Stage 6
Mathematics Life Skills Course

Syllabus

Amended 2007
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1 The Higher School Certificate Program of Study

The purpose of the Higher School Certificate program of study is to:

• provide a curriculum structure which encourages students to complete secondary education

• foster the intellectual, social and moral development of students, in particular developing their
  – knowledge, skills, understanding and attitudes in the fields of study they choose
  – capacity to manage their own learning
  – desire to continue learning in formal or informal settings after school
  – capacity to work together with others
  – respect for the cultural diversity of Australian society

• provide a flexible structure within which students can prepare for:
  – further education and training
  – employment
  – full and active participation as citizens

• provide formal assessment and certification of students’ achievements

• provide a context within which schools also have the opportunity to foster students’ physical and spiritual development.
2 Stage 6 Life Skills Courses: Guidelines for Schools

Preamble

The Government’s White Paper for the Higher School Certificate, *Securing Their Future*, included a commitment to extend the curriculum and reporting arrangements that were established for the School Certificate to HSC students with special education needs. This was in recognition of the principle that the post-compulsory years of schooling should cater for all students who choose to participate.

To meet this commitment, the Board of Studies has developed Life Skills courses for Stage 6 in each broad area of learning. The courses are:

- English Life Skills
- Mathematics Life Skills
- Personal Development, Health and Physical Education Life Skills
- Citizenship and Society Life Skills
- Science Life Skills
- Creative Arts Life Skills
- Technological and Applied Studies Life Skills
- Work and the Community Life Skills.

These courses have Board Developed status and can be used along with other Board Developed courses to meet requirements for the award of the Higher School Certificate. Each Life Skills course comprises a 2 Unit Preliminary course and a 2 Unit HSC course. There will not be an external examination for Life Skills courses.

These guidelines have been designed to help schools make decisions about whether a pattern of study in Stage 6 that includes or comprises Life Skills courses is appropriate to the educational needs of individual students. Schools will use these guidelines and courses to assist in developing a pattern of study that is consistent with the individual transition-planning process for the student.

Rationale for Stage 6 Life Skills Courses

The Stage 6 Life Skills courses extend the curriculum and reporting arrangements that were established for the School Certificate for students with intellectual disabilities. There are eight Stage 6 Life Skills courses.

The Stage 6 Life Skills courses stress the application of knowledge and understanding, skills, values and attitudes to a range of environments that will be accessed by students with special education needs.
HSC rules and requirements

As detailed in the Board of Studies Assessment Certification and Examination (ACE) Manual, the eligibility requirements for the Higher School Certificate are the same for all candidates. Students must:

• have gained the School Certificate or other qualification that the Board of Studies considers satisfactory
• have attended a government school, an accredited non-government school, an institute of TAFE or a school outside NSW recognised by the Board
• have satisfactorily completed courses that comprise the pattern of study for the Higher School Certificate and
• have undertaken and made a serious attempt at the required forms of assessment for each course.

Pattern of study

To be eligible for the Higher School Certificate, all students, including those studying Stage 6 Life Skills courses, must undertake a Preliminary course pattern that includes at least 12 units of study and an HSC course pattern that includes at least 10 units of study. Both patterns must include:

• at least six units from Board Developed courses
• at least two units of a Board Developed course in English
• at least three courses of two units value and
• at least four subjects.

For the Preliminary course pattern, students may study Senior Science or no more than six units of any combination of Biology, Chemistry, Earth and Environmental Science, Physics.

For the HSC course pattern no more than six units of any combination of Biology, Chemistry, Earth and Environmental Science, Physics and Senior Science courses may be studied.

Students with special education needs can meet the requirements of the HSC using a combination of:

• Board Developed courses and/or
• Board Endorsed courses (including Content Endorsed courses) and/or
• Board Developed Life Skills courses and/or
• Industry Curriculum Framework course options.

This flexibility allows schools to develop individualised programs of study that challenge students according to their individual needs.
Eligibility to enrol in a Stage 6 Life Skills Courses

Schools do not need to seek the Board’s permission to enrol students in Stage 6 Life Skills courses. These decisions will be made by the school.

When making decisions about enrolling students in Stage 6 Life Skills courses, schools should bear in mind that the main aim of the Stage 6 Life Skills courses is to extend the curriculum and reporting arrangements that were established in Stage 5 for students with special education needs. The Board expects that the majority of students who enrol in Stage 6 Life Skills courses will be students with an intellectual disability.

In general, students enrolling in Stage 6 Life Skills courses will have completed at least four courses based on Life Skills outcomes and content in Stage 5.

In special circumstances, a student who has not undertaken at least four courses based on Life Skills outcomes and content in Stage 5 may wish to enrol in Life Skills courses for Stage 6.

These special circumstances might include situations where:
• a student has attempted regular syllabuses for the School Certificate but has experienced significant difficulty
• a student transfers from interstate or overseas
• a student has a deteriorating condition.

In these and similar circumstances, schools should only enrol students in Stage 6 Life Skills courses as a result of careful planning. The planning should establish why options other than Stage 6 Life Skills courses, such as accumulation or special provisions for the HSC examinations, are not appropriate.

The individual transition-planning process

When entering students for Stage 6 Life Skills courses, the Principal is certifying that the student is eligible and that the decision is the result of an individual transition-planning process.

Schools will make decisions about whether to enrol individual students in Stage 6 Life Skills courses in the context of an individual transition-planning process that is completed for both Year 11 and Year 12. The process must address how the pattern of study and attainment of the Higher School Certificate will contribute to the student’s transition from school to adult life.
Transition-planning documentation

The completion of a transition-planning process for each student is a condition of access to Stage 6 Life Skills courses.

Schools do not need to forward transition-planning documentation to the Office of the Board.

The transition-planning documentation for each student should show evidence of:
• involvement of the student, and other significant individuals in the student’s life, in the planning process
• clear directions and goals for the student’s studies
• priorities for instruction
• identification of relevant settings and strategies
• resource requirements (across home, school and community settings as appropriate)
• strategies for monitoring progress
• clearly-defined time frames.

The documentation should show that the planned learning experiences and teaching activities are:
• appropriate to the chronological age of the student
• functional and life-skills oriented where appropriate
• developed across a range of settings
• planned collaboratively to meet present and future needs.

It should also address the student’s specific needs at the point of transition from school to post-school.

Planning a pattern of study for students undertaking Stage 6 Life Skills courses

• Life Skills courses may form all or part of a pattern of study for students, based on the individual transition-planning process.
• Modules, outcomes and content from selected Stage 6 Life Skills courses will be chosen on the basis that they meet the individual needs, goals and priorities for each student.
• Students are not required to complete all the modules within a Life Skills course nor are they required to complete all the outcomes and content within each module of a Life Skills course.

The flow chart following demonstrates the links between individual transition planning, and the selection of courses to meet the needs of individual students and the Preliminary and HSC pattern of study requirements.
Individual Transition-planning Process

Student’s Stage 5 Pattern of Study
List all courses (reflecting School Certificate key learning area requirements) being undertaken by the student as part of a Special Program of Study and any workplace learning experiences.

Student’s Strengths, Interests and Abilities
Summarise student’s strengths, interests and abilities relevant to transition planning.

Areas For Student’s Further Development
Summarise specific areas for further development.

Individual Transition-planning Meeting – End of Stage 5
- Ensure that student, parents, carers, appropriate school staff and other relevant people are fully involved in the meeting.
- Agree on goals for post-school.
- If agreed that student goals will best be met by remaining at school to complete the HSC, determine pattern of study for Year 11 (Preliminary Year).
- Document decisions made and associated responsibilities.

