THOMAS CARR COLLEGE
TARNEIT EST.1997

YEAR 11
SUBJECT SELECTION INFORMATION
INTRODUCTION

Thomas Carr College is committed to providing an engaging and innovative learning environment and developing in students independent thinking and informed decision-making. Year 11 is a significant move away from the Core and Elective subjects of Years 7-10. In the VCE, students must complete English as well as a VCE or an internal Religious Education program. This document provides information for students who are beginning Year 11, subjects from which students will choose, VCE and VET offerings at Year 11 and important contact information. Comprehensive curriculum pathways are available on our College website and through SIMON.

The Senior School at Thomas Carr College offers a range of student pathways. At the senior school level, the pathways include the Victorian Certificate of Education (VCE), which, in 2017, will also include an option for students who do not require an ATAR. The College also offers the Victorian Certificate of Applied Learning (VCAL), as well as Vocational Education and Training (VET) programmes. In 2017, the Thomas Carr College Trade Training Centre will offer VET certificate courses in Carpentry, Bricklaying and Furniture Making. Thomas Carr College will be part of the Wyndham VET cluster of schools offering a range of VET certificates for students in the cluster. These are mentioned below. Other VET certificates are offered by a number of external providers with which the College has partnerships (please note that all VET courses incur a fee. The College requires a $200 deposit with any VET application). There is also the possibility of an Australian School Based Apprenticeship (ASBA). It is a comprehensive approach which aims at allowing students to develop study programmes tailored to their individual needs. Most Year 11 students will be completing their first Australian Tertiary Admissions Rank (ATAR) subject begun in the previous year as Unit 1 & 2.

Each year, every effort is made to meet the subject selection preferences for the maximum number of students. Some of the options listed may not be offered due to insufficient student demand. Individual students cannot always be guaranteed of their first preference.

Students are encouraged to seek the advice in order to make considered decisions about possible learning pathways. Each year it is problematic for students who have chosen subjects not suited to interest or ability and therefore require a subject change at the end of Unit 1. VCE units are offered in sequence and the best possible pathway to success is to firstly choose correctly and then to complete the units sequentially.
Year 10
Mainstream
(includes VCE Units 1 & 2 OR VET)

Year 10
PreCal
(includes VET Certificates)

Year 11
VCE
(usually 20-24 units)

Year 11
VET
Compulsory for VCAL
Optional for VCE
SBATS

Year 11
VCAL
(Lit, Num, RE, PDS, WRS)

Year 12
VCE
(minimum 16 units)

Year 12
VET Cert. II or III
(Thomas Carr, Cluster or External Provider)

Year 12
VCAL / VET
(Structured Workplace Learning – compulsory for VCAL)

Employment
Apprenticeship
Traineeship

TAFE
Cert. II, III, IV
Diploma
Advance Diploma

University
COURSE OF STUDY
At Year 11 students study six VCE subjects. The six subjects under normal circumstances would consist of five Unit 1 & 2 sequences plus a Unit 3 & 4/VET sequence continued from the previous year. Students must choose an English subject as well as choose from among VCE Religion and Society Units 1 & 2 or the Thomas Carr College Religious Education program. If selecting VCE Religion and Society Units 1 & 2, there is a prerequisite that a student must average at least 70% for their Year 10 English assessment results before being allowed to undertake VCE VCE Religion and Society Units 1 & 2.

Students must choose subjects in Unit 1 and 2 sequences. A student is not able to choose more than two VETis/VET subjects. Further information about VET courses is available through the Careers office located in the Friendship Centre.

VICTORIAN CERTIFICATE OF APPLIED LEARNING (VCAL)
The Victorian Certificate of Applied Learning (VCAL) is an alternate senior secondary qualification that most schools across the state now deliver. It provides a hands-on, project based program with a more flexible approach to education in the later years. Students who wish to undertake the VCAL can do so by indicating on the Subject Selection form.

A student who completes Year 11 in the VCAL (Victorian Certificate of Applied Learning) program will usually continue the VCAL course into Year 12. More information about the VCAL program can be obtained from the VET/VCAL Co-ordinator and the Careers Department.

RELIGIOUS EDUCATION PATHWAYS
All students at Thomas Carr complete studies in Religious Education. At Year 11, students may choose from the VCE Religion and Society Units 1 & 2 or the Thomas Carr College Religious Education program. If you wish to study VCE Religion and Society Units 1 & 2 at Year 11, you must achieve an average of at least 70% in your Year 10 English assessments and exam.

If you wish to study VCE Religion and Society Units 3 & 4 at Year 12, you must either complete VCE Religion and Society Units 1 & 2 to a satisfactory standard or achieve an average of at least 75% in your Year 11 English assessments and exam.
MATHEMATICS PATHWAYS
The following diagram shows the pathways of your mathematical choices from Years 10 through to VCE. It is very important that you talk to your Maths teacher in order to make choices with which you are comfortable and with which you can be challenged to be successful. If you wish to study Mathematical Methods (CAS) Units 1/2 at Year 11, you must achieve an average of at least 75% in your Year 10 Maths assessment and exams. If you wish to study Specialist Maths at Year 12, it is highly recommended that you choose Specialist Mathematics Units 1/2 and Mathematical Methods (CAS) Units 1/2 at Year 11.

*Specialist Mathematics Units 1 & 2 must be studied with Mathematical Methods (CAS) Units 1 & 2 before advancing to Specialist Mathematics Units 3 & 4

#Specialist Mathematics Units 3 & 4 must be studied with Mathematical Methods Units 3 & 4
ENGLISH PATHWAYS

English learning pathways follow a particular structure that allows students to choose either English and/or English Literature. At the completion of English Literature Unit 2, a student can transfer to English Unit 3. It is very important that you talk to your English/English Literature teacher in order to make choices with which you are comfortable and with which you can be challenged to be successful.
### UNITS 1 & 2 SUBJECTS

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Subjects</th>
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<tbody>
<tr>
<td>Accounting</td>
<td>Italian Second Language</td>
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<tr>
<td>Art</td>
<td>Japanese Second Language</td>
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<tr>
<td>Biology</td>
<td>Information Technology</td>
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<td>Business Management</td>
<td>Legal Studies</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Literature</td>
</tr>
<tr>
<td>Product Design &amp; Technology: Food</td>
<td>Mathematical Methods</td>
</tr>
<tr>
<td>Product Design &amp; Technology: Wood</td>
<td>Music Performance</td>
</tr>
<tr>
<td>Drama</td>
<td>Physical Education</td>
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<tr>
<td>Economics</td>
<td>Physics</td>
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<td>Foundation Mathematics</td>
<td>Psychology</td>
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<tr>
<td>General Mathematics</td>
<td>Religion &amp; Society</td>
</tr>
<tr>
<td>Geography</td>
<td>Specialist Mathematics</td>
</tr>
<tr>
<td>Health &amp; Human Development</td>
<td>Studio Arts</td>
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<tr>
<td>History</td>
<td>Visual Communication &amp; Design</td>
</tr>
<tr>
<td>Indonesian Second Language</td>
<td>VET *Refer to VET/VCAL Handbook</td>
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### WEB PREFERENCES ONLINE

You will be using the online subject selection tool to develop a course that suits your interests and skills. You will be asked to select your subjects based on the directions found in this document and your subject selection form.

