology and Enterprise K-10 overviews.



Key features of Technology and Enterprise K-10 overviews

Scope and sequence statements

The content in the scope and sequence statements is expressed at specific year levels to provide Technology and Enterprise teachers with advice on starting points for the development of learning, teaching and assessment programs. However, teachers will need to use their knowledge of students' progressive achievement to make their own decisions about when it is appropriate to introduce content as students' progress with their learning may not match what could be expected at their current year level.

The scope and sequence statements are organised around the Technology Process, Materials, Information and Systems outcomes and content for the Enterprise, Technology Skills and Technology in Society outcomes are embedded within these.

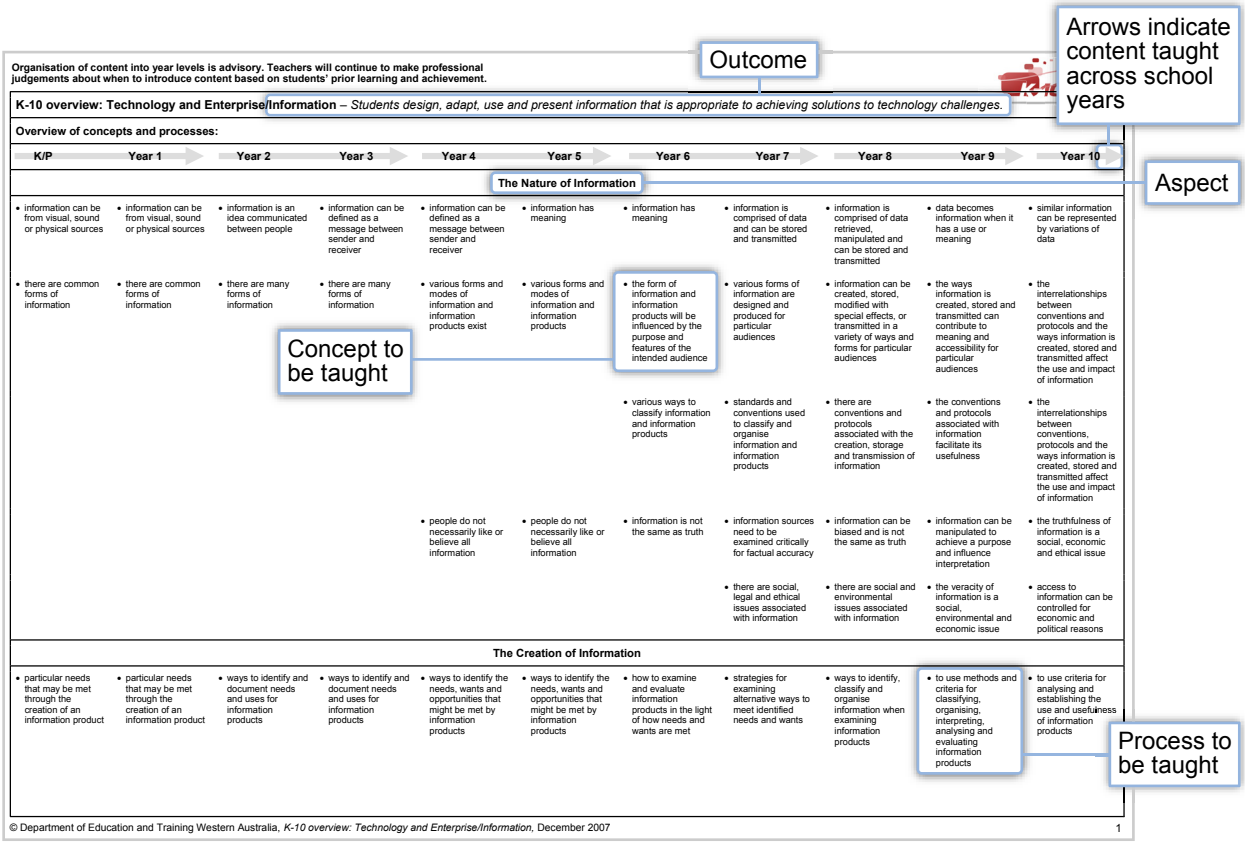
Scope and sequence statements have been developed for the following Technology and Enterprise contexts: agriculture, business education, design and technology, home economics and information technology.

