Outcomes and Standards Framework Overview - Student Outcome Statements
Western Australia. Education Department, 1998

Overview of the document
129 page document designed to directly accompany the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia (1998). It is organised via the eight Key Learning Areas, providing a concise overview of the Student Outcome Statements and Levels (1-8) for the Strands and Substrands in each area. This document was designed to function as a monitoring/planning tool for schools/teachers when designing outcomes-focused learning programs.

N.B An updated version of this document was released in 2005, which included changes to the structure and terminology of the Student Outcome Statements. The changes were the result of a 2002 review of the Student Outcome Statements by the Western Australian Curriculum Council. According to the 2005 document, the updated Student Outcome Statements ensured “a more direct alignment to the Curriculum Framework outcomes and improved the clarity, consistency and utility for teachers in classrooms” (2005, p. 5). Major changes in the 2005 document include: defined Achievement Targets at Years 3, 5, 7 and 9 for some outcomes; the term ‘Strand’ being replaced by ‘Outcome’; the term ‘Substrands’ being replaced by ‘Aspects’; and edited/simplified tables.

Keywords
Curriculum Framework K-12; student outcome statements; learning area outcomes; strands and substrands; strand outcome statements; the Eight Key Learning Areas; the Overarching Statement; levels 1-8, foundation outcome statements; level descriptors.

Table of Contents
ACKNOWLEDGEMENTS
FOREWORD
INTRODUCTION
Relationship of the Learning Area Outcomes to the Student Outcome Statements
Explanation of the Student Outcome Statements
LEARNING AREAS
The Arts
English
Health and Physical Education
Languages Other Than English
Mathematics
Science
Society and Environment
Technology and Enterprise
LEARNING AREA AND STUDENT OUTCOME STATEMENT CODES

Summary of Contents

INTRODUCTION
- Notes that the Curriculum Council developed the Western Australian Curriculum Framework during 1996 and 1997 and that following the trial/development of the Curriculum Framework, the Student Outcome Statements were refined to take account of trial feedback to ensure congruence with the Curriculum Framework.
States that the “The Curriculum Framework sets out what all students should know, understand, value and be able to do as a result of programs they undertake in schools in Western Australia, from kindergarten to year 12.”

Notes that “The Overarching Statement of the Curriculum Framework describes 13 overarching outcomes to which all learning areas contribute. A further 66 learning area outcomes describe the intended learning outcomes in the eight learning areas. It is these learning outcomes that comprise the mandatory elements of the Curriculum Framework.” Notes that the framework provides principles around which schools can develop their own learning programs. (p. 1)

Relationship of the Learning Area Outcomes to the Student Outcome Statements

Notes that the Student Outcome Statements articulate typical learning achievements and provide a ‘progress map’ to describe how key concepts and skills develop as students achieve the learning outcomes in the Curriculum Framework.

Notes that the Learning Area Outcomes relate to the Student Outcome Statements in four major ways:

1. A Learning Area Outcome is directly sequenced as a ‘strand’ into eight levels and the foundation level.
2. A Learning Area Outcome is sequenced as a ‘strand’ and ‘substrands’ into eight levels and the foundation level, where the ‘strand’ is a synthesis of the ‘substrands’.
3. A number of Learning Area Outcomes are together sequenced into eight levels and the foundation level.
4. Advice is provided about monitoring and describing student learning achievements of those Learning Area Outcomes or groups of Learning Area Outcomes that do not lend themselves to a developmental sequence, such as attitudes and values. (pp. 2-3)

Explanation of the Student Outcome Statements

Provides a diagrammatical explanation of how the Student Outcomes Statements are organised in this document which illustrates that the Student Outcome Statements are organised into tables, with one table for each ‘Strand’ in each Learning Area.

Notes that each table includes a description of: the Strand; its Substrands; Foundation Outcome Statements for each Substrand; and Level Descriptors (also know as Strand Outcome Statements) for each Strand and Substrand (Levels 1-8).

Discusses the Curriculum Framework K-12 document and how the Strand Outcome Statements and Annotated Work Samples in it can be used in conjunction with the Student Outcomes Statements in this document.

