INTRODUCTION

The Year 9 and 10 curriculum is designed to allow students to select and create a study program from a wide range of subjects. Over two years, students are encouraged to ensure that they have undertaken courses from different areas of the curriculum so that when it comes to VCE subject selection they are in the best possible position to know their strengths and what interests them.

The core subjects of English, Mathematics, Science and History are those which the Australian Curriculum stipulates that a student must study up to Level 10. To those subjects, we also add a requirement for Physical Education and (until Year 9) at least one Language subject. We also strongly encourage the continued study of a Language in Year 10, although it is not mandated.

At Fintona, we teach the Australian Curriculum History course up to the end of Year 9, with students studying the Level 9 course in the first semester and the Level 10 course in the second. All core subjects are studied for a full year, unlike the elective subjects which are only a semester in length.

The elective subjects come from across the learning areas and allow students to develop their knowledge beyond what is compulsory. When choosing an elective subject, students are encouraged to make choices which include subjects from across faculties, including Arts, Humanities, Commerce and Physical Education. Because the courses are a semester in length, students are able to experience a balance and range of subjects across an entire year.

Year 9 and 10 are the first years of internal examinations for students and every subject (apart from Physical Education) is assessed at the end of each semester; this is a good way for students to develop the skills which will be required of them during their VCE studies.

Before students are asked to select which subjects they wish to study, they and their parents have an opportunity to attend an information evening. The subject selection process also involves an interview with each girl to ensure that she is selecting the subjects which best suit her.

Ruth McKinnon
HEAD OF CURRICULUM & STAFFING
Year 9 provides students with the opportunity to undertake guided choices in their subject selection. The opportunity exists for students to participate in, and reflect on, activities that extend their understanding of themselves and the world.

The Connections Program has been specifically designed by Fintona to allow students to develop a greater awareness of learning beyond the classroom, with a focus on how communities work. Throughout the year, students focus on working together and the important contribution that individuals make to communities. One day a fortnight is devoted to the Connections Program.

A range of life skills is covered throughout the year, ensuring that students have study and self-management skills, along with an awareness of how they can work positively towards physical, emotional and social wellbeing.

Year 10

Students continue to develop skills and knowledge in a broad range of learning areas, ensuring flexible pathways are maintained to reflect our ever changing world. All students undertake a work experience placement. Students secure a five day placement for Term 4 in an area of personal interest. Students may also opt to undertake a further placement during term holidays.

Students are encouraged to avail themselves of the opportunity to try different subjects and will be guided as to how future subject choices may shape career pathways. Some students will commence a selected VCE study in Year 10, with guidance being provided through the subject selection process.

Students also become familiar with the educational pathways available beyond Year 12 and use various software programs designed to allow students to recognise the choices they will face in the near future.

Study skills are further developed, along with strategies to deal with the pressures of life in the senior years of schooling. Students are provided with the information necessary to assist in making informed decisions relating to their physical, emotional and social wellbeing.
**YEAR 9 LEVEL OVERVIEW**

**YEAR 9**

Year 9 is intended to provide girls with guided choices for their program of study. They combine core subjects with a range of elective subjects. The elective subjects in Year 9 are intended to be a pathway into a different set of electives at Year 10 and offer a broad two year program of study before choices about VCE subjects are made.

**CORE SUBJECTS**

- English
- Mathematics (Accelerated Mathematics available)
- Science
- History\(^1\)
- Physical Education

**ELECTIVE SUBJECTS**

Students in Year 9 study three Elective subjects of their choice in Semester 1 and a further three in Semester 2.

<table>
<thead>
<tr>
<th>DISCIPLINE</th>
<th>ELECTIVE SUBJECT</th>
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<tbody>
<tr>
<td>Languages(^2)</td>
<td>French</td>
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<tr>
<td></td>
<td>Latin</td>
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<tr>
<td></td>
<td>Japanese</td>
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<tr>
<td>Visual Arts</td>
<td>Art</td>
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<td></td>
<td>Design</td>
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<tr>
<td>Performing Arts</td>
<td>Drama</td>
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<td></td>
<td>Music</td>
</tr>
<tr>
<td>Commerce</td>
<td>Financial Literacy</td>
</tr>
<tr>
<td>Humanities</td>
<td>Geography</td>
</tr>
<tr>
<td></td>
<td>Ethics</td>
</tr>
<tr>
<td>Health &amp; Physical Education</td>
<td>Australia's Health</td>
</tr>
<tr>
<td></td>
<td>Outdoor Education</td>
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<tr>
<td>Digital Technology</td>
<td>Code Camp</td>
</tr>
</tbody>
</table>

1. The Australian Curriculum mandates the study of History to Level 10. In Semester 1, Year 9 students study the Australian Curriculum History course to Level 9 and in Semester 2 they study the Level 10 Australian Curriculum History course.

2. Girls must study at least one Language subject for two semesters in Year 9. Students who wish to study two languages can select from French and Japanese or French and Latin.
Year 10 is intended to provide girls with guided choices for their program of study. They combine core subjects with a range of elective subjects. The elective subjects in Year 10 are intended to offer the broadest possible range of subjects and experiences in order for students to make informed decisions about their VCE choices.

### CORE SUBJECTS
- English
- Mathematics (VCE Mathematical Methods Unit 1 & 2 available)
- Science (Accelerated Science available)
- Physical Education

### ELECTIVE SUBJECTS

Students in Year 10 study four elective subjects of their choice in Semester 1 and a further four in Semester 2.

<table>
<thead>
<tr>
<th>DISCIPLINE</th>
<th>ELECTIVE SUBJECT</th>
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</thead>
<tbody>
<tr>
<td>Languages¹</td>
<td>French</td>
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<tr>
<td></td>
<td>Latin</td>
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<tr>
<td></td>
<td>Japanese</td>
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<tr>
<td>Visual Arts</td>
<td>Studio Art</td>
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<td></td>
<td>Photography</td>
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<td></td>
<td>Fashion Design</td>
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<td></td>
<td>Architecture</td>
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<tr>
<td>Performing Arts</td>
<td>Drama</td>
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<td></td>
<td>Music</td>
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<tr>
<td>Commerce</td>
<td>Economics and the World</td>
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<td></td>
<td>Business Accounting</td>
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<tr>
<td></td>
<td>Australian Politics</td>
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<tr>
<td></td>
<td>International Politics</td>
</tr>
<tr>
<td>Humanities</td>
<td>China Rising</td>
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<td></td>
<td>Environmental Management</td>
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<td></td>
<td>Ancient Rome</td>
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<tr>
<td></td>
<td>Philosophy</td>
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<td></td>
<td>Feminism</td>
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<td></td>
<td>Multimedia Communication</td>
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<tr>
<td>Health &amp; Physical Education</td>
<td>Exercise Sports Science</td>
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<tr>
<td>Digital Technology</td>
<td>Informatics</td>
</tr>
</tbody>
</table>

¹. Girls can study any language individually but those who wish to study two languages can select from French and Japanese or French and Latin.
Important learning occurs beyond the traditional classroom and Fintona offers a broad range of activities to develop student interests and talents. Students’ efforts are recognised regularly in the school community via assemblies and written publications.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>YEAR LEVELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art and Design Tour</td>
<td>10 - 12</td>
</tr>
<tr>
<td>Athletics (House Sport and Girls Sport Victoria [GSV])</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Badminton (House and GSV)</td>
<td>5 - 12</td>
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<tr>
<td>Basketball (GSV)</td>
<td>7 - 12</td>
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<tr>
<td>Boroondara Literary Award</td>
<td>7 - 12</td>
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<tr>
<td>Creative Writing Club</td>
<td>7 - 12</td>
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<tr>
<td>Cricket (GSV)</td>
<td>7 - 12</td>
</tr>
<tr>
<td>Cross Country (House and GSV)</td>
<td>5 - 12</td>
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<tr>
<td>Cunningham String Quartet</td>
<td>9 - 12</td>
</tr>
<tr>
<td>Danila Dilba</td>
<td>11</td>
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<tr>
<td>Debating (House and Inter-School [DAV])</td>
<td>7 - 12</td>
</tr>
<tr>
<td>Diving (House and GSV)</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Duke of Edinburgh’s Award Scheme</td>
<td>Age 14 - Yr 12</td>
</tr>
<tr>
<td>Elaine Boucher Writing Award</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Elizabeth M. Butt Public Speaking</td>
<td>6 - 11</td>
</tr>
<tr>
<td>Exchanges to Canada and Scotland</td>
<td>9</td>
</tr>
<tr>
<td>Fintona Chorale</td>
<td>9 - 12</td>
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<tr>
<td>Fintona Flutes</td>
<td>8 - 12</td>
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<tr>
<td>Flute Ensemble</td>
<td>5 - 12</td>
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<tr>
<td>Guitar Ensemble</td>
<td>5 - 12</td>
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<tr>
<td>HASSE Space Program</td>
<td>7 - 11</td>
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<tr>
<td>Hockey (House and GSV)</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Indoor Cricket (House)</td>
<td>7 – 12</td>
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<tr>
<td>Language Based Trip (French or Japanese)</td>
<td>10 - 11</td>
</tr>
<tr>
<td>Language Exchanges (French or Japanese)</td>
<td>10 - 11</td>
</tr>
<tr>
<td>Netball (House and GSV)</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Percussion Ensemble</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Poetry Competitions</td>
<td>7 - 12</td>
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<tr>
<td>Ringing Voices Literary Journal</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Rostrum Voice of Youth Public Speaking Awards</td>
<td>9 - 12</td>
</tr>
<tr>
<td>Rotary Balwyn Four Way Test Public Speaking Awards</td>
<td>10 - 11</td>
</tr>
<tr>
<td>Rowing</td>
<td>8 - 12</td>
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<tr>
<td>Saxophone Quartet</td>
<td>7 - 12</td>
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<tr>
<td>Senior Orchestra</td>
<td>8 - 12</td>
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<tr>
<td>Soccer (GSV)</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Softball (GSV)</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Stage Band</td>
<td>7 - 12</td>
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<tr>
<td>Swimming (House and GSV)</td>
<td>5 - 12</td>
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<tr>
<td>Symphonic Wind Ensemble</td>
<td>7 - 12</td>
</tr>
<tr>
<td>School Play</td>
<td>7 - 12</td>
</tr>
<tr>
<td>Table Tennis (House)</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Tennis (House and GSV)</td>
<td>5 - 12</td>
</tr>
<tr>
<td>Tourmont Strings</td>
<td>7 - 12</td>
</tr>
<tr>
<td>Triathlon</td>
<td>7 - 12</td>
</tr>
<tr>
<td>Volleyball (House and GSV)</td>
<td>5 - 12</td>
</tr>
<tr>
<td>World Challenge</td>
<td>9 – 11</td>
</tr>
</tbody>
</table>
In studying such texts, students develop critical understanding of the ways in which today’s world is reported.