Content for each context in the Technology and Enterprise scope and sequence statements relates to learning outcomes as follows:

Context	Outcomes
Agriculture	Technology Process Materials Systems
Business education	Technology Process Information Systems
Design and technology	Technology Process Materials Systems
Home economics	Technology Process Materials Systems
Information technology	Technology Process Information Systems

This table indicates the outcomes that are most aligned with these contexts. Teachers may link other outcomes to these contexts as appropriate.

The scope and sequence statements are organised to reflect teachers' integrated planning for learning in Technology and Enterprise. The following graphic identifies the key features of the Technology and Enterprise scope and sequence statements.



Key features of Technology and Enterprise scope and sequence statements

5 Planning for learning in Technology and Enterprise

School planning is an integral part of the improvement process. It typically involves four stages:

- identification of needs through collection and analysis of student achievement information
- planning for improvement
- implementation
- review.

5.1 Breadth and balance in curriculum planning

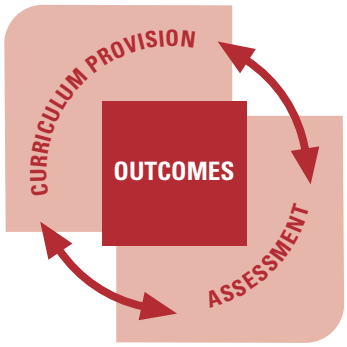
This syllabus identifies content relevant to learning in Technology and Enterprise across the early adolescence phase of development.

When planning with this syllabus, school leaders and Technology and Enterprise teachers will continue to exercise professional judgements about the full range of learning, teaching and assessment programs that will meet the learning needs of their students. These judgements are made in the context of the overall school plan, which takes into account relevant legislative and policy requirements, and community expectations.

School leaders and Technology and Enterprise teachers may use this syllabus in conjunction with the *Curriculum Framework Curriculum Guide – Technology and Enterprise* to plan for a rich and varied curriculum that takes into account the learning needs and interests of students.

5.2 Whole-school planning

The elements of whole-school curriculum planning are encapsulated in the following diagram.



- Students' achievement and learning needs
- Relevant learning outcomes, as described in the *Curriculum Framework*
- Content as described in the *Early Adolescence (8-10) Technology and Enterprise Syllabus* and *Curriculum Framework Curriculum Guide*
- Realistic yet challenging expectations about students' performance
- Opportunities required to enable students to continue to experience success in their learning
- Learning environments
- Pedagogy relevant to students and the focus of learning

Elements of whole-school curriculum planning

Students' achievement and learning needs

Examination of student achievement information enables school leaders and Technology and Enterprise teachers to make judgements about whether students are making sufficient progress with their learning in relation to relevant standards. Sources of information include:

- teachers' records of student assessment
- teacher moderation of student work
- standardised test data.

Learning outcomes and content

Examination of student achievement information and judgements made about students' progress inform analysis of existing curriculum provision, which includes consideration of relevant learning outcomes and content. This enables school leaders and Technology and Enterprise teachers to make informed decisions about the adequacy of current curriculum provision and whether modifications are required. It may result in curriculum modifications to make progress in their learning.

Expectations of students' performance

Consideration of outcomes and content also incorporates setting realistic, yet challenging, targets for student performance. Target setting ensures that decisions lead to school leaders and Technology and Enterprise teachers developing and implementing challenging and developmentally appropriate learning, teaching and assessment programs for students.

Continued success in learning

The focus of whole-school curriculum planning is the continued learning success of all students in the school. While the majority of students will continue to achieve within an expected range, some students will require learning and teaching adjustments to support their learning. Whole-school curriculum planning assists school leaders and Technology and Enterprise teachers to identify individuals and groups of students who require Documented Plans.

Learning environments

The environment of a school and its classrooms needs to be inclusive, supportive and promote learning. Issues that school leaders and Technology and Enterprise teachers could review as part of whole-school curriculum planning include:

- working relationships among
  - teachers
  - students
  - teachers and students
  - teachers, students and their parents/caregivers
  - the school and the community
- management of student behaviour
- provision of a safe and healthy working environment

- level of inclusion in relation to language background, gender, culture, socioeconomic status, abilities or disabilities, and individual differences
- existence of adequate and fair access to, and use of, appropriate and varied resources (space, equipment, materials and technology)
- ways in which students are grouped and arranged in the school and classrooms
- ways in which time is allocated for curriculum provision
- learning opportunities outside the school
- opportunities for students to negotiate the curriculum, if appropriate.

