AIMS OF THE PROGRAM

This document outlines the structure of the Academic Extension Program (AE) at Applecross SHS. Our mission is to deliver one of the best Academic Extension programs in the State. Drawing on the experience of our highly dedicated staff, we aim to offer:

- acceleration of the standard Australian Curriculum
- differentiation
- an in-depth focus on developing creativity, problem solving
- introduction of high level Science, Technology and Engineering concepts

CHARACTERISTICS OF THE GIFTED AND TALENTED LEARNER

A Gifted and Talented student may exhibit some or all of the following to varying degrees:

- learns rapidly and quickly grasps new concepts
- has an excellent memory
- is creative or imaginative, e.g. produces many ideas or is highly original
- is independent - may prefer to work alone
- may have a keen sense of humour
- may be highly motivated, particularly in self-selected tasks
- has unusual or advanced interests
- demonstrates exceptional critical thinking skills or problem-solving ability
- may have superior leadership and interpersonal skills
- frequently asks in-depth, probing questions
- may demonstrate a high degree of social responsibility or moral reasoning
- possesses a large, advanced vocabulary
- has superior insight and the ability to draw inferences or is intuitive
- is an advanced reader either in English or in the home language
- engages in academic debates in class
SELECTION OF STUDENTS

Parents who would like to have their child considered for the Academic Extension program need to provide the following information:

- Completed Application Form
- Most recent school report
- Year 5 NAPLAN Results
- Other
  - Primary Teacher/Principal Recommendation
  - PEAC Reports, other academic extension program reports

Based on the information provided, students may gain pre-approval to enter the Academic Extension program. If pre-approval is not granted students will be required to sit an ACER Academic and Talented Program test at an approximate cost of $XX. The tests will be sat at Applecross SHS during the Term two preceding the year of entry.

The School’s decision on suitable candidates will be final.

EVALUATION

Maintaining a place in the Applecross Academic Extension program is based on the ongoing assessment conducted throughout the course. Student performance is reviewed at the end of each semester. Each candidate is then informed of their suitability for continuation in the program.

STRUCTURE OF THE PROGRAM

Students can be enrolled in one or both of the following course choices:

- AE Mathematics/Science
- AE HASS/English

Students are enrolled in the program from Years 7 to 10 with enrolments constantly reviewed during this time based on student performance.

Students may be withdrawn from normal classes 4 times per term for a double period.

Students enrolling throughout the year are able to apply for a placement in the Academic Extension Program.

The mainstream program in each learning area is accelerated and differentiated to challenge all students in each of the four MESH areas.

The program adopts a themed project based model in each learning area.

MATHEMATICS

Year 7-10 Mathematics - Problem Solving

Each of the problem solving strategies will be introduced and explained in class by the AE teacher. The strategies will be developed conceptually throughout Year 7 to 10. All AE Mathematics students will be prepared to participate in the numerous competitions throughout the year. Some require time outside of class to prepare and also to complete.
Year 7
- Creative problem solving
- Fun spots, investigations and challenges based on coursework
- Australian Mathematics Competitions
- Mathematics Talent Quest
- Have Sum Fun Online
- Have Sum Fun Competition for Yr 7 & 8

Year 8
- Art of problem solving strategies are formalised.
- Australian Mathematics Competitions
- Mathematics Talent Quest
- Australasian Problem Solving Mathematical Olympiads
- WA Junior Mathematics Olympiads
- Have Sum Fun Online
- Have Sum Fun Competition for Yr 7 & 8

Year 9
- Additional problem solving strategies
- Australian Mathematics Competitions
- Mathematics Talent Quest
- Australasian Problem Solving Mathematical Olympiads
- WA Junior Mathematics Olympiads
- Have Sum Fun Online
- Have Sum Fun Competition for Yr 9 & 10

Year 10
- Advanced problem solving strategies
- Australian Mathematics Competitions
- Mathematics Talent Quest
- Have Sum Fun Online
- Have Sum Fun Competition for Yr 9 & 10
- Preparatory topics for Year 11
- Australian Maritime College Talks

SCIENCE
Year 7
Humans as Organisms - In this unit students will study aspects of the human body, taking measurements and making observations of various aspects of the human structure. They will make use of this information to classify modern humans using a classification key. This will then be extended to look at features of ancient human skeletons and how they have evolved over time.

Year 7 Science
Prosthetic Limb Technology - In this extension unit students study the technology behind the advanced development of prosthetic limbs. Students study the materials, the concepts of manual and automated control mechanisms and the role of ICT. Students will travel to the Murdoch University. Students will present their prototype of a prosthetic limb.
Year 8
Cells, tissues and organs - In this unit students will have an opportunity to study cell structure and function in detail by observing pre-prepared slides as well as mounting and staining their own slides. They will study the history and development of the microscope with a field trip to look at the most modern microscopes in action. They will also have the opportunity to complete dissections of some organs.

Year 9
Body Systems - In this unit the students will study how organs and tissues are integrated into organ systems. They will study feedback mechanisms and complete experiments to observe the effects. They will research the modern understanding body systems in regard to their structure and function has developed since the time of Galen.