### EXAMPLE STUDY COURSES

**Student A (VCE Subjects Units 3 & 4 PLUS Religion & Society Units 1 & 2)**

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>No. of periods</th>
<th>Semester 2</th>
<th>No. of periods</th>
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<tbody>
<tr>
<td>Religion &amp; Society Unit 1</td>
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<td>Biology</td>
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<tr>
<td>Information Technology</td>
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</tr>
<tr>
<td>Legal Studies Unit 3</td>
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**Student B (VCE Subjects Units 3 & 4 AND Thomas Carr Religious Education Program)**

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<thead>
<tr>
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<th>Semester 2</th>
<th>No. of periods</th>
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<tr>
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Student C (VET Year 2 AND Thomas Carr Religious Education Program)

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<th>Semester 2</th>
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<td>Drama</td>
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<td><strong>Total number of periods</strong></td>
<td><strong>60</strong></td>
<td></td>
</tr>
</tbody>
</table>

**IMPORTANT CONTACTS**

Your teachers and Careers/Pathways Advisors are your best resources for information. You should never choose a subject without knowing its demands in terms of content and assessment. In order to assist you in your decision-making, refer to the list of contacts below. Make appointments to discuss your options so that when you are ready to make your selections, you are already well-prepared.

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Director</td>
<td>Mr Cris Scarlata</td>
<td><a href="mailto:cris.scarlata@thomascarr.vic.edu.au">cris.scarlata@thomascarr.vic.edu.au</a></td>
</tr>
<tr>
<td>Head of Learning &amp; Teaching: Senior School</td>
<td>Ms Tara Sherlock</td>
<td><a href="mailto:tara.sherlock@thomascarr.vic.edu.au">tara.sherlock@thomascarr.vic.edu.au</a></td>
</tr>
<tr>
<td>Head of Learning &amp; Teaching: Middle School</td>
<td>Mr John Wilkinson</td>
<td><a href="mailto:john.wilkinson@thomascarr.vic.edu.au">john.wilkinson@thomascarr.vic.edu.au</a></td>
</tr>
<tr>
<td>Careers/Pathways</td>
<td>Ms Sam De Silva</td>
<td><a href="mailto:sam.desilva@thomascarr.vic.edu.au">sam.desilva@thomascarr.vic.edu.au</a></td>
</tr>
<tr>
<td>Student Support Team Leader</td>
<td>Ms Clare De Graaf</td>
<td><a href="mailto:clare.degraaf@thomascarr.vic.edu.au">clare.degraaf@thomascarr.vic.edu.au</a></td>
</tr>
<tr>
<td>Head of Learning: Religious Education</td>
<td>Ms Catherine Devine</td>
<td><a href="mailto:catherine.devine@thomascarr.vic.edu.au">catherine.devine@thomascarr.vic.edu.au</a></td>
</tr>
<tr>
<td>Head of Learning: Eng/LoTE</td>
<td>Mr Andrew Cathcart</td>
<td><a href="mailto:andrew.cathcart@thomascarr.vic.edu.au">andrew.cathcart@thomascarr.vic.edu.au</a></td>
</tr>
<tr>
<td>Head of Learning: Humanities</td>
<td>Mr Alex Guedes</td>
<td><a href="mailto:alex.guedes@thomascarr.vic.edu.au">alex.guedes@thomascarr.vic.edu.au</a></td>
</tr>
<tr>
<td>Head of Learning: Sci/Maths/HaPE</td>
<td>Ms Eli Mocan</td>
<td><a href="mailto:elisaveta.mocan@thomascarr.vic.edu.au">elisaveta.mocan@thomascarr.vic.edu.au</a></td>
</tr>
<tr>
<td>Head of Learning: Arts/Tech</td>
<td>Mr Michael Dalley</td>
<td><a href="mailto:michael.dalley@thomascarr.vic.edu.au">michael.dalley@thomascarr.vic.edu.au</a></td>
</tr>
<tr>
<td>VCAL/VET Co-ordinator</td>
<td>Ms Natasha Le Noel</td>
<td><a href="mailto:natasha.lenoel@thomascarr.vic.edu.au">natasha.lenoel@thomascarr.vic.edu.au</a></td>
</tr>
</tbody>
</table>
## Accounting Units 1 & 2

**Rationale:** VCE Accounting introduces students to the nature of financial recording, reporting and decision making processes of a sole proprietor business. Students study both theoretical and practical aspects of accounting. Financial data will be collected and recorded, and accounting information reported, using both manual and information and communications technology (ICT) methods.

**Learning Focus:** Students are introduced to the processes of gathering and recording financial data and the reporting and analysing of accounting information by internal and external users. The case basis of recording and reporting is used throughout the year. Students investigate the reasons for establishing a small business and the factors that may lead to failure. The financial reports used by the owners of a small business are also studied and the purpose to each report identified. An analysis and evaluation of the performance of a small business is also studied using both financial and non-financial information. Using these evaluations, students suggest strategies to the owner on how to improve the performance of the business.

**Outcomes / Assessment:** Students studying Accounting Units 1 and 2 will be expected to:
- Describe and analyse: the internal and external sources of finance, the role and benefits of cash and profit budgeting in planning and control, applicable accounting principles and qualitative characteristics of accounting information.
- Identify and evaluate: internal control procedures, balance day adjustments and the effect on the financial reports, the quality of financial reports that are suitable to users.

**Pathways:** Students can continue to study Accounting in the VCE by continuing to pursue further studies in Accounting Unit 3 & 4.

## Specialist Mathematics Units 1 & 2

**Rationale:** Mathematics is the study of function and pattern in number, logic, space and structure. It provides both a framework for thinking and a means of symbolic communication that is powerful, logical, concise and precise. Advanced General Mathematics is designed for students who wish to enhance their understanding of mathematics and prepare for Unit 3 & 4 Specialist Mathematics.

**Learning Focus:** Students will work on developing their knowledge on topics taken from the key areas of study: arithmetic; algebra; functions and graphs; and geometry and trigonometry. Unit 1 will include the study of algebra, variation, sequences and series, number systems and trigonometry and their applications. Unit 2 will cover circular theorems, vectors, circular functions, complex and polar coordinates and kinematics. Students will routinely solve skill based learning tasks through the completion of set exercises, application and analysis tasks.

**Outcomes / Assessment:** Students studying Units 1 and 2 Advanced General Mathematics will be expected to complete the following assessments:
- Assignments
- Technology and technology free tests
- Problem solving and modelling tasks
- Semester examinations

**Pathways:** Students can continue to study Mathematics in the VCE by electing to undertake studies in the following subjects: Mathematical Methods (CAS) Unit 3 & 4 and Specialist Mathematics Unit 3 & 4.
### Art Units 1 & 2

**Rationale:** The VCE Art study recognises art as an integral part of our lives. Art is a potent and dynamic visual language through which we are able to communicate personal experiences, ideas, cultural values and beliefs. In both the process of making and examining art, students can realise the power to inspire change through imagination, creativity and innovation.

**Learning Focus:** In Unit 1 students apply the Formal and Personal Framework to interpret the meanings and messages of artworks and document the reflection of their own ideas and art making. In their practical work, they explore the characteristics and qualities of materials and areas of personal interest to generate their own artworks. In Unit 2 students identify ways in which art expresses and reflects culture. They use the Formal and Cultural Frameworks to examine the meanings and messages of selected artworks. In their practical work, students continue to explore techniques and develop personal and creative responses in their artmaking.

**Outcomes / Assessment:**

#### Unit 1 Art and meaning/Art making and personal meaning: Outcomes
- Analyse and interpret a variety of artworks using the Formal Framework and the Personal Framework: Theory
- Present visual creative responses that demonstrate their personal interests and ideas through trialling techniques, materials and processes: Folio

#### Unit 2 Art and culture/Artmaking and cultural expression: Outcomes
- Analyse, interpret, compare and contrast artworks from different cultures using the Formal Framework and the Cultural Framework: Theory
- Demonstrate technical development in the presentation of visual responses that include one finished artwork, through the exploration of selected media, materials and techniques: Folio

**Pathways:** Art provides a foundation pathway which VCE students can use as a basis for further education and training involving arts learning at TAFE or Tertiary level. The Arts domain provides opportunities for students to create and critically explore visual culture, individual arts disciplines incorporating contemporary and traditional genres, and art works that involve the fusion of traditional techniques and new forms of multi-media.

