

# STRONGER HSC STANDARDS

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CURRENT STATE | FUTURE STATE

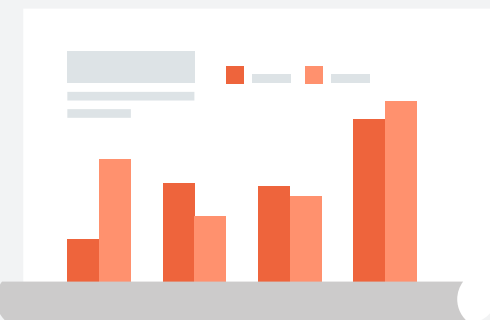
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## MINIMUM STANDARD



IMPROVING LITERACY AND NUMERACY FOR ALL NSW STUDENTS



TAKE  
LIT/  
NUM  
TEST



## CURRICULUM



## ASSESSMENT

NEW FOCUS  
FOR HSC EXAM  
QUESTIONS

CAPPING  
SCHOOL-BASED  
ASSESSMENTS TO  
REDUCE STUDENT  
STRESS



# 1. MINIMUM STANDARD



## ESTABLISH A MINIMUM LITERACY AND NUMERACY STANDARD FOR THE AWARD OF THE HSC

### WHAT IS CHANGING FOR THE NSW HSC?

**Students will be required to reach a minimum literacy and numeracy standard before they are eligible for the award of the Higher School Certificate (HSC).**

The minimum standard is set at a functional level of literacy and numeracy required for everyday life. The standard is not representative of the skills required for academic study but at the minimum level students will need to function after they leave school.

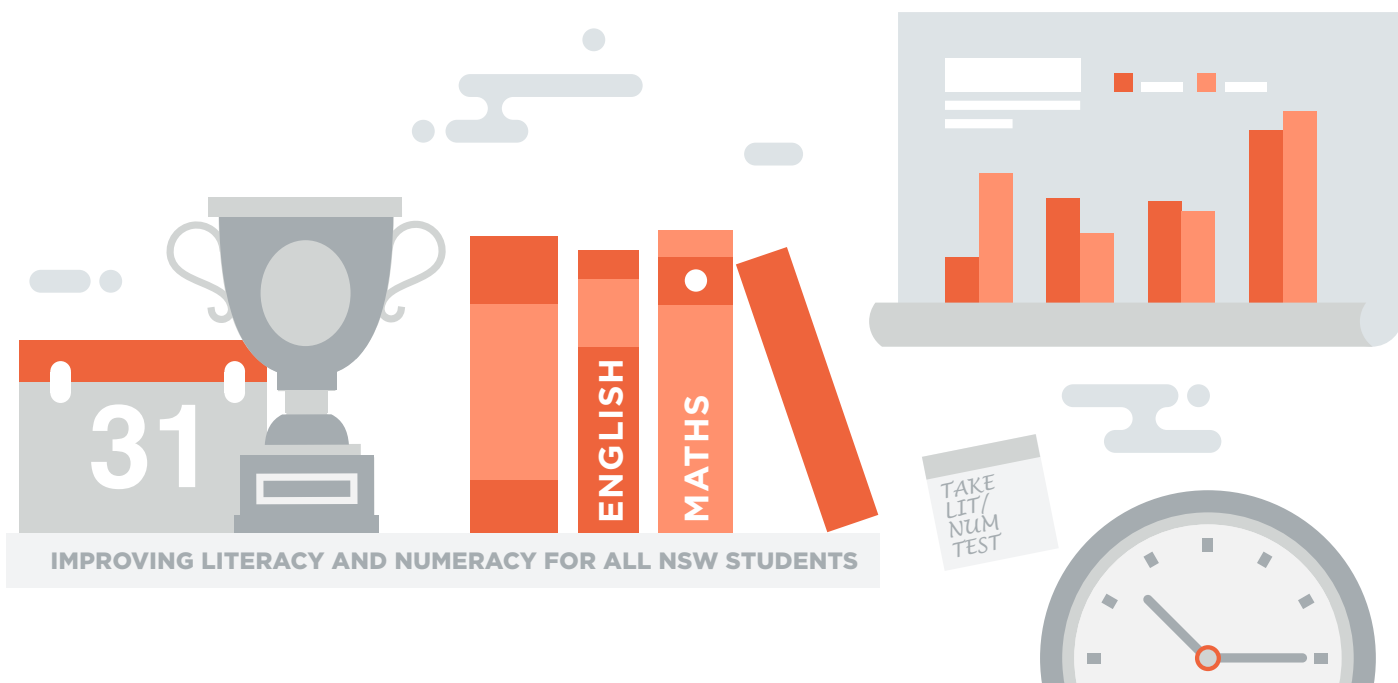
Students can meet the BOSTES standard by achieving:

- a Band 8 in each of their Year 9 NAPLAN reading, writing and numeracy tests; or
- a pass in the online literacy and numeracy tests in Years 10, 11 or 12.

This standard will be subject to further work and validation by BOSTES.

### WHAT EVIDENCE SUPPORTS THIS DECISION?

- OECD research confirms the best indicator of success in life after school (as measured through employment, higher salaries and good health) is a student's literacy and numeracy skills
- Australia's 2012 PISA results show Australia is falling behind internationally and up to one-fifth of 15-year-olds fail to meet the international proficiency standard in literacy and numeracy
- The NSW Business Chamber, the NSW Minerals Council and other employers consistently raise concerns about the literacy and numeracy skills of school leavers. AiGroup has detailed the effect it has on employers trying to build sophisticated Science, Technology, Engineering and Maths (STEM) skills in their workforce, and to upskill their employees
- Countries such as New Zealand and Finland, and Australian jurisdictions such as WA have established literacy and numeracy standards as a condition of their Year 12 certificate



CURRENT STATE	FUTURE STATE
The HSC is awarded to all students who meet the eligibility requirements	To receive the HSC, students must meet the HSC eligibility requirements that include a minimum literacy and numeracy standard, needed for everyday life and employment
Students who do not satisfy the requirements for the HSC receive a Record of School Achievement (RoSA)	Students who do not satisfy the requirements for the HSC, including the literacy and numeracy standard, still receive a RoSA
Students have five years after leaving school to complete the requirements and receive the HSC	Students have five years after leaving school to complete the requirements of the HSC, including sitting an online literacy and numeracy test
Mathematics is not compulsory in Years 11 and 12	Students who do not reach the numeracy standard by the end of Year 10 are required to study a prescribed Mathematics course or topics until they demonstrate they can reach the numeracy standard
Literacy skills are not explicitly addressed in English courses in Years 11 and 12	All Year 11 and 12 English courses have specific strands of literacy
Employers and the community assume that students with an HSC have achieved a functional level of literacy and numeracy	Employers and the community are assured of the level of literacy and numeracy achieved by students who are awarded an HSC

## NEXT STEPS

IN 2016	BEYOND 2016
Collaborate with jurisdictions to share research, teaching strategies, support materials and sample test questions for the implementation of a minimum standard	Work with school sectors to ensure the online literacy and numeracy test is available at set periods each year for students in Years 10, 11 and 12. The test will be available from 2018
Develop specific units within Mathematics and English courses for students at risk of not meeting the minimum standard	
Develop a communications strategy to ensure students, parents, teachers and schools understand the minimum standard	

## WHEN WILL THIS HAPPEN?

The first students to be affected are the Year 9 students of **2017**

Their first opportunity to demonstrate the standard will be the **2017** Year 9 NAPLAN reading, writing and numeracy tests.

Achieving the minimum standard in literacy and numeracy will be a condition for Year 12 students to receive the HSC from **2020**.



# 2. CURRICULUM



## ENSURE CURRENCY OF HSC SYLLABUSES THROUGH REGULAR SYLLABUS REVIEW

### WHAT IS CHANGING FOR THE NSW HSC?

**HSC syllabus documents will be updated to provide more opportunities for students to master knowledge and skills.**

Online technology allows a nimble syllabus review process.

BOSTES will adopt a five-year online review cycle, ensuring syllabuses remain relevant and current.