Outline Pattern of Study for Year 11 – Preliminary Year – 12 Units
- List all courses to be undertaken by the student*, ensuring that these reflect student goals and priorities and the HSC requirements.
- For Stage 6 Life Skills courses, list the selected modules, outcomes and content which will constitute each student’s educational program as determined by the individual transition-planning process.
- Identify relevant settings, strategies.
- Identify resource requirements (across home, school and community settings as appropriate).
- Identify strategies for monitoring progress and clear time frames.

Individual Transition-planning Meeting – End of Preliminary Year
- Ensure that student, parents, carers, appropriate school staff and other relevant people are fully involved in the meeting.
- Review outcomes achieved in Preliminary year.
- Review and confirm student Post-school goals.
- Determine pattern of study for HSC Year – Year 12.
- Document decisions made and associated responsibilities.

Outline Pattern of Study for Year 12 – HSC Year – 10 Units
- List all courses being undertaken (reflecting HSC requirements) by the student*, ensuring that these reflect agreed student goals and priorities and the HSC requirements.
- For Stage 6 Life Skills courses, list the selected modules, outcomes and content which will constitute the student’s educational program as determined by the individual transition-planning process.
- Identify relevant settings, strategies and clear time frames.
- Identify resource requirements (across home, school and community settings as appropriate).
- Identify strategies for monitoring progress within the context of the Profile of Student Achievement.

Note:
* Stage 6 – Note that students entered for Stage 6 Life Skills courses may access Industry Curriculum Framework course options, and other Board Developed or Board Endorsed courses.
Satisfactory completion of Life Skills courses

A student will be considered to have completed a Stage 6 Life Skills course satisfactorily if, in the Principal’s view, the student has:

• followed a program developed from the relevant Life Skills syllabus
• applied themselves with diligence and sustained effort to the set tasks and experiences of the program
• achieved some or all of the course outcomes (see Profile of Student Achievement below).

There are no time requirements for any Board Developed or Board Endorsed course. The Board expects, however, that most students would meet the outcomes for a 2 Unit Preliminary course and a 2 Unit HSC course over approximately 240 indicative hours in total (ie 120 indicative hours each).

What students receive on successful completion

As detailed in the Board of Studies ACE Manual, all students who meet the pattern of study requirements and satisfactorily complete the required studies will receive a Higher School Certificate testamur, a Record of Achievement and a Profile of Student Achievement.

Testamur

The testamur is the Higher School Certificate. It shows the name of the student and the school, and includes a statement that the student has met the requirements for the credential.

Record of Achievement

A HSC Record of Achievement will be provided to any student who completes a Life Skills course. It lists all courses satisfactorily completed and the result for each course. A Record of Achievement is cumulative and lists all courses completed for Stage 6 in previous years.

Profile of Student Achievement

The Profile of Student Achievement is a report completed by the school on the student’s individual achievements. The Board of Studies provides schools with a Profile of Student Achievement booklet for each student. The Profile of Student Achievement lists the outcomes for each Life Skills course. As the student demonstrates that they have achieved a learning outcome, the relevant section of the Profile of Student Achievement is signed and dated by the relevant school teacher.

Before the student leaves school, the Profile of Student Achievement is verified by the school principal as a true and accurate record of all learning outcomes demonstrated by the student. The Profile of Student Achievement is a record of all outcomes attained by the student.
Assistance and advice

School systems or sectors are able to advise schools on transition-planning and on options for students with special education needs. Schools seeking to enrol students in Stage 6 Life Skills courses may contact their system or sector’s special education staff for information on transition-planning and options for their students.

Information and advice on any aspect of Life Skills Stage 6 courses are also available from the Senior Curriculum Officer (Special Education) at the Office of the Board of Studies. Board of Studies Liaison Officers can also advise on matters such as HSC entries and appeals.

The Board of Studies and the Office of the Board of Studies are committed to consultation and to responding to the needs of all students and schools. Schools and parents involved with the education of students with special needs are welcome to contact the Office of the Board of Studies at any time with comments or suggestions on the Life Skills courses or any other aspect of the Board’s policies or requirements relating to students with special education needs.

Occupational Health and Safety

In developing units of work for Life Skills courses, teachers should consider the occupational health and safety issues of working with students. Safe working practices and environments should be provided at all times.

Care must be taken at all times in the practical activities students engage in. Non-slip mats can be provided in wet areas and the height and type of tables considered to suit the physical needs of students. Electrical hazards should be avoided at all times. For example, attention must be given to the safe use of tools, materials and technologies. If students are using tools or machinery, the dangers of working with such items should be explained. Students should be trained to work with tools and machinery. The adequate ventilation of classrooms, particularly when any hazardous substances are used, should be considered. Extractor fans, for example, can greatly assist in the removal of fumes from classrooms.

Further information about working with hazardous substances is available in the document *Chemical Safety in Schools Package* produced by the Department of Education and Training, 1998.

Exposure to excessive noise levels may lead to impaired hearing. The frequency and loudness of sound should be taken into account in the planning of any activities.
3 Continuum of Learning for Stage 6 Mathematics Life Skills Students

- **Stages 1–3**
  - K–6 Mathematics

- **Stage 4**
  - Mathematics

- **Stage 5**
  - Mathematics courses that provide relevant experiences for General Mathematics Stage 6:
    - Intermediate Mathematics
    - Standard Mathematics

- **Stage 5**
  - Mathematics Generic Life Skills Course

- **Stage 6**
  - General Mathematics Preliminary and HSC

- **Stage 6**
  - Mathematics Life Skills Course

- Workplace
- University
- TAFE
- Other
- Lifelong Learning
4 Aim

The aim of Stage 6 Mathematics Life Skills is to develop students’ ability to apply mathematics in a variety of contexts in order to enhance and encourage their participation in post-school life.

5 Objectives

Students will:
• develop an awareness of mathematics as an essential part of everyday living
• develop the knowledge, understanding and skills required to apply numeration and number operations in practical daily situations
• develop knowledge and understanding of the impact of time on whole-of-life activities and skills in time management
• develop knowledge and understanding of shapes, direction and the position of objects in space
• develop knowledge and understanding and skills that enhance their handling and management of money
• develop skills in the practical application of measurement tools and units.
6 Course Structure

Each course has six modules, which focus on generalising knowledge, understanding, skills, values and attitudes across a range of post-school environments. The structure of each Stage 6 Life Skills course is designed to provide a broad and balanced approach to meet individual student needs within the context of the transition-planning process.

Stage 6 Life Skills course has an indicative time allocation of 120 hours in each of the Preliminary and HSC courses. The choice of outcomes and content from the modules within each course, and the time spent on the content, should reflect the needs of individual students.

Generally the outcomes contained in the Stage 6 Mathematics Life Skills course progress in degree of difficulty. The outcomes, however, are not based on a developmental hierarchy. Therefore students are not required to satisfy previous outcomes before engaging with particular outcomes and content later in each module.

The content points listed with each outcome form the basis of the learning opportunities for students. Teachers may choose the most relevant aspects of the content to meet the particular needs of individual students. Any examples provided with the content points are suggested strategies only. Teachers may use the examples provided or develop other examples to meet the particular needs of individual students.