The range of literary texts for Foundation to Year 10 comprises Australian literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander peoples, as well as the contemporary literature of these two cultural groups, and classic and contemporary world literature, including texts from and about Asia.

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**ENGLISH**

Unit Length: Full Year

Literary texts that support and extend students in Years 9 and 10 as independent readers are drawn from a range of genres and involve complex, challenging and unpredictable plot sequences and hybrid structures that may serve multiple purposes. These texts explore themes of human experience and cultural significance, interpersonal relationships, and ethical and global dilemmas within real-world and fictional settings and represent a variety of perspectives. Informative texts represent a synthesis of technical and abstract information from verifiable sources about a wide range of specialised topics. Text structures are more complex including chapters, headings and subheadings, tables of contents, indices and glossaries. Language features include successive complex sentences with embedded clauses, a high proportion of unfamiliar and technical vocabulary, figurative and rhetorical language, and dense information supported by various types of graphics presented in visual form. Students create a range of imaginative, informative and persuasive types of texts including narratives, procedures, performances, reports, discussions, literary analyses and reviews.

For more information please see: www.australiancurriculum.edu.au/English/Curriculum/F-10#level=9

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**OUTLINE**

The English curriculum is built around the three interrelated strands of:

- **Language** - knowing about the English language
- **Literature** - understanding, appreciating, responding to, analysing and creating literature, and
- **Literacy** - expanding the repertoire of English usage, in both written and oral form.

Each area of study in Year 9 integrates and implements the development of skills in the above three strands. Together the strands focus on developing students’ knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating.

Learning in English builds on concepts, skills and processes developed in earlier years, and teachers revise and strengthen these as needed. Students engage with a variety of texts for enjoyment. They interpret, create, evaluate, discuss and perform a wide range of mainly fictional literary texts. These include various types of media texts including newspaper articles, photographs, political cartoons, radio transcripts, television advertising and other forms of media.
ENGLISH: SPECIFIC AREAS OF STUDY

SHAKESPEARE

OUTLINE
Students are introduced to the world of William Shakespeare. Through the classroom reading of The Merchant of Venice, students explore and analyse how the playwright develops themes and characterisation. Students also develop awareness of literary features of a play, and how such features contribute to meaning. The unit encompasses a range of research-based, comprehension and analytical writing tasks, and students participate in a performance of a selected scene from the play. They are encouraged to maintain learning journals with descriptive and reflective writing entries.

ASSESSMENT
Study of historical, ethical and literary contexts, character profiles, scene analysis, essay, performance of selected scene.

ANALYSING AND PRESENTING ARGUMENT

Students study given newspaper articles and opinion-based articles in other media. They become familiar with articles written for a range of purposes and audiences, and acquire proficiency in recognising and formulating different styles of writing, including: informative articles (reportage), opinion pieces, editorials, speeches, letters and reviews. Students also develop understanding of how images and illustrations can be political and persuasive.

ASSESSMENT
Writing for a range of purposes and audiences, language tests (grammar, punctuation and vocabulary), analysis tasks and participation in group discussion.

PUBLIC SPEAKING

OUTLINE
Building on skills from previous year levels, students participate in oral performance (Shakespeare), presentations to class, and in the School’s internal programme, the Elizabeth M. Butt Public Speaking Award. Tasked with developing a persuasive speech, students engage in research, craft a speech with a definitive point of view and deliver their speech to an audience. In doing so, they study the skills required for effective oratory and work toward developing confidence and poise.

ASSESSMENT
An oratory performance, participation in classroom discussion and formal presentation of a textual point of view.

LITERATURE

OUTLINE
Students study a selection of short stories and poetry written by Australian and other authors. The works are selected for their uniqueness of form and use of language, for their artistic merit and for being of enduring relevance to contemporary society, including works created by indigenous Australian authors. The course features the novel To Kill A Mockingbird, whereby students explore the social, moral and ethical decisions taken by the characters in an historical setting. Students learn to appreciate how fiction is a valid and effective means of understand human experience and of voicing protest against social inequality.*

*Please note that the above-mentioned texts for Year 9 are correct at time of publication and may be subject to change.

ASSESSMENT
Analytical tasks, participation in discussion, creative writing including the drafting and editing process.

FILM STUDY

OUTLINE
The study of the film Picnic at Hanging Rock enables students to explore aspects of early 20th century Australia, and how a work of fiction has been recreated through language, structural and visual choices. Students identify and analyse implicit or explicit values, beliefs and assumptions apparent in the film, and how these are influenced by directorial purposes. Students also refine vocabulary choices to discriminate between shades of meaning, with deliberate attention paid to the effect that filmic devices may have on audiences.

ASSESSMENT
Film and scene interpretation, analysis of filmic techniques, discussion of findings orally and in essay form, and creative response.

LANGUAGE

OUTLINE
The Australian Curriculum mandates the teaching of language skills including sentence structure, textual cohesion and paragraphing, modality, punctuation, grammatical conventions, vocabulary and spelling. The development of proficiency in language acquisition and skills occurs as part of students’ study of fiction and media texts, and in isolation with specifically directed language tasks.

ASSESSMENT
Assessment occurs during formative tasks for all areas of study in both semesters and in specific textbooks.
MATHEMATICS

Unit Length: Full Year

The following areas of study are the focus for the curriculum: Number and Algebra, Measurement and Geometry, and Statistics and Probability. The proficiency strands Understanding, Fluency, Problem Solving and Reasoning are an integral part of mathematics content across the three content strands and are assessed by in-class activities, topic tests and application and problem solving/modelling tasks. Digital technology, including the use of the CAS calculator, is utilised where appropriate. Students follow the course described by the Australian Curriculum.

OUTLINE

Number and Algebra
Students apply the index laws using integer indices to variables and numbers, express numbers in scientific notation, solve problems involving very small and very large numbers, and check the order of magnitude of calculations. They use the distributive law to expand and simplify a range of algebraic expressions which include algebraic fractions. Students find the gradient of two points on the Cartesian plane and the gradient and midpoint of a line segment using a range of strategies. Students explore the concept of rate. Students sketch linear relations. They solve linear equations and inequations and set up and solve simultaneous equations. They explain the relationship between the graphical and symbolic forms. Students also consider applications to real life situations. Students use the distributive law to expand algebraic expressions, including binomial expressions, and simplify a range of algebraic expressions. Students factorise quadratic expressions and use the null factor law to solve quadratic expressions. They express numbers in scientific notation and extend and apply the index laws to fractional indices. Students perform operations with surds.

Measurement and Geometry
Students relate three-dimensional objects to two-dimensional representations. They use the concept of similarity of triangles, and apply Pythagoras’ theorem and trigonometry to solve problems involving angles and lengths in right-angled triangles. Pythagoras’ theorem is used to derive the formula for distance between two points.

Statistics and Probability
Students collate and display discrete and continuous data using a variety of statistical diagrams, including grouped frequency tables, stem and leaf plots, histograms and box and whisker plots. They compare and describe data and perform statistical analysis to calculate the mean, median and range.

KEY SKILLS
Knowledge, understanding and application of basic facts in routine and non-routine problems, communicating mathematical understanding, using a CAS calculator appropriately and efficiently.

ASSESSMENT
Application and problem solving/modelling tasks, topic tests, examinations.

RESOURCES
Essential Mathematics for the Australian Curriculum, Year 9, D. Greenwood et al, Cambridge, Casio Class Pad 400 calculator, worksheets.
ACCELERATED MATHEMATICS

Unit Length: Full Year

OUTLINE

Number and Algebra
Students use the distributive law to expand, factorise and simplify a range of algebraic expressions, including quadratics. They solve problems involving linear equations and inequalities, quadratic equations and pairs of simultaneous linear equations. They find the distance between two points on the Cartesian plane, the gradient of a line and the midpoint of a line segment. Students sketch the graphs of linear and exponential relations, solve related equations and explain the relationship between the graphical and symbolic forms. They learn how to simplify surds and rationalise denominators. Students solve quadratic equations to find the axial intercepts and sketch graphs of a parabola from various forms. They find the turning points of parabolas by various means and represent quadratic functions to model situations and solve practical problems. Graphing is also used to solve quadratic inequalities. Students solve simultaneous equations involving linear and quadratic functions. They use the discriminant to find the number and nature of the solutions. Matrix operations are studied and used to solve equations and practical problems. They investigate the properties of circles and hyperbolas and can identify and label key features of their groups.

