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STAR OF THE SEA COLLEGE EDUCATION CHARTER

Learning and Teaching at Star

We are a community of learners, who have a passion for learning, sharing knowledge, celebrating achievement, enabling growth and striving for excellence.

As teachers we.....

- Demonstrate a love of learning and a passion for our learning area.
- Are active members of our profession who seek to improve student learning and engagement through a commitment to 21st Century pedagogy, facilitated by ongoing professional learning.
- Validate and celebrate all achievements in our community.

As students we.....

- Understand that it is our responsibility to exercise initiative in order to be active learners.
- Embrace and celebrate our passion for education and our achievements.

We have a dynamic and holistic approach to life. We are responsive to the needs of others, strive for justice and empower young women to make a difference in the world.

As teachers we.....

- Respect, value and support the diversity of learners and learning activities at Star.
- Recognise that learning and teaching contributes to each student recognising her place as a responsible, global citizen.

As students we.....

- Open our eyes and hearts to different people and issues and use the values we witness at Star to better our world and our future.
- Use our initiative to participate in the many enriching activities on offer and accept diversity within our community.
- Celebrate each other’s gifts.

We build authentic relationships founded on care, compassion and mutual respect.

As teachers we.....

- Care for all members of our community and uphold the dignity of each individual.
- Instil a sense of belonging, identity and pride amongst our students.

As students we.....

- Build mutual, trusting relationships by encouraging, supporting, accepting and respecting each other.
<table>
<thead>
<tr>
<th>Learning and Teaching at Star</th>
<th>As teachers we.....</th>
<th>As students we.....</th>
</tr>
</thead>
</table>
| We value personalised learning that is rigorous, relevant and engaging and provides ongoing support, challenge and success for all students. | • Develop relevant and innovative curriculum that seeks to challenge students and engage them in real world learning activities  
• Support differentiation and personalisation of the curriculum | • Take responsibility for discussing with our teachers how best to understand and improve our learning.  
• Optimise all learning opportunities |
| We promote independence, interdependence and self-confidence through collaboration and effective communication. | • Engage in respectful dialogue  
• Instil the skills and confidence necessary to work effectively in both collaborative and individual settings | • Uphold our identity as strong Star women in an environment that encourages and nurtures independence, creativity and positive relationships.  
• Encourage each other in everything we do and collaborate with respect. |
| We create opportunities to engage in self-reflection to assist in the development of meaningful learning. | • Embrace opportunities that provide timely and constructive feedback to develop a community of reflective and responsive learners. | • Are open to discovering ourselves as learners.  
• Embrace constructive feedback by reflecting on our achievements and our failures. |
| We encourage creativity and critical thinking, where risk-taking and problem solving is valued as an important contribution to learning. | • Foster curiosity and deep thinking by creating an environment where students are encouraged to question, explore and appreciate learning through inquiry | • Invest in our learning through remaining open minded and curious in everything we do. We are prepared to question, explore more deeply and take risks to challenge ourselves. We value creativity and thinking outside the square. |
# THE CURRICULUM AT A GLANCE

<table>
<thead>
<tr>
<th>YEAR 7</th>
<th>YEAR 8</th>
<th>YEAR 9</th>
<th>YEAR 10</th>
<th>YEAR 11</th>
<th>YEAR 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Subjects</strong></td>
<td>Religious Education</td>
<td>English</td>
<td>Health &amp; Physical Education</td>
<td>Humanities</td>
<td>Mathematics</td>
</tr>
<tr>
<td><strong>Languages</strong> (choose 2)</td>
<td>German</td>
<td>Italian</td>
<td>Japanese</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1 Semester each of:</strong></td>
<td>Drama</td>
<td>Food Technology</td>
<td>Digital Technology</td>
<td>Music</td>
<td></td>
</tr>
<tr>
<td><strong>Elective Subjects</strong></td>
<td>Choose 4 (2 per semester)</td>
<td>American History</td>
<td>Art</td>
<td>Design &amp; Technology in Textiles</td>
<td>Drama</td>
</tr>
<tr>
<td></td>
<td>- Stranger Things</td>
<td>- Dark Imaginings</td>
<td>Music</td>
<td>- All That Jazz &amp; All That Rocks</td>
<td>- So You Want To Be a Rock &amp; Roll Star</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR 7</th>
<th>YEAR 8</th>
<th>YEAR 9</th>
<th>YEAR 10</th>
<th>YEAR 11</th>
<th>YEAR 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Subjects</strong></td>
<td>Religious Education</td>
<td>English</td>
<td>Health &amp; Physical Education</td>
<td>Humanities</td>
<td>Mathematics</td>
</tr>
<tr>
<td><strong>Languages</strong> (choose 1)</td>
<td>German</td>
<td>Italian</td>
<td>Japanese</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1 Semester each of:</strong></td>
<td>Drama</td>
<td>Design Lab</td>
<td>Food Technology</td>
<td>Music</td>
<td></td>
</tr>
</tbody>
</table>
CO-CURRICULAR ACTIVITIES

Whilst attending Star of the Sea students are encouraged to participate in a variety of activities outside the realm of the classroom. The following table gives an indication of the programs available in 2019.