Year 10
Genetics and Inheritance - In this unit the students will study the history of the study genetics from Mendel and his punnet squares to the current day an epigenetics. The ethics of genetics research methods and copywriting of genetically modified organisms will be discussed as well as the impact of genetic modification on modern farming practices. Inheritable characteristics will be explored in terms of dominant and recessive genes and that will lead to an exploration of genetic disorders and their characteristics.

ENGLISH
The Academic Extension Program for English focuses on engaging, challenging and inspiring students who display both talent and passion for the subject.

In order to achieve this, the course provides students with challenging texts and enriched assessment tasks in order to promote higher-order thinking. Students are encouraged to look for nuanced meanings in texts, drawing on an emerging understanding of literary theory to form more sophisticated conclusions. The program also fosters a holistic approach to learning, integrating concepts and skills from other subjects to promote ‘bigger picture’ thinking.

While classes are highly competitive, students are required to work collaboratively to consider new perspectives and develop their interpersonal skills. There is a strong culture of verbal communication, cultivated by rigorous class discussion and debate.

Although the course focuses on analytical work, there are ample opportunities for students to develop their creative writing skills across a range of forms, including poetry, prose and drama. For example, this year, students will be participating in an inaugural series of workshops facilitated by a local spoken word poetry group. Moreover, students are urged to showcase their work in writing competitions and seek feedback to develop their craft.

Through these unique learning opportunities, the course aims to give students a more empowered role in their own education. By recognising individual talents and allowing for greater independence in the learning process, students are inspired to extend their skills and cultivate a genuine passion for English.
Year 7
Students are introduced to Classic Literature based on Greek and Norse mythology. They study the sagas and legends that underpin English literature. Students are given the opportunity to research and present projects using technology. They will make initial exploration of classic English Texts.

Year 8
Students research Drama, Poetry and their historic forms. They are given the opportunity to perform and present using those forms as well as including the basis of film making in their course.

Year 9
The focus is on Australian literature. Students will study bush ballads, a novel engaging with the outback legend and view film literature pertaining to Australian stereotypes. Their creative work will be drawn from this tradition.

Year 10
Students will engage in the study of the Literary Cannon. They will read classic novels and make an in depth study of at least one Shakespearian play. Their research will include the literary notion of ‘readings’ and how to apply this to their texts.

HUMANITIES AND SOCIAL STUDIES

Year 7
Students will study Anthropology and Archaeology throughout Year 7. This will culminate their learned knowledge with a museum visit. Students will be encouraged to critique the exhibits they saw at the museum. They will then use this to design their own museum exhibit, with the potential for these exhibits to be submitted into the National History Challenge.

Year 8
Students will engage in the study of how and why societies change. In semester one they will participate in a Historical Inquiry process, in relation to Medieval Europe. One aspect of this will be the study of castle design and how castles have changed over time. This will prepare them for a study of the Renaissance in Second Semester looking at how individuals have the potential to change societies. In particular there will be a focus on Leonardo da Vinci. Why is he considered a ‘Renaissance Man’ and how can people today (including the students) embody the ideals of a ‘Renaissance Man?’

Year 9
Infographics – Students use the content of ‘Biomes’ to learn how to utilise and create infographics. Using ICT and a variety of tools they both cover the course content and learn the value of visual representations of information.

There will be an opportunity for a collaborative assessment with English looking at values and ethics. This will have a particular focus on Australia, and the democratic process.
Simpson Prize – In this extension unit students have the opportunity to enter the Simpson Prize and win a trip to Turkey. All students produce an essay that requires both primary source analysis and the evaluation of a question relating to Australia’s wartime experiences and commemoration. This process will culminate in students creating an audio visual presentation and entering the Simpson Prize National Competition.

National History Challenge – The National History Challenge requires students to undertake a historical inquiry and create a project on a topic of their choice. Students will be led through the process of a historical inquiry, where possible, interacting with primary sources related to their chosen topic. Finally they will create their entry, which could range from an essay to an art-piece or an audio-visual presentation. A presentation night will be held at the school and a judging panel will select the top 6 entries.

Year 10
In Term One students will organise and conduct the school’s ANZAC day service. There will be opportunities here for students to also prepare an entry into the Premier’s ANZAC tour. Students will produce an environmental management project in conjunction with visits to the Swan River Trust and review and monitoring of the Murdoch-Quenda wetland. Students will also review how the environment links with economics. In second semester, students will also visit the Francis Burt Law Centre and review the core system. In relation to studies of the Law there will be opportunities to participate in the Western Australian Mock Trials competition. As part of the Mock Trial program, students will work with Murdoch University in preparing their cases and will then travel to the Western Australian Supreme Court to compete against other schools.

OPPORTUNITIES BEYOND THE CLASSROOM
Many extension challenges are provided beyond the classroom. Opportunities provided to students:
- Have Sum Fun Mathematics Competition
- Brain B Challenge
- Excursion to Murdoch University Biomedical Facility (All Years)
- National History Challenge
- Simpson Prize
- Premier’s ANZAC Tour Competition
- Possible: Da Vinci Decathlon – 10 events in art, poetry, English, engineering, maths, science, philosophy, code breaking, cartography and general knowledge.
- Book in a Day Competition
- Showcase engineering days (UWA and Curtin Universities)
- Showcase of modern mathematics for Year 9 and 10
- Australian Maritime college talks
- Have Sum Fun Mathematics Competition
- Mathematical Olympiads
- Australian Mathematics Competition
- Australian English Competition

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