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### Biology Units 1 & 2

**Rationale:** Biology enables students to investigate the processes involved in sustaining life at cellular, system, species and ecosystem levels. In undertaking this study, students examine how life has evolved over time and understand that in the dynamic and interconnected system of life all change has a consequence that may affect an individual, a species or the collective biodiversity of Earth. The study gives students insights into how knowledge of molecular and evolutionary concepts underpin much of contemporary biology, and the applications used by society to resolve problems and make advancements. In Biology students develop a range of inquiry skills involving practical experimentation and research, analytical skills including critical and creative thinking, and communication skills. Students use scientific and cognitive skills and understanding to analyse contemporary biology-related issues, and communicate their views from an informed position.

**Learning Focus:** Biology is a diverse and evolving science discipline that seeks to understand and explore the nature of life, past and present. Despite the diversity of organisms and their many adaptations for survival in various environments, all life forms share a degree of relatedness and a common origin. The study explores the dynamic relationships between organisms and their interactions with the non-living environment. It also explores the processes of life, from the molecular world of the cell to that of the whole organism, that maintain life and ensure its continuity. Students examine classical and contemporary research, models and theories to understand how knowledge in biology has evolved and continues to evolve in response to new evidence and discoveries. An understanding of the complexities and diversity of biology leads students to appreciate the interconnectedness of the content areas both within biology, and across biology and the other sciences.

**Outcomes / Assessment:** Students studying Unit 1 and 2 Biology will be expected to complete the following Assessments:
- Semester examinations
- Practical analysis tasks
- Tests
- Research Assignments

**Pathways:** After the completion of this subject students can further their studies of Biology by completing Biology Units 3 & 4.
### Rationale:
VCE Business Management examines the ways in which people at various levels within a business organisation manage resources to achieve the objectives of the organisation. Students develop an understanding of the complexity, challenges and rewards that come from business management and gain an insight into the various ways resources can be managed in small, medium and large-scale Organisation.

### Learning Focus:
Students will learn that small rather than large businesses make up the large majority of all businesses in the Australian economy. It is the small business sector that provides a wide variety of goods and services for both consumers and industries, such as manufacturing, construction and retail. This, combined with employment opportunities, makes the small business sector a vital component in the success, growth and stability of Australia. Small businesses are tangible to students as they are visible and accessible in daily life. This unit provides an opportunity for students to explore the operations of a small business and its likelihood of success. Students investigate communication both internal and external to the business. They develop knowledge of aspects of business communication and are introduced to skills related to its effective use in different contexts. The vital functions of marketing and public relations are considered, with students developing an understanding of the important role these functions play in the ultimate success of a business.

### Outcomes / Assessment:
Students studying Business Management Units 1 and 2 will be expected to:
- Explain a set of generic business characteristics and apply them to a range of businesses.
- Apply decision-making and planning skills to establish and operate a small business, and evaluate the management of an ethical and a socially responsible small business.
- Discuss one or more of the day-to-day operations associated with an ethical and a socially responsible small business, and apply the operation/s to a business situation.
- Apply and justify a range of effective communication methods used in business-related situations. Analyse and evaluate effective marketing strategies, processes and public relations and apply these to small business-related situations.

### Pathways:
Students can continue to study Business Management in the VCE by continuing to pursue further studies in Business Management Units 3 & 4.
## Chemistry Units 1 & 2

### Rationale:
Chemistry is a key science in explaining the workings of our universe through an understanding of the properties and interaction of substances that make up matter. Most processes, from the formation of molecules in outer space to the complex biological interactions occurring in cells, can be described by chemical theories. Chemistry is used to explain natural phenomena at the molecular level, as well as create new materials such as medicines and polymers.

### Learning Focus:
Unit 1: How can the diversity of materials be explained? The development and use of materials for specific purposes is an important human endeavour. In this unit students investigate the chemical properties of a range of materials from metals and salts to polymers and nanomaterials. Using their knowledge of elements and atomic structure students explore and explain the relationships between properties, structure and bonding forces within and between particles that vary in size from the visible, through nanoparticles, to molecules and atoms. Students examine the modification of metals, assess the factors that affect the formation of ionic crystals and investigate a range of non-metallic substances from molecules to polymers and giant lattices and relate their structures to specific applications. Students are introduced to quantitative concepts in chemistry including the mole concept. They apply their knowledge to determine the relative masses of elements and the composition of substances.

Unit 2: What makes water such a unique chemical? Water is the most widely used solvent on Earth. In this unit students explore the physical and chemical properties of water, the reactions that occur in water and various methods of water analysis. Students examine the polar nature of a water molecule and the intermolecular forces between water molecules. They explore the relationship between these bonding forces and the physical and chemical properties of water. In this context students investigate solubility, concentration, pH and reactions in water including precipitation, acid-base and redox. Students are introduced to stoichiometry and to analytical techniques and instrumental procedures, and apply these to determine concentrations of different species in water samples, including chemical contaminants.

### Outcomes / Assessment:
Chemistry Units 1 & 2 will be assessed by:
- Classroom tests
- Practical reports
- Summary reports of practical work
- Second-hand data interpretation
- Responding to stimulus material
- Semester exams

### Pathways:
Students who successfully complete Units 1 & 2 Chemistry may continue to study Units 3 & 4 Chemistry.

## Drama Units 1 & 2

### Rationale:
People tell stories, explore ideas, make sense of their worlds and communicate meaning through drama. Drama develops personal and social identity. VCE Drama connects students to the traditions of drama practice and, through the processes of devising and performing drama, allows them to explore, understand and respond to the contexts, narratives and stories that shape their worlds. The study requires students to be creative and critical thinkers. Through work as solo and ensemble performers and engagement with the work of professional drama practitioners, students develop an appreciation of drama as an art form and develop skills of criticism and aesthetic understanding. VCE Drama equips students with knowledge, skills and confidence to communicate as individuals and collaboratively in social and work-related contexts. The study of drama can provide pathways to training and tertiary study in acting, communication and drama criticism.

### Learning Focus:
These units focus on creating, presenting and analysing a devised performance that includes real or imagined characters. Students create solo and ensemble performances and manipulate expressive skills in the creation and presentation of characters. They develop awareness and understanding of how characters are portrayed in naturalistic and non-naturalistic performance style/s. Students also gain an awareness of how performance is shaped and given meaning. They investigate a range of stimulus material and learn about stagecraft, theatrical conventions and performance styles from a range of social and cultural contexts. Students analyse their own performance work and that of other professional practitioners.

### Outcomes / Assessment:
Students studying Units 1 and 2 Drama will be expected to complete the following assessment tasks:
- Ensemble and solo performances
- Documentation of creative processes
- Written analyses
- Examinations

### Pathways:
Students have the opportunity to complete Units 3 and 4 Drama. This may lead to tertiary studies in acting, direction, stage management, theatre design and playwriting.
### Economics Units 1 & 2

**Rationale:** Economics is the study of how individuals and societies use resources to satisfy needs. It is central to understanding why individuals and societies behave as they do. Economic decisions are about resource use in producing goods and services and about the distribution of the proceeds of production. To understand the basis for these decisions, and their impact, requires an understanding of basic economic principles and concepts.

**Learning Focus:** Students will develop an awareness of the links between economics and the influence of political, ethical, environmental and social forces on economic decision making. Students develop an ability to identify, collect and process data from a range of sources. They use the inquiry process to plan economics investigations, analyse data and form conclusions supported by evidence. They also use economic reasoning, including cost-benefit analysis, to solve economic problems. This assists students to better understand the economy and its role in society and environment, along with the values and attributes underpinning it.