<table>
<thead>
<tr>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Aerobics</td>
</tr>
<tr>
<td>• AFL Football</td>
</tr>
<tr>
<td>• Art Club</td>
</tr>
<tr>
<td>• Athletics</td>
</tr>
<tr>
<td>• Australian Mathematics Competition</td>
</tr>
<tr>
<td>• Backstage Crew</td>
</tr>
<tr>
<td>• Badminton</td>
</tr>
<tr>
<td>• Ballroom Dancing Lessons (Year 10)</td>
</tr>
<tr>
<td>• Bands</td>
</tr>
<tr>
<td>• Basketball</td>
</tr>
<tr>
<td>• Big Sister Little Sister (Year 7 &amp; 11)</td>
</tr>
<tr>
<td>• Bike Education (Year 8 &amp; 9)</td>
</tr>
<tr>
<td>• Companions (ANZAC)</td>
</tr>
<tr>
<td>• Concert Orchestra</td>
</tr>
<tr>
<td>• Cricket</td>
</tr>
<tr>
<td>• Cross Country Running</td>
</tr>
<tr>
<td>• Dancing</td>
</tr>
<tr>
<td>• Debating</td>
</tr>
<tr>
<td>• Diving</td>
</tr>
<tr>
<td>• Drama Club</td>
</tr>
<tr>
<td>• Drama Festival (Year 8, 9 &amp; 10)</td>
</tr>
<tr>
<td>• Environmental Activities</td>
</tr>
<tr>
<td>• Exchange Programmes (Japan &amp; Germany)</td>
</tr>
<tr>
<td>• Future Problem Solving</td>
</tr>
<tr>
<td>• Great Victorian Bike Ride</td>
</tr>
<tr>
<td>• Growing Tall Poppies (Enrichment Program)</td>
</tr>
<tr>
<td>• Gymnastics</td>
</tr>
<tr>
<td>• Help Force Activities at Hostel (Year 9)</td>
</tr>
<tr>
<td>• History Competitions (Year 9)</td>
</tr>
<tr>
<td>• Hockey</td>
</tr>
<tr>
<td>• House Netball</td>
</tr>
<tr>
<td>• Instrumental Music Lessons</td>
</tr>
<tr>
<td>• Inter-Faith Exchange (Islamic-Christian Dialogue)</td>
</tr>
<tr>
<td>• Irish Dancing</td>
</tr>
<tr>
<td>• iTeam</td>
</tr>
<tr>
<td>• Lacrosse</td>
</tr>
<tr>
<td>• Languages Council</td>
</tr>
<tr>
<td>• Language Tours (Italy &amp; Japan)</td>
</tr>
<tr>
<td>• Library Monitors</td>
</tr>
<tr>
<td>• Lighting Technician</td>
</tr>
<tr>
<td>• Liturgy Planning and Leadership</td>
</tr>
<tr>
<td>• Magazine Committee</td>
</tr>
<tr>
<td>• Makerspace</td>
</tr>
<tr>
<td>• Maths Challenge</td>
</tr>
<tr>
<td>• Maths Peer Tutoring</td>
</tr>
<tr>
<td>• Media Internship</td>
</tr>
<tr>
<td>• Ministry Retreat</td>
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<tr>
<td>• Music Festival</td>
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<tr>
<td>• Music Soirees</td>
</tr>
<tr>
<td>• Musical/Production (Bi-annual)</td>
</tr>
<tr>
<td>• NASA Space Camp Study Tour (Year 10 &amp; 11)</td>
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<tr>
<td>• National Chemistry Quiz</td>
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<tr>
<td>• National Presentation Leadership Conference</td>
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<tr>
<td>• National Reconciliation Process</td>
</tr>
<tr>
<td>• Netball</td>
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<tr>
<td>• Online CAT (Computational &amp; Algorithmic Thinking) Competition</td>
</tr>
<tr>
<td>• Outreach to Sacred Heart Mission</td>
</tr>
<tr>
<td>• PE Day Activities</td>
</tr>
<tr>
<td>• Public Speaking</td>
</tr>
<tr>
<td>• S.R.C.</td>
</tr>
<tr>
<td>• Sailing</td>
</tr>
<tr>
<td>• Science Experience (Year 9)</td>
</tr>
<tr>
<td>• Self Defence (Year 9)</td>
</tr>
<tr>
<td>• Singing Lessons</td>
</tr>
<tr>
<td>• Soccer</td>
</tr>
<tr>
<td>• Social Justice Group</td>
</tr>
<tr>
<td>• Sound &amp; Lighting Technician</td>
</tr>
<tr>
<td>• Soup Van</td>
</tr>
<tr>
<td>• Stacella Choral Program</td>
</tr>
<tr>
<td>• Stage Band</td>
</tr>
<tr>
<td>• Stage Crew</td>
</tr>
<tr>
<td>• Star Reading Challenge</td>
</tr>
<tr>
<td>• Star Writers’ Collective</td>
</tr>
<tr>
<td>• Statewide Maths Games Days</td>
</tr>
<tr>
<td>• Surf League/Lifesaving</td>
</tr>
<tr>
<td>• Swimming and Water Activities</td>
</tr>
<tr>
<td>• Table Tennis</td>
</tr>
<tr>
<td>• Tennis</td>
</tr>
<tr>
<td>• Tournament of the Minds</td>
</tr>
<tr>
<td>• Triathlon</td>
</tr>
<tr>
<td>• Tutoring of recently arrived Australians</td>
</tr>
<tr>
<td>• UNSW Maths Competition</td>
</tr>
<tr>
<td>• UNSW Science Competition</td>
</tr>
<tr>
<td>• Vietnam Study Trip (Year 10 &amp; 11)</td>
</tr>
<tr>
<td>• Volleyball</td>
</tr>
<tr>
<td>• Wagga Pilgrimage (Year 9)</td>
</tr>
<tr>
<td>• Writing Competitions</td>
</tr>
<tr>
<td>• World Scholar’s Cup (Year 7 &amp; 8)</td>
</tr>
</tbody>
</table>
GENERAL INFORMATION

Work Experience

The Year 10 Work Experience program gives students the opportunity to spend 5 days in a working environment. Having chosen the field of work, and with the assistance of the Work Experience Coordinator, the student will negotiate a placement with an employer. Later in the year, students complete a week of work at that place of employment.

Subject Selection

Year 10 Elective subjects are structured on a semester basis. Before selecting subjects, careful thought should be given to factors such as interest, ability, breadth of education, prerequisites to Year 12 and beyond, prerequisites to certain careers and employment. In order to make the most suitable choice of subjects, students must try to obtain as much information as possible about the subjects. A list of VCE studies appears on page 5. This breadth of studies (subjects) will be maintained in coming years. Please note:

a) A Language must have been studied at Year 9 level in order to continue it for Year 10 and must be taken across two semesters.

b) Electives will only be available if a sufficient numbers of student choose that subject.

c) Drama, Dance Styles, Food Technology, Geography, Law & Order, Media, Photography, Publish & Broadcast, Literature, Science: In Sickness & Health, Science: Science of LiFe, Science: Mission to Mars, Science: Nature Versus Nurture and Sports Science can only be taken for one semester.

Careful consideration is to be given to the selection of subjects as there are limits to the number of classes offered. While every effort will be made to accommodate choices, if quotas are full students may miss the subject of first choice. The selection of subjects will need to comply with a good balance across learning areas and be able to be accommodated in timetable groups.

Year 10 Camp

A four day residential camp provides students with opportunities to develop spiritually, physically and personally. They will participate in a broad program that includes wellbeing and personal growth workshops as well as a range of outdoor education activities.
YEAR 10

SUBJECTS
RELIGIOUS EDUCATION

Course Description

The Religious Education component of the Year 10 program is both academically challenging and faith enriching. It seeks to engage students’ heads, hearts and hands.

1. promoting religious knowledge and understanding of the key practices and beliefs of the Christian community both past and present,

2. developing skills in reasoning and responding to enable students to respond to the Catholic tradition and its call to contribute to the building of the reign of God, and

3. providing opportunities for personal and communal engagement via opportunities for reflection, participation in liturgies and the sacramental life of the Church, leadership formation, and contribution to civic and faith communities.

Star of the Sea’s Religious Education program is based upon the Archdiocesan RE Curriculum Framework. Year 10 units flow from an understanding of the Church and its life where the person of Jesus, known in the Scriptures, is central.

This learning structure comprises strands of learning:

- Knowledge and Understanding – seeking truth
- Reasoning and Responding – making meaning
- Personal and Communal Engagement – living story

and the following content areas:

1. Scripture and Jesus (e.g. The Gospel of Mark)
2. Church and Community (e.g. Women in the Church throughout History)
3. God, Religion and Life (e.g. Our Place in the World)
4. Sacrament, Prayer and Liturgy (e.g. Analysis of the Eucharist)
5. World Religions (Buddhism, Hinduism, Taoism, Sikhism)

Assessment

Assessment of student achievement across all units is dynamic, creative and varied. Students will be assessed on the following:

1. Participation in class activities and discussions
2. Maintenance of workbook and study materials
3. Completion of a range of written and research tasks
4. Oral and group presentations
Students are provided with countless opportunities to explore and deepen their faith.

The Sacred Heart Mission Program is an integral component of our Religious Education program. Year 10 students and staff volunteer to prepare a midday meal for around 200 people at Sacred Heart Mission, St Kilda, which is an experience of active service and reflection upon issues related to homelessness and urban poverty.

Every cycle students participate in **10 Forum**; a seminar-style program of prayer, input and reflection based on themes in the R.E. curriculum and wider Year 10 reality. In 2017 some of these 10 Forum sessions focused on: National Reconciliation Week, Christian leadership and the work of local Catholic justice and welfare agencies.