Measurement and Geometry
Students apply Pythagoras’ theorem to solve problems in right-angled triangles using surds. Students solve quadratic equations to find the axial intercepts and sketch graphs of a parabola from various forms. They find the turning points of parabolas by various means and represent quadratic functions to model situations and solve practical problems. Graphing is also used to solve quadratic inequalities. Students solve simultaneous equations involving linear and quadratic functions. They use the discriminant to find the number and nature of the solutions. Matrix operations are studied and used to solve equations and practical problems. They investigate the properties of circles and hyperbolas and can identify and label key features of their groups. Students study the trigonometry of right-angled triangles, and derive and use the exact trigonometric ratios for angles measuring 30°, 45° and 60°. They explore the characteristics of the unit circle, graph basic trigonometric functions and use trigonometric identities.

Statistics and Probability
They use tree diagrams, Venn diagrams and Karnaugh maps to list a sample space and calculate probabilities of compound events. Students interpret and find conditional probabilities using both intuitive and formulaic methods.

KEY SKILLS
Knowledge and understanding of basic facts in routine and non-routine problems, communicating mathematical understanding, using a CAS calculator appropriately and efficiently.

ASSESSMENT
Application and problem solving/modelling tasks, topic tests, examinations.

RESOURCES

PATHWAY
A selection process exists for involvement in the Year 9 Accelerated Mathematics program. A specialised test, along with data from Year 8 tests and classwork, is used to determine which students are invited to participate in this course. Students are able to study VCE Mathematical Methods Units 1 and 2 as an area of study in Year 10 if the Year 9 Accelerated Mathematics program is completed at a high level.
SCIENCE

Unit Length: Full Year

Students continue their study of Science, exploring it as a human endeavour and a way of understanding and explaining the world. They further hone their science inquiry skills and focus on strengthening their foundation in Biological, Chemical and Physical Science.

RESOURCES

Prescribed textbook: Pearson Science 9 Student and Activity Books.

SCIENTIFIC INQUIRY

Students design questions that can be investigated using a range of inquiry skills. They design methods that include the control and accurate measurement of variables and systematic collection of data and describe how they considered ethics and safety. They analyse trends in data, identify relationships between variables and reveal inconsistencies in results. They analyse their methods and the quality of their data, and explain specific actions to improve the quality of their evidence. They analyse their methods and the quality of their data, and explain specific actions to improve the quality of their evidence. They analyse their methods and the quality of their data, and explain specific actions to improve the quality of their evidence. They analyse their methods and the quality of their data, and explain specific actions to improve the quality of their evidence.

BIOLOGICAL SCIENCES: CO-ORDINATION OF BODY SYSTEMS

OUTLINE

Students study how multi-cellular organisms rely on co-ordinated and interdependent internal systems to respond to changes in their environment. The structure and function of the nervous and endocrine systems is explored in a bid to aid the investigation into the nature of responses to various stimuli. Special mention is made of the responses of the body to changes as a result of the presence of micro-organisms. Modern medical diagnostic and treatment regimens are incorporated into the study of the effects of exposure to electromagnetic radiations such as x-rays and microwaves.

KEY SKILLS

Interpretation, observation, safe laboratory techniques, dissection, research, analysis, classification, evaluation, problem solving, scientific report writing, digital technology use.

ASSESSMENT

Topic tests, assignments, practical work and reports.

BIOLOGICAL SCIENCES: ECOSYSTEMS

OUTLINE

Students use scientific concepts and models to explain the interdependence of populations of organisms and the environment. They investigate how ecosystems change as a result of events such as bushfires, drought and flooding, and examine the effect of independent and dependent factors on population size. Students focus on how energy flows into and out of an ecosystem via the pathways of food webs, and on maintaining sustainability of systems.

KEY SKILLS

Observation, prediction, identification, analysis, synthesis, evaluation, classification, research, interpretation, scientific report writing, use of digital media, fieldwork.

ASSESSMENT

Topic tests, practical work and reports.
CHEMICAL SCIENCES

OUTLINE
Students are introduced to the Periodic Table, the atomic structure of the first 20 elements and natural radioactivity. The mass and charge of the sub-atomic particles is compared. Students investigate factors that affect chemical changes and relate these to everyday situations. The significance of chemical reactions, including combustion and the reactions of acids, in both non-living and living systems, is studied. A comparison of respiration and photosynthesis as biological processes is drawn. Energy transfer in terms of exothermic and endothermic reactions and the effect of combustion products on the environment is researched. A practical analytical project is undertaken, and chemical equations in words and symbols are completed.

KEY SKILLS
Observation, record-keeping, making inferences, safe laboratory techniques, classification, manipulation, developing hypotheses, experimentation, research, analysis, synthesis, developing a flow chart, processing and analysing data, evaluating, scientific report writing, digital technology use.

ASSESSMENT
Topic tests, practical work and reports, presentation of a project.

EARTH AND SPACE SCIENCES: GLOBAL SYSTEMS

OUTLINE
Global systems, including the carbon cycle, rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere. Students investigate how human activity affects global systems. They are required to model one of the biogeochemical cycles, such as water, carbon, nitrogen or phosphorus cycle within the biosphere. Climate change and the effect on sea levels and long-term effect of biodiversity loss are considered. Students are required to explain the causes and effects of the greenhouse effect. The factors that drive deep ocean currents, their role in regulating global climate and their effects on marine life are researched.

KEY SKILLS
Modelling, observation, research, concept mapping, problem solving, interpretation, evaluation, scientific report writing, use of digital technologies.

ASSESSMENT
Tests, assignments.
PHYSICAL SCIENCES: ENERGY TRANSFER BY WAVES, (SOUND AND LIGHT) AND ELECTRIC CIRCUITS

OUTLINE
Students explore the properties of waves, and situations where energy is transferred in the form of waves, such as sound and light. Using inquiry skills they study how and why the movement of energy varies according to the medium through which it is transferred; the structure and functions of the mammalian eye and ear are considered. Discussions of wave and particle models are employed to enhance an understanding of aspects of these phenomena. Furthermore, students investigate the transfer of heat in terms of convection, conduction and radiation, identify situations in which each occurs and discuss these phenomena in terms of the particle model. Factors that affect the transfer of energy through an electric circuit are introduced at this year level.

KEY SKILLS
Spatial awareness, observation, dissection, developing hypotheses, experimentation, research, manipulation of data, analysis, synthesis, processing and analysing data, evaluating, problem solving, manipulation of electrical circuitry, making inferences, scientific report writing, digital technology use, mathematical calculations.

ASSESSMENT
Tests, problem-solving, experimental reports, notes, assignment.
YEAR 9 CORE SUBJECTS

HISTORY
Unit Length: Full Year

THE MODERN WORLD AND AUSTRALIA

OUTLINE
In this subject students consider the genesis of the modern era beginning with the Industrial Revolution and examine its impact upon the development of nations such as England and Australia. Students also examine the emergence of significant economic, social and political ideas in the period. Students then explore the key features of war and its impact on Australian society between 1914-1945. They investigate the emergence of civil rights for Indigenous people during the twentieth century with a particular emphasis on the United States.

KEY SKILLS
Research skills, analysis of written and visual primary and secondary sources, evaluating material to use as evidence, constructing written historical arguments.

ASSESSMENT
Document and graphic exercises, research tasks, extended responses, examination.

RESOURCES
Textbook: Pearson History Custom 9 - 10. Students use film, documentaries, class sets, the Resource Centre, online resources.

PHYSICAL EDUCATION
Unit Length: Full Year

OUTLINE
Students have the opportunity to consolidate their skills in traditional sports such as AFL, volleyball and softball. They will also develop their knowledge about a range of non-traditional sports, such as aerobics. Students will learn rules, strategies and tactics for the sports covered, particularly through game situations. Through completing a fitness unit, students develop the knowledge, skills and behaviour to maintain physical health. Engaging in physical activity contributes to a sense of community and social connectedness which is vital for personal well-being.

KEY SKILLS
Catching, throwing, striking, fielding, movement, correct technique and timing.

ASSESSMENT
Major skills checklist for each sport.
LANGUAGES

Learning a Language contributes to the development of inter-culturally aware citizens through an understanding of languages, culture and humanity. Learning languages promotes and develops reflective, deep and creative thinking.

FRENCH

Unit Length: Full Year

OUTLINE

Students develop their ability to communicate in French and understand the role of language and culture through various topics related to lifestyles in French homes, division of household tasks, part-time work, leisure, shopping and food, and visiting Paris.

KEY SKILLS

Speaking, listening, reading, and writing.

ASSESSMENT

Listening, Speaking, Reading and writing skills are tested in unit tests and end of semester examination.

RESOURCES

Tapis Volant 2 4th edition; Student book and Workbook.

LATIN

Unit Length: Full Year

OUTLINE

Students develop their ability to read Latin through the story-based approach of the Cambridge Latin Course. They amplify and consolidate their knowledge of the classical language in the context of Roman Britain in the first century CE. Students investigate the social, political and historical aspects of Roman culture as an essential preparation for the reading of Roman authors.

KEY SKILLS

Translation, reading comprehension, reading aloud, dictionary use.

ASSESSMENT

Tests, assignments, examination.

