

**Biology**  
**Senior Years**

**Writing Brief**

**February 2016**

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## 1. Introduction

In 2014, the Board of Studies, Teaching and Educational Standards NSW (BOSTES) commenced a review of NSW senior secondary syllabuses for English, Mathematics, Science and History learning areas to determine directions for the incorporation of the senior secondary Australian curriculum. BOSTES conducted consultation in August and September 2014 on proposed directions outlined in [NSW Senior Secondary Review & Evaluation: English, Mathematics, Science and History](#).

The broad directions for each learning area, developed following consultation, were endorsed by BOSTES in December 2014 and are available in Appendix I of this writing brief.

The development of the *Biology Senior Years Writing Brief* takes account of the broad directions and feedback gathered through consultation conducted in October and November 2015.

The purpose of the writing brief is to inform the directions for draft syllabus development. The writing brief is structured according to the elements of a Stage 6 syllabus. Each element includes proposed actions and key considerations for writers in the writing of the draft syllabus. These elements are:

- Rationale
- The place of the Biology Senior Years Syllabus in the K–12 curriculum
- Aim
- Objectives
- Outcomes
- Course structure
- Content, including how Australian curriculum content may be incorporated
- Glossary.

The draft syllabus package will include the elements of a syllabus and Australian curriculum content identified with codes, learning across the curriculum content identified by icons, further information about meeting the diversity of learners, and internal and external assessment.

The draft syllabus for Biology will be developed and available for consultation during 2016.

A summary of the BOSTES syllabus development process is available at <http://www.boardofstudies.nsw.edu.au/syllabuses/syllabus-development/>.

### Diversity of learners

NSW senior secondary syllabuses will be inclusive of the learning needs of all students. The draft syllabuses will be designed to accommodate teaching approaches that support student diversity under the sections 'Students with special education needs', 'Gifted and talented students' and 'Students learning English as an additional language or dialect (EAL/D)'.

For example:

## **Special education needs**

All students with special education needs are entitled to participate in and progress through the curriculum. Some students may require additional support or adjustments to teaching, learning and assessment activities. Adjustments are measures or actions taken in relation to teaching, learning and assessment that enable a student to access syllabus outcomes and content and demonstrate achievement of outcomes.

Most students with special education needs will undertake regular Board Developed courses and/or Board Endorsed courses. Students with special education needs can access Years 11 and 12 outcomes and content in a range of ways. They should choose the most appropriate courses for the HSC in keeping with their goals, interests and learning needs.

Students may engage with:

- syllabus outcomes and content with adjustments to teaching, learning and/or assessment activities
- selected outcomes and content appropriate to their learning needs.

For some students with special education needs, the Years 11–12 Life Skills outcomes and content provided in the Senior Science Senior Years draft syllabus may provide learning more appropriate to their individual needs.

## **Australian curriculum**

BOSTES began its syllabus development process for Stage 6 English, Mathematics, Science and History in 2014. This follows state and territory Education Ministers' endorsement of senior secondary Australian curriculum in these learning areas as the agreed and common base for development of state and territory senior secondary courses. It was also agreed that states and territories would have the flexibility to integrate the approved senior secondary Australian curriculum as appropriate. The writing brief determines how Australian curriculum content can be modified, reordered and supplemented in each learning area, while remaining compatible with the NSW Senior Years assessment and examinations structures.

## 2. Biology key

**i** for your information

The following codes will be used in the Biology Senior Years syllabus.

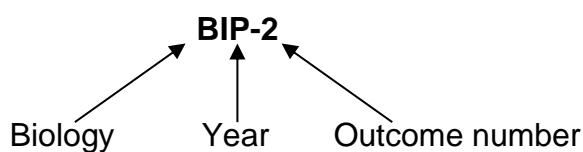
### Outcome coding

Syllabus outcomes will be coded in a consistent way. The code identifies the subject, Year and outcome number.

Years of learning will be represented by the following codes:

Year	Code
11	P
12	H

In the Biology syllabus, outcome codes indicate the subject, Year and outcome number. For example:



### Coding of Australian curriculum content

Australian curriculum content descriptions included in the syllabus will be identified.

#### Actions for writers and key considerations

- Identify Australian curriculum content descriptions by using Australian curriculum codes.
- The codes should appear in brackets at the end of each relevant content description.