Pedagogy

Whole-school curriculum planning includes school leaders and Technology and Enterprise teachers reviewing and selecting a range of approaches to learning, teaching and assessment. Pedagogical approaches selected by teachers should be informed by the principles of learning and teaching in the *Curriculum Framework*.

Time allocation

To achieve a balanced curriculum, schools should provide the appropriate resources, including time, to ensure progress towards achievement of all learning outcomes identified in this syllabus.

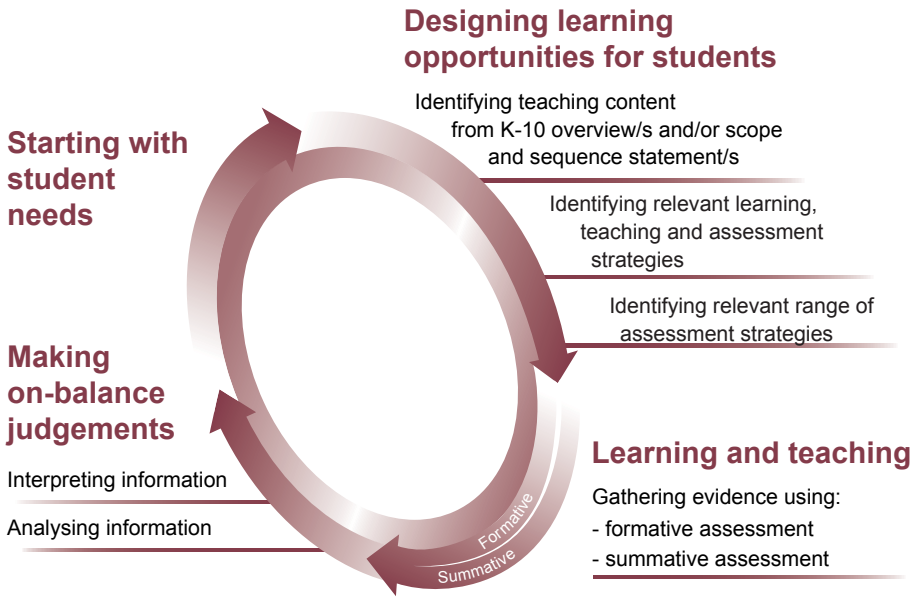
When making decisions about the allocation of teaching time the following should be considered:

- while the eight learning areas in the *Curriculum Framework* are all held in equal esteem, equal time does not need to be allocated to each
- decisions about teaching time should be influenced by student achievement data, indicating students' learning needs in the context of the school
- school system/sector priorities and curriculum policies
- provision of pathways to senior schooling that are appropriate to students' achievement and aspirations
- students from years 1-10 should participate in at least two hours of physical activity per week
- expectation of the teaching of content described in the *NCCO Statements of Learning* in Civics and Citizenship, English, ICT, Mathematics and Science.

5.3 Planning using the *Early Adolescence (8-10) Technology and Enterprise Syllabus*

Classroom planning caters for both groups and individual students and is guided by the directions set in whole-school and learning area curriculum planning.

The key elements of planning for learning are outlined in the diagram below. Planning begins with an assessment of students' learning needs so that teachers can design developmentally appropriate programs. Relevant content can then be selected from the K-10 overviews and scope and sequence statements in this syllabus. Teachers select approaches to learning, teaching and assessment that are relevant to their students and the contexts of their schools.



Key elements of planning for learning

Considerations for planning across the phase include:

- incorporating the focus of learning and strategies the school has committed to in the whole-school curriculum plan
- use of K-10 overviews and scope and sequence statements as a basis for auditing, validating and augmenting existing programs as required
- collaborative planning and decision making about contexts for learning and teaching in Technology and Enterprise to ensure minimal repetition
- consideration of available resources
- continuation of year level planning with a focus on adapting programs, if required, to meet the needs of groups and individuals.