<table>
<thead>
<tr>
<th>Module</th>
<th>Module Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numeration</td>
<td>This module develops students' knowledge, understanding and skills in numeration as required in many aspects of daily living. The development of problem-solving in real-life situations is emphasised.</td>
</tr>
<tr>
<td>Operations</td>
<td>This module gives students proficiency in mathematical operations. It emphasises the application of mathematical operations to practical situations to enhance students' access to community living, further education, training and employment.</td>
</tr>
<tr>
<td>Time</td>
<td>This module provides students with a basic knowledge and understanding of the importance of time in whole-of-life activities. It focuses on developing the capacity to manage personal time and schedule activities.</td>
</tr>
<tr>
<td>Space</td>
<td>This module develops students' understanding of concepts related to personal position in space, objects, shapes, distance and direction, to enhance their capacity to operate in post-school environments.</td>
</tr>
<tr>
<td>Money</td>
<td>This module assists students to have a better understanding of money, its management and responsibilities. It emphasises skills, operations and calculations with money in real-life situations.</td>
</tr>
<tr>
<td>Measurement</td>
<td>This module gives students an understanding of measurement concepts, focusing on the practical application of measurement tools and units in a range of situations.</td>
</tr>
</tbody>
</table>
## 7 Objectives and Outcomes

<table>
<thead>
<tr>
<th>Objective</th>
<th>Outcome</th>
<th>A student:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Students will: develop an awareness of mathematics as an essential part of everyday living</td>
<td>1.1</td>
<td>demonstrates understanding of number sense</td>
</tr>
<tr>
<td></td>
<td>1.2</td>
<td>recognises, matches and sorts concrete objects to represent numbers</td>
</tr>
<tr>
<td></td>
<td>1.3</td>
<td>counts objects in meaningful contexts</td>
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<tr>
<td></td>
<td>1.4</td>
<td>understands and uses ordinal terms</td>
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<tr>
<td></td>
<td>1.5</td>
<td>reads and writes numbers and demonstrates understanding of place value</td>
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<td></td>
<td>1.6</td>
<td>demonstrates knowledge, understanding and application of basic fractions and decimals</td>
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<td></td>
<td>1.7</td>
<td>recognises and uses percentages</td>
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<tr>
<td></td>
<td>1.8</td>
<td>applies mathematical knowledge and skills to solve problems in a range of contexts</td>
</tr>
<tr>
<td>2. Students will: develop the knowledge, understanding and skills required to apply numeration and number operations in practical daily situations</td>
<td>2.1</td>
<td>demonstrates knowledge and understanding of addition, subtraction, multiplication and division processes</td>
</tr>
<tr>
<td></td>
<td>2.2</td>
<td>understands and applies correct order of operations in calculations</td>
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<td></td>
<td>2.3</td>
<td>uses a calculator to perform calculations</td>
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<tr>
<td></td>
<td>2.4</td>
<td>determines and applies appropriate processes to solve problems</td>
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<tr>
<td>Objective</td>
<td>Outcomes</td>
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<tr>
<td><strong>Students will:</strong></td>
<td><strong>A student:</strong></td>
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<tr>
<td>3</td>
<td>matches familiar activities with basic time-frames including day, night, morning, afternoon</td>
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<tr>
<td>3.1</td>
<td>demonstrates an understanding of the sequence of events and the time of day in a range of environments</td>
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<tr>
<td>3.2</td>
<td>demonstrates an understanding of weekday and weekend activities</td>
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<tr>
<td>3.3</td>
<td>demonstrates knowledge and understanding of days of the week, months, seasons and years</td>
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<tr>
<td>3.4</td>
<td>demonstrates knowledge and understanding of seconds, minutes and hours</td>
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<tr>
<td>3.5</td>
<td>reads time in different formats</td>
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<td>3.6</td>
<td>estimates and calculates with time</td>
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<tr>
<td>3.7</td>
<td>reads and understands calendars and plans events</td>
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<tr>
<td>3.8</td>
<td>reads and interprets timetables</td>
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<tr>
<td>3.9</td>
<td>prioritisers personal time and manages scheduled activities</td>
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<tr>
<td>3.10</td>
<td>prioritises personal time and manages scheduled activities</td>
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<tr>
<td>4</td>
<td>discriminates, matches, sorts, copies and creates patterns and designs</td>
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<tr>
<td>4.1</td>
<td>demonstrates an understanding of position</td>
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<tr>
<td>4.2</td>
<td>recognises and uses a range of three-dimensional and two-dimensional shapes</td>
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<tr>
<td>4.3</td>
<td>demonstrates knowledge and understanding of distance and direction</td>
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<tr>
<td>4.4</td>
<td>reads and understands a variety of directories and maps</td>
<td></td>
</tr>
<tr>
<td>4.5</td>
<td>reads and understands a variety of directories and maps</td>
<td></td>
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<tr>
<td>Objective</td>
<td>A student:</td>
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<tr>
<td>Students will:</td>
<td>Outcomes</td>
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<tr>
<td>5 develop knowledge and understanding and skills that enhance their handling and management of money</td>
<td>5.1 understands that money is a medium for purchasing goods and services</td>
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<td></td>
<td>5.2 identifies, matches and counts coins and notes</td>
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<td>5.3 reads and writes amounts of money and relates operations to money</td>
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<td></td>
<td>5.4 tenders amounts of money to make purchases, and estimates and calculates change</td>
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<td></td>
<td>5.5 demonstrates an understanding of the purchasing power of money and relates and compares value to price</td>
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<td>5.6 demonstrates understanding of ways of generating income</td>
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<td></td>
<td>5.7 demonstrates knowledge, understanding and application of financial decision-making skills</td>
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<td></td>
<td>5.8 demonstrates an understanding of the responsibilities and obligations associated with money management</td>
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<tr>
<td>6 develop skills in the practical application of measurement tools and units.</td>
<td>6.1 demonstrates knowledge and understanding of the attributes of size, shape, length, mass, temperature, area and volume</td>
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<tr>
<td></td>
<td>6.2 demonstrates knowledge, understanding and use of measurement units and tools for length, mass, temperature, perimeter, area and volume</td>
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<tr>
<td></td>
<td>6.3 reads and interprets a variety of graphs and tables</td>
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<td></td>
<td>6.4 estimates and calculates lengths and distances</td>
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<td></td>
<td>6.5 estimates and calculates quantities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.6 estimates and calculates perimeter and area</td>
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</tbody>
</table>
8 Key Competencies

The Stage 6 Mathematics Life Skills course provides a context for the development of general competencies essential for the acquisition of effective, higher-order thinking skills. These are necessary for community living, further education and training, and employment.

The following key competencies are embedded in Mathematics Life Skills:

- collecting, analysing and organising information
- communicating ideas and information
- planning and organising activities
- working with others and in teams
- using mathematical ideas and techniques
- solving problems
- using technology.

These key competencies are developed through the objectives, modules, outcomes and content of the Stage 6 Mathematics Life Skills course, in ways which address individual student needs.
9 Modules

Module 1: Numeration

Module Description

This module develops students' knowledge, understanding and skills in numeration as required in many aspects of daily living. The development of problem-solving in real-life situations is emphasised.

Outcome

1.1 Demonstrates understanding of number sense

Content

Students:
- show an understanding of number sense
  eg – respond appropriately to requests using words descriptive of number, such as 'all', 'none', 'few'
- demonstrate use of number sense
  eg – respond correctly to instructions such as:
    'Put all the containers on the shelf'
    'Pass me the chair which is in the middle of the row'
    'Put some pencils on each desk'
    'Put more food on the plate'
    'Put less food on the plate'

- apply number concepts appropriately in a range of situations
  eg – respond to advice or directions such as
    'All people must use this exit'
    'You need more money for this ticket'
    'Write these words in the middle of the page'
**Outcome**

1.2 Recognises, matches and sorts concrete objects to represent numbers

**Content**

Students:

- use concrete objects in a range of situations to represent specific numbers
  eg – respond correctly to instructions such as:
  ‘Put three pens on the table’
  ‘Put two balls on the ground’
  ‘Use this packing or counting grid for packing items at work’

- arrange objects in a range of situations to represent specific numbers
  eg – respond correctly to instructions such as:
  ‘Place a given number of boxes on the shelf’

- match number sets using concrete objects
  eg – respond correctly to instructions such as:
  ‘Here is a group of four rulers, find me another group that is the same in number’
  ‘This is a box of six eggs, show me another box with six eggs’

- identify sets containing equal numbers of objects
  eg – respond correctly to instructions such as:
  ‘Show me the photo with three people in it’
  ‘Which group has five students in it?’
  ‘Which packet contains five Mars Bars?’