Students participate in daily classroom prayer and lead prayer at House and full-College liturgies.

Each year a large number of Year 10 students attend social justice formation conferences run by Caritas Australia, Catholic Earthcare, Catholic Education Melbourne and the St Vincent de Paul Society.

Through these experiences students participate fully in the life of our faith community, wider Church and fragile world.
ENGLISH

Course Description
The main aim of the Year 10 course is to extend students’ appreciation and use of the English language in all its forms. The set texts offer many exciting possibilities for learning. Overall, the course is designed to enrich the experience of students through reading, writing, viewing and oral communication. Importantly, the course aims to prepare students for VCE English and VCE Literature.

Areas of Study
The study of English in Year 10 comprises three main areas:

1. Reading and Creating
2. Reading and Comparing
3. Analysing and Presenting Arguments

Reading and Creating
This is the part of the course where students get to create original ideas in writing. Students examine how experienced authors write on certain themes, and then they put these ideas into practice.

Reading and Comparing
Students will be presented with two texts that are similar in some way (the presentation of ideas, themes and issues, are examples) and then compare them.

Analysing and Presenting Arguments
This area of study encourages students to critically examine the language of writers who attempt to persuade, particularly in the media and then to develop and use those same techniques to persuade others.

Set Texts
Students are asked to purchase their own copies of the set texts and film. They must read or watch these texts before the start of the school year, or during the previous term.

Work Habits
All students are required to keep a workbook/folder and an organised laptop. This is a comprehensive record of class notes, handouts, research material and drafts.

Assessment
Students complete a range of assessment tasks over each semester including a Semester examination. Each assessment task is linked to one of the three main areas of skill development.
HEALTH & PHYSICAL EDUCATION

Course Description

The Year 10 Health and Physical Education program attempts to broaden the students’ knowledge of:

1. risk taking behaviour, harm minimisation strategies and alcohol, drugs and coping with the stress and anxiety and learning about safe and responsible relationships.

2. sports, fitness and recreational activities which could be used in their future lifestyle.

The program aims to guide students towards lifelong health and physical activity by encouraging the students to develop interest in recreational activities. It is hoped that the students will gain an understanding of the physical benefits of exercise and will continue with these recreational activities which have provided fun, enjoyment and personal success in future years.

Through the Health classes, it is hoped that the students will make positive choices and use rationale decision making techniques to overcome the difficulties faced during adolescence.

Throughout the year students will undertake one period of Health and two periods of Physical Education per cycle, which will enable students to travel to a number of venues in order to experience a wider variety of activities.

Students will participate in the following activities:

- Badminton
- Basketball
- CPR & First Aid
- Fitness Wellbeing Activities
- Football Codes
- Golf
- Handball
- Netball
- Self Defence
- Ten Pin Bowling
- Tennis
- Volleyball
- Yoga

Students will cover four units in Health Education:

- Risk Taking Behaviour, Alcohol and Drugs
- Relationships and Sexuality
- Mental Health and Wellbeing
- CPR & First Aid
Assessment

Assessment in Physical Education is based on participation and development of skill proficiency in a variety of tasks and activities. Particular attention is given to the student’s ability to work in a co-operative environment with her peers and her teacher. Students will complete a group assessment where they implement and devise a practical lesson based on a chosen sport demonstrating leadership and collaboration.

Correct sports uniform is expected to be worn at all times.

Assessment in Health Education:

1. Risk Taking Assessment Task
2. Mental Health and Wellbeing Assessment Task
3. Healthy Competition group Task
4. Completion of First Aid and CPR Certificate
MATHEMATICS

Course Description

The Year 10 Mathematics Course prepares students for the Mathematics subjects offered in VCE. Consequently the assessment instruments used are in line with those they will face in VCE Mathematics – key skills and knowledge tests, application tasks, examinations. Students studying Mathematics are assessed throughout the year both with calculators (technology-enhanced) and without calculators (technology-free) in line with the assessment procedures at VCE. As the appropriate selection and effective use of technology is an important component of all VCE Mathematics studies, students will be required to have a TI-Nspire CAS (Computer Algebra System) calculator.

Students are able to select from three levels of mathematics depending on their strengths and abilities in the subject.

The 3 courses are:

1. **Year 10 Mathematics (Methods)**
   
   This course is algebraic and quite abstract. The Mathematics studied within this course allows students the flexibility to undertake any Mathematics in Year 11 & 12.

2. **Year 10 Mathematics (General)**
   
   This course allows students who have found Year 9 Mathematics more challenging to undertake a less algebraic Mathematics which still offers them the possibility to undertake General Mathematics in Year 11 and Further Mathematics in Year 12.

3. **Foundation Mathematics**
   
   This course is designed for students who have experienced difficulties with abstract mathematical concepts covered in Year 9. This course will allow students to study Year 11 Foundation only.

More details of the specific courses are outlined below:

Course Content

**In first semester the topics covered are:**

<table>
<thead>
<tr>
<th>MATHEMATICS (METHODS)</th>
<th>MATHEMATICS (GENERAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Linear Functions - graphing and solving equations and inequations</td>
<td>• Linear Functions - graphing and solving equations</td>
</tr>
<tr>
<td>• Geometry, including Circle Geometry</td>
<td>• Geometry</td>
</tr>
<tr>
<td>• Pythagoras' Theorem</td>
<td>• Pythagoras’ Theorem</td>
</tr>
<tr>
<td>• Trigonometry</td>
<td>• Trigonometry</td>
</tr>
<tr>
<td>• Algebra – simplifying, expanding and factorising</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FOUNDATION MATHEMATICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Number Operations</td>
</tr>
<tr>
<td>• Pythagoras' Theorem</td>
</tr>
<tr>
<td>• Basic Algebra</td>
</tr>
<tr>
<td>• Trigonometry</td>
</tr>
<tr>
<td>• Interpreting Graphs and Data</td>
</tr>
</tbody>
</table>
In second semester the topics covered are:

<table>
<thead>
<tr>
<th>MATHEMATICS (METHODS)</th>
<th>FOUNDATION MATHEMATICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Indices and Surds</td>
<td>• Geometry</td>
</tr>
<tr>
<td>• Quadratic Functions and Graphs</td>
<td>• Measurement</td>
</tr>
<tr>
<td>• Probability</td>
<td>• Design</td>
</tr>
<tr>
<td>• Non-Linear Functions</td>
<td>• Earning Money</td>
</tr>
<tr>
<td></td>
<td>• Probability</td>
</tr>
<tr>
<td></td>
<td>• Linear Graphs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MATHEMATICS (GENERAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Statistics</td>
</tr>
<tr>
<td>• Measurement</td>
</tr>
<tr>
<td>• Percentages and Ratio</td>
</tr>
<tr>
<td>• Finance</td>
</tr>
<tr>
<td>• Matrices</td>
</tr>
</tbody>
</table>

**Assessment**

A number of different instruments are used for assessment:

1. Application Tasks are carried out each semester

2. Skill exercises in each topic followed by a Mastery Test to assess the student's ability to apply these skills in standard as well as more challenging and non-routine situations.