**Outcomes / Assessment:** Students studying Economics Units 1 and 2 will be expected to:
- Closely examine how a society organises itself to meet the needs and wants of its citizens. Specific focus is on markets and what factors influence prices and resource allocation.
- Analyse and describe economic events and their impact on growth, living standards and the environment. Specific focus is on Gross Domestic Product, inflation and distribution of wealth and income.

**Pathways:** Students can continue to study Economics in the VCE by continuing to pursue further studies in Economics Unit 3 & 4.

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### English Units 1 & 2

**Rationale:** The study of English encourages the development of literate individuals capable of critical and imaginative thinking, aesthetic appreciation and creativity. The mastery of the key knowledge and skills described in this study design underpins effective functioning in the contexts of study and work as well as productive participation in a democratic society in the twenty-first century.

**Learning Focus:** The study of English contributes to the development of literate individuals capable of critical and creative thinking, aesthetic appreciation and creativity. This study also develops students’ ability to create and analyse texts, moving from interpretation to reflection and critical analysis. Through engagement with texts from the contemporary world and from the past, and using texts from Australia and from other cultures, students studying English become confident, articulate and critically aware communicators and further develop a sense of themselves, their world and their place within it. English helps equip students for participation in a democratic society and the global community. This study will build on the learning established through AusVELS English in the key discipline concepts of language, literature and literacy, and the language modes of listening, speaking, reading, viewing and writing.

**Outcomes / Assessment:** Students studying Units 1 and 2 English will be need to satisfactorily complete:
- Analytical essays
- A creative response
- One oral speech conveying an opinion
- Language analysis essay
- End of year examination

**Pathways:** Students continue with English throughout the Senior School, completing Units 3 & 4. The study of subject English is regarded as a priority throughout secondary schooling and is compulsory at every level.
### Foundation Mathematics Units 1 & 2

**Rationale:** In Foundation Mathematics there is a strong emphasis on using mathematics in practical contexts relating to everyday life, recreation, work and study. Students are encouraged to use appropriate technology in all areas of their study. This unit involves the study of Measurement, Theorem of Pythagoras, Trigonometry, Number, Travelling around Australia, Cooking and Budgeting. Students are required to define and explain key concepts as specified in the content from each area of study, and to develop mathematical ideas, produce results and carry out analysis in situations requiring problem solving, investigative techniques or in application tasks.

**Learning Focus:** Students will be required to define and explain key concepts, in relation to the topics from selected areas of study, and apply a range of related mathematical routines and procedures. They will apply mathematical processes in non-routine contexts to solve practical problems in familiar and new contexts. They will select and appropriately use technology to develop mathematical ideas, produce results and carry out analyses in situations requiring problem solving, modelling or investigative techniques of approaches.

**Outcomes / Assessment:** Students studying Foundation Mathematics Units 1 and 2 will complete the following assessments:
- Topic Tests
- Problem solving and extended investigation tasks
- Semester examinations

**Pathways:** Foundation Mathematics Units 1 and 2 do not provide a basis for undertaking Unit 3 and 4 studies in Mathematics. Foundation Mathematics Units 1 and 2 provide continuing mathematical development of students entering VCE who need mathematical skills to support their other VCE subjects, including VET studies.

### General Mathematics Units 1 & 2

**Rationale:** General Mathematics provides a course of study for a broad range of students that may be implemented in a number of ways. The appropriate use of technology to support and develop the teaching and learning of mathematics is to be incorporated throughout the course. This may include the use of some of the following technologies for various areas of study or topics: graphics calculators, spreadsheets, graphing packages, dynamic geometry systems, statistical analysis systems, and computer algebra systems.

**Learning Focus:** Throughout the year, students study ‘Data analysis,’ Linear relations and equations’, ‘Geometry and trigonometry’, Bivariate Data, Linear Relations, Ships, Networks and Matrices. The appropriate use of technology to support and develop learning of mathematics is incorporated throughout the course. Students are required to define and explain key concepts as specified in the content from each area of study, and to apply mathematical processes in routine and non-routine contexts. Students are expected to select and appropriately use technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem solving, modelling or investigative techniques.

**Outcomes / Assessment:** Students will be assessed using School Assessed Coursework covering the following areas:
- Topic test
- Problem solving and extended investigation tasks.
- Semester examinations

**Pathways:** General Mathematics provides a course of study for a broad range of students that may be implemented in a number of ways. Some students may not study mathematics beyond Units 1 and 2 while others will intend to study Further Mathematics Units 3 and 4.
### Geography Units 1 & 2

**Rationale:**  
VCE Geography enables students to examine natural and human phenomena, how and why they change, their interconnections and the patterns they form across the Earth’s surface. In doing so, they develop a better understanding of their own place and its spaces and those in other parts of the world. These spatial perspectives, when integrated with historical, economic, ecological and cultural perspectives, deepen understanding of places, environments and human interactions with these. Interpretative and analytical skills enable students to interpret information presented in a variety of formats including maps, graphs, diagrams and images.

**Learning Focus:**  
**Unit One: Hazards and Disasters**  
Students will undertake investigations into how hazards develop. These can include: geological, hydro-meteorological, biological and technological hazards. They will compare and contrast two different types of hazards and how people respond to them.

**Unit Two: Tourism**  
In this unit students investigate the characteristics of tourism, with particular emphasis on where it has developed, its various forms, how it has changed and continues to change and its impacts on people, places and environments. They select contrasting examples of tourism from within Australia and elsewhere in the world to support their investigations.

**Outcomes / Assessment:**  
A fieldwork report  
And at least one of:  
- structured questions  
- a case study  
- a report  
- a folio of exercises

**Pathways:**  
Students can continue to study Geography in the VCE by electing to undertake studies in Geography Unit 3 and 4.

### Health & Human Development Units 1 & 2

**Rationale:**  
The study of Health and Human Development is based on the premise that health and human development needs to be promoted at an individual level, and within group and community settings at national and international levels, to maximise global development potential. This underpins the structure of Health and Human Development subject. The study also promotes the understanding that nutrition plays a major role in influencing both health status and individual human development.

**Learning Focus:**  
This study of Health and Human Development is designed to enable students to develop an understanding of individual human development (physical, social, emotional and intellectual) that occurs through the lifespan stages of childhood, youth and adulthood. Students will develop an understanding of the physical, mental and social dimensions of health and the interrelationship between health and individual human development. They will also develop an understanding that variations in health and human development are influenced by a range of determinants including bio-logical and behavioural factors, as well as physical and social environments.