All syllabuses will be published online on the interactive BOSTES e-syllabus platform.

### WHAT EVIDENCE SUPPORTS THIS DECISION?

- High-performing school systems (such as Shanghai, Ontario, Singapore and Hong Kong) are redesigning their curriculum to allow students to develop mastery of knowledge and skills in a subject
- Educational researchers Michael Fullan and Maria Langworthy argue that depth is more relevant for students, given the easy access to information through technology. Schools are not charged with “delivering all of the content that a student might theoretically require in life”, but teachers should help students “master the process of learning”
- The Business Council of Australia highlights the need for its future workforce to learn the core knowledge, skills and attributes that enable them to develop into collaborative, creative and adept employees
- Geoff Masters of the Australian Council for Educational Research advocates that curriculum and teaching documents should be renewed regularly
- Victoria, the ACT and Tasmania review their curriculum on a three-to-five-year basis
- Western Australia produces a schedule showing priorities for syllabus review



CURRENT STATE	FUTURE STATE
Some syllabuses have numerous options to give students the broadest introduction possible to a subject	Syllabuses give students a grounding in the fundamental subject matter and allow the time to develop depth of knowledge and skills
The NSW curriculum model lacks a regular review cycle	Syllabuses are revised every five years. Minor, specific changes are made quickly for implementation within 12 months
Senior secondary syllabuses are static, paper-based documents	Senior secondary syllabuses are interactive, published online and linked to teaching resources and assessment tasks

## NEXT STEPS

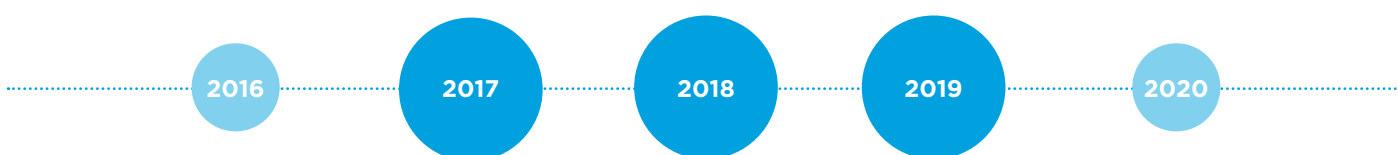
IN 2016	BEYOND 2016
Commence public consultation to finalise the draft syllabuses in English, Mathematics, Science and History	The remaining Years 11 and 12 syllabuses will be reviewed, starting with technology and some Asian language syllabuses
Develop rules establishing a regular review cycle for minor and major changes to curriculum	English, Mathematics, Science and History syllabuses are integrated in the BOSTES e-syllabus online platform to allow teachers to link syllabuses to teaching programs and share lesson plans
Seek BOSTES Board endorsement and Ministerial approval of the final syllabuses for implementation in NSW schools	

## WHEN WILL THIS HAPPEN?

The new English, Mathematics, Science and History syllabuses will be released in **2017** to allow students and teachers one year to become familiar with the content. This will also allow teachers to develop lesson plans.

The new English, Mathematics, Science and History syllabuses will be implemented for Year 11 students in **2018** and for Year 12 students in **2019**.

The review of technology and some Asian language syllabuses will commence from **2017**.





## OFFER NEW BOSTES

## HSC COURSES

### WHAT IS CHANGING FOR THE NSW HSC?

**New syllabuses will be introduced for English, Mathematics, Science and History.**

Students can study Science Extension for the HSC.

The remaining Years 11 and 12 syllabuses will be reviewed, starting with technology and some Asian language syllabuses.