RESOURCES

Cambridge Latin Course Books 3 and 4 (retain Book 3 from Year 8); Collins Latin Dictionary and Grammar.

JAPANESE

Unit Length: Full Year

OUTLINE

Students develop their ability to communicate in Japanese and understand the role of language and culture through a variety of topics relevant to their own life and to those of Japanese teenagers, focusing on cultural similarities and differences. Students learn to talk about major milestones in their lives; where they were born and raised; languages and nationalities; celebrities with Japanese background in the fields of entertainment, media and sports; Japanese department stores; popular theme parks in Japan.

KEY SKILLS

Speaking, listening, reading, and writing.

ASSESSMENT

Oral presentations, tests, examination.

RESOURCES

YEAR 9 ELECTIVES

VISUAL ARTS

Unit Length: Semester

ART OUTLINE
Based on the governing principle of observation, Year 9 Art explores various forms of documentation and personal expression. Building on key ideas developed in previous learning experiences, students develop and extend skills in a variety of artmaking techniques and processes. There are opportunities to develop a wide range of skills in both traditional and new media, including Painting, Sculpture, Drawing, Printmaking, and Digital Imaging. The structure of Year 9 Art is designed to be flexible to cultivate and encourage personal choice in the development of practical artwork. There is an emphasis on developing personal statements and style.

Through the study of Art history and appreciation, students establish a broader understanding of the important impact art has had in a number of different historical, political, social and cultural contexts.

KEY SKILLS
Artmaking techniques, creative thinking, use of information and communication technology, personal and social capability, ethical and intercultural understanding.

ASSESSMENT
Visual Diary, folio of resolved artworks, response to set analytical and art appreciation tasks, examination.

DESIGN

OUTLINE
Year 9 Design offers students the opportunity to create functional furniture and textile products through the application of the design process, project-based research, critical analysis and inquiry. Students work authentically in a studio environment to invent, visualise and prototype design solutions, gaining the skills and knowledge needed to develop ideas into commercially viable ventures.

Through the study of design history they gain a broad understanding of the role and function of product design, examining furniture and textiles. They investigate its role throughout time, its material and stylistic evolution. They explore the contemporary, cultural and sustainable aspects of furniture and products as a means to manufacture and prototype their own furniture solution.

Students learn the language of industrial design, exercise critical thinking, visual literacy, problem solving and personal expression. Through exploring and understanding real-world product based design students exercise discernment as connoisseurs, positioning them as curators rather than consumers of design.

KEY SKILLS
Creative and critical thinking, visual literacy, problem solving, use of information and communication technology, personal and social capability, ethical understanding and intercultural understanding.

ASSESSMENT
Visual diary, folio of resolved products, response to set analytical and art appreciation tasks, examination.
PERFORMING ARTS

Unit Length: Semester

The Arts engage students in critical and creative thinking, helping them understand themselves and the world. The Arts play a critical role in all societies, and encourage the exploration of a broad range of ideas. Two key areas frame arts based learning – creating and making, and exploring and responding. The study of Drama focuses on creation, interpretation, performance and analysis of characters, narratives and stories.

DRAMA

OUTLINE
In Year 9 Drama, students improvise with, perform and evaluate the elements of drama and narrative structure to develop ideas and explore subtext to shape devised and scripted drama. Students are encouraged to collaborate to manipulate combinations of the elements of drama to develop and convey the physical and psychological aspects of roles and characters consistent with intentions in dramatic forms and performance styles. Students practise and refine the expressive capacity of voice and movement to communicate ideas and dramatic action in a range of forms, styles and performance spaces, including the exploration of those developed by Aboriginal and Torres Strait Islander dramatists. Students are also encouraged to structure drama to engage an audience through the manipulation of dramatic action, forms and performance styles and by using design elements.

KEY SKILLS
Critical and creative thinking, performance, literacy, communication, intercultural understanding, personal and social capability.

ASSESSMENT
Script interpretation, history of theatre, research, performance, performance analysis, group devised ensemble performance and examination.

MUSIC (RECORDING AND TECHNOLOGY)

OUTLINE
In Year 9 Music, students learn how to set up, record and use the Pro-Tools recording software program. They develop their skills through practical activities so they can learn to record different types of instruments and ensembles. They learn to record each other, mix and edit sound sources. They make use of the music software program Sibelius to compose, and create midi files. Students have the opportunity to attend a recording studio and record a performance that they have prepared in class. All students gain an understanding of the OH&S issues in the Music Industry and how to apply them correctly and safely.

KEY SKILLS
Creative thinking, use of technology and audio equipment, communication, personal and social capability.

ASSESSMENT
Setting up and recording in the studio, Sibelius, setting up of audio equipment, understanding relevant terminology in a written and practical examination.
YEAR 9 ELECTIVES

COMMERCe

Unit Length: Semester

FINANCIAL LITERACY

OUTLINE
Students explore the world of money and investments. What is money, where does it come from, how do we make it, and just as importantly, how do we keep it? Over the course of the semester students will develop ICT skills to enable to them to produce budgets for individuals in order to manage their personal finances. Students will be introduced to the share market and property markets, learn how prices change and how to invest into these markets. Students will gain an understanding of currency, both Australian and global currencies and how they influence an individual’s financial position. In order to develop greater financial awareness and independence, students are introduced to a number of financial scams and how they should plan for their financial future.

KEY SKILLS
Budgeting, decision making, planning for long term investing, evaluation of the share market and property market.

ASSESSMENT
Tests, assignment, share market report and the final examination.

RESOURCES
Resources provided by the classroom teacher, guest speakers, textbook.

HUMANITIES

Unit Length: Semester

GEOGRAPHY

OUTLINE
What are some of the major geographical issues facing the world today? How can they be addressed at the global, national and local scales? This elective enables students to broaden their geographical knowledge of the world through a study of two key topics: Human Wellbeing and Global Tourism. In examining the theme of human wellbeing, a range of current case studies from Africa, Asia and America are investigated, such as: refugee movement, food security, water and sanitation, child labour, literacy rates for women in developing countries, diseases such as malaria and AIDS. Students also examine global trends in tourism (which generates 1 in 10 jobs around the world), its impact on people and environments at national and local scales and innovative and interesting developments in ecotourism. Fieldwork will be undertaken which enables students to further develop their skills in collecting and analysing information collected in the field.

KEY SKILLS
Research, presenting and interpreting data such as maps and graphs, conducting fieldwork.

ASSESSMENT
Classwork, research task, fieldwork report, data presentation and analysis tasks, examination.

RESOURCES
Atlas, class sets, online resources, Resource Centre, audio visual material, fieldwork site.
ETHICS

OUTLINE
How do I live a good life? What are my rights and responsibilities? How do I decide what is good and bad when making a moral decision? In this subject, students are introduced to the meaning of ethics, and what it means to live responsibly. They explore aspects of personal morality and what this means in our daily, social interactions. Students ask whether such a thing as universal, moral absolutes exist. The subject also explores ethical principles within specific contexts, including the law, medicine, the press, and sport. Students examine whether it is ever acceptable to lie, and whether there is a code of ethics that applies to war. They also watch and analyse the concerns of a feature film that depicts a critical moral dilemma.

KEY SKILLS
Critical thinking, analysis of written and visual sources.

ASSESSMENT
Journal exercises, oral presentation, essay and examination.

HEALTH AND PHYSICAL EDUCATION

AUSTRALIA’S HEALTH

OUTLINE
This unit will focus on the health of Australians and what influences or impacts on the variations in health. Students consider how age, gender, socioeconomic status and culture can create inequalities and influence health status. They will build on their health literacy skills through evaluating nutritional information, including advertising and social media. Students will also research health inequalities in Australia’s youth and investigate the role of communities and governments in addressing the key issues.

KEY SKILLS
Collect, critique and analyse data on health status; research health promotion programs; evaluate the effectiveness of programs; problem solve methods to improve health.

ASSESSMENT
Research assignments, topic test, examination.

RESOURCES
Work booklets, online resources.
OUTDOOR EDUCATION

OUTLINE
This unit will focus on developing the key skills and knowledge to safely participate in activities in outdoor environments and to respect and value diverse environments. Students will investigate the different types of outdoor environments and discover what motivates individuals to experience nature. They will also develop appropriate practical skills for safe and sustainable participation and how to conserve and promote positive impacts on outdoor environments. Practical outdoor experiences will provide them with the necessary knowledge and physical skills to effectively create and implement an independent journey at the end of the unit. The activities in this unit may contribute to the Duke of Edinburgh’s Award.

KEY SKILLS
Developing essential personal and social capabilities, including communication, resilience, self-confidence, leadership, teamwork, goal setting, personal autonomy and initiative; plan and reflect on individual impact on the environment; analyse and evaluate outdoor experiences.

ASSESSMENT
Practical report, assignment, journal, examination.

RESOURCES
Work booklets.

DIGITAL TECHNOLOGY

CODE CAMP

OUTLINE
Students learn to make things and solve problems through writing software. Utilising their existing knowledge of a coding platform, such as Scratch, Alice, Swift, Lego EV3 or GameMaker, or learning a new language, such as Python or Visual Basic, students can create their own animation, game, website, robot challenge or app. They extend their knowledge of how computers encode, process and store information. Students learn computational thinking and the Problem Solving Methodology to analyse, define, test and build their solutions. Students examine design of user interfaces and the visual and navigational elements in software solutions. Students learn classic algorithms such as searching, sorting and recursion and participate in Computational Thinking challenges.