Learning Areas

The Arts

Quotes the following from the Curriculum Framework K-12 (1998): “In The Arts learning area, students develop creative skills, critical appreciation and knowledge of artistic techniques and technologies in dance, drama, media, music, visual arts and combinations of art forms. The Arts develop students’ sense of personal and cultural identity and equip them for lifelong involvement in and the appreciation of the arts.”
Groups the Arts Student Outcome Statements into the following four strands (no substrands):

1. Communicating arts ideas – Focuses on the ways students communicate ideas by creating, interpreting, exploring, developing and presenting ideas in and through the arts.
2. Using arts skills, techniques, technologies and processes – Focuses on developing students’ understandings of how they choose from a repertoire of appropriate tools in making and appreciating the arts.
3. Responding, reflecting on and evaluating the arts – Focuses on students’ use of their aesthetic understanding to respond to and evaluate the arts.
4. Understanding the role of the arts in society – Focuses on developing students’ understandings of the role of the arts in society and their appreciation of the ways in which the arts have shaped their own lives, contemporary societies and past times, places and people.

Notes that “Teachers need to take into account the contexts of particular art forms as well as what they know about students – their prior learning, emotional, physical and cognitive development. They need to understand how learning is best shaped for students of different age groups.” (p. 12)

Discusses the Arts and inclusivity and notes that in planning, teaching and assessing the Arts, three aspects of inclusivity need to be considered:

1. Access and equity.
2. Valuing the knowledge and experience of all groups.
3. Critically analysing the constructs that disadvantage or advantage certain groups.

Makes particular reference to inclusivity regarding the following areas:

1. The arts and Aboriginal perspectives.
2. The arts and gender.
3. The arts and gifted and talented students.
4. The arts of students with disabilities.

Concerning connections to the Curriculum Framework, presents a diagram outlining the inter-relationship between: The Curriculum Framework and Overarching Statement ↔ The Arts Learning Area Statement and Outcomes ↔ The Arts Student Outcome Statements. (p. 14)

Presents and tables the following Student Outcome Statements for The Arts:

- Level Descriptors for the first Arts Strand: “Communicating arts ideas.” (p. 16)
- Level Descriptors for the second Arts Strand: “Using arts skills, techniques, technologies and processes.” (p. 17)
- Level Descriptors for the third Arts Strand: “Responding, reflecting on and evaluating the arts.” (p. 18)
- Level Descriptors for the fourth Arts Strand: “Understanding the role of the arts in society.” (p. 19)

English

States that “In English students learn about the English language and how to use it effectively. The study of English plays a vital role in the development of students’ literacy, enhances their learning in all areas of the curriculum and provides them with the communication skills and critical understanding of language necessary for active participation in society.” (p. 21)
Notes that in the English learning area, students develop:

- The ability to speak, listen, read, view and write with purpose, effect, understanding and critical awareness in a range of contexts.
- Knowledge of the ways language varies according to content purpose, audience and context.
- A sound grasp of the conventions of Standard Australian English and the ability to apply these.
- A broad knowledge of a range of literature (inc. Australia literature) and a capacity to relate this literature to aspects of contemporary society and personal experience.
- The capacity to critically discuss and analyse texts.
- A knowledge of the way textual interpretation and understanding may vary according to social, cultural and personal differences.
- An understanding of the role language plays in the construction of gender, ethnicity and socioeconomic class.

Advises that teachers will provide learning tasks that include: a balanced range of texts; a range of purposes and texts types; a range of audiences; a range of strategies.

Advises that teachers will make judgements about students’ achievement over time and across a range of tasks and activities involving differing purposes, audiences and types of text.

Notes that as students progress though levels of achievement, the range of text types will expand from familiar to unfamiliar, and from simple to complex.

Discusses the study of media in English and notes that it focuses on developing students’ textual analysis skills and their understandings of various media as forms of communication. Notes that media includes print, radio, television, video, film, interactive multimedia and the Internet.