When using this syllabus for planning learning, teaching and assessment programs in Technology and Enterprise, teachers can:

- identify *Curriculum Framework* learning outcomes that will be highlighted in the unit of work/program
- reflect the principles of learning, teaching and assessment in the *Curriculum Framework*
- use K-10 overview/s and/or scope and sequence statement/s to select relevant content
- identify appropriate targets for particular groups and individuals that connect to whole-school targets
- identify what students will need to do to demonstrate their learning
- identify review points for monitoring and assessing student progress
- gather information about students' learning using a range of assessment strategies and provide ongoing feedback that is meaningful to students
- make ongoing use of information about student progress to reflect on and modify learning and teaching opportunities.

5.4 Integrating learning

The *Curriculum Framework* identifies effective learning as that which enables students to make connections between ideas, people and things, and to relate local, national and global events and phenomena. Making connections across learning areas helps students to appreciate the interconnected nature of human learning and knowledge. Students are more likely to achieve desired learning outcomes when they see connections between their various learning experiences and can build on their experiences across learning areas.

Planning for integration

An integrated approach to curriculum planning links content across learning areas in purposeful ways. Integrating learning enables Technology and Enterprise teachers to plan learning, teaching and assessment programs that focus on:

- making the purpose and relevance of learning explicit
- supporting complementary learning and consistent application of knowledge, understandings and skills across learning areas
- enhancing learning by providing opportunities for students to make authentic connections within and across learning areas, their school, their home and the wider context of the world
- the efficient use of learning and teaching time.

When supporting integration of learning, Technology and Enterprise teachers:

- identify connected ideas across learning areas and relevant contexts for learning as a basis for learning, teaching and assessment programs
- teach relevant skills and knowledge, and then provide opportunities for practice, in a range of contexts.

When planning and delivering integrated programs it is important to also maintain a balanced focus on the content and learning outcomes related to specific learning areas. This ensures that students have appropriate opportunities for rigorous and specialised learning as well as opportunities to integrate their learning.

Links with other learning areas

When making links across the curriculum, it is important for teachers to ensure that:

- students are involved in identifying and planning the links
- knowledge and skills are developed in a consistent way.

Examples of opportunities for Technology and Enterprise teachers to make links to other learning areas are outlined on the following page.

Opportunities to integrate cross-curriculum areas

The Arts

Teachers can contribute to the teaching of The Arts by providing students with the opportunity to:

- work with other people's ideas and modify them for their own purpose
- incorporate The Arts skills of structuring, refining, rehearsing and reflecting within the Technology Process
- utilise advanced sketching, rendering and presentation techniques
- develop lateral thinking strategies to design and encourage them to consider alternative forms, styles and genres
- use the principles and elements of design to devise and produce quality solutions to technology challenges.

English

Teachers can contribute to the teaching of English by providing students with the opportunity to:

- access, interpret, assemble and communicate information
- use a range of terminology, tables, graphs, diagrams and illustrations and present it through a variety of mediums and technologies
- listen to a variety of instructions, explanations, warnings and advice throughout the course of workshop and classroom sessions
- apply a range of appropriate oral communication techniques in order to convey information, ideas and concepts to teachers, students and large groups
- read to elicit information about instructions, plans, processes, skills, materials, equipment and gain insights into others' challenges and achievements
- use writing to effectively communicate to a variety of audiences.

Health and Physical Education

Teachers can contribute to the teaching of Health and Physical Education by providing students with the opportunity to:

- apply occupational health and safety concepts to ensure personal well-being and injury prevention
- apply sound nutritional choices
- apply collaborative behaviours to ensure a well ordered and cooperative learning environment
- make responsible decisions relating to task prioritisation, time management and goals setting
- apply interpersonal skills of negotiation, assertiveness, conflict resolution, collaboration, cooperation and leadership across the Technology and Enterprise contexts.

Science

Teachers can contribute to the teaching of Science by providing students with the opportunity to:

- communicate information to a wide audience using appropriate scientific and technological terms and language
- critically evaluate and minimise our impact on the environment through conservation of resources, reuse, recycling and the application of technology
- understand and apply concepts of energy relating to cooking, heating, transport, simple machines, mechanical devices, pneumatics, hydraulics, internal combustion, electricity and electronics
- choose a range of woods, metals, ceramics, polymers, fabrics and foods based on their properties and their ability to satisfy functional requirements.