KEY SKILLS
Computational thinking: decomposition, abstraction, pattern matching, algorithms. Coding skills in the applicable platform or language. Analysing and designing software solutions in response to given needs. Testing and evaluating software solutions.

ASSESSMENT
Assignments, major project, examination.
ENGLISH

OUTLINE
The English curriculum is built around the three interrelated strands of:

- **Language** - knowing about the English language
- **Literature** - understanding, appreciating, responding to, analysing and creating literature, and
- **Literacy** - expanding the repertoire of English usage, in both written and oral form.

Each area of study in Year 10 integrates and implements the development of skills in the above three strands. Together the strands focus on developing students’ knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers revise and strengthen these as needed. Students engage with a variety of texts for enjoyment. They interpret, create, evaluate, discuss and perform a wide range of mainly fictional literary texts. These include various types of media texts including newspaper articles, photographs, political cartoons, radio transcripts, television advertising and other forms of media. In studying such texts, students develop critical understanding of the ways in which today’s world is reported.

Literary texts that support and extend students in Years 9 and 10 as independent readers are drawn from a range of genres and involve complex, challenging and unpredictable plot sequences and hybrid structures that may serve multiple purposes. These texts explore themes of human experience and cultural significance, interpersonal relationships, and ethical and global dilemmas within real-world and fictional settings and represent a variety of perspectives. Informative texts represent a synthesis of technical and abstract information from verifiable sources about a wide range of specialised topics. Text structures are more complex including chapters, headings and subheadings, tables of contents, indices and glossaries. Language features include successive complex sentences with embedded clauses, a high proportion of unfamiliar and technical vocabulary, figurative and rhetorical language, and dense information supported by various types of graphics and images.

Students create a range of imaginative, informative and persuasive types of texts including narratives, procedures, performances, reports, discussions, literary analyses and reviews.

For more information please see: www.australiancurriculum.edu.au/English/Curriculum/F-10#level=10
ENGLISH: SPECIFIC AREAS OF STUDY IN YEAR 10

Unit Length: Semester

SHAKESPEARE

OUTLINE
Students build on their knowledge of Shakespearean theatre, with a study of a play. In addition to the understanding of Elizabethan drama introduced in Year 9, they acquire a more complex understanding of literary technique and language features as presented in Macbeth. They identify, explain and discuss how narrative viewpoint, structure, characterisation and devices, including analogy and satire, shape different interpretations and responses. They identify and explore the purposes and effects of different text structures and language features of spoken texts, and use this knowledge to create their own performance of a selected scene.

ASSESSMENT
Passage analyses, essays and scene performance.

COMPARATIVE TEXT STUDY: FILM AND NOVELLA

OUTLINE
Students study the Australian film The Black Balloon and American novella Of Mice and Men, selected for their literary merit and complementary themes concerning difference, otherness, the concept of the outsider, and the theme of responsibility. Students study and are invited to explain the similarities and differences between the texts in the presentation of related ideas and themes, and the choices made by an author or director convey particular perspective. They study the conventions of different literary forms and identify the ways in which film or narrative work to create particular meaning.

ASSESSMENT
Scene and passage analyses, comparative essays, reviews and creative responses.

PUBLIC SPEAKING

OUTLINE
The Elizabeth M. Butt Public Speaking programme continues with oratory performances held in Term 3. In Year 10, students create a speech based on an interpretation of a selected quotation. The competition promotes the development of polished oratory skills, as well as poise and confidence when speaking to an audience. Students refine their skills in planning and editing, specifically in structuring a spoken text to create a particular perspective and effect on an audience. In this task, and in other formal presentations such as text-related speeches, they develop proficiency in using voice and language conventions to present a point of view, speaking clearly and coherently, using logic, imagery and rhetorical devices.

ASSESSMENT
Elizabeth M Butt presentations, formal text presentations, verbal participation in class.

LITERATURE

OUTLINE
Students are encouraged to read widely from fictional and biographical sources. They study The Adoration of Jenna Fox which has been selected for its specific cultural context and fluidity of genre, allowing them scope for imagining possibilities for creative responses. Students explore the social and moral positions taken by the characters in this setting. During the year, students are also given a range of short stories and poetry for study, also selected on the basis of artistic merit and for the unique ways in which human experience is represented.

ASSESSMENT
Passage analyses, essays and creative responses.

NOTE: Above-mentioned texts are correct at time of publication and may be subject to change.
MATHEMATICS

Unit Length: Full Year

The following areas of study are the focus for the curriculum:
Number and Algebra, Measurement and Geometry, and Statistics and Probability. The proficiency strands Understanding, Fluency, Problem Solving and Reasoning are an integral part of mathematics content across the three content strands and are assessed by in-class activities, topic tests and application and problem solving/modelling tasks. Digital technology, including the use of the Casio Classpad 400 calculator, is utilised where appropriate. Students follow the course described by the Australian Curriculum - Year 10/10A.

OUTLINE

Number and Algebra: Students use the distributive law to expand, factorise and simplify a range of algebraic expressions, including quadratics. They solve problems involving linear equations and inequalities, quadratic equations and pairs of simultaneous linear equations. Students find the equations of linear functions and examine the properties of perpendicular and parallel lines. They find the distance between two points on the Cartesian plane, the gradient of a line and the midpoint of a line segment. Students sketch the graphs of linear and exponential relations, solve related equations and explain the relationship between the graphical and symbolic forms. They learn how to simplify surds and rationalise denominators. Students are also introduced to fractional indices. Matrices are introduced and students explore the basic operations involving matrices leading to producing inverses to set up and solve matrix equations. Students solve quadratic equations to find the axial intercepts and sketch graphs of a parabola from various forms. They find the turning points of parabolas by a variety of means and represent quadratic functions to model situations and solve practical problems. Graphing is also used to solve quadratic inequalities. Students solve simultaneous equations involving linear and quadratic functions. They use the discriminant to find the number and nature of the solutions. Matrix operations are studied and used to solve equations and practical problems. They investigate the properties of circles and hyperbolas and can identify and label key features of their graphs.

ANALYSING AND PRESENTING ARGUMENT

OUTLINE

Students study newspapers such as The Guardian, The Australian, The Age and The Herald Sun. They become familiar with articles written for a range of purposes and audiences, and acquire proficiency in recognising and formulating different styles of writing, including: informative articles (reportage), opinion pieces, letters and reviews. Students also develop understanding of how images and illustrations can be political and persuasive. They continue to refine their ability to identify persuasive devices employed by authors to influence their readership.

ASSESSMENT

Writing for a range of purposes and audiences, language tests (grammar, punctuation and vocabulary), analysis tasks and participation in group discussion.

LANGUAGE

The Australian Curriculum mandates the teaching of Language skills including sentence structure, textual cohesion and paragraphing, modality, punctuation, grammatical conventions, vocabulary and spelling. The development of proficiency in Language acquisition and skills occurs both alongside and complementary to students’ study of fiction and media texts, and in isolation with specifically directed Language tasks.

ASSESSMENT

Assessment occurs during formative tasks for all areas of study in both semesters and in specific textbook language tasks.

NOTE: Above-mentioned texts for Year 10 are correct at time of publication and may be subject to change.
Measurement and Geometry: Students derive and use exact trigonometric ratios for angles measuring 30°, 45° and 60°. They use symmetry properties of the unit circle to solve problems involving angles in all four quadrants. Students sketch the graphs of basic trigonometric functions, including simple transformations of these.

Statistics and Probability: Students review probability concepts and use the addition law and a variety of probability diagrams to represent and calculate the probabilities of sample spaces and events. They calculate the probabilities of dependent and independent events and conditional probabilities.

KEY SKILLS
Knowledge, application and understanding of basic facts in routine and non-routine problems, communicating mathematical understanding, using a Casio Classpad 400 calculator appropriately and efficiently.

ASSESSMENT
Application and problem solving/modelling tasks, topic tests, examinations.

RESOURCES
Essential Mathematics for the Australian Curriculum, Year 10, D. Greenwood, Cambridge, Casio Class Pad 400 calculator, worksheets.

VCE UNIT 1 & 2 MATHEMATICAL METHODS
Refer to the Fintona 2019 VCE Handbook.
YEAR 10 CORE SUBJECTS

SCIENCE

Unit Length: Full year

RESOURCES
Prescribed textbook: Pearson 10 Student and Activity Books.

SCIENTIFIC INQUIRY
Students develop questions and hypotheses and design and improve appropriate methods of investigation and laboratory experimentation. They explain how they have considered reliability, safety, fairness and ethical actions in their methods and identify where digital technologies can be used to enhance the quality of data. When analysing data, selecting evidence and developing and justifying conclusions, they identify alternative explanations for findings and explain any sources of uncertainty. Students evaluate the validity and reliability of claims made in secondary sources with reference to currently held scientific views, the quality of the methodology and the evidence cited. They construct evidence-based arguments and select appropriate representations and text types to communicate science ideas for specific purposes.

BIOLOGICAL SCIENCES: GENETICS

OUTLINE
Students explore the genetic basis of inheritance. This will involve comparing processes and outcomes, predicting offspring, and explaining pedigrees. First and second-hand data will be evaluated. Mutations such as changes in DNA or chromosomes and the factors that contribute to causing mutations are described.

KEY SKILLS
Observation, interpretation, evaluation, research, problem solving, application of knowledge to everyday situations, use of digital technologies.

ASSESSMENT
Test, chapter questions, practical work and reports, problem solving, written responses, oral presentation, assignment.