Discusses inclusivity and notes that “Students come from diverse social, cultural and linguistic backgrounds.” (p. 21)

Notes that due to student diversity, some students will require more time and assistance in understanding the Student Outcome Statements and that teachers will “make professional judgements about what is culturally appropriate and familiar content for the students in their classes”. (p. 21)

Advises that teachers need to take into consideration students’ experiences with English and other languages outside the classroom.

Suggests that students with disabilities may require specialised equipment and/or computer programs to help them achieve the outcomes. Argues that key terms and requirements such as “write”, “speak”, “talk”, “listen”, and others need to be considered and advises that disabled students may be able to show evidence of these things via other methods. (p. 22)

Groups the English Student Outcome Statements into four strands, each of which is divided into four substrands.

The four strands are defined as follows:

1. Speaking and Listening – Focuses on students speaking and listening with purpose, understanding, and critical awareness. Students select and apply strategies for conveying and making meaning in a wide range of contexts. Students develop sophisticated understandings of the power and influence of oral communication.

2. Viewing – Focuses on students viewing a wide range of visual texts with purpose, understanding and critical awareness, and selecting and applying strategies for making meaning in a variety of contexts. Students progress
towards becoming analytical and critical viewers of an extensive range of visual texts.

3. Reading – Focuses on students reading a wide range of texts with purpose, understanding and critical awareness, and selecting and applying strategies for making meaning in a wide range of contexts. Students progress towards becoming critical and reflective readers of a wide range of complex texts.

4. Writing – Focuses on students writing for a range of purposes and audiences and in a range of forms, selecting and applying strategies, and using conventions appropriate to purpose, audience and context.

- The substrands for each are defined as follows:
  - Use of Texts – Focuses on developing the sophistication, complexity, variety and control students demonstrate when making and conveying meaning from spoken, visual and written texts.
  - Contextual Understanding – Focuses on the way language varies according to context and how language affects the way students view themselves and their world.
  - Conventions – Focuses on the use and interpretations of the conventions of oral communication, visual texts and written texts.
  - Processes and Strategies – Focuses on how students reflect and act upon their understandings of the way language works when speaking and listening, viewing, reading and writing.

- Concerning connections to the Curriculum Framework, presents a diagram outlining the inter-relationship between: The Curriculum Framework and Overarching Statement ↔ The English Learning Area Statement and Outcomes ↔ The English Student Outcome Statements. (p. 24)

- Presents and tables the following Student Outcome Statements for English:
  - Level Descriptors for the first English Strand: “Speaking and Listening.” (pp. 26-27)
  - Level Descriptors for the second English Strand: “Viewing.” (pp. 28-29)
  - Level Descriptors for the third English Strand: “Reading.” (pp. 30-31)
  - Level Descriptors for the fourth English Strand: “Writing.” (pp. 32-33)

**Health and Physical Education**

- Quotes the following from the Curriculum Framework K-12 (1998): “Health and Physical Education provides students with an understanding of health issues and the skills needed for confident participation in sport and recreational activities. This enables students to make responsible decisions about health and physical activity and to promote their own and others’ health and well-being.” (p. 35)

- Notes that in this area, students learn about the physical, mental, emotional and social development of themselves and others and examine the impact of interactions between the individual, the wider community and the environment on the health and physical activity of individuals and populations.

- Argues that Health and Physical Education helps students maximise their opportunities and potential to lead healthy, active lifestyles.

- Groups the Health and Physical Education Learning Area Student Outcomes Statements into the following four strands:
  1. Concepts for a Healthy Lifestyle – Focuses on the progressive development of health and physical activity knowledge and understandings that enable students to make informed decisions for a healthy, active lifestyle.
2. Skills for Physical Activity (divided into two substrands: Movement, Skills and Activity; and Game Strategies) – Focuses on the progressive development of movement skills and strategies necessary for students to confidently and competently participate in physical activity.

3. Self-management Skills – Focuses on the progressive development of the skills necessary for students to make informed decisions about health and physical activity, including decision-making, planning, goal setting, time management, stress management and self-esteem development.

4. Interpersonal Skills – Focuses on the progressive development of interpersonal skills such as communication, cooperation, collaboration and leadership necessary for effective relationships and healthy, active lifestyles.