- group sets of equal numbers of objects
  eg – respond correctly to instructions such as:
  ‘Place all the six packs of drink on this shelf’
  ‘Collect all the pictures with two people in them’
Outcome

1.3 Counts objects in meaningful contexts

Content

Students:
- count objects within meaningful contexts
  - eg – count appropriate number of cups and saucers for 12 people at a party

- count objects by twos, fives and tens within meaningful contexts
  - eg – package pens or pencils into bundles of 2, 5, 10

- count by ones, twos, fives and tens in meaningful contexts in order to solve number problems
  - eg – use boxes of 5 to count 30 items
  - – fill an order for eighteen litres of juice using two-litre containers
Outcome

1.4 Understands and uses ordinal terms

Content

Students:
- understand ordinal terms 1st to 10th
  eg – identify friends sitting in the 1st, 2nd and 3rd seats
- use ordinal terms in meaningful contexts
  eg – identify that the train ticket is renewed on the first day of each month
**Outcome**

1.5 Reads and writes numbers and demonstrates understanding of place value

**Content**

Students:
- read, write and order the numbers 11-100, demonstrating knowledge and understanding of place value
- read, write and order numbers to 1000, demonstrating knowledge and understanding of place value
  - eg – write the number that is 10 more/less than
  - write the number that is 100 more/less than
- read, write and order numbers beyond 1000, demonstrating knowledge and understanding of place value
- use a calculator to demonstrate place value
Outcome

1.6 Demonstrates knowledge, understanding and application of basic fractions and decimals

Content

Students:
• allocate portions or divide materials
  eg – cut a birthday cake at a party into equal sizes portions
  – prepare quantities for cooking
  – allocate work materials

• recognise that cutting an item in half will result in two equal pieces

• recognise that cutting items in thirds and quarters will result in three and four equal pieces respectively

• use terms half, quarter, third to identify and name fractions involving concrete materials
  eg – ‘half a pie’
  – ‘a quarter of an apple’

• understand and apply fractional terms such as half, quarter, third within meaningful contexts
  eg – identify that the bell rings every half-hour

• understand and apply other fractional terms such as three-quarters, two-thirds within meaningful contexts
  eg – ‘I spent three-quarters of my lunchbreak in the library’

• demonstrate that decimals are another way of describing fractional portions
  eg – 0.5 = $\frac{1}{2}$

• understand and apply decimals within meaningful contexts
  eg – compare interest rates on savings accounts
  – read a stopwatch to tenths and hundredths of a second
Stage 6 Mathematics Life Skills Syllabus

Outcome

1.7 Recognises and uses percentages

Content

Students:
• recognise that percentages are based on a fraction of 100

• recognise that percentages can be used to allocate portions or divide materials
eg – use 50% of available materials to construct an animal shelter

• recognise that fractions can be expressed as percentages
eg – \( \frac{1}{4} = 25\% \)
\( \frac{1}{2} = 50\% \)
\( \frac{3}{4} = 75\% \)
\( \frac{95}{100} = 95\% \)

• recognise occasions when use of fractional expressions and percentage expressions are common
eg – ‘half an apple’, ‘50% of the population’, ‘a quarter of the pie’, ‘5% increase in prices’

• calculate percentages of quantities, such as 10%, 20%, 25%, 50%

• apply percentage terms within broader contexts
eg – understand and use statements such as:
‘10% of the budget is needed for travel’
‘One account earns 4% interest while another account earns only 1.5%’

• use a calculator to solve problems involving percentages

• calculate percentages within broader contexts
eg – calculate simple interest on bank balances, investments
   – calculate compound interest on fixed amounts
Outcome

1.8 Applies mathematical knowledge and skills to solve problems in a range of contexts

Content

Students:
- apply knowledge and skills in a range of situations
  - carry out calculations to manage daily health requirements such as medication every third day
  - determine if there are enough apples/slices of cake for each person
  - determine if all game sets contain equal numbers of objects
  - solve problems such as:
    - ‘I need 50% of $20, how much is that?’
    - ‘How many \( \frac{1}{4} \) cups do I need to make one cup?’
    - ‘$5 is half the amount I need for the book, how much more do I need?’
    - ‘Sort these one hundred books into bundles of tens’
Module 2: Operations

Module Description

This module gives students proficiency in mathematical operations. It emphasises the application of mathematical operations to practical situations to enhance students’ access to community living, further education, training and employment.

Module Outcomes

Outcome

2.1 Demonstrates knowledge and understanding of addition, subtraction, multiplication and division processes

Content

Students:
- demonstrate understanding of addition using concrete objects
  eg – place groups of objects together to make a total

- recall basic addition facts
  eg – memorise and demonstrate addition facts to 20

- demonstrate understanding of addition in written format with or without trading
  eg – 4 + 5 = 9
  – determine the total number of items in several bundles
    15
    16 +
    31

- demonstrate an understanding of subtraction using concrete objects
  eg – 10 boxes are to be packed, three are already packed, how many left to pack?

- recall basic subtraction facts
  eg – memorise and demonstrate subtraction facts to 20

- demonstrate understanding of subtraction in written format with or without trading
  eg – 9 – 5 = 4
  – 50 packages on shelf, less 25 sold, how many to re-stock?
    50
    25 –
    25

- demonstrate an understanding of multiplication using concrete objects
  eg – 5 packets of 5 lollies makes 25 lollies

- use multiplication tables
  eg – use written multiplication tables to produce answer
• recall multiplication tables
  eg – memorise and demonstrate 1–10 times tables

• demonstrate understanding of multiplication in written format
  eg – 15

       5 x
    ---
    75

  – pack 20 racks of 5 items, how many items have been packed altogether?
    20

       5 x
    ---
    100

• demonstrate understanding of division using concrete objects
  eg – 10 cakes among 5 people – how many will each person get?

• use understanding of division in everyday situations
  eg – pack 500 items in boxes with 100 items each, how many boxes are needed?