### WHAT EVIDENCE SUPPORTS THIS DECISION?

- PricewaterhouseCoopers, AiGroup and the Office of the Chief Scientist have called for more employees with sophisticated Science, Technology, Engineering and Mathematics (STEM) skills and highlighted the need to attract students to STEM courses
- BOSTES data shows that despite an increase in HSC students, total entries in advanced STEM courses fell about 7% from 2004 to 2014
- BOSTES data shows that student enrolments in Extension courses fell from 25,726 in 2004 to 22,283 in 2014
- International tests in 2012 (PISA, TIMSS) suggest the performance of Australia's top students is slipping compared with other countries





CURRENT STATE	FUTURE STATE
Not all STEM courses have advanced options for students	A Science Extension course is available for students to increase their STEM capability

## NEXT STEPS

IN 2016	BEYOND 2016
Commence public consultation to finalise the draft Science syllabuses	Finalise the Science Extension syllabus for implementation in NSW schools
Changes to existing English, Mathematics and History Extension courses considered as part of syllabus review	Integrate the Science Extension syllabus into the BOSTES e-syllabus online platform to allow teachers to link the syllabus to teaching programs and to share lesson plans
	The remaining Years 11 and 12 syllabuses will be reviewed, starting with technology and some Asian language syllabuses

## WHEN WILL THIS HAPPEN?

The new Science Extension syllabus will be finalised in **2017** to allow teachers time in **2018** to become familiar with the content and to develop lesson plans.

The new Science Extension syllabus will be implemented for Year 12 students in **2019**.

The review of technology and some Asian language syllabuses will commence from **2017**.



# 3. ASSESSMENT



## INTRODUCE NEW, RIGOROUS GUIDELINES FOR EFFECTIVE SCHOOL-BASED HSC ASSESSMENT

### WHAT IS CHANGING FOR THE NSW HSC?

**The number of school-based assessment tasks will be capped at three per course in Year 11 and four per course in Year 12 to reduce excessive stress caused by over-assessment.**

The guidelines around school-based assessment will be tougher to prevent plagiarism and cheating.

### WHAT EVIDENCE SUPPORTS THIS DECISION?

- OECD research shows that effective in-school assessments give students better feedback to improve their learning, particularly among struggling students
- Research from Hong Kong shows fewer and more targeted assessment tasks are more effective in giving feedback to teachers and students about their strengths and weaknesses. Hong Kong and Scotland have restructured their school-based assessment tasks to reflect this best practice
- Limiting the number of assessments will allow more time for teaching and learning, and reduce excessive stress and pressure on students
- Geoff Masters of the Australian Council for Educational Research encourages alternatives to exam-style assessments in schools to challenge students in different areas, and allow more opportunities to apply, rather than recite, knowledge



CURRENT STATE	FUTURE STATE
Assessment tasks focus on essays and written exams	Students receive a wide variety of assessment tasks, such as presentations and speeches, projects, in-class problem solving, starting with English, Mathematics, Science and History
Take-home essays and test questions tend to replicate HSC examination questions	School-based assessment tasks evaluate the knowledge and skills not assessed in the end-of-year written HSC exams
Students report excessive stress. From a student's perspective, school assessments can be relentless, repetitive and stressful	Assessment tasks are capped to reduce relentless pressure and allow students more opportunities to demonstrate what they know
Too many assessments reduce the time students have to build a depth of understanding in a subject	A reduction in assessment tasks creates opportunities for deeper learning by students
Small numbers of students engage in negative practices such as plagiarism and cheating in school-based assessments	The cap on assessment tasks to reduce excessive student stress, coupled with tougher school-based assessment guidelines, reduces opportunities for plagiarism and cheating

## NEXT STEPS

IN 2016	BEYOND 2016
BOSTES will cap the number of school-based assessment tasks in Years 11 and 12.	BOSTES online assessment resources will provide advice for teachers to design tasks suited to their subject
Each subject will have guidelines, specific to the skills being assessed	
Guidelines will be tougher about issues related to plagiarism and cheating	

## WHEN WILL THIS HAPPEN?

School-based assessment guidelines will be amended and released in **2017**. This will allow students and teachers time to become familiar with the changes to assessment practices.

New assessment guidelines for English, Mathematics, Science and History will be in place for Year 11 students in **2018**.

The number of assessment tasks in each subject will be capped for Year 11 students in **2018** and Year 12 students in **2019**.