- Discusses inclusivity and notes that teachers need to recognise the different social and cultural backgrounds and the varying skills and abilities of their students. Outlines three aspects of inclusivity which need to be considered:
  1. Access and equity.
  2. Valuing the knowledge and experience of all groups.
  3. Critically analysing the constructs that disadvantage or advantage certain groups.

- Discusses students with disabilities and notes that teachers should be aware of the needs of students with disabilities when planning learning activities and assessment tasks and provide options for these students to demonstrate their achievement of the outcomes in different ways where possible (for example, in some cases physical assistance may be required). Notes that some terminology may not apply to certain students (such as “look” and “listen” for vision and/or hearing impaired students).

- Concerning connections to the Curriculum Framework, presents a diagram outlining the inter-relationship between: The Curriculum Framework and Overarching Statement ⇔ The Health and Physical Education Learning Area Statement and Outcomes ⇔ The Health and Physical Education Student Outcome Statements. (p. 38)

- Presents and tables the following Student Outcome Statements for Health and Physical Education:
  - Level Descriptors for the first Health and Physical Education Strand: “Concepts for a Healthy Lifestyle.” (p. 41)
  - Level Descriptors for the second Health and Physical Education Strand: “Skills for Physical Activity.” (pp. 42-43)
  - Level Descriptors for the third Health and Physical Education Strand: “Self-management Skills.” (p. 44)
  - Level Descriptors for the fourth Health and Physical Education Strand: “Interpersonal Skills.” (p. 45)

Languages Other Than English

- Notes that Languages Other Than English (LOTE) is the curriculum area in which students develop knowledge, skills and understandings to communicate effectively and appropriately in languages other than English (and that the outcomes can be achieved though the learning of any language other than English).

- Notes that LOTE has six learning outcomes, but only the first three are strands as the last three are not sequenced developmentally but are assessed through the first three outcomes. The learning outcomes are defined as follows:
  1. Listening and Responding, and Speaking (first Strand) – Focuses on developing Listening/Speaking skills in target language.
2. Viewing, Reading and Responding (second Strand) – Focuses on developing Viewing/Reading skills in target language.
3. Writing (third Strand) – Focuses on developing students’ written skills in the target language.
4. Cultural Understandings – Focuses on developing an appropriate cultural framework (understanding of relationship between language and sociocultural context).
5. The System of the Target Language – Focuses on developing knowledge on the structure and system of the language.
6. Language Learning Strategies – Focuses on developing students’ use of skills and strategies to enhance their ability to convey and make meaning in the language (developing ‘learning-how-to-learn’ skills).

- Notes that the LOTE Outcome Statements are based on the LOTE National Statement and Profile and have been written primarily for students with little or no background in a language other than English.
- Concerning connections to the Curriculum Framework, presents a diagram outlining the inter-relationship between: The Curriculum Framework and Overarching Statement ⇔ The LOTE Learning Area Statement and Outcomes ⇔ The LOTE Student Outcome Statements. (p. 48)
- Presents and tables the following Student Outcome Statements for LOTE:
  - Level Descriptors for the first Languages Other Than English Strand: “Speaking and Listening.” (pp. 26-27)
  - Level Descriptors for the second Languages Other Than English Strand: “Viewing.” (pp. 28-29)
  - Level Descriptors for the third Languages Other Than English Strand: “Reading.” (pp. 30-31)
  - Level Descriptors for the fourth Languages Other Than English Strand: “Writing.” (pp. 32-33)

**Mathematics**

- Quotes the following from the Curriculum Framework K-12 (1998): “In Mathematics students learn to use ideas about number, space and chance, and mathematical ways of representing patterns and relationships, to describe, interpret and reason about their social and physical world. Mathematics plays a key role in the development of students’ numeracy and assists learning across the curriculum.” (p. 59)
- Notes that Mathematics involves decision-making and problem solving as well as observing, representing and investigating social and physical phenomena and between mathematical objects themselves.
- Notes that Mathematics enhances our understanding of the world and the quality of our participation in society, is valuable to people individually and collectively and is an integral part of the general education of every young person.
- Notes that while the Student Outcome Statements in Mathematics provide a development of mathematical ideas expected as students progress through their schooling, they emphasise the ‘big ideas’ rather than the details of sequence or content.
- Groups the Mathematics learning area into seven strands, each of which has its own substrands, as follows:
  1. Appreciating Mathematics – Focuses on developing a positive attitude and disposition towards mathematics (N.B. This strand is not explicitly developed
2. Working Mathematically – Focuses on how students think about and work with mathematics. As a result of their learning, students are expected to show a greater appreciation of the role of mathematics and a greater use of mathematical thinking processes and skills in interpreting and dealing with mathematical and non-mathematical situations.

