

2018 EDITION



APPLECROSS

SENIOR HIGH SCHOOL
INDEPENDENT PUBLIC SCHOOL

Academic Extension Program

YEARS | 7 - 10

Achieve

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Note:

The Academic Extension Program offered by Applecross Senior High School is NOT a GATE (Department of Education Gifted and Talented Program), therefore 'out of area' academic extension applicants WILL NOT sit the academic extension testing.

Students will be required to gain access to Applecross Senior High School via the **usual enrolment application process**. 'Out of Area' applications are based on distance from the school to the student's residential address. The school will decide if any 'out of area' applications will be accepted towards the end of Term 3 of the preceding year of entry. Should an 'out of area' applicant gain enrolment at Applecross Senior High School, their academic performance will be reviewed at that time for entry into the Academic Extension program.

AIMS OF THE PROGRAM

This document outlines the structure of the Academic Extension Program 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

Students will be required to attend a selection process at Applecross SHS which will involve both individual and group tasks. The tests will be sat at Applecross SHS on a date to be advised in the preceding year of entry.

The school's decision on suitable candidates will be final.

Students will be required to gain access to Applecross Senior High School via the **usual enrolment application process**.

EVALUATION

Maintaining a place in the Applecross Academic Extension program is based on the ongoing assessment conducted throughout the course. Student performance is reviewed during 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 all Academic Extension courses:

- Mathematics
- English
- Science
- Humanities and Social Sciences

Students are enrolled in the program from Years 7 to 10 with placement reviewed twice each year based on student performance.

There may be opportunities for cross-curricular activities across Learning Areas.

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 differentiated to challenge the students in each of the four MESH areas. Students will have opportunity to engage in critical learning experiences consistent with the WA Curriculum.

MATHEMATICS

Problem Solving Strategies feature prominently in the Academic Extension courses offered to our students in Years 7 to 10. They are developed conceptually throughout the different years in the program.

There is the opportunity to look at some exciting new advances in robotics and coding in our classes with many outside facilitators visiting our school with varied presentations and interactive activities that allow our students excellent occasions to experiment with new innovations.

All Academic Extension classes will be participating in various competitions throughout the year. There are also many extra events that require students to do some work and preparation outside of class time and the competitions occur outside of school hours. These offer our students excellent opportunities to work together in teams to improve their acquired skills and positions on the teams are highly sought after.

Our school has a rich history in achieving at the highest level in these following tournaments:

Year 7

- Australian Mathematics Competitions
- Mathematics Talent Quest
- Have Sum Fun Online
- Have Sum Fun Competition – Junior Division
- Australasian Problem Solving Junior Mathematics Olympiad

Year 8

- Australian Mathematics Competitions
- Mathematics Talent Quest
- Have Sum Fun Online
- Have Sum Fun Competition – Junior Division
- Australasian Problem Solving Mathematical Olympiads

Year 9

- Australian Mathematics Competitions
- Mathematics Talent Quest
- Have Sum Fun Online
- Have Sum Fun Competition – Intermediate Division
- Australasian Problem Solving Mathematical Olympiads
- WA Junior Mathematics Olympiads

Year 10

- Australian Mathematics Competitions
- Have Sum Fun Online
- Have Sum Fun Competition – Intermediate Division

Also in Year 10 we bring in guest speakers from various occupations that specifically talk about the way they use Mathematics in their work.

We also concentrate on preparing students for the rigours of Mathematics studies in Upper School.

SCIENCE

To reflect the capabilities and aspirations of our students and to give them the broadest experience of the practical applications of science we have chosen a Bio-medical focus for the extension work that our AE students undertake.

The types of tasks that we cover in each year group have been identified to tie in with aspects of the West Australian Curriculum and involve the disciplines of biology, chemistry and physics. We aim to develop the student's capabilities to create new ideas after researching assigned topics, as well as using their problem solving skills and reflecting on their work to facilitate future improvement. We use group work and research tasks to develop the student's ability to work collaboratively and to communicate their ideas to others effectively. We also take part in a number of excursions and competitions such as:

- Murdoch University
- Harry Perkins Institute
- Science and Engineering Challenge
- The Big Science Competition
- The National Australian Chemistry Quiz
- AE camp to Dryandra Woodland and Ridgefield Future Farm

Students will be encouraged to take a multidisciplinary and collaborative approach to their learning with a Biomedical Science theme running through all year groups. The Biomedical science theme will help to provide relative contexts for the learning and will be the springboard for the developing our extension program activities.