# REDESIGN HSC EXAMINATIONS TO ASSESS DEPTH OF KNOWLEDGE AND APPLICATION OF SKILLS

## WHAT IS CHANGING FOR THE NSW HSC?

**HSC exam questions test the application of knowledge and skills, as well as the recall of facts.**

HSC exam questions focus on in-depth analysis and problem solving skills.

HSC exam questions reduce the opportunity for pre-prepared, memorised and plagiarised student work.

## WHAT EVIDENCE SUPPORTS THIS DECISION?

- Reducing the predictability of exam questions will discourage practices such as pre-prepared responses and ghost writing, and provide a more reliable indication of students' ability
- The Australian Council for Educational Research highlights the need for assessment practices including exams that test necessary workplace skills, such as working collaboratively, using technology, communicating and solving problems
- Shanghai and Singapore have streamlined their curriculums to focus on essential content, allowing students and teachers the time to master knowledge and skills rather than 'surface learning' across a range of topics. This practice allows more analytical exam questions
- The reduction of topic options in syllabuses allows for more specific questions



CURRENT STATE	FUTURE STATE
Some exam questions are predictable. Some students answer with pre-prepared, memorised or plagiarised responses	Redesigned exam questions are less predictable and test a student's application of knowledge and skills
Some syllabuses have a wide array of topic options, which can lead to generalised and predictable essay questions	Fewer options in a subject allow more probing essay questions, testing students in-depth analysis and problem-solving skills

## NEXT STEPS

IN 2016	BEYOND 2016
	Some exam committees will be trained on writing fewer general questions, and to pose problems requiring applications of knowledge and skills

## WHEN WILL THIS HAPPEN?

The new English, Mathematics, Science and History syllabuses will be released in **2017**.

Sample exam questions for English, Mathematics, Science and History syllabuses will be available in **2017**.





## APPLY A COMMON SCALE FOR MATHEMATICS

### WHAT IS CHANGING FOR THE NSW HSC?

**Mathematics courses will be marked on a common scale.**

This will remove any incentive for students to study courses below their ability, with students taking higher-level courses receiving greater recognition of their efforts.

### WHAT EVIDENCE SUPPORTS THIS DECISION?

- BOSTES data shows that between 2004 and 2014, the proportion of students studying the easier practical Mathematics courses rose 20% while the proportion of students studying calculus-based mathematics fell 14%
- The number of students undertaking higher-level courses is falling at a time when educational research by John Hattie, Patrick Griffin and Geoff Masters shows an overall decrease in the number of high-achieving Australian students
- BOSTES research suggests that perceived ATAR advantages, high numbers of assessments and student stress contribute to the fall in students selecting more difficult subjects
- Common scaling allows comparison of students studying at different levels
- English courses are on a common scale, allowing a reliable comparison of students and guarding against any perceived ATAR advantage
- In the absence of common scaling or common content, perverse incentives may arise for some students to select lower-level courses to maximise their grades
- The Mathematical Association of NSW and a number of Australian academics have confirmed that students select lower-level courses to maximise their results, with increasingly large numbers of students in Mathematics General 1 and Mathematics General 2 and declining numbers of students in the more advanced courses



CURRENT STATE	FUTURE STATE
Some students choose a Mathematics course that is below their level of ability in an attempt to maximise their ATAR	Students are encouraged to take the Mathematics course that best aligns with their level of ability
Mathematics does not have common content or a common scale to reliably compare achievement between students studying at different levels	There is a common marking scale for Mathematics

## NEXT STEPS

IN 2016	BEYOND 2016
Finalisation of Mathematics syllabuses will include common content across adjacent courses to support common scaling	The principle of a common scale will also apply to other subjects of a hierarchical nature in the future, as appropriate, eg science
Seek BOSTES Board endorsement and Ministerial approval of the final syllabuses for implementation in NSW schools	

## WHEN WILL THIS HAPPEN?

There will be common content in Mathematics for Year 11 students in **2018** and for Year 12 students in **2019**.

A common scale for Mathematics will apply for Year 12 students in **2019**.





[www.boardofstudies.nsw.edu.au/stronger-hsc-standards](http://www.boardofstudies.nsw.edu.au/stronger-hsc-standards)