3. Space – Focuses on the visualisation, analysis, representation and interpretation of shapes, movements, locations and arrangements in space. As a result of their learning, students are expected to improve their capacity to describe and analyse mathematically the spatial features of objects, environments and movements.

4. Measurement – Focuses on the choice and use of stable units, tools and formulas for measurement, and direct estimation and measurement of physical attributes and time. As a result of their learning, students are expected to make better and more skillful use of direct and indirect measurement and estimation to describe, compare, evaluate and construct.

5. Chance and Data – Focuses on the collection, organisation, display and interpretation of data and the nature and measurement of chance variation. As a result of their learning, students have a greater understanding of chance variation and data handling processes and how to make use of this in dealing with data.

6. Number – Focuses on numbers and the way we write them, and the use of numbers and operations to deal with quantitative aspects of the environment. As a result of their learning, students are more efficient and flexible in their use of numbers and operations and the relationships between them.

7. Algebra – Focuses on the symbolic and graphical methods for representing variation and generality, and the formulation and solution of equations and inequalities. Algebraic thinking occurs when attention shifts from the particular numbers to general relationships between operations. (N.B. The Algebra Strand starts at Level 5).

Concerning connections to the Curriculum Framework, presents a diagram outlining the inter-relationship between: The Curriculum Framework and Overarching Statement ⇨ The Mathematics Learning Area Statement and Outcomes ⇨ The Mathematics Student Outcome Statements. (pp. 62-63)

Explains the first Strand, Appreciating Mathematics, which does not have level descriptors. (pp. 64-65)

Presents and tables the following Student Outcome Statements for Mathematics:

- Level Descriptors for the second Mathematics Strand: “Working Mathematically.” (pp. 66-67)
- Level Descriptors for the third Mathematics Strand: “Space.” (pp. 68-69)
- Level Descriptors for the fourth Mathematics Strand: “Measurement.” (pp. 70-71)
- Level Descriptors for the fifth Mathematics Strand: “Chance and Data.” (pp. 72-73)
- Level Descriptors for the sixth Mathematics Strand: “Number.” (pp. 74-75)
- Level Descriptors for the seventh Mathematics Strand: “Algebra.” (pp. 76-77)
Science

Quotes the following from the Curriculum Framework K-12 (1998): “In the Science learning area, students learn to investigate, understand and communicate about the physical, biological and technical world and value the processes that support life on our planet. Science helps students to become critical thinkers by encouraging them to use evidence to evaluate the use of science in society and the application of science in daily life.” (p. 79)

Groups the Science Student Outcome Statements into five strands as follows:

1. Investigating Scientifically – Focuses on the testing of scientific ideas and problem solving. It is broken into four substrands: Planning, Conducting, Processing Data, and Evaluating. (N.B. This is the only Science strand which has substrands).

2. Earth and Beyond – Focuses on developing understandings that: the way people live depends on the landscape, weather, climate and the need to act responsibly to sustain the environment; the earth is composed of materials that are altered by forces within and on its surface; and the relationship among the earth, our solar system and the universe is dynamic.

3. Energy and Change – Focuses on developing understandings that: energy is vital to our existence and to the quality of life for individuals and society; energy can be transferred between objects; and the processes of energy transfer can be controlled.

4. Life and Living – Focuses on developing understandings that: all living things in the environment are interdependent and changing one aspect of the environment will affect other organisms; the relationship between the structure and function in living things is a basis for understanding life-maintaining processes; and organisms grow, reproduce and change over generations.