**Outcomes / Assessment:**  
Students studying Unit 1 and 2 Health and Human Development will be expected to complete the following Assessments:  
- Topic tests  
- Oral presentation and written report  
- Data Analysis

**Pathways:**  
Students may continue their studies of Health and Human Development by studying Unit 3/4 Health and Human Development.
| **Rationale:** | History is the practice of understanding and making meaning of the past. It is also the study of the problems of establishing and representing that meaning. It is a synthesising discipline which draws upon most elements of knowledge and human experience. Historical understanding is communicated through written, oral and visual forms. The analysis of written documentary evidence such as letters, diaries, court proceedings and government records has long been the foundation of the study. |
| **Learning Focus:** | In Unit 1 students will study the periods of time between years from 1918 to 1939 leading up to World War 2, they examine the importance of this period which is characterised by significant social and cultural change where new fascist governments used the military, education and propaganda to impose controls on the way people lived. In Unit 2 students analyse the causes of the Cold War in the aftermath of World War Two. They investigate significant events and developments and the consequences for nations and people in the period 1945 –1991, focusing on conflicts such as the Korean War, Malay-Borneo, Vietnam War and the Space and Arms race including the Cuba Missile Crisis. |
| **Outcomes / Assessment:** | Complete SAC assessments, tests and reports where they will:  
- Analyse and apply historical accounts and knowledge to a number of source materials to draw conclusions regarding the accuracy and meaning of key issues surrounding the period studied.  
- Understand and explain the key ideas and influences of political struggles and ideologies  
- Discuss and analyse the characteristics of social and cultural changes occurring during this time |
| **Pathways:** | Students can continue to study History in the VCE by continuing to develop their inquiry and literacy skills further in Unit 3 & 4 History Revolutions. |
### Rationale:
This study equips students with the knowledge and skills to be discerning users of digital systems, data and information and creators of digital solutions. They are equipped to apply new ways of thinking as well as technical and social protocols when developing intellectual and social capital. VCE Computing supports students to participate in a globalised society and economy as they learn how to exploit the capabilities of digital systems and manage risks when communicating and collaborating with others locally and globally. The study provides students with practical opportunities to create digital solutions for real-world problems in a range of settings, developing an essential tool set for current and future learning, work and social endeavours. VCE Computing provides a pathway to further studies in areas such as computer science, information systems, business, systems engineering, robotics, linguistics, logistics, database management and to careers in digital-technologies based areas.

### Learning Focus:
In Area of Study 1 students collect primary data when investigating an issue, practice or event and create a digital solution that graphically presents the findings of the investigation. In Area of Study 2 students examine the technical underpinnings of wireless and mobile networks, and security controls to protect stored and transmitted data, to design a network solution that meets an identified need or opportunity. They predict the impact on users if the network solution were implemented. In Area of Study 3 students acquire and apply their knowledge of information architecture and user interfaces, together with web authoring skills, when creating a website to present different viewpoints on a contemporary issue. In Computing Unit 2 students focus on data and how the application of computational, design and systems thinking skills support the creation of solutions that automate the processing of data. In Area of Study 1 students develop their computational thinking skills when using a programming or scripting language to create solutions. They engage in the design and development stages of the problem-solving methodology. In Area of Study 2 students develop a sound understanding of data and how a range of software tools can be used to extract data from large repositories and manipulate it to create visualisations that are clear, usable and attractive, and reduce the complexity of data. In Area of Study 3 students apply all stages of the problem-solving methodology to create a solution using database management software and explain how they are personally affected by their interactions with a database system. When creating solutions students need to apply relevant stages of the problem-solving methodology as well as computational, design and systems thinking skills.

### Outcomes / Assessment:
Students studying Unit 1 and 2 Information Technology will be expected to complete the following Assessments:
- Examination at the end of each semester
- Acquire, secure and interpret data then design an Infographics solution to communicate the findings of an investigation
- Design a network with wireless capabilities to meet an identified need
- Design and develop a website collaboratively to present an issue
- Programming Folio
- Create a data visualisation that meets a specified user’s needs
- Create a solution using database management software, and explain the personal benefits and risks of interacting with a database.

### Pathways:
Students can continue to study Information Technology in the VCE by electing to undertake studies in the following subject Information Technology Applications Unit 3 & 4
## Legal Studies Units 1 & 2

### Rationale:
VCE Legal Studies examines the processes of law-making, dispute resolution and the administration of justice in Australia. Students develop an understanding of the impact of the legal system on the lives of citizens, and the implications of legal decisions and outcomes on Australian society. The study provides students with an appreciation of how individuals can be involved in decision-making within the legal system, encouraging civic engagement and helping them to become more informed and active citizens.

### Learning Focus:
The law influences all aspects of society – at home, at work and in the wider community. Laws are used by society to preserve social cohesion, and to ensure the protection of people from harm and from the infringement of their rights. These laws can be grouped according to their source and whether they are criminal or civil in nature. Following an overview of the law in general, this unit focuses on criminal law. Students examine the need for laws in society. They investigate the key features of criminal law, how it is enforced and adjudicated and possible outcomes and impacts of crime. Through a consideration of contemporary cases and issues, students learn about different types of crimes and explore rights and responsibilities under criminal law. Students investigate the processes and procedures followed by courts in hearing and resolving criminal cases. They explore the main features and operations of criminal courts and consider the effectiveness of the criminal justice system in achieving justice.

### Outcomes / Assessment:
Students studying Legal Studies Units 1 and 2 will be expected to:
- Describe and analyse the need for Law; the elements of criminal liability law, crimes against the person and property, the court hierarchy, the role of courts in law making, the process of dispute resolution and the protection of rights
- Identify and evaluate criminal and civil law, criminal sanctions, the jurisdiction of courts within the hierarchy and the processes of dispute resolution

### Pathways:
Students can continue to study Legal Studies in the VCE by continuing to pursue further studies in Legal Studies Unit 3 & 4.

## Literature Units 1 & 2

### Rationale:
The study of literature focuses on the enjoyment and appreciation of reading that arises from discussion, debate and the challenge of exploring the meanings of literary texts. Students reflect on their interpretations and those of others. The study is based on the premise that meaning is derived from the relationship between the text, the context in which it was produced and the experience of life and literature the reader brings to the texts. The study of literature encourages independent and critical thinking in students’ analytical and creative responses to texts, which will assist students in the workforce and in future academic study.

### Learning Focus:
This unit focuses on the ways literary texts represent human experience and the reading practices students develop to deepen their understanding of a text. Students respond to a range of texts personally, critically and creatively. This variety of approaches to reading invites questions about the ideas and concerns of the text. While the emphasis is on students’ close engagement with language to explore texts, students also inform their understanding with knowledge of the conventions associated with different forms of text, such as poetry, prose, drama and/or non-print texts.

### Outcomes / Assessment:
Students studying Units 1 and 2 Literature will be need to satisfactorily complete:
- Oral presentation on personal context and interpretation
- Short Story using Tim Winton as inspiration
- Film analysis
- Comparative essay
- Screenplay
- Social commentary

### Pathways:
Students who satisfactorily complete Units 1 and 2 of Literature have the option of completing Units 3 and 4 of either English or Literature. They also have the option to do both English and Literature.
### Language: Indonesian Units 1 & 2

#### Rationale:
The study of a language other than English contributes to the overall education of students, most particularly in the area of communication, but also in the areas of cross-cultural understanding, cognitive development, literacy and general knowledge. It provides access to the culture of communities which use the language and promotes understanding of different attitudes and values within the wider Australian community and beyond.

#### Learning Focus:
This study of language is designed to enable students to:
- use Indonesian to communicate with others;
- understand and appreciate the cultural contexts in which Indonesian is used;
- understand their own culture(s) through the study of other cultures;
- understand language as a system;
- make connections between Indonesian and English, and/or other languages;
- apply Indonesian to work, further study, training or leisure.

#### Outcomes / Assessment:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Outcome 1</td>
<td>informal conversation or reply to personal letter/fax/email.</td>
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<tr>
<td>Outcome 2</td>
<td>listen to spoken texts (e.g. conversations, interviews, broadcasts) to obtain information to complete notes, charts or tables in Indonesian or English and read written texts (e.g. extracts, advertisements, letters) to obtain information to complete notes, charts or tables in Indonesian or English.</td>
</tr>
<tr>
<td>Outcome 3</td>
<td>oral presentation or review or article</td>
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</tbody>
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#### Pathways:
Students studying Indonesian can continue to study in Year 12 Units 3 and 4. As students approach the end of the compulsory years of schooling they begin to make choices about their preferred areas of and pathways for learning. Students choose studies from the Victorian Certificate of Education (VCE) or recognised vocational training through either a Vocational Education Training (VET) program or the Victorian Certificate of Applied Learning (VCAL).