Languages (LOTE)

Teachers can contribute to the teaching of Languages (LOTE) by providing students with the opportunity to:

- be aware of cultural differences, sensitivities and customs and reflect on these differences when formulating solutions to design challenges
- recognise the varied cultural and ethnic sources of knowledge, materials, tools, techniques and expertise
- recognise how the exploitation of finite and renewable resources impacts on various cultures and communities
- understand that there is a broad range of internationally recognised technical, symbol, engineering and language standards that apply across the world that transcend local cultural and language differences.

Mathematics

Teachers can contribute to the teaching of Mathematics by providing students with the opportunity to:

- apply mathematical ideas and tools when calculating length, area, volume, mass, force, angle, time and temperature
- use a variety of mental, paper and computational strategies when problem solving
- gauge the reasonableness of measurements and results because they are being applied in a logical and practical manner
- visualise and represent 3D shapes and objects using various drawing techniques
- estimate quantities and use alternative units of measure
- model the investigative process
- use specific skills such as measurement, estimation and calculation in the collection and processing of data within investigations and design proposals, prototyping and documentation of specifications
- use scaling and graphing techniques, and sequencing and ordering of data
- convert between metric units.

Society and Environment

Teachers can contribute to the teaching of Society and Environment by providing students with the opportunity to:

- understand the concept of limited resources and the need to meet needs effectively and with minimal negative impacts
- understand that the application of suitable technologies can alleviate disadvantage and increase productivity
- consider environmental impacts and ecological sustainability when choosing materials, processes and energy sources
- form cooperative teams and allocate tools, equipment and materials in a fair and equitable manner
- understand that people must employ enterprising ways to satisfy needs and wants using finite resources.

6 Assessment

Assessment is an integral part of learning and teaching and informs curriculum planning.

The purpose of assessment is to:

- monitor students' progress to inform teacher planning and student learning
- gather and interpret evidence that enables Technology and Enterprise teachers to make informed decisions on students' achievement and progress as a basis for reporting.

Assessment relies on the professional judgement of the teacher. It is based on valid, comprehensive and reliable information about student achievement that has been collected over time. Assessment tasks must be fair, challenging and educative.

Technology and Enterprise teachers are expected to provide feedback to students on learning tasks, so that students know what to do to improve and teachers know what next to plan for in their teaching.

The scope and sequence statements in this syllabus have been developed with reference to information on students' progressive achievement of learning outcomes as detailed in the *Curriculum Framework Progress Maps – Technology and Enterprise*/*Outcomes and Standards Framework – Technology and Enterprise.*

In planning and delivering learning, teaching and assessment programs using the scope and sequence statements, Technology and Enterprise teachers can support students to work towards or beyond what is described in relevant standards. Students with particular needs may, however, require individual or group Documented Plans to support their learning.

Schools should have an assessment policy based on the principles of assessment in the *Curriculum Framework* and communicate this to students and the school community.

6.1 The process of assessment

Assessment involves:

- providing students with opportunities to apply and demonstrate what they know, understand and can do
- gathering and recording the evidence of students' demonstrations of their learning

- using evidence to make on-balance judgements about students' achievement
- giving students advice about how to improve and continue their learning
- providing students with opportunities to be involved in reviewing assessment information and setting learning goals
- providing students with the skills necessary to successfully complete the assessment type.

6.2 Principles of assessment

Assessment should:

- be based on the belief that all students can improve in their learning
- be developed with reference to the principles of learning, teaching and assessment in the *Curriculum Framework*
- be referenced to common standards as described in the *Curriculum Framework Progress Maps – Technology and Enterprise/Outcomes and Standards Framework – Technology and Enterprise*
- provide feedback to students about the progress of their learning, the quality of their work and the direction they need to take in future learning
- enhance students' resilience and motivation
- recognise and value the diverse backgrounds and experiences of students
- involve observing students during learning activities
- enable collaboration with colleagues, in and across schools, to evaluate evidence so that judgements about student achievement are valid, reliable and comparable
- result in adjustments to teaching to take into account the information that assessment provides
- allow for input from students and parents/caregivers.

