

New Stage 6 Syllabus

MATHEMATICS STANDARD



The new Mathematics Standard syllabus has been developed using the established NSW Education Standards Authority (NESA) syllabus development process. The syllabus includes Australian curriculum content and reflects the new directions of the *Stronger HSC Standards* reforms.

The *Stronger HSC Standards* reforms include:

- supporting the achievement of high minimum standards for all students
- ensuring the flexibility and versatility of the Higher School Certificate (HSC) to cater for the full range of students
- encouraging every student to achieve at their highest possible level
- a focus on the acquisition of deep knowledge, understanding and skills for students.

NSW Stage 6 syllabuses are inclusive of the learning needs of all students. The syllabuses accommodate teaching approaches that support student diversity, including students with special education needs, gifted and talented students and students learning English as an additional language or dialect (EAL/D).

Many of the features of the current Stage 6 syllabuses have been retained, including:

- rationale
- aim
- objectives
- outcomes
- content for Year 11 and Year 12 courses.

New features of Stage 6 syllabuses include:

- Australian curriculum content identified by codes
- Learning across the curriculum content, including cross-curriculum priorities and general capabilities
- publication in an interactive online format
- an interactive glossary.

What is similar?

Students will continue to be provided with opportunities to:

- study common content in Year 11
- study either one of two courses in Year 12 – Mathematics Standard 1 or Mathematics Standard 2
- develop Working Mathematically skills in an integrated way
- study topics such as Measurement, Financial Mathematics and Statistical Analysis
- construct, use and interpret models based on mathematical concepts
- use and apply mathematical knowledge, understanding, skills, techniques, reasoning and, where appropriate, digital technologies to organise, interpret and solve problems in practical situations
- interpret and communicate mathematics in a variety of forms, including the use of diagrams and graphs, using appropriate notation and language.

What is different?

- The syllabus name has changed from Mathematics General to Mathematics Standard.
- The Mathematics Standard 1 course is now a Board Developed Course.
- Content is organised in topics and subtopics.
- Content identifies and builds on elements of Stage 5 Algebra, Geometry, Measurement and Statistics.
- Focus Studies material is integrated to provide flexibility in sequencing topics.
- Opportunities for Applications and Modelling are identified.
- The use of digital technologies has been strengthened.
- Working Mathematically is embedded and comprises six components: Understanding, Fluency, Communicating, Problem Solving, Reasoning and Justification.
- New content includes Networks.

Why is assessment changing?

The *Stronger HSC Standards* reforms provide new directions for assessment practices in all Stage 6 courses to:

- rebalance the emphasis on assessment to allow more time for teaching and learning
- maintain rigorous standards
- provide opportunities to assess students' depth of knowledge and their conceptual, analytical and problem-solving skills.

School-based assessment requirements for Mathematics Standard have changed to reflect new outcomes, course structure and content.

How are the school-based assessment requirements for Mathematics Standard changing?

NESA continues to promote a standards-referenced approach to assessing and reporting student achievement. The approaches of assessment for, assessment as and assessment of learning are important to guide future teaching and learning opportunities and to provide students with ongoing feedback.

Changes to school-based assessment requirements for each course include:

- mandated components and weightings for Year 11 and Year 12
- capping the number of school-based assessment tasks to three in Year 11 and four in Year 12
- specified minimum and maximum weightings for formal tasks
- a variety of tasks to assess student knowledge, understanding and skills.

What is the plan for implementation?

2017	2018		2019
	Term 1	Term 4	
Familiarisation and planning	<p>Start teaching new Year 11 courses for English, Mathematics Standard, Science and History</p> <p>Start implementing new Year 11 school-based assessment requirements for all Board Developed Courses (excluding VET, Life Skills and Content Endorsed Courses)</p>	<p>Start teaching new Year 12 courses for English, Mathematics Standard, Science and History</p> <p>Start implementing new Year 12 school-based assessment requirements for all Board Developed Courses (excluding VET, Life Skills and Content Endorsed Courses)</p>	First HSC examinations for new English, Mathematics Standard, Science and History courses

What materials will be provided to support implementation?

Many existing resources will continue to be useful and relevant. Some teaching units may need modification to meet the requirements of the new syllabus.

Support materials will assist teachers in familiarisation and planning for implementation of the syllabus and assessment requirements. Program Builder, an online programming tool, will be available for teachers in Term 1 2017.

Initial materials released with the syllabus include:

- school-based assessment requirements
- assessment advice
- a parent guide to new syllabuses and assessment.

Additional materials released throughout 2017 include:

- sample scope and sequences
- sample teaching units
- sample assessment schedules
- sample assessment tasks
- advice on making adjustments for students with special education needs.