3. Semester examinations covering all topics.
SUGGESTED MATHS PATHWAYS

YEAR 10
SEMESTER 1
Year 10 Foundation Mathematics
Year 10 Mathematics (General)
Year 10 Mathematics A

YEAR 10
SEMESTER 2
Year 10 Foundation Mathematics
Year 10 Mathematics (General)
Year 10 Mathematics A

YEAR 11
UNIT 1/2
Foundation Mathematics
General Mathematics
Further Mathematics

YEAR 12
UNIT 3/4
Further Mathematics
Mathematical Methods
Mathematical Methods & Enhanced Methods/ Specialist Mathematics
Mathematical Methods & Specialist Mathematics

NOTE: Students choosing Foundation Mathematics will not be able to undertake a Unit 3/4 Mathematics Study.

As there are a number of tertiary courses that have a Mathematics 3/4 prerequisite, it is important that students who are considering studying Foundation Mathematics at Year 10 or 11 consult the Careers Counsellor prior to making their final decision.
MODERN HISTORY: Rifles, Rights & Rock n’ Roll

Course Description
Throughout recorded time human beings have explored past events in an attempt to understand their present lives and, perhaps, to develop a theory as to what may happen in the future. By exploring the deeds of those who have gone before we can develop a deep appreciation of who we are now and where we may be headed. This semester of History begins in 1939 with Australia at war and is followed by an exploration into the Civil Rights struggle of Indigenous peoples in Australia. The final unit investigates the impact of other cultures on our own Pop Culture through the mediums of TV, film and music. By the end of this course students will have gained an insight into modern Australia.

Unit 1: Australia in World War II
Unit 2: Rights and Freedoms – The Australian Experience - Indigenous Civil Rights Movement
Unit 3: The Globalizing World - Pop Culture

Historical Skills: During this course students will be required to research, analyse, evaluate, hypothesise, write and argue in a way that explores the conventions of historical inquiry.

Historical Concepts: Students will continue to develop their understanding of historical concepts including: perspectives, continuity and change, evidence, cause and effect and significance.

Assessment
Students may be assessed in any of the following ways:

1. Tests
2. Document analyses
3. Essays
4. Creative responses
5. Oral presentations
6. Reports
7. Historical inquiry
8. Semester examination

Looking ahead to VCE
This course will give students an excellent grounding in History. It links to 20th Century History and Classics in Year 11 and Revolutions and Australian History in Year 12.
DYNAMIC SCIENCE

Course Description

Science and its applications are a part of everyday life. The study of Science is aimed at developing the ability to ask questions and find answers about the natural and physical worlds. This elective provides a solid foundation of knowledge in Biology, Chemistry, Earth and Space Sciences. Students will apply scientific concepts to real life examples and appreciate the dynamic nature of how scientific knowledge has developed using the scientific process. Science has made major contributions to our lives today as contemporary citizens. By completing this unit students will be provided with a solid grounding in the knowledge and skills needed for VCE Sciences.

We will complete the following topics:

Earth and Space Sciences
- The Big Bang theory can be used to explain the origins of the universe. Students will explore how the evolution of the universe, including the formation of galaxies and stars, has continued since the Big Bang.

Chemical Sciences
- Student review atomic structure, learn how to write chemical equations, and investigate chemical reactions and factors affecting their rate.

Biological Sciences
- DNA structure and function will be examined in detail, and the process of acquiring genetic mutations will be explored. Students study the cell cycle and the stages of cell division.

In this semester unit, students will practise and develop skills of observation, analysis, expression and communication. A variety of learning situations will be explored using laboratory work, videos, making models, written assessments, individual work and group work.

Assessment

Assessment is continuous and is based on the following:

1. Participation - co-operative and responsible participation in all aspects of class work
2. Practical Work - carrying out activities and experiments, recording observations accurately and writing scientific reports
3. Written Work - maintaining class notes, homework and worksheets in an organised manner
4. Assessment Tasks - a range of activities, requiring research, experimentation and planning over an extended period of time
5. Topic Tests & Semester examination - consisting of multiple choice and short answer questions
Pathways to VCE Sciences

ALL students are required to complete this unit in either Semester 1 or 2.

Recommendations for undertaking VCE Sciences

**To undertake Year 11 Sciences = 2 Science units minimum**
- Year 11 Chemistry (Dynamic Science & Science of LiFe or Mission to Mars)
- Year 11 Biology (Dynamic Science & any one other unit)
- Year 11 Physics (Dynamic Science & Mission to Mars or Science of LiFe)
- Year 11 Psychology (Dynamic Science & any one other unit)

**To undertake Year 12 Sciences = 3 Science units minimum**
- Year 12 Biology (Dynamic Science, In Sickness & Health & Science of LiFe or Mission to Mars)
- Year 12 Psychology (Dynamic Science, Nature Versus Nurture & one other unit)
SOCIETY & MONEY – S.A.M.

Course Description

*Society and Money* is a semester course designed for students to gain vital understandings of personal financial management, economics and civics and citizenship. All people should know how to budget and how to save for future purchases. They should also be aware of some of the current domestic and global economic issues. Students will need to be aware of their rights and responsibilities in the political and legal spheres of our society in order to be effective Australian citizens.

Unit 1 - Financial Literacy and Digital Disruption

This unit explores ways to effectively manage personal finances, including how to budget and how to avoid credit traps and scams. Students will also study what is meant by ‘digital disruption’ and how this is changing work and the work environment.

Unit 2 - Your Government, Your Rights and Your Responsibility

In this unit of work the focus will be on the three levels of government. Students will explore how a government is elected and how much each vote counts. They will understand the different levels of the courts, the role of the various court personnel and they will visit the Magistrates’ Court. Students will also study the differences between civil and criminal law and the merits of the jury system.

Assessment

1. Budgeting test
2. Economics Investigation
3. Analysis of a current legal/political issue
4. Semester examination

Looking ahead to VCE

This course links to the study of Accounting, Business Management, Economics, Legal Studies and Politics in VCE.
ART

Course Description

Do you want to learn more about art and artists?

Do you want to learn new contemporary art skills?

Year 10 is your opportunity to grow as an artist.

Learn skills using traditional methods, learn techniques used by other artists, explore new ways to apply them. Students will have a chance to use some unconventional methods too.

This is excellent preparation for further studies in VCE Studio Arts, for an art-related career, or to expand art skills to express ideas. Students will also visit exhibitions in galleries and in other unexpected places.

Rewind (Semester 1 or 2)

You will have the opportunity to look back in time and study magnificent Masterpieces, using these as inspiration for your own art making.

Art Production

You will explore and learn about traditional and exciting techniques in drawing, painting or printmaking. You will also complete a visual diary that documents the development of ideas including inspiration, preliminary sketches/designs, experimentation and technical trials demonstrating the development of your finished artworks.

Art Appreciation

You will reflect and respond to the work of classical artists; the likes of Da Vinci, Raphael and Caravaggio. You will be introduced to the Old Masters and their Masterpieces and learn some of their technical secrets. This appreciation will also include first-hand experience by visiting Art gallery/s and seeing artwork ‘in the flesh.’

Everything Old Is New (Semester 1 or 2)

You will have the opportunity to explore vintage and retro artists and styles using these as inspiration for your own art making.

Art Production

You will explore techniques including drawing, collage, printmaking or sculpture and be introduced to innovative ways of making art using recycled materials such as maps and old books. You will also complete a visual diary that documents the development of ideas including inspiration, preliminary sketches/designs, experimentation and technical trials demonstrating the development of your finished artworks.

Art Appreciation

You will reflect and respond to the work of a range of Retro and Vintage artists and use their aesthetics and style as inspiration. You will be introduced to how these artists have responded to their environment to create innovative artworks. This appreciation will also include first-hand experience by visiting Art gallery/s and spaces both physically and online.
Assessment

**Art Production**
- a folio of completed works
- visual diary documenting the development of ideas including sketches, inspirational material, designs and experimentation.