• use a combination of operations to solve everyday problems
  eg – organise food for a party of 10 people
        – calculate the number of sausages, number of bread rolls and amount of litres of drink etc required
**Outcome**

2.2 Understands and applies correct order of operations in calculations

**Content**

Students:
- recognise that performing operations in different order changes the result
  ie $-(2 + 3) \times 5 = 25; 2 + (3 \times 5) = 17$

- understand and use the conventional order of operations
  $-()$, $\times/\div$, $+/-$

- use parentheses on a calculator to ensure correct order of operations
  $\text{eg} = \frac{28 + 45}{17 + 15}$
Outcome

2.3 Uses a calculator to perform calculations

Content

Students:
• indicate recognition of the purpose of a calculator

• identify number and operation buttons on a calculator
  eg – numbers 0-9, decimal point, =, +, -, x, ÷

• use calculator to perform a given operation
  eg – add 2 numbers

• use calculator to perform a given calculation utilising function key
  eg – %

• demonstrate understanding of relevant occasions to use a calculator
  eg – with complex calculations
  – when it would be quicker or more efficient to use calculator
  – when personal skills are insufficient to perform a calculation

• use calculators to solve problems in a range of environments
  eg – work, shopping, home
Outcome

2.4 Determines and applies appropriate processes to solve problems

Content

Students:

• recognise problems that require mathematical solutions  
  eg – ‘determine how many packets of 20 plastic bags are needed to wrap 320 newspapers’

• demonstrate that a range of operations may be used to find a solution  
  eg – divide 20 into 320; use repeated addition (20, 40, 60 … 320); use repeated subtraction (320, 300, 280 … 0); use multiplication (20 ← ? = 320)

• solve problems utilising appropriate individual skills  
  eg – mental, written, calculator

• generalise problem-solving skills in familiar environments  
  eg – school, home, work, leisure

• generalise problem-solving skills in abstract form across a range of environments  
  eg – calculate the number of objects that will fill a space prior to action  
    – calculate the number of tiles required to cover a floor space
Module 3: Time

Module Description

This module provides students with a basic knowledge and understanding of the importance of time in whole-of-life activities. It focuses on developing the capacity to manage personal time and schedule activities.

Outcome

3.1 Matches familiar activities with basic time-frames including day, night, morning, afternoon

Content

Students:
• associate breakfast with morning
• associate dinner with evening
• associate lunch with the middle of the day
• demonstrate an association of meal time routines with basic times of the day
  eg – direct attention (eye gaze, head turning) towards kitchen in expectation
  – move towards dining table just prior to meals
  – point to a timetable (symbolic or text) to indicate choice of meal time according to time of day
• demonstrate an association of personal health care routines with basic times of the day
  eg – recognise that toileting occurs at mid-morning and at lunch time
• demonstrate an association of personal, social routines with basic times of the day
  eg – take a shower before school or work
  – call friends on the telephone in the afternoon/evening
  – wash hands before a meal
• demonstrate an association of training or work activities with basic times of the day
  eg – go directly to roll-call room upon arrival at school
  – cease work in preparation for the end of school or work day
  – leave school at end of period 3 to travel to work placement
Outcome

3.2 Demonstrates an understanding of the sequence of events and the time of day in a range of environments

Content

Students:
- recognise a personal sequence of events associated with a particular time of day
  eg – showering/dressing/breakfast/travel to school/work/training in the morning
  – travel home/afternoon tea/play/TV in afternoon
- acknowledge the next step in a personal sequence associated with time of day
  eg – collect personal items before leaving for school or work
- follow a personal sequence of events associated with a time of day
  eg – cease work/pack up/proceed to bus stop
**Outcome**

3.3 Demonstrates an understanding of weekday and weekend activities

**Content**

Students:
- identify weekdays and weekends
- recognise that weekdays involve school, work or training activities
  eg – identify days for work placement
- recognise that weekends involve home or community activities
  eg – indicate recognition that weekends provide opportunities for home
  maintenance, recreation and leisure
- identify activities that occur on both weekdays and weekends
  eg – identify that meal preparation occurs on both weekdays and weekends
- identify events of personal significance that occur on specific days of the week
  eg – attend youth group on Tuesday evenings
**Outcome**

3.4 Demonstrates knowledge and understanding of days of the week, months, seasons and years

**Content**

Students:
- identify the names and sequence of the days of the week
- identify the names and sequence of the months of the year
- communicate events of personal significance which occur in particular months of the year  
  eg – birthdays, Christmas
- identify the names and sequence of seasons, and the special features of each season  
  eg – summer – hot weather, outdoor activities, cool clothing, beach activities
- plan activities that involve consideration of the days of the week  
  eg – days for work placement, ten-pin bowling on Saturday afternoons
- plan activities that involve consideration of the months of the year  
  eg – plan birthday celebrations within a family or group  
  – plan a holiday that is dependent on the season
- demonstrate a knowledge and understanding of the passage of time in years  
  eg – indicate significant events in future years such as leaving school, getting drivers’ licence, turning 21
Outcome

3.5 Demonstrates knowledge and understanding of seconds, minutes and hours

Content

Students:
• demonstrate an understanding that clocks measure the passage of seconds, minutes and hours

• identify the numerical relationships between seconds, minutes, hours and days
  eg – 60 seconds = 1 minute
  – 60 minutes = 1 hour
  – 24 hours = 1 day

• identify that each day is divided equally into two twelve-hour periods either side of midday, known as am and pm
  eg – am is morning
  – pm is afternoon

• convert units of time
  eg – days to hours, hours to minutes etc
  – 80 minutes = 1 hour and 20 minutes
Outcome

3.6 Reads time in different formats

Content

Students:
• read hour, half hour and quarter hour on analogue clocks or watches
• read hour, half hour and quarter hour on a variety of analogue clocks or watches with and without numerals or with Roman Numerals
• read hour, half hour and quarter hour on digital clocks or watches
• read time in 5 minute intervals on analogue clocks or watches
• read time in 5 minute intervals on digital clocks or watches
• read time by minutes on analogue clocks or watches
• read time by minutes on digital clocks or watches
• indicate knowledge and understanding of the relationship between analogue and digital time
eg – 2:45 equals quarter to three
• indicate knowledge and understanding of 12 and 24 hour time formats on analogue and/or digital clocks or watches
• use the DMS button on a calculator to represent time
**Outcome**

3.7 Estimates and calculates with time

**Content**

Students:

- indicate estimation of the passage of time within the day  
  eg – indicate that it is time for lunch without prompting from bell or verbal indication  
  – come in from outdoors at sunset

- indicate estimation of the passage of distinct periods of time  
  eg – respond appropriately to directions such as ‘Come back in five minutes’  
  – return to work at the end of one-hour break for lunch

- estimate amount of time taken to complete personal preparations when planning day’s activities  
  eg – meals, shower, dressing

- estimate amount of time required to complete individual work or training activities

- estimate amount of time required to travel from one point to another when planning day’s activities

- estimate time of the day from usual sequence of events  
  eg – estimate that it is about 8.30 am because they have arrived at school  
  – estimate time of day by reference to the start or end time of a particular TV program

- calculate finishing time of activity given the commencement time and duration of activity

- calculate duration of activity given commencement and finishing times of activity

- calculate commencement time for an activity given finishing time and duration  
  eg – determine when to start meal preparation for a designated mealtime

- use the DMS button on a calculator to calculate elapsed time

- estimate periods of time  
  eg – can approximate 3 minutes, 20 minutes etc

- calculate exact times for everyday events  
  eg – calculate the time for a train or bus journey taking into account departure and arrival times  
  – calculate when a cake will be cooked taking into account the cooking time and the time the cake was placed in the oven

- demonstrate a knowledge of time zone differences throughout Australia
• calculate time for capital cities based on the specified time differences
  eg – 8am in Sydney = ? in Perth

• calculate time differences between cities, regions

• demonstrate knowledge of the effect of Daylight Saving Time on local time
Outcome

3.8 Reads and understands calendars and plans events

Content

Students:
• demonstrate an understanding of the common structure of calendar formats
  eg – identify months, weeks and days on various calendars

• recognise that many calendars indicate days of significance
  eg – public holidays, school holidays, weekends

• recognise that calendars are used to plan special events and activities

• identify days of special significance on calendar
  eg – birthdays, Christmas

• identify number of days, weeks, months between one event and another

• use a calendar in planning regular events
  eg – note work experience, TAFE, church activities on the calendar

• use a calendar to plan ahead for special events
  eg – birthday party, Mothers' Day, holiday

• use a calendar to calculate time available for particular activities
  eg – prepare and submit job application or school assignment by due date