BIOLOGICAL SCIENCES: EVOLUTION

OUTLINE
The theory of evolution by natural selection is considered to explain the diversity of living things and is supported by a range of scientific evidence. Students investigate the theories of evolution. This will include explaining the process of Natural Selection, evaluating evidence about the evolution of species, including fossil record, chemical and anatomical similarities, and geographical distribution of species. They investigate changes caused by natural selection in a particular population as a result of a specified selection pressure and relate genetic characteristics to survival and reproductive rates.

KEY SKILLS
Concept mapping, research, problem solving, analysis, making inferences, use of digital technologies.

ASSESSMENT
Test, research work, written responses, examination.

BIOLOGICAL SCIENCES: MICROBIOLOGY

OUTLINE
Students will investigate the different types of microorganisms, disease and decay, and infectious diseases (including the spread and prevention of diseases). The role of antibiotics and the immune system will be explored.

KEY SKILLS
Research, concept mapping and visual representation, classifying, problem solving, predicting, experimenting, observation, applying knowledge to everyday situations, scientific report writing.

ASSESSMENT
Test, research work, poster, practical work and reports, problem solving activities, written reports, oral presentation, assignment.
CHEMICAL SCIENCES

OUTLINE
Students continue to develop their knowledge of chemistry, including atoms and ions, and the characteristics of groups of elements in the Periodic Table. Students are introduced to the three primary types of chemical bonds and perform reactions including precipitation and acid-base neutralisation. Students explore the benefit of chemistry to society when producing various substances. They investigate the effect of a range of factors, such as temperature and catalysts, on the rate of chemical reactions. The ability to represent and interpret chemistry through symbols and words is developed.

KEY SKILLS
Modelling, experimentation, research, flow charts, concept mapping, problem solving, record keeping, scientific report writing, observation, interpretation and evaluation, use of digital technologies.

ASSESSMENT
Test, modelling, problem solving activities, oral presentation, experimental projects, assignment, examination.

EARTH AND SPACE SCIENCES: EVOLUTION OF THE UNIVERSE

OUTLINE
The students consider that the universe contains features including galaxies, stars and solar systems and that the Big Bang theory can be used to explain the origin of the universe. Students identify the evidence supporting the Big Bang theory, such as Edwin Hubble’s observations and the detection of microwave radiation. Other forms of radiation, as emitted by radioactive atoms are introduced and investigated. The concept of half-life and uses of radio isotopes is explored and waste storage from nuclear power generation discussed.

KEY SKILLS
Modelling, observation, research, concept mapping, problem solving, interpretation, evaluation, scientific report writing, use of digital technologies.

ASSESSMENT
Test, assignment, examination.

RESOURCES
Prescribed textbooks: Pearson 10 Student and Activity Books.
PHYSICAL SCIENCES: ENERGY CONSERVATION

OUTLINE
Students study the Law of Conservation of Energy which explains that total energy is maintained in energy transfer and transformation. They use models to describe how energy is transferred and transformed within systems and recognise that in energy transfer and transformation, a variety of processes can occur, so that the usable energy is reduced and the system is not 100% efficient. A comparison of energy changes in interactions such as car crashes, lifting and dropping is made.

KEY SKILLS
Experimentation, observation and analysis, applying knowledge, evaluation, numerical modelling, modelling, use of digital technologies, report writing.

ASSESSMENT
Topic test, practical work and reports, examination.

PHYSICAL SCIENCES: MOTION

OUTLINE
Students study displacement, velocity and acceleration, both graphically and using formulae. The effects of different forces in collisions and when driving a car are investigated and analysed. Students are required to apply Newton’s Laws of Motion to everyday phenomena. From this information, the safety features of a car can be understood. The concepts of power, work and energy transformations in motion are studied so that students can distinguish between the scientific definitions of these terms and their colloquial use. The formulae connecting these concepts are applied to energy changes in interactions and the rate at which these changes occur.

KEY SKILLS
Safe experiment techniques, collecting and recording data, drawing and interpreting graphs, problem solving, applying knowledge and performing mathematical calculations.

ASSESSMENT
Topic test, practical work and reports, assignment, examination.

PHYSICAL SCIENCES: ELECTRICITY

OUTLINE
Students construct series and parallel circuits and explore the function of different electrical and electronic components. Current, voltage, resistance and power are defined. Calculations involving these quantities are performed using Ohm’s Law and the power formula. Examples of household electricity use and electricity bills are considered which inform ways to conserve electrical energy. Students learn about electrical safety and the effects of electric shocks. Electromagnets and the links between electricity and magnetism are studied.

KEY SKILLS
Experimentation (including the use of digital multimeters), observation and analysis, numerical modelling.

ASSESSMENT
Topic test, practical work and reports, assignment, examination.
ACCELERATED SCIENCE

Unit Length: Full year

SEMESTER 1: BIOLOGICAL SCIENCES

SEMESTER 2: PHYSICAL SCIENCES

SCIENTIFIC INQUIRY

The principles of scientific research are addressed throughout the course. Year 10 accelerated science students undertaking scientific inquiry would be expected to engage with science-based questions, prioritise evidence in responding to questions, formulate explanations from evidence, connect explanations to scientific knowledge, and communicate and justify explanations.

BIOLOGICAL SCIENCES: CONTINUITY OF LIFE

OUTLINE

The first of the three areas of study in this unit focuses on reproduction. In this area of study students consider the need for the cells of multicellular organisms to multiply for growth, repair and replacement. Students revisit the phases of the cell cycle, and focus on the importance of the processes involved in a cell’s preparation for cell division. Cytokinesis is explained for both plant and animal cells. Students describe the production of gametes in sexual reproduction through the key events in meiosis and explain the differences between asexual and sexual reproduction in terms of the genetic makeup of daughter cells. They consider the role and nature of stem cells, their differentiation and the consequences for human prenatal development and their potential use to treat injury and disease. Reference is made to genetic inheritance, DNA structure and technology. Throughout the course they conduct practical applications, and consider the development of ideas and technological advances that have contributed to our knowledge and understanding of reproductive biology and genetics.

KEY SKILLS

Observation, modelling, research, concept mapping, problem solving, evaluation, scientific report writing, use of digital technologies.

ASSESSMENT

Practical investigations and related reports, research assignment(s), poster, topic text, examination.

RESOURCES

Prescribed Textbook: New Biology for You Student Book; Student Book: For all GCSE Examinations; Year 11 Biozone.

BIOLOGICAL SCIENCES: SURVIVAL OF CELLS AND ORGANISMS

OUTLINE

In this unit, students examine the cell as the structural and functional unit of an organism. The composition of cells, their activities and replication are studied and also the transport processes across plasma membranes. The common requirements of organisms including energy, nutrients and exchanging gases are investigated, and the major body systems of mammals. Students study the particular sets of biotic and abiotic factors that operate at Queenscliff and Barwon Heads and how these factors influence the kinds of organisms that live there. They consider the adaptations of organisms and how organisms in their habitats are part of naturally self-sustaining systems in which the energy flows and matter is cycled between living and non-living components of the ecosystem. Throughout the course they conduct practical investigations, consider the development of ideas and technological advances that have contributed to our knowledge and understanding of organisms and the way that they function.

KEY SKILLS

Observation, modelling, research, concept mapping, problem solving, evaluation, scientific report writing, use of digital technologies.

EXCURSION

Overnight excursion to gather data for a compulsory practical investigation.

ASSESSMENT

Practical investigations and related reports, oral presentation, fieldwork, research assignment(s), poster, topic text, examination.

RESOURCES

Prescribed Textbook: New Biology for You Student Book; Student Book: For all GCSE Examinations; Year 11 Biozone.
### BIOLOGICAL SCIENCES: GLOBAL ISSUES

**OUTLINE**

Students independently investigate an issue pertaining to human impact on the environment. They communicate the findings of their investigation and explain the biological concepts, identify different opinions, outline the legal, social and ethical implications for the individual and/or species and justify their conclusions. Material for the investigation includes five photographs of their own highlighting the issue of choice.

**KEY SKILLS**

Observation, modelling, research, concept mapping, problem solving, evaluation, scientific report writing, use of digital technologies.

**ASSESSMENT**

Multimedia oral presentation, examination.

**RESOURCES**

Prescribed Textbook: *New Biology for You* Student Book: Student Book: For All GCSE Examinations; Year 11 Biozone.

### PHYSICAL SCIENCES: ELECTRIC CIRCUITS

**OUTLINE**

Students will apply the concepts of charge, electric current, potential difference, energy and power in electric circuits. They will analyse electric circuits using formulae and their understanding of the energy gains and losses around series and parallel circuits. As part of this unit the students will investigate safety features of household electric distribution as a simple circuit comprising fuses, switches, circuit breakers, loads and earth connections. The operation of simple circuits with non-ohmic devices are examined involving the use of characteristic curves of various devices. The ability to calculate energy in terms of the kilowatt-hour is developed and the link between this unit and energy bills is established.

**KEY SKILLS**

Modelling, mathematical applications, observation, research, concept mapping, problem solving, evaluation, scientific report writing, use of digital technologies.

**ASSESSMENT**

Tests, practical reports, assignments, examination.

**RESOURCES**

PHYSICAL EDUCATION

OUTLINE
Students are provided with the opportunity to experience a variety of team games and movement activities, including dance, lacrosse, tchoukball and badminton. They participate in skills sessions, game situations and competitions to gain an understanding of correct technique, rules and tactics. Students analyse how participation in physical activity and sport influences their personal development during a lifestyle fitness unit. They’re also provided with opportunities to refine their skills in demonstrating leadership, teamwork and collaboration in a range of physical activities.