**Art Appreciation**
- written research and analysis of artists and their artwork
- Semester examination
DANCE STYLES

Course Description

Students will explore the different ways of expanding their personal movement vocabulary and choreographic skills. They will also cover the aspect of safe dance practices and anatomical principles involved in dance technique and performance.

Students will study the following:

1. Exploring a range of dance styles through theoretical and practical work. They will use dance elements such as skills, body actions, and processes to structure dance works. Dance styles covered will include Jazz, Tap, and Contemporary.
2. Students will have the opportunity to focus on a particular style that may engage them. Dance is approached as an art form with an emphasis on the creating, making and presenting of dance pieces.

Assessment

Assessment is continuous and based on the work requirements below:

1. **Learnt Group Dance:** In any style of dance suited to the students. Choreographed by the teacher.
2. **Student Choreographed Ensemble Pieces:** Students to form small ensembles of 3 - 5 and choreograph a dance in a style of their own choice. Styles may include hip-hop, jazz or a mixture of styles. They will address elements of space, time and energy, group structures and a variation of body actions and physical skills in composing their pieces.
3. **Cultural Context Dance Making:** Students analyse and workshop specific cultural contexts in the presenting of dance. This can address forms such as African-American Contemporary, Broadway Classical Jazz, focusing on a specific choreographic style.
4. **Safe Dance Practices** Practical and theoretical research into safe dance practices. Devising and presenting a warm-up routine. These will address, in a safe manner, exercises and combinations to develop flexibility and control.
5. **Performance Analysis:** Students are to watch a live performance and/or a video and complete an analysis task.
DESIGN & TECHNOLOGY IN TEXTILES

Course Description
This subject involves students investigating vintage fashion and street style, fashion drawing, producing and evaluating their own sewn projects.

Students can choose Textiles in Year 10 with no previous sewing skills, or they can further develop the skills already acquired in Year 9.

If a student wishes to continue with Product Design and Technology in Textiles in VCE, one or two terms in Year 10 would be an excellent start. Students can choose to complete different units in this subject for Semesters 1 and 2.

Fashion and Style Icons
To start the semester, students refresh machining skills with a small machined project.

The course introduces fashion from the ‘60s, ‘70s and ‘80s as inspiration for summer dress designs. Vintage fashion, including films with Audrey Hepburn as well as fashion by famous vintage designers, are used as starting points for research and drawing.

Students develop an understanding of pattern terms and use production processes and decorative techniques to complete their own garment.

Fashion and Street Style
To start the semester, students refresh machining skills with a small machined project.

The course introduces students to the history of street style photography, concentrating on the late 20th century and the work of Bill Cunningham in New York, followed by street fashion bloggers and fashion subcultures of the 21st century.

Design folios use style bloggers, subculture fashion and urban city centres as starting points for folio research and designs.

Students develop an understanding of pattern terms and use production processes and decorative techniques to complete their own garment.

One small product and garment are completed during the semester, with more experienced students being able to choose garments involving more complex processes.

Assessment
Assessment for each semester will include:

1. small sewn product
2. design folio with design brief, research, design drawings and samples
3. completed garment and evaluation report
4. Examination covering skills and knowledge of the semester’s work
DRAMA

Course Description

In this unit, students focus on modern theatre. We look at the actor in performance from the view of both acting style and stagecraft. Set design, lighting, audio visual and sound are used to explore the performance space.

We look at a range of theatre styles.

**Topic 1: Grotowski: Poor Theatre.**

What if we break through the fourth wall? Have the actors amongst the audience? How can we implicate the audience in the narrative? We look at techniques and participate in workshops to explore this idea.

**Topic 2: Brecht: Epic Theatre.**

Can theatre change the world? One man tried and created this style of theatre to make his audience think about their world and choices in life. We apply his theory to theatre design, interpret playscripts and experiment with non naturalistic acting style.

**Topic 3: Stanislavski: Naturalism.**

This unit is purely focused in the actors workshop where we develop character and layer detail to performance. How can we as actors truly persuade an audience to empathize with a character, with an actor?

Assessment Tasks

1. Poor theatre: group devised performance
2. Epic theatre: theatre design task
3. Naturalism: solo performance
4. Workbook: Production Process
5. Reflective essay
6. Theatre Performance analysis
FOOD TECHNOLOGY

Course Description

This course examines the key nutrient groups and their relationship to the health of the individual. Students look at how to design meals in order to better meet health needs and address the recommendations of a health promotion food selection model.

Students investigate the design process and are given design briefs to respond to with equal emphasis on practical work and related theory. They also look at the impact of a range of factors on changing food consumption patterns.

The course provides practical food production experiences and gives students the opportunity to further develop food skills using complex processes. One of the highlights of this course is the making of camembert, a soft ripened cheese. Students are taught the food chemistry behind this process and, at the same time, learn about the relationship of calcium to better health outcomes.

The content of this course includes:

- Designing, producing and evaluating a variety of food items
- The Australian Guide to Healthy Eating
- Exploring the relationship between nutrition and health
- Diet-related diseases
- Cheese making
- Cooking techniques
- Food science
- Influences on our food choices
- Food allergies and intolerances

Assessment

1. Production performance
2. Test
3. Design brief task
4. Multimedia clip
5. End-of-semester examination
GEOGRAPHY - People, Places & Possibilities

Course Description

Geography is study of the earth’s natural and human environments. It’s about the world you live in and the current, real life things that affect you.

Here’s the journey you’ll take during your semester unit of Geography.

Unit 1 Use It, Change It, Fix It

Investigating environmental change and management

- An exploration of issues related to environmental use, change and management, with a focus on coastal environments
- Excursions include a field trip to the local beach and another Bayside location
- Case studies include an examination of the Maldives and Merimbula

Unit 2 Human Being, Human Doing

Investigating the differences in human wellbeing

- An exploration of issues related to the wellbeing of people in difference places around the world, with a focus on Africa, Asia and Australia
- Excursions include field trips around Brighton to compare living conditions
- Case studies include an examination of Australia and Central Africa

Assessment

- Fieldwork Reports: local area excursions
- Environmental Case Study: planning a sustainable holiday
- Human Case Study: Central Africa
- Semester examination

Looking to the future...Year 11

Year 10 Geography provides students with an introduction to the concepts and skills required for VCE Geography. For students considering studying Units 3 & 4 Geography in Year 11, it is recommended that they undertake Year 10 Geography.

Geography overlaps with so many other areas so it’s a great subject to combine with History, Biology, Legal Studies, Politics, Art, Mathematics, Economics, English; in fact most VCE subjects.
LANGUAGES

Languages set people free - free to explore the world, free to communicate with people from different cultures, free to develop personal and social skills that will stand them in good stead in many areas of life. Over the Year 10 course, as students learn more words and grammar, they will expand the ways in which they can express themselves in the chosen language. They will also gain a deeper understanding of how people interact with each other in different ways. In language studies students will develop tolerance of other cultures through exposure to foreign films, excursions, incursions and hosting exchange students. There are opportunities to participate in exchange programs and experience life in another country. The study of a language in Year 10 opens doors to a future that could take you anywhere.

There are three languages offered at Year 10 level: German, Italian and Japanese.

All three languages may be studied until the completion of VCE. Learning goals and assessments are similar; what is different is the topics covered by each language.