Technology and Enterprise teachers will use their professional judgement to inform decisions about when to assess, whether the assessment evidence should be collected formally or informally, and which evidence provides the most valuable and reliable information about student learning.

6.3 Assessment in Technology and Enterprise

Assessment in Technology and Enterprise is determined in part by the context of learning. As the Technology and Enterprise learning area includes the contexts of agriculture, business education, design and technology, home economics and information technology it is important that appropriate assessment strategies are used.

At the beginning of the early adolescence phase, teachers provide structured guidance and support. As skills and knowledge develop, teacher support is gradually reduced until some students are able to work independently.

Formative assessment usually focuses on particular aspects of learning to enable Technology and Enterprise teachers to modify learning, teaching and assessment programs and provide students with specific information to guide improvement. Incidental and detailed feedback can help to identify gaps in learning and allow Technology and Enterprise teachers and students to monitor progress. Technology and Enterprise teachers can gather information about student progress through analysis of students' work, observation of students' engagement with tasks and involvement in discussions.

Summative assessment usually focuses on determining the extent to which students have achieved Technology and Enterprise learning outcomes.

Summative judgements are informed by student achievement over time and across a range of contexts.

Types of assessment suitable for early adolescence (8-10) Technology and Enterprise

Types of assessment	Methods of gathering information
Investigation/Devising Students complete open-ended or directed research tasks and design challenges that require them to investigate products, services or enterprises, draw conclusions and develop strategies to solve problems. This requires creative and critical thinking and novel and intelligent solutions.	• open-ended tasks • scale models and prototypes • design challenges • observation checklists • drafts • written reports • proposals presented using a range of communication types (written, oral, graphical, video, or various combinations of these) • sketches and technical drawings • portfolio annotations • technical reports • self evaluation and peer evaluation • projects/assignments/reports • oral presentations • structured whole or small group discussions • individual discussions with students
Production Students create solutions to satisfy design challenges and complete practical tasks by implementing production plans and applying technical skills and problem-solving techniques. Students safely use and adapt appropriate technologies to realise plans and goals.	• demonstrations of practical skills in simulated and real contexts • manufactured products • scale models and prototypes • practical work including complex projects • a structured collection of work samples (portfolio) • observation checklists • production plans • evaluation tools (self or peer) • reports • group presentations and reports

Types of assessment suitable for early adolescence (8-10) Technology and Enterprise (continued)

Types of assessment	Methods of gathering information
Production (continued)	• observation and performance checklists • product test records • journals and learning logs • photographs • oral presentations • structured whole or small group discussions • individual discussions with students • on-balance judgements
Response/Evaluation Students respond through analysis and critical appraisal of materials and processes, showing the development and the use of problem-solving processes, as well as evaluation of their own work. This may be through an oral, written or multimedia presentation, or a combination of these.	• rubrics for practical activities • observation checklists • evaluation tools (self or peer) • formative and summative tests • reports • attitude surveys • oral presentations • ICT visual response • data collection tables • preparation of business plans, • structured whole or small group discussions • individual discussions with students • on-balance judgements

6.4 Recording assessment information

When recording assessment information, Technology and Enterprise teachers should select methods that:

- are time efficient
- are effective in informing student learning
- enable assessment over a period of time
- accommodate a range of assessment types
- can be linked effectively to standards that inform reporting.

Methods of recording assessment information include:

- anecdotal records
- annotated work samples
- audio and visual (including photographic and video) recordings
- checklists
- Documented Plans (Individual Education Plans and Group Plans)
- marking keys
- observation notes
- portfolios
- reflection sheets, diaries or scrapbooks
- records of test results
- rubrics
- sample assessment items
- student/teacher journals.

Teachers can use the *Curriculum Framework Progress Maps – Technology and Enterprise/ Outcomes and Standards Framework – Technology and Enterprise* to inform the recording of assessment information.

6.5 Making judgements and reporting

Teacher judgements are fundamental to assessment and reporting processes.

Technology and Enterprise teachers assess using ways with which they feel comfortable to monitor students' progress and determine summative grades for reporting.

Technology and Enterprise teachers do not have to level or grade every piece of student work.