5. Natural and Processed Materials – Focuses on developing understandings that: different materials have different properties and these properties relate to their uses; the structure of materials can explain their behaviour and properties; interactions occur between materials and materials can change.

Provides each Strand with a strand descriptor, which is one of the Science Learning Outcomes from the Curriculum Framework.

Presents the following additional four Learning Area Outcomes for the Science Learning Area, which are not sequenced as Student Outcome Statements (and have no level descriptors):

1. Communicating Scientifically – Focuses on the language of science and developing understandings of how to communicate science understandings in suitable forms to certain audiences.

2. Science in Daily Life – Focuses on developing students’ understandings of science concepts and learning to apply these understandings to interpret and explain natural and technological phenomena in their daily lives.

3. Acting Responsibly – Focuses on developing students’ responsible thinking and acting, and understanding that scientific decisions have implications.


Notes that these are to be monitored and reported on by teachers in association with the outcomes that develop science conceptual understandings and provides a detailed overview of the main components of these four outcomes and a description of how students might be judged demonstrating achievement of them.
Concerning connections to the Curriculum Framework, presents a diagram outlining the inter-relationship between: The Curriculum Framework and Overarching Statement ⇔ The Science Learning Area Statement and Outcomes ⇔ The Science Student Outcome Statements. (p. 82)

Presents and tables the following Student Outcome Statements for Science:

- Level Descriptors for the first Science Strand: “Investigating Scientifically.” (pp. 88-89)
- Level Descriptors for the second Science Strand: “Earth and Beyond.” (p. 90)
- Level Descriptors for the third Science Strand: “Energy and Change.” (p. 91)
- Level Descriptors for the fourth Science Strand: “Life and Living.” (p. 92)
- Level Descriptors for the fifth Science Strand: “Natural and Processed Materials.” (p. 93)

### Society and Environment

Quotes the following from the Curriculum Framework K-12 (1998): “The Society and Environment learning area develops students’ understanding of how individuals and groups live together and interact with their environment. Students develop a respect for cultural heritage and a commitment to social justice, the democratic process and ecological sustainability.” (p. 95)

Notes that the Society and Environment learning area has seven learning outcomes, however, only the first six of these are strands (each of which contain substrands). These are defined as follows:

1. Investigation, Communication and Participation – Focuses on the investigation process and on the skills of critical inquiry and ethical decision making that help students to become better informed, active citizens.
2. Place and Space – Focuses on developing students’ understandings about the natural and built environment, the processes and activities that have shaped them over time, the relationship of interdependence between people and places, and the importance of caring for landscapes.
3. Resources – Focuses on developing students’ understandings about different kinds of resources, their use to meet people’s needs and wants, and management and enterprise practices and workplace organisation that improve the efficiency of their use.
4. Culture – Focuses on developing students’ understandings about the values and beliefs of cultural groups, the influence of codes, customs and norms on people and on the identity, cohesion and diversity of groups, and the degree to which cultures change and develop over time.
5. Time, Continuity and Change – Focuses on people and events of the past, and through them on the dynamic relationship between continuity and change, causes and consequences of change, the differing values placed on aspects of the past at different times, the possible variations in interpretations of historical events and the tentative nature of historical knowledge.
6. Natural and Social Systems – Focuses on developing students’ understandings about how systems provide order to the natural and social relationships occurring in the world.
7. Active Citizenship – Focuses on the behaviours and practices displayed by students that reflect their commitment to the values and principles associated with democratic process, social justice and ecological sustainability, and that form a basis for them to critically review social and environmental action.
Notes that the Student Outcome Statements (levels descriptors) are based on a view of child developmental learning that progresses. Outlines the progression as follows: an egocentric perspective on society and environment ⇒ some awareness of concepts and processes within a perspective of society and environment (literal, context specific) ⇒ an awareness of concepts and processes (simple inferences, context specific, limited capacity to explain, generalise or interpret evidence) ⇒ an awareness (largely context dependent, some capacity to link cause and effect and to generalise beyond the specific) ⇒ an understanding of concepts and processes (inferences supported by evidence, growing awareness of complexity of interrelationships within society and environment) ⇒ a well developed understanding of concepts and processes (ability to generalise, can evaluate complex social and environment issues) ⇒ an ability to apply detailed understandings of concepts and processes to complex social and environmental issues now and in the future.