Course Description

By Year 10, students are ready to move into a new phase of their language studies. They have a solid base of language skills developed in Years 7, 8 and 9. At Year 10 students learn to express themselves in a much wider range of realistic situations.

The Year 10 Language courses aim to develop and refine each student’s use of receptive, productive and interactive language, and to further develop self-awareness and a sense of personal and cultural identity.

Learning Outcomes

SPEAKING AND LISTENING

- Uses common social exchanges appropriately with classmates, teachers and guests
- Uses language frameworks to express own ideas
- Reproduces modelled language in structured exchanges, recycling language for new situations
- Listens to spoken texts and identifies key information

READING

- Reads and recognises known words in new contexts
- Extracts key information from short passages
- Reads aloud with appropriate accurate pronunciation and intonation

WRITING

- Appropriately sequences sentences in a paragraph
- Uses linking words to form more complex sentences
- Modifies known language to write on a variety of topics
Assessment

There are four areas of assessment:

1. Listening to, and understanding of, dialogues
2. Participating in conversations and oral presentations
3. Reading and understanding authentic material
4. Complete simple written tasks for communication
   (For Japanese, progress in the script itself is also assessed.)

In addition there are two assessment areas for the Victoria Curriculum:

1. Communicating
2. Understanding

All languages have a semester examination comprising of a listening and written component.
LANGUAGES

LANGUAGE SPECIFIC TOPICS

German
Main topics covered include how to ask for permission, how to order and pay for a meal, health, talking about the weather and describing where you live, as well as cultural events.

Students are expected to be very familiar with the basics of German grammar, so at Year 10 level students are introduced to ways of expressing more complex ideas.

Students who undertake Year 10 German are eligible to apply for a 10 week student exchange to Bavaria, Germany, through the Bayerischer Jugendring (BJR) and the Association of German Teachers’ of Victoria (AGTV).

Italian
Main topics covered include parties and festivals, films and pastimes, holidays, weather, migration, technology and environment.

Students are expected to be very familiar with the basics of Italian grammar, so at year 10 level students are introduced to ways of expressing more complex ideas.

Students who undertake Year 10 Italian are eligible to apply for a school organised study tour to Italy which occurs every 2 years.

Japanese
Main topics covered include life milestones, Language study, healthy and unhealthy fast foods, shopping, country and city life, directions, school trips and part-time jobs.

Throughout the course, students will be challenged to identify the differences and similarities in daily life and culture between Japan and Australia and to reflect on how this impacts on cultural values.

Students at this stage are expected to be very familiar with the hiragana and katakana scripts and it is important that they are able to read and write these characters well. They will be able to use the 48 kanji characters from Year 7, 8 and 9 with greater confidence throughout the course in addition to learning 18 new kanji characters in Semester 1 and 26 new kanji characters in Semester 2.

Students who undertake Year 10 Japanese are eligible to apply for a school organised study tour to Japan, which occurs every 2 years. This tour includes sightseeing of major cultural sights and cities as well as a home–stay experience with a Japanese family.
LAW & ORDER: Juvenile Justice

Course Description
This is a semester unit that will address the law and legal processes around juvenile crime. We will complete the following units:

- Law-making by parliament
- Laws affecting young people, including those relating to mobile phones, stalking, alcohol and public transport
- The court trial
- Civil law and the development of legal precedents
- Punishment through the juvenile justice system

Students will participate in a mock trial to see first-hand how the law actually works. Students have the opportunity to choose the role they will play during the trial. Amongst the key roles are barristers, witnesses and judges.

Assessment
1. Research assignment
2. Tests
3. Analysis of case studies
4. Extended response questions
5. Semester examination
6. A major assessment will be a mock trial court case, to be held at Star, where the students play the roles of lawyers, witnesses and members of the jury. While students prepare for the trial over several weeks, there is significant unpredictability regarding how the trial will actually progress. For those students who love the idea of the law but don’t always love public speaking, there are many very important roles in the trial that don’t involve having to address the court.

Looking ahead to VCE
For students who are considering studying either Legal Studies or Global Politics in VCE, then Law & Order is highly recommended. Students will receive valuable background for the later study of these subjects.
LITERATURE - Essential Reads & Literature Now!

Course Description

The Year 10 Literature course has been totally remade into two exciting units designed to engage and extend readers and writers at Star.

Semester 1: *Essential Reads* students will have the opportunity to read and discuss the sort of texts that people have been talking about for decades (even centuries). Students who study these texts will never need to excuse themselves from future conversations about *Pride and Prejudice* or *To Kill a Mockingbird*. This course will set you up perfectly for future Literature studies and might even enable you to say: “I love the Russians.”

Semester 2: *Literature Now!* provides students with the opportunity to be part of the current literary scene (well, the conversations and debates anyway). We’ll be visiting Melbourne’s best independent theatre, Red Stitch, for the Australian premier of a cutting-edge play. As is fitting with modern literature, students will encounter a range of perspectives from other cultures through novel and film. We will be visiting the Wheeler Centre and take part in the Melbourne Writers Festival.

Students who enjoy reading and watching good films, then discussing, debating and exploring ideas within them will find that these courses are for them.

Students can choose to study one or both units.

The work undertaken in these courses serves as an excellent preparation for Literature in VCE and is highly recommended for those students thinking about Literature in VCE Units 1 - 4.

Assessment

The assessment tasks involve the examination of characters and themes, language structures and both creative responses and analytical writing responses. Assessment is both individual and group work based.

<table>
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<tr>
<th>Semester 1: Essential Reads</th>
<th>Semester 2: Literature Now!</th>
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<tr>
<td><strong>Close Passage Analysis:</strong> <em>Pride and Prejudice</em></td>
<td><strong>Play Review:</strong> Red Stitch Theatre</td>
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<tr>
<td><strong>Creative Response:</strong> Students respond creatively to <em>To Kill a Mockingbird</em></td>
<td><strong>Critical Theory:</strong> selected reading of foreign film</td>
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<tr>
<td><strong>Exploring connections between texts:</strong> ‘The Lady and the Dog’ by Anton Chekhov and ‘The Girl with the Dogs’ by Anna Funder</td>
<td><strong>Close Passage Analysis:</strong> 2017 Man Booker Longlisted novel: <em>Home Fire</em> by Kamila Shamsie</td>
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Some changes may be made to text and task list
MEDIA

Course Description

Year 10 Media is designed for students who are interested in looking at the media from both a practical and theory perspective. The course examines different forms of media and the impact of changing technologies on society. It investigates how we use those technologies to communicate ideas and stories and how technology has changed the way we interact with the media. Students develop media production skills across a range of media platforms.

Areas of Study

Advertising: What sells? How do we reach modern audiences? How do we market products in the digital world? In this unit we look at how advertising has changed and adapted in both traditional and digital markets. Students produce an advertising campaign across a range of media forms.

Film Production: This unit is an introduction to filmmaking, students develop production skills to help create a short film. We look at the history of cinema and draw on this knowledge to help develop the story and technical aspects of our own film production.

Film Analysis: What makes a good film? Is it just the story line? We study a film and look at it from story, production and audience perspectives.

Digital Media: With the rise of digital media everyone has the ability to be media maker. In this unit students research digital platforms. Students create media products targeted to a specific audience.