### 3. Rationale

**i** for your information

The rationale describes the distinctive nature of the subject and outlines its relationship to the contemporary world and current practice. It explains the place and purpose of the subject in the curriculum, including:

- why the subject exists
- the theoretical underpinnings
- what makes the subject distinctive
- why students would study the subject
- how it contributes to the purpose of the Senior Years curriculum
- how it prepares students for post-school pathways .

#### **Proposed rationale for Biology Senior Years**

Students of Senior Years Biology will expand their knowledge of the living world and develop and utilise a range of skills including the ability to think and work scientifically, make evidence-based judgements, use their creativity and imagination?? and to communicate abstract ideas succinctly and concisely. This subject provides a foundation for students to critically consider information and to make informed decisions about contemporary biological issues in their everyday lives.

The course is designed for students who have substantial achievement in Stage 5 Science, including those who wish to continue with the study of science and specifically biology at tertiary level.

Our scientific knowledge and understanding and methods of working scientifically have led biologists to gain a better understanding of how biological systems interact. By working scientifically students design and conduct qualitative and quantitative investigations, both individually and collaboratively, to investigate aspects of the big ideas of science, in particular the diversity of species and structure of organisms, their use of energy and materials, and their ability to reproduce and evolve.

Thinking in Biology involves using differing scales, including macro-, micro- and nano-scales, to investigate biological systems and their interactions to expand our knowledge and find solutions to biological issues. The study of biology provides a foundation for participation in further studies in science as well as knowledge, skills and attitudes useful in a variety of fields and often provides the unifying link across interdisciplinary studies.


Biological knowledge and its application will be required to tackle major local, national and global issues and challenges now and into the future. These include the enduring issues of environmental health and sustainability, biosecurity and the resilience of ecosystems, and analysing the impact of human activity and the strategies proposed to address these.

**Actions for writers and key considerations**

- The rationale requires some revision to provide clarity and consistency of purpose in regard to the principles of biology in the course and to complement and better reflect the specific nature and characteristics of biology.
- Where appropriate, the rationale should complement the aims and objectives of the syllabus.
- The use of terms such as ‘nano-scales’ and ‘contemporary’ should be reviewed in relation to their appropriateness or need.



#### **4. The place of the Biology Senior Years syllabus in the K–12 curriculum**

 for your information

NSW syllabuses will include a diagram that illustrates how the syllabus relates to the learning pathways K–12. This section places the Senior Years syllabus in the K–12 curriculum as a whole.

This diagram will be included in the draft syllabus.

## 5. Aim

**i** for your information

In NSW syllabuses, the aim provides a statement(s) of the overall purpose of the syllabus. It indicates the general educational benefits for students from programs based on the syllabus.

The aim, objectives, outcomes and content of a syllabus are clearly linked and sequentially amplify details of the intention of the syllabus.

### **Proposed aim for Biology Senior Years**

The aim of the Biology Senior Years syllabus is to develop students’:

- appreciation of biology as an experimental science where models and theories are refined and new models and theories are developed through independent and collaborative research that continues to have significant impacts on society
- abilities to debate and critically evaluate scientific arguments and claims, communicate to a range of audiences biological understanding or findings and to propose possible solutions to problems
- understanding of the theories and models used to describe, explain and make predictions about biological systems, structures and properties by considering the factors that affect these and how they can be controlled to produce desired products or outcomes
- respect for all living things and the environment and their understanding of how biology and biological practices are used and are integral to developments in many fields of human endeavour.

### **Actions for writers and key considerations**

- The aim requires some revision to provide greater consistency and clarity of purpose and to complement and better reflect the amended rationale, objectives and outcomes.
- The aim requires some revision with regards to the representation of the principles, specific nature and characteristics of biology.
- The aim will be reviewed to ensure consistency of length, detail and complexity with other senior syllabuses.

## 6. Objectives

**i** for your information

In NSW syllabuses, objectives provide specific statements of the intention of a syllabus. They amplify the aim and provide direction to teachers on the teaching and learning process emerging from the syllabus. They define, in broad terms, the knowledge, understanding, skills, values and attitudes to be developed through study in the subject. They act as organisers for the intended outcomes.

### Proposed objectives for Biology Senior Years

#### Values and attitudes

Students:

- develop positive, informed values and attitudes towards biology
- recognise the importance and relevance of biology in their lives now and for the future.

#### Skills

Students:

- develop skills in applying the processes of Working Scientifically.