The students will be expected to take part in a number of excursions throughout each year to augment their learning as well as National Science Competitions.

Year 7

During year 7 the students will discover how to classify modern humans (ACSSU111) by looking at features of the human skeleton. They will also compare the human and avian skeleton through comparisons of models and the dissection of chicken wings.

The students will also work in small groups to develop their team working skills and their physics understanding whilst building a bridge from straws. They will then move

on to building a fully articulated prosthetic arm using similar materials (ACSHE121).

Year 8

In year 8 the students explore the structure and function of cells (ACSSU149). Modern stem cell research and the biology of cancer (ACSHE134) cells is the main focus of study with a visit to The Harry Perkins Institute to gain hands on experience of modern research techniques.

The students will also produce a research project about the history of the modern compound light microscope, where they will explore the physics of lenses and the chemistry of glass (ACSSU151, ACSSU225).

Year 9

The year 9 students will concentrate on homeostasis and the coordination of systems in the context of the nervous, endocrine and cardiovascular systems. During chemistry the students will investigate the effectiveness of some pharmaceutical compounds such as antacids and aspirin and will determine the correct treatment for a range of bites and stings (ACSSU179). The students will also research the diagnosis and treatment of diseases using modern techniques such as Xrays, CT scans and Gamma rays to add a physics context to study of pathology (ACSSU177, ACSSU182, ACSHE158).

Year 10

In this unit the students will study the history of genetics from Mendel and his punnet squares to the current day applications of 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 as well as the diagnosis and treatment of disease using biotechnological methods.

The students will also spend a day at the Harry Perkins Institute discovering how to unlock the 21st Century Genetics Tool Kit. During the day the students will learn what it is like to work in a modern research facility whilst finding out how medications could one day be tailored to individual needs. The chemistry of DNA and the enzymes that it codes for will be explored with one context being catalysis of reactions (ACSSU187).

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 will not only analyse texts, synthesise the concepts raised, but also make evaluations. 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

Academic extension students will explore more complex concepts of narrative style such as foreshadowing and conflict types. They will also investigate different text choices and developing paragraphing techniques by melding various techniques. They will be encouraged to participate in debating and writing competitions.

In Semester Two their focus will be contextual information and how it impacts on reading a text. These topics include: Slavery, Segregation in America and World War II in the Pacific. They will also investigate multimodal methods of presentation and understanding the techniques of visual texts. In Semester Two, they will produce an anthology of creative classwork to present at a reading event.

Year 8

Academic extension students will use their journals to engage with a wide range of short stories exploring figurative language. They will apply this to creating poetry and short stories using a number of techniques including flashbacks, denouements, symbolism and point of view. They will begin learning skills to analyse film and employ multi-modal skills to present themes and create their own multi-modal texts.

In Semester Two they will focus on contextual concepts and work with Bloom's Taxonomy and how to embed evidence in written response to a number of text types. They will develop the skills required for constructing persuasive essays. The text types studied will include detailed study of a Shakespearean play focusing on voice, set design, costume and symbolic interpretation. These students will be encouraged to participate in debating and writing competitions.

Year 9

Academic extension students study literary texts focusing on symbolism and the importance of context in contributing to understanding. Students will extend their knowledge of persuasive writing through the reading, writing and presentation of a speech. They will also work with IT programmes to construct and present a non-print advertisement.

In Semester Two they will create and maintain an Autobiographical Blog creating anecdotal life stories. They will explore the use of Parody by reading and creating examples. Students will explore the importance of symbolism through film and drama texts and practise developing extended essay responses to that concept. These students will be encouraged to participate in debating and writing competitions.

Year 10

Students will engage in the study of the Literary Canon. They will read classic novels and make an in depth study of at least one Shakespearean play.