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### Language: Japanese Second Language Units 1 & 2

#### Rationale:
The study of a language other than English contributes to the overall education of students, most particularly in the area of communication, but also in the areas of cross-cultural understanding, cognitive development, literacy and general knowledge. It provides access to the culture of communities which use the language and promotes understanding of different attitudes and values within the wider Australian community and beyond.

#### Learning Focus:
The detailed study of Japanese enables students to explore and compare aspects of the language and culture of the Japanese-speaking community through a range of oral and written texts in Japanese related to the selected sub-topic. This aims to develop students’ knowledge and understanding of, for example, historical issues, aspects of contemporary society or the literary or artistic heritage of the community. The texts which form the basis of this study might include feature films, short films, short stories, songs, newspaper articles, electronic texts, documentaries, music, painting and oral histories. The length of texts selected will vary depending on the type of text, its density and level of complexity. In order for the student to be able to explore their sub-topic in sufficient depth to meet the relevant outcomes, it is suggested that a range of at least three different texts are selected.

#### Outcomes / Assessment:

<table>
<thead>
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<th>Outcome</th>
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<tbody>
<tr>
<td>Outcome 1</td>
<td>On completion of this unit the student should be able to establish and maintain a spoken or written exchange related to personal areas of experience.</td>
</tr>
<tr>
<td>Outcome 2</td>
<td>On completion of this unit the student should be able to listen to, read and obtain information from spoken and written texts.</td>
</tr>
<tr>
<td>Outcome 3</td>
<td>On completion of this unit the student should be able to produce a personal response to a text focusing on real or imaginary experience.</td>
</tr>
</tbody>
</table>

#### Pathways:
Students can select to continue the study of Japanese in Year 12, Units 3 and 4. As students approach the end of the compulsory years of schooling they begin to make choices about their preferred areas of and pathways for learning. Students choose studies from the Victorian Certificate of Education (VCE) or recognised vocational training through either a Vocational Education Training (VET) program or the Victorian Certificate of Applied Learning (VCAL).
Language: Italian Units 1 & 2

**Rationale:** The study of a language other than English contributes to the overall education of students, most particularly in the area of communication, but also in the areas of cross-cultural understanding, cognitive development, literacy and general knowledge. It provides access to the culture of communities which use the language and promotes understanding of different attitudes and values within the wider Australian community and beyond.

**Learning Focus:** This study is designed to enable students to use Italian to communicate with others. Students are taught to understand and appreciate the cultural contexts in which Italian is used as well as understand their own culture(s) through the study of other cultures. Students study language as a system making connections between Italian and English, and/or other languages. Students are also encouraged to apply Italian to work, further study, training or leisure.

**Outcomes / Assessment:** Students completing Unit 1 or 2 may complete a number or variety of the following assessments:
- Outcome 1: formal letter, or fax, or email or role-play or interview.
- Outcome 2: listen to spoken texts (e.g. conversations, interviews, broadcasts) and reorganise information and ideas in a different text type and • read written texts (e.g. extracts, advertisements, letters) and reorganise information and ideas in a different text type.
- Outcome 3: journal entry or personal account or short story.

**Pathways:** There are no prerequisites for entry into Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Italian is designed for students who will, typically, have studied the language for at least 200 hours prior to the commencement of Unit 1. It is possible, however, that some students with less formal experience will also be able to meet the requirements successfully. Units 1 to 4 are designed to be of an appropriate standard for the final years of secondary education. All VCE studies are benchmarked against comparable national and international curriculum.

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Mathematical Methods Units 1 & 2

**Rationale:** Mathematics is the study of function and pattern in number, logic, space and structure. It provides both a framework for thinking and a means of symbolic communication that is powerful, logical, concise and precise. It also provides a means by which people can understand and manage their environment. Essential mathematical activities include calculating and computing, abstracting, conjecturing, proving

**Learning Focus:** There are four major areas of focus in mathematical methods units 1 and 2: Functions; Rates of Change and Calculus; Algebra; and Probability. Algebra focuses on problem solving and manipulation of polynomial functions to degree 4, circular functions, exponential functions and logarithmic functions. Functions covers the graphical representation of functions of a single real variable and the study of key features of graphs of functions such as axis intercepts, domain and range of a function, asymptotic behaviour and symmetry. Probability covers introductory probability theory, including the concept of events, probability and representation of event spaces using various forms such as lists, grids, Venn diagrams, karnaugh maps, tables and tree diagrams. Impossible, certain, complementary, mutually exclusive, conditional and independent events involving one, two or three events (as applicable), including rules for computation of probabilities for compound events.

**Outcomes / Assessment:** Students studying Units 1 and 2 Mathematical Methods will be expected to complete the following assessments:
- A total of 6 examination-style tests (SAC), 3 per semester
- Semester examinations

**Pathways:** Students can continue to study Mathematics in the VCE by electing to undertake studies in the following subjects: Further Mathematics Unit 3 & 4, Mathematical Methods (CAS) Unit 3 & 4, Specialist Mathematics Unit 3 & 4.
### Music Performance Units 1 & 2

**Rationale:**
Music is an integral part of all cultures and societies, both contemporary and historical. VCE Music offers students opportunities to engage in the practice of performing, creating and studying music that is representative of diverse genres, styles and cultures. Students can specialise in one or more approaches to the study of music, depending on their VCE program overall and the post-VCE pathways they may be interested in following. Students develop knowledge of stylistic, aesthetic and expressive qualities and characteristics of music and develop their ability to communicate their understanding through music making: performing, composing, arranging and/or improvising; and musicianship: aural perception, analysis and music language.

**Learning Focus:**
This unit focuses on building performance and musicianship skills. Students present performances of selected group and solo music works using one or more instruments. They study the work of other performers and explore strategies to optimise their own approach to performance. They identify technical, expressive and stylistic challenges relevant to works they are preparing for performance and practise technical work to address these challenges. They also develop skills in performing previously unseen music. Students study aural, theory and analysis concepts to develop their musicianship skills and apply this knowledge when preparing and presenting performances.

**Outcomes / Assessment:**
- Coursework
- End of semester 1 and 2 performance examination.
- End of semester 1 and 2 aural and written examination

**Pathways:**
Students can continue to study Music in the VCE by electing to undertake studies in Music Performance 3 and 4 upon the completion of Units 1 and 2. Alternatively or in conjunction, students have the opportunity to study VETis Music Industry.

### Physical Education Units 1 & 2

**Rationale:**
VCE Physical Education examines the biological, physiological, psychological, social and cultural influences on performance and participation in physical activity. It focuses on the interrelationship between motor learning and psychological, biomechanical, physiological and sociological factors that influence physical performances, and participation in physical activity. The study enables the integration of theoretical knowledge with practical application through participation in physical activities. There are opportunities for students to apply theoretical concepts and reflect critically on factors that affect all levels of performance and participation.

**Learning Focus:**
In unit one, students explore how the body systems work together to produce movement and analyse this motion using biomechanical principles. Through practical activities students explore the relationships between the body systems and physical activity. They are introduced to the aerobic and anaerobic pathways utilised to provide the muscles with the energy required for movement and the basic characteristics of each pathway. Students apply biomechanical principles to improve and refine movement. They use practical activities to demonstrate biomechanical principles and how the correct application of biomechanics can lead to improved performance in sport and physical activity.

Unit two explores a range of coaching practices and their contribution to effective coaching and improved performance of an athlete. The way in which a coach influences an athlete can have a significant effect on performance. The approach a coach uses, the methods applied and the skills used will have an impact on the degree of improvement experienced by an athlete. By studying various approaches and applying this knowledge to a practical session, students gain a practical insight into coaching.