#### Knowledge and understanding

Students:

- develop knowledge and understanding of the structure and function of organisms
- develop knowledge and understanding of the Earth's biodiversity
- develop knowledge and understanding of heredity and evolution
- develop knowledge and understanding of the effects of disease and disorders

#### Actions for writers and key considerations

- Review the objectives to ensure consistency with the amended rationale, aim and outcomes of the course.
- Enhance the concept of Science as a Human Endeavour in the values and attitudes objectives.

## 7. Outcomes

**i** for your information

In NSW syllabuses, outcomes provide detail about what students are expected to achieve at the end of each Stage in relation to the objectives. They indicate the knowledge, understanding and skills expected to be gained by most students as a result of effective teaching and learning. They are derived from the objectives of the syllabus.

### Proposed outcomes for Biology Senior Years

Outcomes will be developed during draft syllabus writing. The following table presents a sample of some of the proposed outcomes.

#### Values and attitudes

<p><b>Objectives</b> Students:</p> <ul style="list-style-type: none"> <li>develop positive, informed values and attitudes towards biology</li> <li>recognise the importance and relevance of biology in their lives now and for the future.</li> </ul>
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#### Skills

<p><b>Objective</b> Students:</p> <ul style="list-style-type: none"> <li>develop skills in applying Working Scientifically</li> </ul>	
<p><b>Year 11 Outcomes</b> A student:</p>	<p><b>Year 12 Outcomes</b> A student:</p>
<p>BIP-1 proposes questions or hypotheses to be investigated scientifically and predicts outcomes</p>	<p>BIH-1 evaluates questions and/or hypotheses to be investigated scientifically and predicts evidence-based outcomes</p>
<p>BIP-2 designs investigations, considers risks, ethical issues and identifies appropriate materials and suggests related data for collection</p>	<p>BIH-2 justifies the design of risk assessed, ethical investigations, involving appropriate materials and selects and collects relevant primary and secondary sourced data</p>

## Knowledge and understanding

<p><b>Example Year 11 Course Unit 1</b></p> <p><b>Objective</b> Students:</p> <ul style="list-style-type: none"> <li>develop knowledge and understanding of the structure and function of organisms</li> </ul> <p><b>Year 11 Outcomes</b> A student:</p> <p>BIP-8 describes single cells as the basis for all life by analysing and explaining cells' ultrastructure and biochemical processes</p>	<p><b>Example Year 12 Course Unit 3</b></p> <p><b>Objective</b> Students:</p> <ul style="list-style-type: none"> <li>develop knowledge and understanding of heredity and evolution</li> </ul> <p><b>Year 12 Outcomes</b> A student:</p> <p>BIH-8 explains cell replication and protein synthesis through analysing DNA and the mechanisms of inheritance and variation</p>
<p><b>Example Year 11 Course Unit 2</b></p> <p><b>Objective</b> Students:</p> <ul style="list-style-type: none"> <li>develop knowledge and understanding of Earth's biodiversity</li> </ul> <p><b>Year 11 Outcomes</b> A student:</p> <p>BIP-10 describes biological diversity by explaining the relationships between a range of organisms in terms of specialisation for selected habitats and their evolution</p>	<p><b>Example Year 12 Course Unit 4</b></p> <p><b>Objective</b> Students:</p> <ul style="list-style-type: none"> <li>develop knowledge and understanding of disease and disorders</li> </ul> <p><b>Year 12 Outcomes</b> A student:</p> <p>BIH-10 analyses homeostatic mechanisms, structures and functions, both internal and external that organisms utilise to respond to disease and disorders</p>

## Actions for writers and key considerations

- Develop up to 10–12 Skills and Knowledge and Understanding outcomes to complement the existing outcomes and to ensure that core content areas and skills development in biology are addressed.
- Ensure there is a coherent and logical development from Year 11 to Year 12, and that the outcomes provide detail with regards to the knowledge, understanding and skills expected to be gained. The outcomes should be derived from the objectives.
- The outcomes should build on and extend the Science K–10 continuum of learning.

## 8. Course structure

**i** for your information

The following provides an outline of the Year 11 and Year 12 course structure for the Biology Senior Years syllabus with indicative course hours and the arrangement of course content, along with outlining relationships between specific components and between core and options.

### Proposed course structure for Biology Senior Years

	Biology	Indicative hours	Depth Studies
Year 11 Course (120 hours)	Unit 1 The Structure and Function of Organisms	60	
	Unit 2 The Earth's Biodiversity	45	15 hours for Depth Studies
Year 12 Course (120 hours)	Unit 3 Continuity of life on Earth	60/50*	10 hours for Depth Studies
	Unit 4 Disease and disorders	60/50*	

\* 10 hours of Depth Studies may be undertaken in either Unit 3 or Unit 4 or the time may be shared across both the Units.