Their research will include the literary notion of “readings” and how to apply this to their texts. In Semester One and Two they will create novellas to be published. Students will be given the opportunity and encouraged to submit creative writing to available competitions

HUMANITIES AND SOCIAL SCIENCES

Humanities and Social Sciences incorporates the study of Economics, Civics and Citizenship, Geography, and History. Students in the Academic Extension course for this subject look beyond these four units to common threads that run through them all. Furthermore, this is a subject where skills such as critical thinking, developing arguments, working collaboratively and creativity are regarded highly and encouraged in the classroom.

Students in the extension classes will engage in projects that challenge them and require them to think outside the box. All classes also compete in a variety of competitions, including the Australian Geography Competition, the Australian History Competition, the National History Challenge and have the opportunity to also compete in the Simpson Prize, the Premier's ANZAC tour, inter-school Mock Trials and the World Scholars Cup.

Year 7

In Year 7, the extension students get their introduction into Humanities and Social Sciences through looking at the four units of study through the one lens by asking the question – how can we make a better world?

They will begin their investigation through studying Economics. Students will look at Entrepreneurs and business leaders who have used their skills to improve the world around them. They will create infographics that can be used to teach their peers about the strengths these Entrepreneurs have displayed. Still in the realm of Economics, they will also compete in their own 'Shark Tank' competition, working collaboratively in groups to design a product or business idea and selling it to the class.

Students will also study Ancient History and Archaeology in Year 7. Whilst learning about archaeological techniques and how historians and archaeologists learn about the past, they will conduct their own investigations replicating these skills. This will culminate in students creating their own entries into the National history Challenge, entries in the past including Museum Exhibit designs, websites and audio visual presentations.

Challenging activities are also undertaken in Civics and Citizenship and Geography. Applying what they have learnt in Semester One, students will develop their own strategies to improve the world around them. In particular, in their Geography unit students will learn about 'Water in the World' and will investigate problems regarding water health and supply and will be encouraged to develop creative solutions to these problems. They will also learn about cities and what makes places livable, designing their own 'livable cities'.

Year 8

Students are presented with a range of challenging activities in History, Geography, Civics and Citizenship and Geography. They are challenged to become critical and engaged thinkers. In Geography there is the opportunity to apply theoretical skills in field trips such as the one undertaken to Scarborough and Cottesloe Beaches in 2017 and to hypothesize about the issues facing our coastal regions. Through their geographical inquiries students will learn important research skills, undertaking surveys and gathering their own evidence to support their ideas.

They will also have the opportunity to learn about Medieval Europe in History. Students will undertake an Historical Inquiry and will be asked to think critically about the issues around studying the past. They will engage in a range of creative and collaborative activities that see students using ICT to develop solutions to historical problems. A lecturer from UWA will also visit students as part of their investigation into the social and emotional impacts of the Black Death. In Civics and Citizenship and Economics students research a current consumer issue or a local political or civic issue and develop a proactive plan to address the issue.

Year 9

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 is also a camp to Dryandra Woodland in conjunction with the Academic Extension program in Science.

In history students will learn about the Industrial Revolution and World War One and will be led through the process of a historical inquiry, where possible, interacting with primary sources related to their chosen topic. Furthermore, as part of their study of World War One, they will have the opportunity to develop their persuasive essay writing skills by developing an entry into the Simpson Prize competition.

Year 10

The key theme for Year 10 Humanities and Social Science extension students is Human Rights. Throughout all topics covered through the year students keep coming back to this theme, questioning how Human Rights are protected. The Universal Declaration of Human Rights will be an important primary source document used throughout the year across all contexts. In preparation for Year 11 and 12 the units are modeled on how they would be taught in Upper School.

In Term One students will organise and conduct the school's ANZAC Day Service. This will link with their studies of World War Two. However, in history they will also look at both the African American and Aboriginal and Torres Strait Islander civil rights movements, comparing them and assessing their outcomes.

In Geography, students will produce an environmental management plan following an investigation into environmental change in our local region. Furthermore, they will use data to study how Geography and human wellbeing are intertwined. Students will also review how the environment links with economics and how governments on a global scale co-operate in regards to economics, the environment and other global issues.

In relation to studies of Civics and Citizenship 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. In 2016 Applecross Senior High School had the second highest number of Mock Trial teams of all government schools.