Assessment

Students will be assessed on the following:

1. Technical Projects
2. Production of a short film
3. Written Analysis
4. Research Tasks
5. Semester examination
MUSIC

Course Description

Music in Year 10 may be elected for one or two semesters as the course is in two distinct parts. A practical and theoretical background such as that covered in the Year 9 Music course is necessary if students are considering this course. Students should be able to demonstrate ability on an instrument, or vocally, and show an understanding of music theory to a minimum Grade 2 standard.

The content of this course is suitable for students with general practical skills in music including those who are considering music as a VCE subject.

It is strongly advised that students considering music at VCE level undertake individual lessons with an appropriate instrumental teacher.

Rockin’ All Over the World (Semester 1 or 2)

The course consists of a study of the following topics:

- Class Band
- A study of World Music
- Creative Organisation (composition and arrangement)
- Musicianship and Aural Training

Assessment

Completion of Work Requirements which include:

1. Participation in class band
2. Creative assignments
3. A research assignment
4. Aural training exercises and tests
5. Semester examination

Get A Job Sha na na na (Semester 1 or 2)

The course consists of a study of the following topics:

- Class Band
- A study of Careers in Music
- Creative Organisation (composition and arrangement)
- Musicianship and Aural Training
Assessment

Completion of Work Requirements which include:

1. Participation in class band
2. Creative assignments
3. A research assignment
4. Aural training exercises and tests
5. Semester examination
PHOTOGRAPHY

Course Description

This course in Photography is being offered as a **single semester study**. Students undertake Photography study as part of a broader course, acting as a pathway for related VCE studies - Studio Arts (Photography) or Media Studies.

Photography is a skill-based process which needs to be understood and practised before imagination and creativity can play a role. Both digital and traditional photographic processes will be explored. Skills which are taught as an integral part of this course are:

- the aesthetics of photography
- elements and principles to compose images
- development of subject matter and ideas
- the theory and mechanics of an SLR camera
- processing film to create negatives
- use of an enlarger to create a contact sheet and prints
- use of a digital camera
- use of Photoshop and scanning software to manipulate digital imagery
- mounting images
- analysis and evaluation of the work of photographers as well as student’s own work

Class time will be divided between classroom theory, where students will look at the work of photographers as well as learning the theories and technical skills involved in creating photographs and safe darkroom practices. Students will become familiar with camera settings, depth of field, framing techniques, different lighting situations, photographic practices and techniques. Students will also work with computers using Photoshop software to produce digital images.

Assessment

Students will be assessed on the completion of:

1. worksheets and assignments
2. the presentation of an annotated workbook
3. a folio of photographs which reflects mastery of the skills studied
4. final photography work mounted
5. Semester examination
PUBLISH & BROADCAST

Course Description

The Publish & Broadcast course is a Digital Technologies and Multimedia elective that introduces students to responsive web site construction and macOS/iOS app design and development in a technology-rich mobile world.

The course integrates the use of numerous software packages for the purposes of publishing &/or broadcasting online content.

Students work through a series of guided practical tutorials designed to develop skills in:

- Web page (site) design and construction using HTML 5 and CSS 3 standards.
- Creating responsive web designs using tools such as “Bootstrap” frameworks and “jQuery” library.
- Introductory app development in laptop/desktop (macOS) and/or mobile (iOS) platforms using software such as Xcode and Swift.

Students will explore and develop ways in which different software types can be used and combined to produce an on-line published document. This will involve the production of a responsive (adaptive) web site suitable for use on digital media ranging from mobile technology to desktop computers. The course will incorporate the use of skills from various software programs from planning and design through to development and evaluation.

Students will also code and create apps for use on Apple laptop/desktop computers (macOS) and/or mobile (iOS) devices. They will gain an understanding of key coding concepts that will become the foundation of their coding (programming) knowledge. Students will be introduced to these coding concepts through guided problem-solving class activities while creating an “App Portfolio” of work. They will be given opportunities to practice and explore concepts and skills learned and reflect upon their coding journey.

Assessment

Students will be assessed according to the completion of:

1. Class exercises
2. Assessment tasks
3. Tests
4. App portfolio
5. Individual projects
6. Semester examination
SCIENCE: Science of Life (Biochemistry)

Course Description

This elective Science of Life (Biochemistry) focuses on the basic requirements for human survival. Students will be introduced to the mechanisms by which humans have survived and evolved throughout history, and the evidence that supports these theories of evolution. Did changes to the human diet over time and the use of fire play a major part in explaining human survival?

The elective will then focus more specifically on the chemistry of food and fuels as sources of energy. Students will examine how the processes of cellular respiration and photosynthesis produce food necessary for energy and survival. The molecules of life - carbohydrates, proteins and fats will be explored. They will learn about their chemical composition, their reactions and why they are such important molecules in sustaining our lives and our Earth into the future. The advantages and disadvantages of fossil fuels as future energy sources will be compared and the environmental and social issues identified. These are some of the concepts that students will explore in this unit that aims to further develop their skills in chemistry and biology.

Areas of Study

- What is evolution?
- The mechanism of natural selection (survival of the fittest)
- Evidence of evolution: fossil record, comparative anatomy, embryology
- Comparative DNA and protein studies
- The steps to speciation and what leads to extinction
- Fossil fuels and impacts of their use
- Investigate how the processes of cellular respiration and photosynthesis produce food and energy necessary for survival
- Energy transformations in photosynthesis and respiration
- The chemistry of food and how food groups are used as energy sources
- Examining carbohydrate groups and whether sugar is a friend or foe in our diet
- Proteins make up body parts from hair to hormones. What other types of proteins are present?
- Catalysts and enzyme action

Through this study, students will practise and develop skills of observation, analysis, expression and communication. They experience a variety of learning situations through the use of practical laboratory work, videos, computer simulations, making models, written assessments, multi-media presentations, individual work and group work.
Assessment

Students will be assessed on the completion of:

1. Practical activities
2. Class exercises and worksheets
3. Survivor challenge and report
4. Topic test & Semester examination

Pathways to VCE

This science elective is designed to prepare students to enter VCE Biology (Year 11) and VCE Chemistry (Year 11).
SCIENCE: In Sickness & Health (Biology & Physics)

Course Description

Diseases affect all of us to some degree, from the common cold to life threatening cancers.

Science is the tool that empowers us to understand the causes of disease and allows us to come up with preventative measures or treatments to stop their spread in our society. Human lives have been saved thanks to scientific researchers developing antibiotics and vaccination programs such as Gardasil that protects women against cervical cancer. This unit offers students the opportunity to extend their scientific knowledge by applying it to the real life context of disease - its diagnosis, defence and treatment.

This science elective will integrate the sciences of biology and physics to give students a comprehensive understanding of how they can work together to solve the problems associated with diseases. Students will undertake practical activities to develop their use and understanding of the scientific method that is essential to senior VCE science studies.

Areas of Study

How is disease linked to your cells?
- Looking at cell structures using a light microscope
- Identifying cell changes that happen when you are infected by a disease
- Learn about different categories of diseases in our society

Cell reproduction, cell death and why cancers refuse to die
- How do healthy cells divide and die?
- Why do cancer cells not follow the rules?
- Looking at the causes of different cancer types and their symptoms
- Breast cancer and the BRCA 1 & BRCA 2 genes

Nuclear medicine and its uses in diagnosing & treating cancer
- What are radioisotopes and how are they used to find and treat certain cancers?
- The use of medical images produced by X rays, MRIs, ultrasounds & PET scans
- Treatments such as surgery, chemotherapy and radiotherapy will be examined

Infectious diseases and the body’s defence system
- Comparing how pathogens like bacteria and viruses invade the body
- The use and overuse of antibiotics leading to the emergence of superbugs
- The innate and specific responses of your immune system against these invaders
Vaccinations, allergic reactions and autoimmune diseases

- How do vaccines protect you from disease? Active and passive immunity
- What goes wrong with your immune system that leads to allergies and autoimmune diseases like multiple sclerosis?