Concerning connections to the Curriculum Framework, presents a diagram outlining the inter-relationship between: The Curriculum Framework and Overarching Statement ↔ The Society and Environment Learning Area Statement and Outcomes ↔ The Society and Environment Student Outcome Statements. (p. 98)

Presents and tables the following Student Outcome Statements for Society and Environment:

- Level Descriptors for the first Society and Environment Strand: “Investigation, Communication and Participation.” (pp. 102-103)
- Level Descriptors for the second Society and Environment Strand: “Place and Space.” (pp. 104-105)
- Level Descriptors for the third Society and Environment Strand: “Resources.” (pp. 106-107)
- Level Descriptors for the fourth Society and Environment Strand: “Culture.” (pp. 108-109)
- Level Descriptors for the fifth Society and Environment Strand: “Time, Continuity and Change.” (pp. 110-111)
- Level Descriptors for the sixth Society and Environment Strand: “Natural and Social Systems.” (pp. 112-113)

**Technology and Enterprise**

- Quotes the following from the Curriculum Framework K-12 (1998) “In the Technology and Enterprise learning area, students apply knowledge, skills, experience and resources to the development of technological solutions that are designed to meet the changing needs of individuals, societies and environments. Students become innovative, adaptable and reflective as they select as use appropriate materials, information, systems and processes to create solutions that consider the short- and long-term impact on societies and environments.” (p. 115)
- Emphasises the role of ‘enterprise’ in this learning area, which is: “the ability to identify needs and opportunities in a variety of situations and to take action which will be of benefit”. (p. 115)
- Notes that decisions about the development and use of technology reflect a range of cultural issues and environmental factors, including: values and experiences of different people and communities; political positions held by different groups in society; actual or predicted impact of technologies on different environments; and the processes though which decisions are made (which often involves a complex mix of consensus, conflict and compromise).
Groups the Technology and Enterprise Student Outcome Statements into four interdependent strands as follows:

1. Technology Process – Focuses on students engaging in learning processes that enable them to develop manipulative, organisational, operational and enterprise skills. Broken into four key substrands: Investigating, Devising, Producing and Evaluating.
2. Materials – Broken into two substrands: Nature (focuses on properties of materials when making design selections); and Techniques (focuses on safe and appropriate use of equipment and techniques when designing with materials).
3. Information – Broken into two substrands: Nature (focuses on developing understandings that information products and processes have specific needs and audiences); and Techniques (focuses on safe and appropriate use of equipment and techniques when designing information products).
4. Systems – Broken into two substrands: Nature (focuses on evaluating systems and developing understandings that systems are designed for specific purposes); and Techniques (focuses on the appropriate use of equipment and techniques when designing and developing systems).

Discusses inclusivity and notes that three key aspects of inclusivity need to be considered by teachers in planning, teaching and assessing students in Technology and Enterprise:

1. Access and equity.
2. Valuing the knowledge and experience of all groups.
3. Critically analysing the constructs that disadvantage or advantage certain groups.

Concerning connections to the Curriculum Framework, presents a diagram outlining the inter-relationship between: The Curriculum Framework and Overarching Statement ⇐ The Technology and Enterprise Learning Area Statement and Outcomes ⇐ The Technology and Enterprise Student Outcome Statements. (p. 118)

Presents and tables the following Student Outcome Statements for Technology and Enterprise:

- Level Descriptors for the first Technology and Enterprise Strand: “Technology Process.” (pp. 120-121)
- Level Descriptors for the second Technology and Enterprise Strand: “Materials.” (pp. 122-123)
- Level Descriptors for the third Technology and Enterprise Strand: “Information.” (pp. 124-125)
- Level Descriptors for the fourth Technology and Enterprise Strand: “Systems.” (pp. 126-127)

**LEARNING AREA AND STUDENT OUTCOME STATEMENT CODES**

- Provides a glossary of codes and acronyms used within the Student Outcome Statements in each Learning Area. (pp. 128-129)