Judgements about student achievement are based on knowledge of the students and their work, accumulated over time and in a range of situations. The frequency, consistency and degree of independence shown by students in demonstrating achievement provide a basis on which Technology and Enterprise teachers can make on-balance judgements about assessment of learning outcomes. Valid and reliable on-balance judgements can be supported by moderation processes within and between schools. Moderation processes should take into account individual staff differences and readiness.

Technology and Enterprise teachers also refer to information from standardised tests to inform their judgements about students' achievement.

Teacher judgements inform summative grades for reporting. Reporting is a process, both formal and informal, for providing information about the progress of student achievement. It provides a vital part of developing and maintaining the partnership between school and home.

When reporting, care needs to be taken to give students and parents/caregivers information that:

- is free of jargon and complex technical language

- focuses on strengths and what the student has achieved in the learning period
- reports student achievement in relation to relevant standards
- is reliable and valid within and across schools
- is comprehensible to them (this may require use of interpreters and/or translations).

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Early Adolescence (8-10) Technology and Enterprise Syllabus Summary

The *Early Adolescence (8-10) Technology and Enterprise Syllabus* is designed to support teachers with planning and delivering learning, teaching and assessment programs in the context of the *Curriculum Framework*. The syllabus details content at each year of schooling across the early adolescence phase of development. When using these advisory materials, teachers will continue to make professional judgements about when to introduce content based on students' prior learning and achievement.

1 Purpose

This syllabus provides teachers with advice about content, planning, teaching and assessment in Technology and Enterprise in years 8-10.

Connections with other curriculum policy and support documents

This syllabus is consistent with, and can be used in conjunction with, the following policy and support documents:

- *Technology and Enterprise Learning Area Statement* in the *Curriculum Framework for Kindergarten to Year 12 Education in Western Australia* produced by the Curriculum Council of Western Australia. The *Curriculum Framework* establishes the learning outcomes expected of all Western Australian students from kindergarten to year 12.
- The Curriculum Council's *Curriculum Framework Progress Maps - Technology and Enterprise.* These describe progressive student achievement in Technology and Enterprise from kindergarten to year 12 and are a guide for monitoring and planning for student achievement.
- The Department of Education and Training's *Outcomes and Standards Framework - Technology and Enterprise.* This is similar to the *Technology and Enterprise Progress Maps* but also includes Achievement Targets for years 3, 5, 7 and 9 in WA public schools.

- The Curriculum Council's *Curriculum Framework Curriculum Guide - Technology and Enterprise.* This describes, in phases of development, content to support students' progress in Technology and Enterprise from kindergarten to year 12.
- The MCEETYA *National Consistency in Curriculum Outcomes (NCCO) Statements of Learning.* These are statements of learning agreed to by State and Territory Ministers for Education and are intended to provide greater consistency in curriculum outcomes across Australia.

As part of a K-12 approach to Technology and Enterprise, this syllabus also:

- builds on the *Middle Childhood (4-7) Syllabus*
- prepares students for the more specialised Technology and Enterprise courses in years 11 and 12.

2 Rationale

Key features of Technology and Enterprise

Technology and Enterprise involves applying knowledge, skills and resources to satisfy human needs and desires. Technology and Enterprise develops students':

- manipulative and technical skills
- design and production skills
- technical literacy
- understandings of the interaction of Technology and Enterprise with community, culture, values and attitudes.

Organisation of the Technology and Enterprise learning area

The *Curriculum Framework Technology and Enterprise Learning Area Statement* identifies seven outcomes:

- Technology Process
- Materials
- Information
- Systems
- Enterprise
- Technology Skills
- Technology in Society.

The scope and sequence statements in this syllabus are structured around these outcomes with content for the last three incorporated in that for the first four.

3 Phase of Development

Teaching Technology and Enterprise in years 8-10

The *Curriculum Framework* identifies seven principles of effective learning and teaching:

- opportunity to learn
- connection and challenge
- action and reflection
- motivation and purpose
- inclusivity and difference
- independence and collaboration
- supportive environment.

The following table outlines suggestions on how the principles of effective learning and teaching can be incorporated into the teaching of Technology and Enterprise in years 8-10 in ways which take account of students' current stages of development.