**Outcomes / Assessment:**
Students are assessed by a variety of methods including:
- Tests
- Research tasks
- Data analysis and practical laboratories
- Semester Examination

**Pathways:**
Students may continue to study Physical Education Units 3 and 4.
## Physics Units 1 & 2

**Rationale:** Physics seeks to understand and explain the physical world. It examines models and ideas used to make sense of the world and which are sometimes challenged as new knowledge develops. By looking at the way matter and energy interact through observations, measurements and experiments, physicists gain a better understanding of the underlying laws of nature.

**Learning Focus:**

**Unit 1:** In this unit students explore how physics explains phenomena, at various scales, which are not always visible to the unaided human eye. They examine some of the fundamental ideas and models used by physicists in an attempt to understand and explain the world. Students consider thermal concepts by investigating heat, probe common analogies used to explain electricity and consider the origins and formation of matter.

- How can thermal effects be explained?
- How do electric circuits work?
- What is matter and how is it formed?

**Unit 2:** In this unit students explore the power of experiments in developing models and theories. They investigate a variety of phenomena by making their own observations and generating questions, which in turn lead to experiments. Students make direct observations of physics phenomena and examine the ways in which phenomena that may not be directly observable can be explored through indirect observations. The detailed studies provide opportunities to explore further electronics by a practical investigation of the conversion of AC into DC electricity.

- How can motion be described and explained?
- How can AC electricity charge a DC device?

**Practical investigation (based on How can AC electricity charge a DC device?)**

**Outcomes / Assessment:** Students are assessed in a number of ways including the following:
- Topic tests
- Practical reports
- Class presentation of selected topics
- Semester examinations

**Pathways:** Students can continue to study Sciences in the VCE by electing to undertake studies in Unit 3 and 4 Physics.

## Production Design & Technology: Food Units 1 & 2

**Rationale:** VCE Food and Technology focuses on the importance of food in our daily lives from both a theoretical and practical point of view. The study enables students to apply their theoretical understanding of the relationship between food and technology as they develop skills in food preparation. VCE Food and Technology challenges students to make links between food, food processing, nutrition, health and well-being. Students are given the opportunity to consider the importance of environmental issues and sustainability practices in food production, as well as the important role of technology in food product development. Students develop knowledge of the physical, chemical, sensory and functional properties of food and are able to apply this knowledge when using food in a practical situation. They develop and apply the knowledge and skills to prepare food safely and hygienically. Students use the design process, critical thinking and problem-solving skills to develop food products to suit specific situations or to meet the needs of individual consumers and their lifestyles.

**Learning Focus:** In Unit 1, students are introduced to various key foods, the suitable cooking and storage techniques of products within each key food group and how to enhance the aesthetics of each product. They investigate safe and hygienic food handling practices at commercial food production settings and apply good practices in the preparation and processing of their own foods. Students explore the classification, physical, sensory and chemical properties of key foods for optimal results. Unit 2 entails the investigation of the development of kitchen equipment and tools for the 21st Century. They design, produce and analyse products using new and emerging tools and equipment that ensure the saving of time and labour in the kitchen. Students implement solutions to design briefs by finding solutions to exciting design challenges for a range of contexts and individuals with different food needs and preferences.

**Outcomes / Assessment:** Students studying Units 1 and 2 Food Technology will be expected to complete the following assessment tasks:
- Brief tests and quizzes
- Health and safety report
- Design Brief
- Practical activities
- Practical evaluations
- Worksheets and research as required

**Pathways:** Students who complete Year 11 Design and Technology (Food) can continue their study at Year 12.
### Product Design & Technology: Textiles Units 1 & 2

**Rationale:** Product design is part of people’s responses to changing needs to improve quality of life by designing and creating artefacts. Product design is enhanced through knowledge of social, technological, economic, historic, ethical, legal, environmental and cultural factors. Designers play an important part in our daily lives. They determine the form and function of the products we use. They transform ideas into drawings and plans for the creation and manufacture of useful products that fulfil human needs and wants.

**Learning Focus:** These units focus on the analysis, modification and improvement of a product with consideration of the materials used and issues of sustainability. Students produce a prototype based on an existing garment. They re-designed their prototype and produce a second version of this garment. Students safely use tools, equipment, machines and materials to realize their garments. They compare their garments with the original design and evaluate it against the needs and requirements outlined in their design brief. Students gain knowledge of material characteristics and properties, their uses and suitability for particular products in relation to product design. Additionally, Students consider the use of materials from a sustainable viewpoint. They become aware of the source, origin and the processing of materials and their environmental impact. Students learn about intellectual property (IP), its implications related to product design and the importance of acknowledging the IP rights of the original designer.

**Outcomes / Assessment:**
- Write a design brief for the modified and improved product.
- Write a report and give a presentation of a case studies on a designer (Textiles or Fashion) who address sustainable practices.
- Students create a prototype of an existing product using a commercial pattern and create a redesigned product based on the prototype. Investigate cases of Intellectual Property disputes.
- Develop a production plan with working drawings of production process.

**Pathways:** VCE Product Design and Technology Unit 1 & 2 can provide a pathway to a study of Unit 3 & 4 in the same area i.e. Textiles. The study can also lead into a range of related fields such as industrial, product, interior and exhibition design, engineering, and fashion, furniture, jewellery, textile and ceramic design at both professional and vocational levels.

### Product Design & Technology: Wood Units 1 & 2

**Rationale:** In Unit 1 and 2 Product Design and Technology students learn about the role Designers play in our daily lives and how they determine the form and function of the products we use. Students learn how designers transform ideas into drawings and plans for the creation and manufacture of useful products that fulfil human needs and wants. In recent history the use of resources to create an ever-increasing array of products has given designers an increased responsibility to think sustainably. Students develop an understanding of the consequences of product design choices. They develop the necessary skills to critically analyse existing products and to develop their own creative solutions.

**Learning Focus:** In Product Design Technology students are introduced to the Product design process, IP and the Product design factors, with an emphasis on materials and sustainability. Students consider case studies of designers who claim to have incorporated sustainable practices. Students examine how an existing product currently fulfils the need of a user. They consider how the product could be improved. Students write a design brief for a product’s modification and improvement by altering at least three points of the original design, ensuring the primary purpose/function of the original product remains. One of the alterations should aim to improve the product’s sustainability. Students develop evaluation criteria for design options, the completed product, and to judge the efficiency and effectiveness of design and production activities.

**Outcomes / Assessment:**
- Design Brief
- Investigation into a Designer
- Evaluation Criteria, taken from Design Brief
- Design Folio with Investigation,
- Modified Design Production with 3 changes.
- Evaluation
- Examination

**Pathways:** VCE Product Design and Technology can provide a pathway to a range of related fields such as industrial, product, interior and exhibition design, engineering, and fashion, furniture, textile and ceramic design at both professional and vocational levels.
**Psychology Units 1 & 2**

**Rationale:** Psychology is the scientific study of mental processes and behaviour in humans. Biological, behavioural, cognitive and socio-cultural perspectives inform the way psychologists approach their research into the human condition. Psychology provides students with a sophisticated framework for understanding the complex interactions between biological, behavioural, cognitive and socio-cultural factors that influence thought, emotions and behaviour.

**Learning Focus:** In Unit 1 students are introduced to the development of psychology from its philosophical beginnings to a scientific study of the human mind and behaviour. Students explore the scope of psychology, its specialist disciplines such as neuropsychology, cognitive, social and human developmental psychology, and its fields of application. Students consider influences on perception and human behaviour from biological, behavioural, cognitive and socio-cultural perspectives. They examine the contribution classic and contemporary studies have made to the development of different psychological theories used to predict and explain the human mind, and behaviours associated with particular stages of development over a lifespan. A person's attitudes and behaviours affect the way they view themselves and the way they relate to others is studied in Unit 2. Understanding what influences the formation of attitudes of individuals and behaviours of groups can inform and contribute to explanations of individual aggression or altruism, the positive and negative power of peer pressure and responses to group behaviour. Differences between individuals can also be ascribed to differences in intelligence and personality, but conceptions of intelligence and personality and their methods of assessment are con-tested. Differences between individuals, groups and cultures can be analysed in varied ways through different psychological perspectives informed by both classic and contemporary theories.