### Actions for writers and key considerations

- The course structure requires some revision to enhance coherence with the other courses and ensure a logical development of interrelated ideas.

Further information is to be included in the syllabus about the nature and structure of Depth Studies. They are intended to be flexible, non-prescriptive areas for further study, selected to meet the needs of individual students.

They should:

- represent contemporary issues in biology
- provide opportunities for the diversity of learners
- extend students in areas of particular interest
- provide access to specific areas of science not included in the core content
- promote student engagement
- provide students with opportunities to apply their knowledge and further develop the skills and understandings gained in the course.

Describe how area(s) of study are selected and investigated at depth either individually, in a group or as a whole class activity. Information should include that a substantial component of first or second-hand investigative work and research is to be undertaken to assist students in applying the core content knowledge and skills.

Examples of activities that may be suitable for depth studies should be included. These include individual or group projects that may be chosen by students according to their interests and abilities. Examples of small and large-scale studies are to be provided along with recommended time allocations.

The examples should include a range of activities that result in a variety of outcomes. Some examples are:

- individually conduct a first-hand research investigation into one endangered species and suggest ideas and solutions to help protect the species.
- investigate and prepare a social media campaign about factors that affect the development of type 2 diabetes.
- select an area of interest, eg the ecology of a mangrove swamp, use of bio-mimicry in food production or a specific biological process to study in depth.

## 9. Content

**i** for your information

In NSW syllabuses for Senior Years, courses of study and educational programs are based on the outcomes and content of syllabuses. The content describes in more detail how the outcomes are to be interpreted and used, and the intended learning appropriate for each Year. In considering the intended learning, teachers will make decisions about the emphasis to be given to particular areas of content, and any adjustments required based on the needs, interests and abilities of their students.

### Organisation of the content

The Biology Senior Years syllabus will be organised in the following way:

<b>Year 11 Biology</b>	
<b>Unit 1</b>  <b>The Structure and Function of Organisms</b>	<b>Cells as the basis of life</b> <ul style="list-style-type: none"> <li>- Cell structure and function</li> <li>- Transport into and out of cells</li> <li>- Organisation of cells</li> </ul>
	<b>Organisation of living things</b> <ul style="list-style-type: none"> <li>- Transport systems</li> <li>- Nutrient intake</li> <li>- Response systems</li> <li>- Gas exchange</li> <li>- Excretory systems</li> <li>- Reproduction</li> </ul>
<b>Unit 2</b>  <b>The Earth's Biodiversity</b>	<b>Biological diversity</b> <ul style="list-style-type: none"> <li>- Effects of the environment on organisms</li> <li>- Adaptations</li> <li>- Selection pressures</li> <li>- The Theory of Evolution</li> <li>- Evolution – the evidence</li> </ul>
	<b>Ecosystem dynamics</b> <ul style="list-style-type: none"> <li>- Population dynamics</li> <li>- Past ecosystems</li> <li>- Future ecosystems</li> </ul>




<b>Year 12 Biology</b>	
<b>Unit 3</b>  <b>Continuity of life on Earth</b>	<b>Heredity</b> <ul style="list-style-type: none"> <li>- Cell replication</li> <li>- DNA and protein synthesis</li> <li>- Genetic variation</li> <li>- Using technology to determine inheritance patterns</li> </ul>
	<b>Genetic change</b> <ul style="list-style-type: none"> <li>- Mutation</li> <li>- Reproductive technologies</li> <li>- Biotechnology</li> <li>- Genetic technologies</li> </ul>
<b>Unit 4</b>  <b>Disease and disorders</b>	<b>Disease</b> <ul style="list-style-type: none"> <li>- Homeostasis</li> <li>- Causes of disease</li> <li>- Responses to pathogens</li> <li>- Immunity</li> <li>- Prevention, treatment and control</li> </ul>
	<b>Non-Infectious disease</b> <ul style="list-style-type: none"> <li>- Causes and responses</li> <li>- Prevention</li> <li>- Technologies used to assist with the effects of disease and disorders</li> <li>- Biomedical technologies</li> <li>- Epidemiology</li> </ul>

**Sample content:**

## **The Structure and Function of Organisms: Cells as the basis of Life**

### **Outcomes**


#### **A student:**

- uses scientific thinking and problem-solving techniques to suggest valid conclusions from gathered data and information BIP-5 \*\*
- selects appropriate representations to illustrate results and/or understandings and conclusions BIP-6 
- describes single cells as the basis for all life by analysing and explaining cells' ultrastructure and biochemical processes BIP-10 \*\*

### **Content**

Cell structures, and the physical and chemical environment in which they exist, determine the way in which cells function.