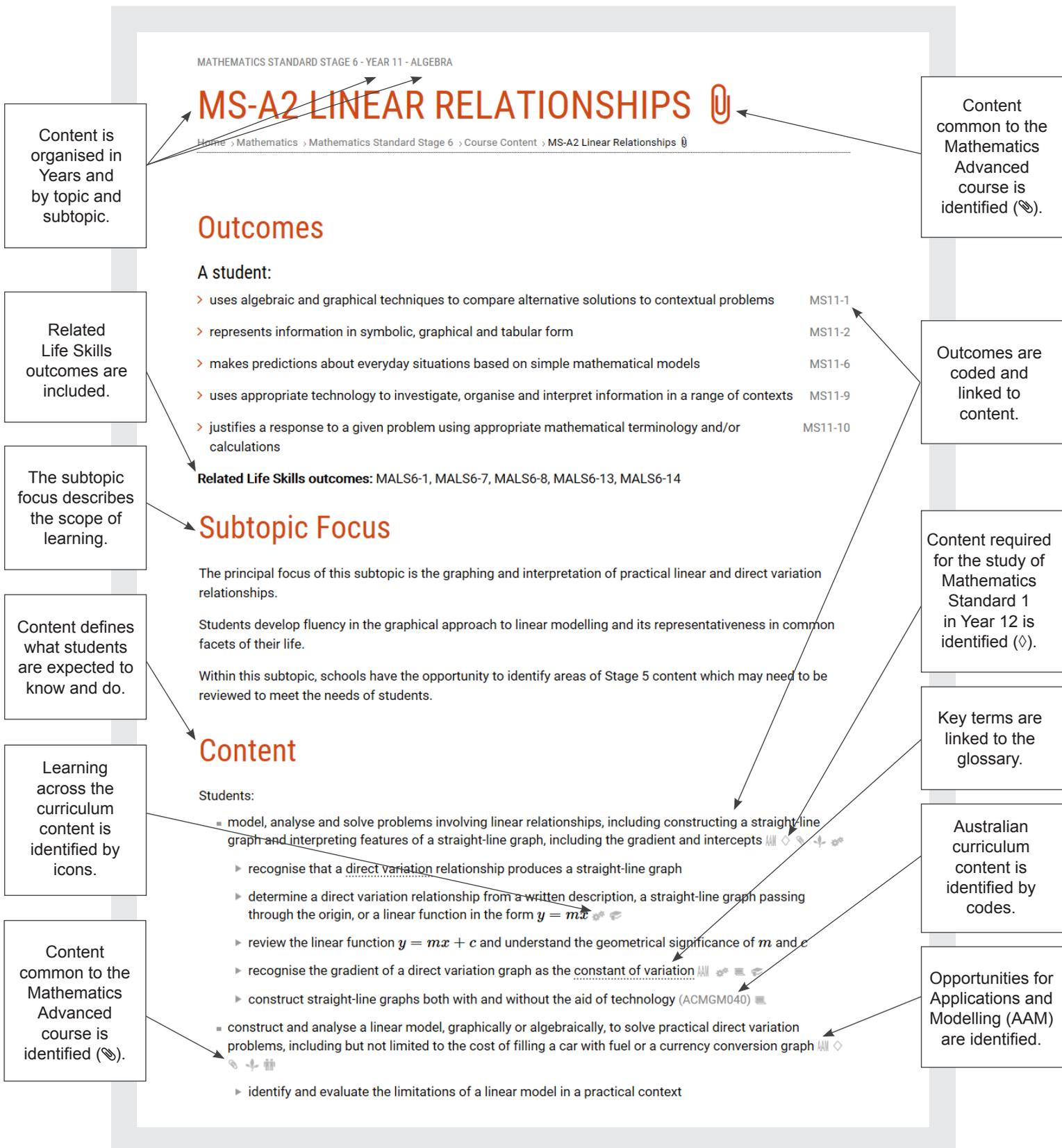
HSC Examination Specifications with sample materials will be released in Term 4 2017.

The NSW Department of Education, the Catholic Education Commission NSW, the Association of Independent Schools of NSW and other school systems and professional teacher associations will continue to assist and support implementation of the syllabus.

How can I access the new Mathematics Standard syllabus?

The Mathematics Standard syllabus is available on the NESA website.

Features of Mathematics Standard content pages



Content is organised in Years and by topic and subtopic.

Related Life Skills outcomes are included.

The subtopic focus describes the scope of learning.

Content defines what students are expected to know and do.

Learning across the curriculum content is identified by icons.

Content common to the Mathematics Advanced course is identified (🔒).

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Outcomes are coded and linked to content.

Content required for the study of Mathematics Standard 1 in Year 12 is identified (◊).

Key terms are linked to the glossary.

Australian curriculum content is identified by codes.

Opportunities for Applications and Modelling (AAM) are identified.