**Outcomes / Assessment:**

- Empirical Research Activity on Visual Perception
- Empirical Research Activity on Piaget's Cognitive Development Theory
- Semester Examinations
- Test of Attitudes and Social Influences on the Individual
- Oral Presentation

**Pathways:** Students can continue to study Psychology Units 3 & 4 in the VCE after successful completion of Units 1 & 2.

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**Religious Education: Thomas Carr College Program (Religion & Contemporary Issues)**

**Rationale:** The world is the primary context and place of God's self-disclosure to all of humanity. It is in the lived reality of our daily lives that we are called to experience God as Creator, Jesus as Saviour and the Holy Spirit as Guide. The Catholic school is part of the world and part of the community of the Church and invites all the members of the school community to search for God in the world and to live a life framed by the life and words of Jesus.

**Learning Focus:** Students focus on Religion and Contemporary Issues. They are introduced to the nature of ethical decision making in a pluralist society. They will explore the concepts and theories underpinning ethical decision making and the various influences on it. Students will examine ethical perspectives and moral viewpoints upheld by a number of religious traditions, one being their home tradition Christianity. They will analyse how the ideas, values and ethical principles underpinning ethical perspectives are expressed through the formal aspects of religion. Students will apply their knowledge of concepts, approaches, methods and traditions associated with ethical perspective to a range of debates about ethical issues in the public arena of pluralist societies, focusing on a range of contemporary issues.

**Outcomes / Assessment:** The primary purpose of assessment is to assist in better teaching and learning. Students will have three Formative Assessment Tasks and three Summative Unit Tests at the end of each term and an End of Year Examination.

**Pathways:** They develop the critical thinking skills of students essential for understanding religious and ethical issues. Further study in Theology or Religious Education can be done.
### Religion & Society Units 1 & 2

**Rationale:**
The beliefs, values and ideas of religious traditions can play an important part in shaping and maintaining culture. Religious beliefs about the nature of existence and the purpose of human life provide a frame of reference for understanding the world and for guiding daily personal and communal action. It aims to develop understanding and respect for the perceptions of the participants in religious traditions. It values and promotes open inquiry, without bias towards any one tradition.

**Learning Focus:**
During Semester 1, students explore the origins of religion, identifying the nature and purpose of religion past and present. They investigate the contribution of religion to the development of human society and then focus on the role of religious traditions in shaping personal and group identity. Students examine how religious traditions are affected and changed by individuals and groups. The study provides the opportunity for students to understand the often complex relationships that exist between individuals, groups, religious traditions and the society in which they live. They will study at least two religious traditions. Different religious traditions may be selected for each area of study.

During Semester 2, students survey various approaches to ethical decision-making and then explore at least two religious traditions in detail. They explore contemporary ethical issues in the light of their investigations into ethical decision-making and ethical perspectives, and moral viewpoints in religious traditions.

**Outcomes / Assessment:**
During Semester 1, students will cover three areas of study: Area Study One – World Religions, Area Study Two – Religions in Australia, Area Study Three – Religious Identity and Life Experiences.

During Semester 2, students will cover three areas of study: Area Study One – Ethical method in pluralist society, Area Study Two – Religion and morality in pluralist society, Area Study Three – Contemporary ethical issues in pluralist society.

**Pathways:**
Students continue to study Religious Education in VCE by electing to undertake studies in at least one of the following areas: Religion and Society Unit 3 & 4; Text and Traditions Unit 3 & 4 or School-based Religious Education Program.

### Studio Arts Units 1 & 2

**Rationale:**
VCE Studio Arts encourages and supports students to recognise their individual potential as art makers and presents a guided process to assist their understanding and development of art making. The study establishes effective art practices through the application of an individual design process to assist the student’s production of a folio of artworks. The theoretical components of this study are an important basis for studio practice as it offers students a model for inquiry that can support their art making.

**Learning Focus:**
VCE Studio Arts encourages and supports students to recognise their individual potential as art makers. The study establishes effective art practices through the application of an individual design process. Unit 1 focuses on using sources of inspiration and ideas as the basis for artworks and exploring a wide range of materials and techniques as tools for translating ideas, observations and experiences into visual form. Unit 2 focuses on the use of materials and techniques in the production of artworks. The theoretical component of this study is an important basis for studio practice as it offers students a model for inquiry that can support their artmaking practices.

**Unit 1: Artistic inspiration and techniques:**
- Source ideas & inspiration & use a variety of methods to translate these into visual form.
- Explore & use a variety of materials and techniques to support and record the development of individual ideas to produce artworks.
- Discuss how artists from different times and locations interpret sources of inspiration and use materials and techniques.

**Unit 2: Design Explorations and concepts:**
- Develop an individual design process including visual research and inquiry to produce a variety of design explorations and a number of artworks.
- Analyse and discuss the ways in which artists from different times and locations have created aesthetic qualities artworks, communicated ideas and develop styles.

**Outcomes / Assessment:**
- A folio including design exploration and finished artworks.
- Written theory tasks.
- End of Year Examination.

**Pathways:**
The foundation for the individual design process established in Units 1 & 2 prepares Studio Arts students for Units 3 & 4. Studio Arts provides opportunities for students to create and critically explore visual culture through visual arts and arts works that involve the fusion of traditional techniques and forms with digital media. These studies can lead to a range of tertiary and vocational studies, such as those associated with multimedia, fine art, graphic and fashion design, the music industry, film and television, theatre and advertising.
### Rationale:
The Visual Communication Design study examines the way visual language can be used to convey ideas, information and messages in the fields of communication, environmental and industrial design. Students employ a design process to generate and develop visual communications. The design process provides a structure to organise design thinking and is shaped by considerations of aesthetics and functionality, as well as social, environmental and economic factors. Students develop the skills to manipulate and organise design elements, design principles, selected media, materials and production methods when creating visual communications. Students have the opportunity to investigate the work and practices of Australian and international designers from a variety of social, cultural, historical and contemporary contexts.

### Learning Focus:
Unit 1 focuses on using visual language to communicate messages, ideas and concepts. This involves acquiring and applying design thinking skills as well as drawing skills to make messages, ideas and concepts visible and tangible. Through experimentation and through exploration of the relationship between design elements and design principles, students develop an understanding of how design elements and principles affect the visual message and the way information and ideas are read and perceived. Students review the contextual background of visual communication through an investigation of design styles. This research introduces students to the broader context of the place and purpose of design. Unit 2 focuses on the application of visual communication design knowledge, design thinking skills and drawing methods to create visual communications to meet specific purposes in designated design fields. Students use presentation drawing methods that incorporate the use of technical drawing conventions to communicate information and ideas associated with the environmental or industrial fields of design. They investigate how typography and imagery are used. In response to a brief, students engage in the stages of research, generation of ideas and development of concepts to create visual communications.

### Outcomes / Assessment:
- Design Folio’s exploring the areas of Environment, Industrial and Communication Design fields.
- Theoretical tasks analysing design in past and contemporary contexts.
- Written Examinations.

### Pathways:
At the conclusion of this course, the students are equipped to continue on to study Unit 3 & 4 Visual Communication and Design. Their folio work from these units can also provide important visual evidence of skills for interviews for tertiary design courses or future jobs.