#### **Students:**

- investigate different cellular structures, including
  - examining a variety of materials using the monocular microscope (ACSBL032)
  - examining electron micrographs of a variety of cells
- describing a variety of cell structures, including
  - drawing scaled diagrams of a variety of cells (ACSBL035)
  - comparing and contrasting different cellular structures and arrangements
- classifying cells on the basis of their structure, including
  - classifying prokaryotic, eukaryotic, plant and animal cells (ACSBL048)
- describing the way in which materials can move into and out of cells, including
  - modelling diffusion and osmosis (ACSBL046)
  - relating the exchange of materials across membranes to the surface area to volume ratio, concentration gradients and the characteristics of the materials being exchanged (ACSBL047) 
- describe the development of the Cell Theory, including
  - relating the development of the Cell Theory to evidence gained from multiple individuals and across disciplines such as the developments of microscopy (ACSBL038) \*\*

#### **Depth studies may include:**

Investigate current knowledge of the structure of the cell membrane and construct a model, explaining how materials can be transported across it.

Investigate the way prokaryotic cells, eukaryotic unicellular, colonial and multicellular organisms respond to and interact with their environment.

### **Actions for writers and key considerations**

- The content needs to focus on students developing an understanding of fundamental concepts and skills in biology.
- The scope and depth of content should be reviewed and reduced to provide opportunities for depth of learning, learning by practical experiences, and include problem-solving while achieving an overall reduction.
- The content should maintain a contemporary nature and should not refer to specific technologies or processes that may become redundant.
- The content, knowledge, understanding and skills should build on and extend the continuum of learning from Stage 5 Science.
- Analyse and select Australian curriculum content, and modify, reorder and supplement to align with and complement draft syllabus content as appropriate.
- Australian Curriculum – Science as a Human Endeavour – should be included and identified by the Australian curriculum coding.
- Identify, by underlining, specific terms for inclusion in and links to a glossary.
- Selected content should focus on developing understanding of the fundamental concepts and skills in biology including problem-solving skills.
- Appropriate and authentic opportunities to develop knowledge, understanding, skills, values and attitudes specific to learning across the curriculum areas should be identified by icons.

## 10. Learning across the curriculum

 for your information

NSW syllabuses provide a context within which to develop core skills, knowledge and understanding considered essential for the acquisition of effective, higher-order thinking skills that underpin successful participation in further education, work and everyday life including problem-solving, collaboration, self-management, communication and information technology skills.

BOSTES has described learning across the curriculum areas that are to be included in syllabuses. In Senior Years syllabuses, the identified areas will be embedded in the descriptions of content and identified by icons. Learning across the curriculum content, including the cross-curriculum priorities and general capabilities, assists students to achieve the broad learning outcomes defined in the BOSTES *Statement of Equity Principles*, the *Melbourne Declaration on Educational Goals for Young Australians (December 2008)* and in the Australian Government's *Core Skills for Work Developmental Framework (2013)*.

Knowledge, understanding, skills, values and attitudes derived from the learning across the curriculum areas will be included in BOSTES syllabuses, while ensuring that subject integrity is maintained.

Cross-curriculum priorities enable students to develop understanding about and address the contemporary issues they face.

The cross-curriculum priorities are:

- Aboriginal and Torres Strait Islander histories and cultures 🖐️
- Asia and Australia's engagement with Asia 🇦🇺
- Sustainability 🌱

General capabilities encompass the knowledge, skills, attitudes and behaviours to assist students to live and work successfully in the 21st century.

The general capabilities are:

- Critical and creative thinking ⚙️
- Ethical understanding ⚖️
- Information and communication technology capability 💻
- Intercultural understanding 🌐
- Literacy 🎓
- Numeracy 📊
- Personal and social capability 👥

BOSTES syllabuses include other areas identified as important learning for all students:

- Civics and citizenship 🗳️
- Difference and diversity 🏳️
- Work and enterprise ⭐

## **Sample learning across the curriculum area for Biology Senior Years**

### **Information and communication technology capability**

Information and communication technology (ICT) can be used effectively and appropriately to access, create and communicate information and ideas, solve problems and work collaboratively. The Senior Years Biology syllabus provides students with opportunities to develop ICT capability when they develop design ideas and solutions, research science concepts and applications, investigate science phenomena, and communicate their scientific and technological understandings. In particular, they learn to access information, collect, analyse and represent data, model and interpret concepts and relationships, and communicate scientific and technological ideas, processes and information. Digital technologies and aids, such as animations and simulations, provide opportunities to view phenomena and test predictions that cannot be investigated through practical experiences in the classroom, and may enhance students' understanding and engagement with science and technology.