• use a calendar for periodical occasions
  eg – attend a meeting on the 1st Tuesday of the month
  – make a credit card payment by the 4th of each month

Technology that may be used in support of this Outcome:

• use calendar software to generate and modify calendars and plans
Outcome

3.9 Reads and interprets timetables

Content

Students:
• respond to an individual sequence chart (timetable) for a range of weekday activities
  eg – photo board, symbols, text, clock face times

• respond to an individualised family or group sequence chart (timetable) for a range of weekend activities

• understand and apply daily plan or timetable used in school, training or employment environments
  eg – use school timetable
  – move to next work activity according to personal daily plan

• read and interpret written timetables for community activities
  eg – swimming pool or library opening times
  – session times for cinema

• read and interpret written timetable for TV programs

• read and interpret single mode transport timetables
  eg – bus or train or ferry

• read and interpret interconnecting transport timetables
  eg – bus and train, bus and bus
Outcome

3.10 Prioritises personal time and manages scheduled activities

Content

Students:
- identify time needed for personal activities and priorities
- identify personal care and related activities that require planning time
- identify school, work or training activities that require planning time
- plan daily activities to meet priorities and scheduled events
  eg – leaving home in sufficient time to catch transport
- plan a week’s activities to meet priorities and scheduled events
- schedule activities within a weekly plan in accordance with designated responsibilities
- schedule activities over a month in accordance with designated responsibilities
- manage personal time to ensure that conflicts of schedules do not occur
- identify changing circumstances and alter activities accordingly
  eg – make alternative plans to get to school on time when there is a bus strike
Module 4: Space

Module Description

This module develops students’ understanding of concepts related to personal position in space, objects, shapes, distance and direction, to enhance their capacity to operate in post-school environments.

Outcome

4.1 Discriminates, matches, sorts, copies and creates patterns and designs

Content

Students:
- discriminate between objects according to shape, colour, size
  - eg – discriminate between small and large slices when indicating request or preference for food
  - choose an appropriately sized ball to play soccer
- match objects or figures according to shape, colour, size
  - eg – match paired items of clothing
  - match sets involving two or more items
- sort objects or figures according to shape, colour, size
  - eg – sort plates or cutlery
  - sort items from laundry according to colour, type, use
  - sort shapes according to various attributes
- copy patterns using objects
  - eg – place settings at table
  - use wooden blocks to recreate pattern
  - set up a chess or draughts board for a game
- copy patterns using writing or drawing materials
  - eg – use graph paper or template to recreate or copy pattern
  - copy pattern onto plain paper using ruler and pencil
- create patterns or designs using shapes, colours
  - eg – use coloured pencils to create pattern on polar graph paper
  - use wooden blocks to create pattern or design
- recognise use of patterns and designs in the community
  - eg – identify symbols and company logos using tessellations like recycling symbol etc
  - use balanced patterns when designing greeting cards to create an attractive appearance
  - use geometry in designing a flag

Technology that may be used in support of this Outcome:

- use geometry software to create and copy patterns
Outcome

4.2 Demonstrates an understanding of position

Content

Students:

- demonstrate an awareness of a range of positions across environments
  eg – show preference for a particular position such as prone lying, supine lying, sitting, standing
  – move under low hurdle during PE
  – step over a gap between train and the platform

- demonstrate awareness of comparative language of position
  eg – in/out, up/down, over/under

- understand and use comparative language of position across environments
  eg – respond appropriately to instructions involving position
  – describe environments and activities using language of position

- apply knowledge of position to solve problems in a range of environments
  eg – rearrange boxes in a storeroom to store more goods
  – tidy up items on a supermarket shelf
  – vocalise or ask to be moved from one area of a room to another

- demonstrate awareness of personal position relative to others and significant objects across environments
  eg – hold and manipulate large objects near other people safely
  – step on or off an escalator or into a lift
Outcome

4.3 Recognises and uses a range of three-dimensional and two-dimensional shapes

Content

Students:
- recognise the differences in a range of shapes and objects
  eg – square, round, rectangular, spherical
- classify shapes and objects
  eg – size, colour, use
- investigate properties of shapes and objects
  eg – experiment with boxes on shelves to find best method of stacking
- use knowledge and understanding to solve problems across a range of environments
  eg – determine the most efficient way to store drinks in an Esky
- investigate the use of geometrical shapes in everyday life
Outcome

4.4 Demonstrates knowledge and understanding of distance and direction

Content

Students:
• demonstrate an awareness of comparative language of distance
  eg – near/far, long/short

• demonstrate an understanding of relative distance
  eg – indicate recognition that it is a short walk to the letterbox but a long walk to
   the swimming pool

• demonstrate an understanding of spatial relationships and direction
  eg – move to a doorway to get outside
  – turn head to a sound or event nearby

• communicate information about distance and direction
  eg – sketch a path to show a route followed
  – give directions to a supervisor’s desk from their work station

• use correct terminology for direction
  eg – right/left
  – north/south/east/west
  – towards/away from
Outcome

4.5 Reads and understands a variety of directories and maps

Content

Students:

• understand the purpose and functions of directories and maps
  eg – urban street directories
  – tourist maps
  – charts and aerial maps

• understand basic features of directories and maps
  eg – scale, legend, key, grid, orientation

• locate their own position on a map
  eg – city, suburb, street

• use maps for a variety of personal purposes
  eg – plan route to work
  – locate leisure venues
  – use a directory to get to work
  – use a map to plan a holiday

• understand and interpret scaled drawings/plans
  eg – interpret scaled drawings using 1:100 scale
  – reproduce a full sized model from a scaled drawing
  – interpret doorways, windows, walls etc from house plans

• use street directories to communicate direction to another person
  eg – give direction using a street directory while a person is driving

Technology that may be used in support of this Outcome:

• use the Internet to locate and interpret travel itineraries
Module : 5 Money

Module Description

This module assists students to have a better understanding of money, its management and responsibilities. It emphasises skills, operations and calculations with money in real-life situations.

Outcome

5.1 Understands that money is a medium for purchasing goods and services

Content

Students:
• recognise that money can be exchanged for goods and services
  eg – buy lunch from shop
  – pay taxi driver for ride
• understand that money has value
• recognise that different coins and notes have different values
Outcome

5.2 Identifies, matches and counts coins and notes

Content

Students:
• identify coins and notes

• match coins and notes
  eg – sort into groups

• recognise that 100 cents equal one dollar

• count silver coins of equal denominations to one dollar and beyond
  eg – 5c, 10c, 15c, 20c …. using 5c coins
  – 20c, 40c, 60c, 80c, $1.00, $1.20 …. using 20c coins

• recognise equivalence between coins
  eg – 20 cents = 2 x 10 cents

• count coins of different denominations

• recognise equivalence between coins and notes
  eg – 5 x $2.00 coins = $10.00 note

• recognise equivalence between notes
  eg – 2 x $5.00 note = $10.00 note

• count money using coins and notes
**Outcome**

5.3 Reads and writes amounts of money and relates operations to money

**Content**

Students:
- read amounts of money
- write amounts of money
  - using $, c, decimal notation
- use operations in relation to money, choosing the method most appropriate for individual skills (ie mental or written calculation, calculator)
  - determine how much more money is needed for a new bike
  - determine how many weeks of saving are required to pay for a holiday
**Outcome**

5.4 Tenders amounts of money to make purchases, and estimates and calculates change

**Content**

Students:
- recognise need to tender money to complete purchases
  
  eg – give money to a checkout person in exchange for goods

- determine cost of purchases
  
  eg – read price of single item purchase
  
  – use ‘dollar more’, ‘closest dollar’ to estimate total cost of multiple item purchase
  