KEY SKILLS
Catching, throwing, striking, fielding, co-ordination, movement to music, teamwork, fair play, sportsmanship and sports administration.

ASSESSMENT
Active participation, skills checklist, group assessment.

PHYSICAL SCIENCES: MOTION

OUTLINE
Students will study and analyse motion of objects in a straight line under constant acceleration graphically, numerically and algebraically. They will apply Newton’s three laws to objects, analyse the forces that govern the subsequent motion and the forces involved in stretching and compressing a spring. The students will apply the concept of work done by a constant force and the energy transfers and transformations using an energy conservation model, from these the rate of energy transfer (power) is calculated. The main energies considered are gravitational potential energy near the surface of the earth, kinetic energy and elastic potential energy. The energy and momentum changes in collisions are investigated.

KEY SKILLS
Modelling, mathematical applications, observation, research, concept mapping, problem solving, evaluation, scientific report writing, use of digital technologies.

ASSESSMENT
Tests, practical reports, assignments, examination.

RESOURCES
YEAR 10 ELECTIVES

LANGUAGES

FRENCH

Unit Length: Full Year

OUTLINE

Students develop their ability to communicate in French and understand the role of language and culture through various topics related to health and fitness for young people, development and changes in fashion, media, environment issues and plans for the future.

KEY SKILLS

Speaking, listening, reading, and writing.

ASSESSMENT

Listening, Speaking, Reading and writing skills are tested in unit tests and end of semester examination.

RESOURCES


LATIN

Unit Length: Full Year

OUTLINE

Students develop their ability to read Latin through the story-based approach of the Cambridge Latin Course. They amplify and consolidate their knowledge of the classical language in the context of Imperial Rome in the first century CE. Students investigate the social, political and historical aspects of Roman culture as an essential preparation for the reading of authentic Latin texts.

KEY SKILLS

Translation, reading comprehension, dictionary use.

ASSESSMENT

Tests, assignments, examination.

RESOURCES

Cambridge Latin Course Books 4 and 5 (retain Book 4 from Year 9); Collins Latin Dictionary and Grammar.

JAPANESE

Unit Length: Full Year

OUTLINE

Students develop their ability to communicate in Japanese and understand the role of language and culture through a variety of topics relevant to their own life and to those of Japanese teenagers, focusing on cultural similarities and differences. Students learn to talk about urban and country lifestyle; street directions; school trips; transportation; part-time work, future careers and aspirations; exchange program.

KEY SKILLS

Speaking, listening, reading, and writing.

ASSESSMENT

Oral presentations, tests, examination.

RESOURCES


In addition to the prescribed textbooks listed, CDs, videos, DVDs, worksheets, workshops, outside performances, etc. are used in Language subjects at Years 9 and 10.

NOTE

Language studies are sequential by nature; therefore, students are required to complete a full year of study in both Year 9 and Year 10 to establish the necessary skills to undertake a VCE language.
VISUAL ARTS

Unit Length: Semester

STUDIO ART

OUTLINE
Studio Art as a subject allows students to explore and create through a series of self-directed learning tasks that build on a student’s prior learning and skills established in, but not restricted to, previous art and design subjects. Weighted equally between critical thinking and practical art production this subject aims to promote the important role research and conceptualisation play in the art making process. Students are free to work in one or more media, including Painting, Sculpture, Textiles, Drawing, Printmaking, and Digital Imaging. As a subject, Year 10 Studio Art encourages students to establish and document their own areas of interest and resulting responses.

Through the study of contemporary arts practice, students develop and expand their understanding of the important role art plays in the shaping of both individuals and cultures.

KEY SKILLS
Creative thinking, use of information and communication technology, visual literacy, personal and social capability, ethical and intercultural understanding.

ASSESSMENT
Visual Diary, folio of resolved artworks, response to set analytical and art appreciation tasks and examination.

ARCHITECTURE

OUTLINE
Architecture offers students the opportunity to design exterior and interior spaces and to consolidate skills and knowledge using the design process, project-based research, critical analysis and inquiry. Students work authentically in a studio environment to drive and develop spatial design concepts and create professional presentations.

Students develop the core skills required of an architect and interior designer and consolidate their grounding in design and visual communication skills. Through the study of design history and contexts students gain a broad understanding of the role and function of architecture. A range of modern architectural debates and problems are addressed, situating them within an historical context and exploring contemporary design implications.

KEY SKILLS
Students learn the language of architectural design, exercise critical thinking, visual literacy, problem solving and personal expression. Through exploring and understanding architecture students exercise discernment as connoisseurs, positioning them as curators rather than consumers of design.

ASSESSMENT
A Folio that documents the students’ explorations and evaluation of concepts, aesthetics and achievements, folio of resolved concepts, response to set analytical and art appreciation tasks and examination.
YEAR 10 ELECTIVES

PHOTOGRAPHY

OUTLINE
Year 10 Photography introduces students to a variety of skills, techniques and processes involved in darkroom photography. Over the course of the semester students will learn how to take photographs using a 35mm SLR camera, process film and produce black and white prints. Through the study of the mechanics and circumstances of darkroom photography students develop and gain a broader understanding of the concepts that underpin digital photography. Students will be required to maintain visual and written documentation of their progress and conceptual development.

Through the study of source material, significant artists and art movements, students will form personal opinions about the ways in which photographers undertake artistic practices, employ techniques and processes, and develop aesthetic qualities and styles in their artworks. This unit also enables students to establish a foundation for understanding the role and function that photography and photo-based media has in the shaping of social, cultural and political contexts.

KEY SKILLS
Creative thinking, visual literacy, use of information and communication technology, personal and social capability, ethical and intercultural understanding.

ASSESSMENT
Visual Diary, folio of resolved artworks, response to set analytical and art appreciation tasks, examination.

FASHION DESIGN

OUTLINE
Fashion Design offers students the opportunity to develop creative product design skills through original fashion concepts. Students produce garments that are creative and technically functional. Students examine how the fashion industry works and the roles and responsibilities of designers and manufacturers. Students develop innovative, future thinking to trend forecast and analyse trends.

Students work authentically in a studio environment to drive and develop fashion design concepts and create professional design presentations. The focus is on enquiry and application of the design process.

Students develop the core skills required of a fashion designer and consolidate their grounding in design and visual communication skills. Through the study of fashion history and culture such as art, design, technology, concepts of taste, multiculturalism, identity and gender, consumerism, ethics and sustainability students gain a broad understanding of the role and function of fashion throughout time.

KEY SKILLS
Critical thinking, visual literacy, problem solving and personal expression, ethical and intercultural understanding.

ASSESSMENT
Folio that documents the students’ explorations and evaluation of concepts, aesthetics and achievements, folio of resolved design works, response to set analytical and art appreciation tasks and examination.
MUSIC (PERFORMANCE AND STYLES)

OUTLINE
In Year 10 Music, students have the opportunity to perform, compose and create. In this elective students will develop their music performance skills both individually and as part of an ensemble. They will explore a range of music from different genres through listening and analyses. Students will develop their compositional skills using different approaches. Aural comprehension and theory skills will also be developed over the semester.

KEY SKILLS
Analysis, performance, creative thinking, personal and social capability.

ASSESSMENT
Solo and group performance, analysis of styles, composition and arrangement, aural comprehension, examination.

PERFORMING ARTS

Unit Length: Semester

The Arts engage students in critical and creative thinking, helping them understand themselves and the world. The Arts play a critical role in all societies, and encourage the exploration of a broad range of ideas. Two key areas frame arts based learning – creating and making, and exploring and responding. The study of Drama focuses on creation, performance and analysis of characters, narratives and stories.

DRAMA

OUTLINE
In Year 10 Drama, students are encouraged to develop their performance skills and knowledge and understanding of Drama through the study and performance of a play text, the study of a theatre practitioner and an investigation/analysis of the application of theatrical styles and conventions through viewing and making drama.

Students make and respond to drama independently and in groups, with their teachers and communities. Students refine and extend their understanding and use of role, character, relationships and situation. They extend the use of voice and movement to sustain belief in character. They maintain focus and manipulate space and time, language, ideas and dramatic action. They experiment with mood and atmosphere, use devices such as contrast, juxtaposition and dramatic symbol and modify production elements to suit different audiences.

Students explore and research a theatre innovator to develop authentic performances and to apply dramatic techniques and conventions to their work. Students’ development and learning will also be determined by a small group performance based upon their study of a set play text. Students will also reflect upon their practices through a presentation, and review of a live theatre performance.

KEY SKILLS
Critical and creative thinking, performance, literacy, communication, personal and social capability.

ASSESSMENT
Solo performance, theatre innovator application, performance analysis, small group performance and a written and performance examination.
COMMERCE

Unit Length: Semester

ECONOMICS AND THE WORLD

OUTLINE

Students learn of the impact that their decisions make to the world around them. How do they make these decisions and are they being rational or irrational in their decision making process. This subject explores how consumers behave through their study of behavioural economics. Students analyse the changes in our economy though demand and supply and how consumers and business interact in a market economy. They learn the impact of global poverty and globalisation on the lives of people from around the world and offer solutions to many of the problems that globalisation causes. They asses how we interact with our international neighbours through trade and the influence that trade has on less developed nations. We look at a balance between economic growth and saving the planet.

KEY SKILLS

Critical thinking, research, evaluation and analysis.

ASSESSMENT

Behavioural investigation, tests, assignment, research tasks, examination.