### **Actions for writers and key considerations**

- For each learning across the curriculum area develop a succinct statement that describes how the subject provides opportunities to develop knowledge, understanding, skills, values and attitudes related to the area and its relevance.

## **11. Glossary**


**i** for your information

One glossary will be developed for each Senior Years learning area. The glossary to be developed for the Biology Senior Years draft syllabus will explain terms that will assist teachers in the interpretation of the subject. The glossary will be based on the NSW K–10 Science glossary and Australian curriculum Senior Years Science glossary.

### **Actions for writers and key considerations**

- Identify and underline words and/or terms additional to those in the K–10 Science glossary in the content for inclusion in the Senior Years glossary.

## **12. Assessment and reporting**

 for your information

BOSTES continues to promote a standards-referenced approach to assessing and reporting student achievement in NSW, and the importance of assessment for, of and as learning as essential components of quality teaching and learning.

Information on assessment and reporting for the Year 11 and Year 12 courses will be reviewed and developed for draft syllabus consultation in 2016.

The information will include:

- mandatory components and weightings for school-based assessment of the HSC course
- HSC examination specifications which describe the format of the HSC examination program for Biology.

## **13. Appendix I**

### **Broad directions from consultation**

The following broad directions for syllabus development have been informed through consultation with stakeholders. These broad directions will guide the development of the NSW Biology Stage 6 syllabuses.

1. In the revision and development of the courses, consideration be given to how the courses provide flexibility to meet the needs of all students.
2. In the revision of the current content-heavy courses provision be made for the reduction and integration of content. This may be organised using the concept of Big Ideas of Science.
3. The nature and practice of Science is reflected in the inclusion of working scientifically using first-hand investigations, secondary sources, models and modelling.
4. The Science courses be reviewed to allow flexibility of pedagogy and delivery. This may include cross-disciplinary study, project based/research and STEM learning.
5. Opportunities be considered to extend students' learning in Science by revising each course's content and requirements.
6. The Senior Science course rationale, structure and assessment requirements be reviewed to focus on developing scientifically literate students.
7. The Senior Science course rationale, structure and assessment requirements be reviewed with a focus to support a range of post-school contexts.
8. Assessment and HSC examination specifications be reviewed to ensure appropriate opportunities for assessment of a wide range of student performance including assessing analytical and critical thinking, first-hand investigations, the use of secondary sources and research projects.
9. The Science syllabuses should provide for the continual inclusion of contemporary and relevant material.
10. The rationale, outcomes and content of the Stage 6 Science Life Skills course be reviewed to better meet the needs of the students for whom the course is intended, as well as provide an appropriate progression from Stage 5 Science Life Skills outcomes and content and alignment with the regular Stage 6 Science courses where appropriate.



## 14. Appendix II

### Key matters raised during draft writing brief consultation and actions

Key matters	Actions
<p>Option 2 is preferred. However, there is strong support for Option 3 with its depth study component.</p> <p>The rationale, aim and objectives require revision to provide clarity and consistency.</p> <p>A reduction in content is required to contain the scope and breadth of learning, and to enable depth of study and time for practical activities.</p> <p>The concept of depth studies is supported. However, assessment for the HSC requires clarification.</p> <p>The Biology syllabus should emphasise learning science as it is practised.</p> <p>Development of an Extension course(s) for Science should be considered.</p> <p>Senior Years assessment policies, procedures and requirements require clarification.</p>	<p>Aspects of Options 2 and 3, including depth studies, will be incorporated.</p> <p>The rationale, aim and objectives will be reviewed to provide clarity and consistency.</p> <p>Content will be reduced to provide opportunities for deeper learning through review of the areas of study and practical activities.</p> <p>Depth studies will be included and details about their nature and structure will be provided.</p> <p>Where appropriate, practical investigations and activities will enhance and complement the content.</p> <p>An Extension course(s) in Science will be considered for development following draft syllabus development in the science courses.</p> <p>Senior Years assessment policies and procedures will be reviewed during draft syllabus development.</p>