Scientific research is vital in the search for new cancer treatments. This unit gives you the opportunity to either hear from a guest speaker about the importance of this research, or visit the Peter MacCallum Cancer Centre, to see scientific research in action.

Assessment

You will be assessed on the completion of:

1. Practical reports
2. Class exercises & worksheets
3. Topic tests & Semester examination

Pathways to VCE

This science elective is designed to prepare students to enter VCE Biology (Year 11 or 12) and Physics (Year 11).
SCIENCE: Mission to Mars (Physics & Chemistry)

Course Description

At its core, Science gives us an understanding of the universe and our place in it. The exploration of space has demonstrated both the ingenuity of humans and our ability to look deeply into our origins.

In Mission to Mars, students will investigate these big questions in the context of designing a mission to colonise Mars, with a focus on further developing their skills in chemistry and physics.

Students will undertake practical activities and collaborative tasks that will enhance their use of scientific equipment in preparation for senior VCE science studies. They will learn how to work as a team, write formal scientific reports from collected data and analyse their findings accurately to form valid conclusions. These are all vital skills that need to be developed for VCE Sciences.

Areas of Study

- Determining the challenges of travelling to and living on another planet
- The age and composition of the solar system and the formation of the planets
- The chemistry of isotopes, elements, compounds and molecules (acid/base reactions and precipitation reactions)
- The differences between Mars and Earth and how to provide the requirements necessary for survival and colonisation
- The importance of Water and it’s chemistry and the challenges of finding and using water on Mars (electrolysis and combustion reactions)
- Energy Transfer and the laws of thermodynamics and conservation of mass
- The fundamental forces, Newton’s laws and their application to rocket science
- An excursion to the Victorian Space Sciences Education Centre (VSSEC) to complete a simulated mission

Assessment

Students will be assessed on the completion of:

1. Practical reports
2. Collaborative projects & class exercises
3. Topic tests and Semester examination

Pathways to VCE

This elective is designed to prepare students to enter VCE Chemistry (Year 11) and VCE Physics (Year 11).
SCIENCE: Nature versus Nurture (Psychology & Biology)

Course Description


The interaction of our genes and environment make us the individuals we are. Our behaviours, mental health and sleep cycles are all controlled by the mind and body working collaboratively together.

This unit examines the structure and function of the brain and neurons in order to understand the problems that arise with genetic and psychological disorders such as schizophrenia.

Are genes predisposing people to certain psychological disorders? Epigenetics is a new science that looks at whether you inherit already modified DNA from your parents based on their lifestyle choices.

Can environmental stresses experienced in a person’s lifetime lead to different behaviours or characteristics? These are some of the questions that students will explore in this unit that aims to further develop their skills in psychology and biology.

Areas of Study

- Introduction to Psychology
- Structure and function of the brain
- Neuron structure and signalling between neurons (neurotransmitters)
- DNA mutations leading to genetic diseases/neurological disorders
- Genetic profiling for disorders & genetic counselling
- Epigenetics - how our lifestyle choices can alter the expression of our genes
- Examining Sleep cycles and their impact on your health
- Mental health & psychological disorders - schizophrenia, bipolar, depression & anxiety
- Forensic Psychology - why people commit crime?
- Research methodology used in Psychology - Sleep Diary

Students will undertake practical activities and collaborative tasks that will enhance their use of scientific equipment in preparation for senior VCE science studies. They will learn how to work as a team, write formal scientific reports from collected data and analyse their findings accurately to form valid conclusions. These are all vital skills that need to be developed for VCE Sciences.
Assessment

Students will be assessed on the completion of:

1. Practical reports
2. Collaborative projects, class exercises & worksheets
3. Research task
4. Topic tests and Semester examination

Pathways to VCE

This elective is designed to prepare students to enter VCE Biology (Year 11) & VCE Psychology (Year 11 or 12).
SPORTS SCIENCE

Course Description
This course provides students with the opportunity to examine how athletes are better able to understand and improve their sporting performance. Students will study the musculoskeletal, cardiorespiratory and energy systems and identify how these body systems respond to exercise and training. Students will also explore Biomechanical principals and balance and stability that are associated with enhancing sport performance to achieve success.

The Sports Science course has a strong theoretical component and is complemented by relevant and challenging physical activities. These activities have been chosen to enhance students understanding of how the application of sports science can be used to complement physical performance.

Sports Science is designed to introduce students to VCE Physical Education through studies directly linked to key concepts found in Units 1-4.

Areas of Study
- The Musculoskeletal System
- Energy Systems
- How the Cardiorespiratory System Responds to Exercise
- Balance and Stability
- Biomechanics

Activities include:
- Pilates
- Rowing
- Practical activities
- Golf simulation
- Tree top adventure
- Wheelchair basketball

Assessment
1. Practical Report on a selected activity
2. Major Assignment: Analysis of your chosen sport
3. Semester examination
VISUAL COMMUNICATION DESIGN

Course Description

Learn manual and digital skills using different drawing methods to generate ideas and to present concepts. You will use the design process to solve design problems for a range of clients, purposes and audiences.

This is excellent preparation for further studies in VCE Visual Communication Design, for a design-related career, or to expand creative thinking and design skills.

Signature Branding (Semester 1 or 2)

Exploring the fields of graphic design and industrial design, students will learn how to follow the process that designers use to find great solutions, and learn skills using different drawing methods to generate ideas and to present concepts. A range of drawing methods, hand-generated and computer-generated, will be explored, suited to each project and field of design. Projects include packaging design, magazine design and typography design. Students will create surface graphics on 2D packaging nets and develop it to a 3D packaging outcome. Students will be introduced to Photoshop and Adobe Illustrator.

This is excellent preparation for further studies in VCE Visual Communication Design, for a design-related career, or to expand creative thinking and design skills to express ideas. There will be an opportunity to explore examples of design, first-hand, on excursions.

Assessment

For each task, a developmental folio that documents the design process, including reflective annotations.

1. Understanding of the conventions of the design field
2. Final presentations
3. A written research task
4. Analysis of existing design
5. Semester examination

Julia Fullard (Stella 6)  Monique Moor (Ave 3)
Grand Designs (Semester 1 or 2)

In this unit students will focus on architectural conventions and interior design to create a space for a particular need. Technical drawing methods and rendering techniques using copic markers will be used to enhance visual thinking. Students will learn skills using different drawing methods to generate ideas and to present concepts. These will be both manual and digital. The design process will be followed to solve problems for a range of clients, purposes and audiences. As well as generating ideas through sketching, students will be introduced to Photoshop and Adobe Illustrator. Projects include gallery design, shop signage and layout, and learning an appreciation for typography and its role in design.

This is excellent preparation for further studies in VCE Visual Communication Design for a design-related career, or to expand creative thinking and design skills to express ideas. Students will explore examples of the built environment, first-hand, on excursions.

Assessment

For each task, a developmental folio that documents the design process, including reflective annotations.

1. Understanding of the conventions of the design field
2. Final presentations
3. A written research task
4. Analysis of existing design
5. Semester examination