  – use calculator

- estimate amount to tender

- estimate change

- calculate and check change using mental or calculator techniques

- complete purchase process in an appropriate manner across a range of environments
Outcome

5.5 Demonstrates an understanding of the purchasing power of money and relates and compares value to price

Content

Students:
• understand the hierarchy of value of notes and coins
  eg – a $10.00 note is worth more than a $2.00 coin

• understand the relationship between value of coins and notes and their purchasing power
  eg – a $10.00 note buys more of the same items than a $2.00 coin

• understand the hierarchy of value attached to goods and services
  eg – some things cost more than others
    – a plastic disposable cup is cheaper than a fine china cup

• use an understanding of the relationship between value and price within a range of environments
  eg – choose not to buy an ice-cream for $3 because it is too expensive
    – choose a $100 blanket over a $20 blanket because it will last longer
Outcome

5.6 Demonstrates understanding of ways of generating income

Content

Students:
• understand the distinction between wages and salary
• calculate wages based on hourly rate
• understand and apply concepts of overtime
• calculate income based on commission and piecework
• understand the effects of income tax

Technology that may be used in support of this Outcome:
• use spreadsheet software to calculate income tax
Outcome

5.7 Demonstrates knowledge, understanding and application of financial decision-making skills

Content

Students:
- compare the prices of identical or similar items to minimise outlay
  eg – go to two different stores to compare price of jeans
  – compare prices in two catalogues to get best price

- understand the functions and purpose of financial institutions
  eg – hold money safely in savings accounts
  – lend money to buy items

- become aware of various financial institutions
  eg – bank, credit union, building society

- use a savings account

- identify the differences between credit, debit and balance

- read and interpret bank statements

- understand the various forms of credit available
  eg – lay-by, hire purchase, credit card, debit card, store cards, personal loans

- become aware of the impact of interest, fees and charges on account balances

- make appropriate financial decisions
  eg – operate a credit card
  – put a CD on lay-by rather than credit card

- determine value of purchasing a weekly train ticket rather than five daily tickets

- understand the relationship between income and expenditure

- recognise the need to manage money to achieve long and short-term goals

Technology that may be used in support of this Outcome:
- use spreadsheet software to demonstrate the growth of an amount of money with interest
- use spreadsheet software to demonstrate the repayment of a loan


Outcome

5.8 Demonstrates an understanding of the responsibilities and obligations associated with money management

Content

Students:
- learn about the responsibilities and obligations involved in financial relationships
  eg  – make repayments on a debt
  – repay debt within given time limits
  – understand legal obligations attached to financial relationships
- prepare personal budgets
- modify personal budgets in response to changes in income, expenditure and goals
  eg  – modify budgets to ensure repayments on credit cards
- fulfil responsibilities and obligations involved in financial relationships
  eg  – pay back loans from friends or family members
  – maintain savings balance to ensure sufficient funds to repay personal loan
  – monitor savings account expenditure to ensure credit balance
  – renegotiate credit arrangements if necessary
- understand the financial commitment associated with renting a property
  eg  – payment of bond
  – identify and calculate inclusions in rental price (water etc), exclusions in rental price (phone, electricity) etc
- understand the financial commitment associated with purchasing a property
  eg  – calculate interest to be paid over specified number of years based on the purchase price
  – calculate stamp duty as a percentage of purchase price etc
- understand the financial commitment associated with owning and running a car
  eg  – calculate monthly repayments based on the purchase price and specified interest rates
  – calculate the value of a car over time based on specified depreciation rates
  – calculate the cost of filling a car with petrol based on petrol tank capacity and cost of petrol
  – calculate monthly and annual running costs of a car taking into account fuel, economy, distance travelled and insurance costs etc
Module 6: Measurement

Module Description

This module gives students an understanding of measurement concepts, focusing on the practical application of measurement tools and units in a range of situations.

Outcome

6.1 Demonstrates knowledge and understanding of the attributes of size, shape, length, mass, temperature, area and volume

Content

Students:
• recognise that shapes(objects/items have attributes that can be measured
  eg – length, mass, temperature, area and volume

• use comparative language to describe attributes
  eg – big/small, short/long, heavy/light, hot/cold

• use their understanding of these attributes in daily living
  eg – run a warm bath
  – use a heavy object as a weight
  – choose the biggest portion at lunch
**Outcome**

6.2 Demonstrates knowledge, understanding and use of measurement units and tools for length, mass, temperature, perimeter, area and volume

**Content**

Students:
- recognise that things are measured using standard and derived units
  - metre, kilogram, second
  - centimetre, gram, litre
- recognise that there are particular tools used for measuring particular units
  - rulers for centimetres
  - scales for grams
- understand that units and tools for measurement vary according to scale
  - rulers for centimetres
  - tapes for metres
  - odometers for kilometres
- measure using standard units for a variety of purposes
  - use scales to measure own weight
  - use measuring cups for food preparation
Outcome

6.3 Reads and interprets a variety of graphs and tables

Content

Students:
• identify the functions of particular graphs and tables
eg – show progress towards a goal
• understand basic features of tables and charts
eg – pictures, columns, tally marks, axes
• understand and use graphs and tables in a range of activities
eg – identify the position of their favourite football team
  – use a work productivity table
  – read a distance chart when planning a holiday
  – keep a tally chart for house duties
  – accurately read a work roster including days and times
  – interpret information from a pay slip under each heading/column eg gross pay, net pay, deductions etc

Technology that may be used in support of this Outcome:
• use a graphing calculator or graphing software to generate and interpret graphs
• use the Internet to locate graphs for interpretation
Outcome

6.4 Estimates and calculates lengths and distances

Content

Students:

- estimate distances
  eg – estimate that the door is about 5 metres from the window

- estimate length or distance using standard or non-standard units
  eg – judge that it is about 20 paces to the lunch room
  – show length of fish caught on weekend

- calculate length or distance using standard or non-standard units
  eg – calculate amount of cord needed to restring clothes line using arm spans
  – calculate total distance from Sydney to Dubbo by road
Outcome

6.5 Estimates and calculates quantities

Content

Students:
• estimate quantity using standard or non-standard units
  eg – estimate that a jug will hold approximately one litre of water

• measure quantity using standard and non-standard units
  eg – measure 500 grams of flour using kitchen scales
  – mix Plaster of Paris using equal parts plaster and water

• use a calculator to solve problems involving measurement

• solve problems in everyday situations using the measures of quantities
  eg – calculate the amount of concrete to pave an area forming the driveway
Outcome

6.6 Estimates and calculates perimeter and area

Content

Students:
• understand the concepts of perimeter and area

• estimate perimeters  
  eg – of a garden  
  – of a playing field

• estimate areas  
  eg – of lawn needing to be mowed

• calculate perimeter and area using appropriate units  
  eg – calculate perimeter of a chicken yard by measuring and adding all sides  
  – calculate area of wall to determine correct amount of paint required

• solve problems in everyday situations using the calculations of area and perimeter  
  eg – use the calculated area of a floor to calculate the required number of tiles to cover the area  
  – read perimeters or calculate perimeters from abstract sources such as a house plan  
  – calculate perimeters from scaled drawings and convert to real measurements

• use a combination of calculations to solve a problem  
  eg – calculate the perimeter of a driveway, the area to apply a sealer to the finished product and the volume of concrete needed to pave it to a depth of 10cm
10 Post-school Opportunities

The study of Stage 6 Mathematics Life Skills assists students to prepare for employment, further education and training and full and active participation in community life. In particular, there are opportunities for students to gain recognition in vocational education and training. Teachers and students should be aware of these opportunities.