RESOURCES

Teacher generated resources, online resources, audio visual, textbook.

BUSINESS ACCOUNTING

OUTLINE

Students will learn to record and report accounting transactions for a small business. They will develop an understanding of how a small business accounts for both profit and cash flows as well as the decision making process on how a business can be financed. Students will assess financial information for a small business and prepare financial reports including profit and loss statements, cash flow statements and balance sheets in order to determine the financial worth of a business. An important skill students will develop is to analyse accounting information and reports in order to assess how they can improve a business through the interpretation of these accounting reports. Students will develop an understanding of how the use of accounting reports can benefit both the owner and manager of a small business, and how this can translate into increased success for the owner and the business itself.

KEY SKILLS

Recording transactions into journals and ledgers, preparing reports for profit, cash flow and the financial position of the small business, and analysing financial statements.

ASSESSMENT

A range of tests, application exercises and examination.

RESOURCES

Class exercises developed by the teachers, textbook.
INTERNATIONAL POLITICS

OUTLINE
This course aims to provide students with an opportunity to engage with the key political issues of our times. Students are provided with an insight into the political forces that shape the world and develop a cultural understanding of the world in which they live. They ask questions such as do citizens and states have global responsibilities and can the global community of the 21st century meet the challenges we face today?

Students will also focus on how the global community works in the 21st century and how effective we are in managing conflict and co-operation. What challenges do we face today in relation to war, conflict, environment, people movement and international crime?

KEY SKILLS
Research and analytical skills, extended writing, problem solving and analysis, ethical and intercultural understanding.

ASSESSMENT
Research assignments, tests, document analysis, examination.

RESOURCES
Newspapers and other forms of media, online resources, teacher generated class handouts.

AUSTRALIAN POLITICS

OUTLINE
The course aims to provide valuable information about politics, focusing on Australia’s political system so we can be active and informed citizens who question and influence the political decisions that affect us all. Students learn about different forms of Government such as Democracy, Fascism and Communism, followed by an examination of the development of Australia’s political system. We then look at the structure of Australia’s parliamentary system: the House of Representatives, the Senate and the process by which laws are made. The course examines Australia’s political parties and the voting systems that are used to elect them.

A major part of the course involves keeping up to date with current issues in the media, culminating in an in-depth study of a political issue relevant to young people today and developing ways in which to deal with this area of concern.

KEY SKILLS
Research and analytical skills, note taking, extended responses, problem solving.

ASSESSMENT
Research assignments, tests, class presentations, analysis of a current issue in Australian politics, document analysis, examination.

RESOURCES
Newspapers and other forms of media, online parliamentary resources and websites, class handouts.
HUMANITIES

Unit Length: Semester

CHINA RISING

OUTLINE
This history elective examines key features of Chinese history during the 19th and 20th centuries. The central question is: how and why did China evolve from an imperial society to a communist superpower in the second half of the 20th century? It includes analysis of the influence of the west on China and the Opium Wars, the Revolution of 1911, war with Japan, civil war between the nationalists and communists, the establishment of a communist regime, the Cultural Revolution and development of China as an economic superpower.

KEY SKILLS
Research, analysis of written and visual primary and secondary sources, synthesis of historical evidence to construct an argument.

ASSESSMENT
Analysis of primary sources, research tasks, extended responses, examination.

RESOURCES
HTAV text China Rising, Tom Ryan. Students use film, DVDs, class sets, the Resource Centre, online resources.

ENVIRONMENTAL MANAGEMENT

OUTLINE
The world’s population has reached seven billion and is growing. What pressures are being placed on the natural environment by global population growth? This elective examines important questions concerning environmental change and management at a range of scales. This elective focuses on the world’s ocean environments, the Port Phillip Bay coastal environments and the local urban environment here in Balwyn. Students explore human responses to environmental issues and evaluate effective environmental management strategies. Students will also have the opportunity to participate in a fieldwork trip and further develop skills in geographical investigation and examine coastal management strategies as well as urban planning strategies to cater for Melbourne’s rapidly expanding population.

KEY SKILLS
Research, presenting and interpreting data such as maps and graphs, conducting fieldwork.

ASSESSMENT
Research, fieldwork report, data presentation and analysis tasks, examination.

RESOURCES
Atlas, class sets, online resources, Resource Centre, audio visual material, fieldwork sites.
ANCIENT ROME

OUTLINE
This elective examines key features of ancient Roman history. The central questions are: what were the social, political and economic features of the early development of Rome during the Republic and the Imperial era? The significance of warfare and its impact on Rome, including the Roman conquest of Italy and the wider struggle for supremacy in the Mediterranean is examined. The significance of events such as the Punic Wars and the spread of Christianity and the role of individuals such as Julius Caesar and Octavian are evaluated.

KEY SKILLS
Research, analysis of written and visual primary and secondary sources, synthesis of historical evidence to construct an argument.

ASSESSMENT
Analysis of primary sources, research tasks, extended responses, examination.

RESOURCES
HTAV textbook. Students use film, DVDs, class sets, the Resource Centre, online resources.

PHILOSOPHY

OUTLINE
How should I live? What is a good life? What is fate? What is truth? Students examine life’s important questions, and are introduced to the philosophical ancestry of western culture. Through film, artwork, documentary and a classroom text, students are introduced to and explore the historical significance of key thinkers from Socrates and Epicurus, to Montaigne, Nietzsche and contemporary Australian philosophers such as Peter Singer. They apply the ideas of philosophy to the dilemmas and practicalities of modern existence. Students also study the roles of faith and reason in creating our understanding of the world.

KEY SKILLS
Conceptual understanding, analysis, application of philosophical arguments to practical life.

ASSESSMENT
Research, oral presentations, classroom participation, examination.

RESOURCES
Alain de Botton, The Consolation of Philosophy, selected readings, film and art references.
FEMINISM

OUTLINE
There is a genuine level of interest in feminism – its meaning and its history – among younger people today. The resurgence of feminism as a newsworthy topic has led many young people, especially young women, to be curious about the exact meaning of the term ‘feminism’ and its significance for their own lives. This subject will allow students to understand the evolution of feminist thought and its continuing importance. It will also encourage them to consider deeply their own preconceptions and understandings of gender difference, sexism and other related concepts. While students will study the history and contemporary nature of feminism as a significant social movement, it will also integrate philosophy and ethics, politics, civics, economic thought and a consideration of scientific theories of gender and gender difference.

KEY SKILLS
Research skills, critical and creative thinking, analysis of texts, evaluating material to use as evidence, presentation and communication skills.

ASSESSMENT
Reflective blog/journal writing, text analysis and extended responses, research tasks examination.

RESOURCES
Students use film, audio visual material, the Resource Centre and online resources.

MULTIMEDIA COMMUNICATION

OUTLINE
In this unit, students will have the opportunity to make and respond to different modes of media or a range of media formats as a form of communication in an informed, critical and creative way. They will explore how modes of media communicate meaning through a manipulation of visual, sound and print elements. Accuracy and reliability of information sources in traditional print media as well as social media will be investigated. The relationships between media technologies, audiences and society will also be explored. Students will be involved in the analysis of media as well as creating their own representations applying the conventions of the mode studied.

KEY SKILLS
Analysis and evaluation, deconstruction of media codes and conventions, critical and creative thinking, visual literacy, ethical and intercultural understanding.

ASSESSMENT
Production of a short film, Production of an interactive Newspaper, Production of an advertisement, Analysis of an Advertisement and a Comparative Analysis and Evaluation visual, oral or written presentation, examination.
HEALTH AND PHYSICAL EDUCATION

Unit Length: Semester

EXERCISE SPORTS SCIENCE

OUTLINE
This subject will explore the human body systems that are most relied upon during physical activity. Students will examine the cardiovascular, respiratory and muscular systems and how they function during exercise and at rest. A unit on training programs will see students assess their own fitness and design a program based on the principles of training and individual goals. Further, they will explore the legal and illegal methods of enhancing performance in sport and the ethical considerations around the various methods.

KEY SKILLS
Design and implement an effective training program; collect, critique and analyse data to determine training goals; use and apply correct anatomical terminology; compare and contrast enhancement methods.

ASSESSMENT
Assignments, topic tests, examination.

RESOURCES
Work booklets.

DIGITAL TECHNOLOGY

Unit Length: Semester

INFORMATICS

OUTLINE
“Informatics is about using computers to work with digital information – gathering, using, storing, retrieving, and visualising information and data. It is the study of tools and technologies to solve problems in all types of settings, such as finance, economics, journalism, biology, health, engineering, social media and communication.” (University of Melbourne). In this unit students learn how to create online surveys and infographics, visualise large data sets, and how to design and build databases. Students frame investigative inquiries and interpret data, identifying relationships and patterns. Students examine the effective visual presentation of information through colour, contrast, fonts and use of conventions. Students utilise a range of established and emerging software tools including Excel and Access but also GapMinder, Google Fusion Tables and Piktochart. Students examine the world of Big Data and how the Internet of Things has the potential to shape future decision making.

KEY SKILLS
Interpretation of selected data, identify relationships and patterns, select and apply appropriate design tools to represent the functionality and appearance of graphic solutions for particular purposes, use software, and select and apply functions, formats, conventions, data validation and testing techniques to efficiently manipulate data and create graphic solutions, identify and extract, using software functions, relevant data from appropriate data sources, use appropriate techniques to describe data types and database structures, apply formats and conventions to create effective forms and reports.

ASSESSMENT
Assignments, major project, examination.
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