Suggested approaches to learning and teaching

Principles of learning and teaching	Strategies years 8-10 teachers of Technology and Enterprise can use to implement the principles
Opportunity to learn Learning experiences should enable students to observe and practise the actual processes, products, skills and values which are expected of them.	• Provide opportunities for students to observe, practise, select and use a range of processes, skills, equipment and technologies. • Provide opportunities for students to work on open-ended tasks which require them to investigate, evaluate, create, adapt, select and use technologies. • Model and demonstrate Technology and Enterprise skills and procedures. • Provide opportunities for students to apply Technology and Enterprise skills in the wider community.
Connection and challenge Learning experiences should connect with students' existing knowledge, skills and values while extending and challenging their current ways of thinking and acting.	• Connect Technology and Enterprise concepts and skills to students' background knowledge and personal interests. • Connect Technology and Enterprise concepts and skills to students' learning in other curriculum areas. • Encourage students to think creatively and devise alternative solutions for technology challenges. • Encourage students to be innovative in their work. • Provide access to ICT, illustrating the potential and possible limitations of this technology. • Encourage alternative perspectives and views. • Illustrate how ways of thinking about Technology and Enterprise have been, and are, subject to challenge and change.
Action and reflection Learning experiences should be meaningful and encourage both action and reflection on the part of the learner.	• Provide opportunities for students to critically examine the social and environmental impacts of technologies. • Provide opportunities for students to reflect on and monitor their performance and progress. • Make assessment criteria explicit and create opportunities for self-assessment.

Suggested approaches to learning and teaching (continued)

Principles of learning and teaching	Strategies years 8-10 teachers of Technology and Enterprise can use to implement the principles
Motivation and Purpose Learning experiences should be motivating and their purpose clear to the student.	• Illustrate real life applications and future uses of Technology and Enterprise skills and understandings students are developing. • Connect learning in Technology and Enterprise to students' lives and local environments. • Connect learning in Technology and Enterprise to further education and career pathways. • Involve students in planning learning experiences in Technology and Enterprise.
Inclusivity and difference Learning experiences should respect and accommodate differences between learners.	• Design activities which cater for different learning styles, values, gender, abilities, interests, cultures and family backgrounds. • Design activities which take into account students' differing physical, mental and emotional development.
Independence and collaboration Learning experiences should encourage students to learn both independently and from and with others.	• Design learning experiences which allow students flexibility in learning styles and task structure. • Design learning experiences which allow students to work cooperatively and collaboratively with other students.
Supportive environment The school and classroom setting should be safe and conducive to effective learning.	• Create a classroom climate based on mutual respect and tolerance. • Ensure students are provided with a safe environment, understand and comply with safety rules and are adequately supervised at all times. • Actively recognise and encourage achievement and progress. • Reassure students that mistakes are an opportunity to learn and improve. • Promote school policies which support positive attitudes towards Technology and Enterprise.

4 Content

Content in this syllabus is organised into:

- K-10 overviews for each scope and sequence statement
- scope and sequence statements expressed in year levels to provide advice on starting points for learning, teaching and assessment programs.

5 Planning

When using the content in this syllabus to plan for learning, teachers of Technology and Enterprise need to take into account the following:

- relevant policies and curriculum priorities
- students' achievement and learning needs
- opportunities to integrate learning
- the *Curriculum Framework's* principles of learning, teaching and assessment.

6 Assessment

The purpose of assessment in Technology and Enterprise is to monitor students' progress to:

- provide feedback
- inform planning, teaching and reporting.

When assessing, Technology and Enterprise teachers need to take into account the *Curriculum Framework's* principles of assessment and keep in mind the following:

- assessment relies on teachers' professional judgements
- assessment should be referenced to common standards as described in the *Curriculum Framework Progress Maps - Technology and Enterprise/Outcomes and Standards Framework - Technology and Enterprise*
- teachers of Technology and Enterprise do not have to formally level or grade every piece of student work
- Technology and Enterprise Departments should have an assessment policy which is communicated to students and other members of the school community
- assessment can be undertaken in a variety of ways including via collection and marking of student work, observation, checklists, portfolios, recordings and anecdotal records
- teachers of Technology and Enterprise can select from a range of published or teacher developed resources to record assessment information.