Recognition of Student Achievement in Vocational Education and Training (VET)

Wherever appropriate, the skills and knowledge acquired by students in their study of HSC courses should be recognised by industry and training organisations. Recognition of student achievement means that students who have satisfactorily completed HSC courses will not be required to repeat their learning in courses in TAFE NSW or other Registered Training Organisations (RTOs).

RTOs, such as TAFE NSW, provide industry training and issue qualifications within the Australian Qualifications Framework (AQF).

The degree of recognition available to students in each subject is based on the similarity of outcomes between HSC courses and industry training packages endorsed within the AQF. Training packages are documents that link an industry’s competency standards to AQF qualifications. More information about industry training packages can be found on the National Training Information Service (NTIS) website (www.ntis.gov.au).

Recognition by TAFE NSW

TAFE NSW conducts courses in a wide range of industry areas, as outlined each year in the TAFE NSW Handbook. Under current arrangements, the recognition available to students in relevant courses conducted by TAFE is described in the HSC/TAFE Credit Transfer Guide. This guide is produced by the Board of Studies and TAFE NSW and is distributed annually to all schools and colleges. Teachers should refer to this guide and be aware of the recognition available to their students. Information in relation to Life Skills courses can be found on the TAFE NSW website (www.tafensw.edu.au).

Recognition by other Registered Training Organisations

Students may also negotiate recognition into a training package qualification with another Registered Training Organisation. Each student will need to provide the RTO with evidence of satisfactory achievement so that the degree of recognition available can be determined.
11 Assessment and Reporting

11.1 Assessment

Assessing student achievement is the process of collecting information on student performance in relation to the knowledge and skills objectives of the course and the related outcomes.

Within the Stage 6 Mathematics Life Skills course, the individual transition-planning process will determine the educational priorities for each student, from which modules and outcomes are studied and content covered. The content points listed with each outcome not only form the basis of the learning opportunities for students, but also provide examples of assessable activities on which teacher judgement will be based.

Assessment should take account of the individual ways that students demonstrate achievement of syllabus objectives and outcomes based on the content covered in the course. To cater for such individuality, a range of assessment materials should be used, appropriate for the outcomes to be measured, and relevant to students’ capabilities. Such assessment instruments may include:

- observation of participation
- observation of performance of practical activities
- work experience reports
- oral reports and presentations
- group work
- journal writing
- written tasks.

Evidence of achievement of module outcomes can be based on ongoing observations during teaching and learning or from assessment tasks specifically designed to assess achievement at particular points.

Students may demonstrate achievement of outcomes across a range of situations or environments including the school, home, community and workplace. Assessment should reflect the student’s ability to generalise the knowledge, skills, and values and attitudes to a range of adult environments.

Students entered for Life Skills courses may achieve the designated outcomes independently or with support. The type of support will vary according to the particular needs of the student and the requirements of the task. Examples of support may include:

- the provision of extended amounts of time
- physical and/or verbal assistance from others
- the provision of technological aids
- adjustments to the environment based on the specific needs of individual students.

Provision has been made in the Profile of Student Achievement for teachers to record where an outcome has been achieved independently or with support, and to list the most relevant examples of syllabus content that demonstrate achievement towards particular outcomes.
11.2 Reporting using the Profile of Student Achievement

The Board of Studies will provide schools with a Profile of Student Achievement booklet for each student. The Profile of Student Achievement lists the outcomes for each Life Skills course. Schools will use the Profile to report on student performance for each of the syllabus outcomes that the student has been working towards. As the student demonstrates that they have achieved a learning outcome, the relevant section of the Profile of Student Achievement will be signed off and dated by the relevant school teacher.

Using the Profile of Student Achievement, students’ achievement of the designated outcomes, independently or with support, will be reported. Where a student is still working towards independent achievement of particular outcomes, teachers will indicate on the Profile of Student Achievement the level of the student’s achievement with support, using a practical example.

Before the student leaves school, the Profile of Student Achievement is verified by the school principal as a true and accurate record of all learning outcomes demonstrated by the student. The Profile of Student Achievement is a permanent record of all outcomes attained by the student.

In addition, students who meet the pattern of study requirements and satisfactorily complete the required studies will receive a Higher School Certificate testamur and a Record of Achievement.
12 Glossary

Augmentative Communication

Any method of communication other than speech that is used either:
- with speech where speech is difficult to understand
- to facilitate increased use of speech
- instead of speech, where speech will not develop. Communication modes such as signing or using communication aids ‘augment’ informal communication behaviours such as natural gestures, facial expression and body language.

Board Developed Courses

Refer to Section 10 of the Board of Studies Assessment, Certification and Examination Manual.

Board Endorsed Courses

Refer to Section 10 of the Board of Studies Assessment, Certification and Examination Manual.

Collaborative planning

Involves a team of people who have significant knowledge and understanding of the student, or the capacity to assist in the decision-making process. These people may include:
- the student
- parents/caregivers
- teachers and other school personnel
- transition personnel
- Department of Community Services personnel
- an advocate
- others as appropriate.

Communication aid

Usually non-electronic and accessed directly by touch or indirectly by eye-gaze. May include picture boards, communication books, object boards, etc.

Communication device

Any augmentative/alternative communication equipment. May be electronic with text or voice output options (VOCA) and accessed directly or indirectly by use of a switch.

CPR

Cardiopulmonary Resuscitation (CPR) is the method of performing EAR and ECC in tandem. This can be performed by one or two operators.

EAR

The term Expired Air Resuscitation (EAR) is used to describe the mouth-to-mouth, mouth-to-nose and mouth-to-mask methods of artificial ventilation of the lungs in addition to the mouth-to-mouth-and-nose method used on infants.

ECC

External cardiac compression.
Individual transition-planning process

This is a mechanism that assists the school, student, parents/caregivers and other relevant personnel to select and work towards goals that will maximise the student's independence and quality of life. The transition-planning process focuses particularly on enabling the most appropriate educational program to be planned, with a view to preparing a student for post-school life.

Modules

Areas of study within each course that relate to particular content.

No Go Tell

A series of safety steps or strategies that can be used in unsafe or threatening situations. It involves the skills required to say no in threatening situations, to get away from the unsafe situation and to seek help, advice and support.

Personal communication/strategies system

Individually customised system of communication using augmentative strategies and supports. These are determined by assessment of physical and/or expressive/receptive need of the individual and may include one or a combination of the following supports: real objects, remnants, photographs, line drawings, signing and electronic voice output communication devices (VOCAs).

Personal health care procedures

Include feeding, toileting and suctioning of fluids.

Post-school environments

Within the context of transition-planning, students will be prepared for participation in a range of post-school environments including:
- employment
- further education, training and other programs
- community living.

Professional health care support

Includes nurses, medical practitioners and therapists.

Protective behaviours

Actions (personal safety skills) taken by both children and adults to help keep themselves safe and work towards reducing violence in the community. They help everyone to stay safe from the risks that surround us in our everyday life.

Subject

A subject is a name given to a defined area of knowledge. Several courses may be offered in a subject.
<table>
<thead>
<tr>
<th><strong>Syllabus</strong></th>
<th>A document that describes a course/s of study for a subject. A syllabus includes statements of purpose, objectives, outcomes, content and indicative time.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Syllabus package</strong></td>
<td>This includes a syllabus document with additional information on assessment and support material.</td>
</tr>
<tr>
<td><strong>VET (Vocational Education and Training)</strong></td>
<td>VET is industry-specific training that may lead to the award of a VET credential under the Australian Qualifications Framework.</td>
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