

# SUBJECT SELECTION GUIDE

YEAR 8 GOING INTO YEAR 9 & 10 - 2023



**HILLBROOK**

IN BALANCE WE GROW

# ART

## HOW WILL I BENEFIT FROM STUDYING ART?

Now that you have had a taste of what it's like to design and produce your own artworks, you are ready to learn skills that will never leave you; what it is to be a good artist!

Every part of our lives contain design elements, from our choice of fashion, hairstyles, interior design, websites, ideas of beauty, and so many more. Have you wondered why some designs just seem to 'work' while others don't? It's because the fundamentals of Art have been used well, or not at all. Interested in knowing what they are?

The Art Centre is a safe place where you will learn to explore your creativity, build confidence, solve problems, and understand yourself and the world, no matter what style of learning you work best in. As there is often more than one solution to a design problem, you'll learn to develop your imagination, lateral thinking skills, time management skills, and you will learn to use the building blocks of making and understanding amazing art.

## WHAT IS STUDIED IN YEAR 9 ART?

Students receive one-on-one support in developing their artistic abilities and most students notice a rapid increase in their fine art skill set during this year. Students also experiment with a range of art media and processes including: painting, drawing, mixed media, photography, and sculpture. Activities could include a still life drawing, designing, and creating marketable art of their own choice, painting, photography, mask making, clay sculpture, and more. Students write down their ideas, experiments, and reflections in their Art Visual Diary or as a digital presentation.

## WHAT IS STUDIED IN YEAR 10 ART?

The key themes of Year 10 will see students focus on building skills in time management, creative thinking, decision-making, and problem-solving. These skills translate effectively to other subject areas and to life in general. Year 10 students are no longer Juniors, but are not yet Seniors. At Hillbrook we call this our 'transition' year. The Art Team closely supports this by making artworks that allow each student to reflect on their Junior years and consider their Senior years. Experimentation remains an important focus, with huge numbers of media types being explored and developed.

Students create many artworks: filmmaking & editing, experimental photography, investigational 2D folios (drawing/painting/printing), sculpture, and mixed media. An exciting two years!

## WHAT IS THE ASSESSMENT?

Art has two kinds of assessment: your artworks and documentation (Making) along with written investigation into your own, and others', artworks (Responding). Artworks are assessed according to criteria detailed in the Australian Curriculum Standards for Visual Art.

# BUSINESS STUDIES

## HOW WILL I BENEFIT FROM STUDYING BUSINESS?

Business Studies provides you with real-world experiences. This course delivers information and skills that are applicable both personally and in any career choice. The topic of personal finance will help you learn to manage your own finances in our increasingly complex consumer-driven world. You will gain insights into the life cycle of a business from start-up to post-maturity through inquiry-based learning. In this course you will unleash your entrepreneurial capabilities by developing new business ideas and running your own business. You will learn indispensable accounting skills using both manual and computerised systems.

## WHAT ARE THE TOPICS IN YEAR 9?

- Personal Finance
- Investing in Shares – ASX Sharemarket Game
- Business Life Cycle and Business Strategy
- Running a Business – Introduction to the Functions of Business; Operations,
- Marketing & Finance

## WHAT ARE THE TOPICS IN YEAR 10?

- Introduction to Accounting – including computerised accounting
- Australian Business Week Program – a real-world experience in running a company where students learn vital business, workplace, and life skills
- Business Feasibility Studies – viability of business ideas

## WHAT IS THE ASSESSMENT?

Assessment is varied to suit different learning styles. Types of assessment include: tests, group projects, journals, multimodal presentations, and research assignments.

# DESIGN

## HOW WILL I BENEFIT FROM STUDYING DESIGN?

The study of Design provides you with opportunities to engage in the exploration and production of innovative designed solutions. You will develop your creative thinking and problem-solving skills, through the practical application of design thinking, drawing and prototyping to clearly communicate solutions in response to the analysis of human needs, wants and opportunities.

Design is grounded in real-world experiences and will actively engage you in complex problem solving involving exploring, analysing, developing, producing and evaluating. You will work both independently and collaboratively, to make discerning decisions when envisaging creative products, services and environments. You will also learn about and work with contemporary and emerging technologies, to create quality prototypes and present visual proposals to different audiences. You will learn how to challenge your own thinking, research new knowledge and justify your decisions.

## WHAT ARE THE TOPICS IN YEAR 9?

- Communication Design: Sketching – Rapid Idea Creation (Portfolio)
- Industrial Design (Product): 'I Gift You' Gift Box (Portfolio and Product Prototype)
- Sustainable Design: Design Challenge – Coaster (Portfolio and Product Prototype)
- Communication Design: Typography (Portfolio)

## WHAT ARE THE TOPICS IN YEAR 10?

- Graphic Design: Design Challenge – Logo (Client Pitch)
- Human Centred Design: Accessory (Portfolio and Product Prototype)
- Architectural Design: Client Pitch and 3D Model
- Interior Design: Client Pitch and Mood Board

## WHAT IS THE ASSESSMENT?

- The assessment in Year 9 and 10 requires you to deliver portfolios, client pitches, prototypes, and models.
- The two key dimensions assessed are (1) Knowledge and Understanding and (2) Processes and Production Skills.

# DIGITAL TECHNOLOGIES

## HOW WILL I BENEFIT FROM STUDYING DIGITAL TECHNOLOGIES?

Digital Technologies empowers you to shape change by influencing how contemporary and emerging information systems and practices are applied to meet current and future needs. A deep knowledge and understanding of information systems enables you to be creative and discerning decision-makers when you select, use and manage data, information, processes and digital systems to meet needs and shape preferred futures.

Learning in Digital Technologies focuses on further developing understanding and skills in computational thinking, such as, precisely and accurately describing problems and the use of modular approaches to solutions. You will develop a range of thinking skills such as systems thinking, design thinking and computational thinking.

Digital Technologies provides you with authentic learning challenges that foster curiosity, confidence, persistence, innovation, creativity, respect, and cooperation. You will develop modular solutions to complex problems, and evaluate your solutions and existing information systems based on a broad set of criteria. You will consider the privacy and security implications of how data is used and controlled. Also, Digital Technologies provides you with practical opportunities to use design thinking and to be an innovative developer of digital solutions and knowledge.

The subject helps you to become an innovative creator of digital solutions, effective user of digital systems and critical consumer of information conveyed by digital systems.

## WHAT ARE THE TOPICS IN YEAR 9?

- Systems & Data
- Digital Computer Networks & Cyber Security
- User Interface & User Experience Design
- Lego Robotics
- Algorithms
- Python coding

## WHAT ARE THE TOPICS IN YEAR 10?

- Algorithms and Computational Thinking
- Python coding for game design and development
- Web Design – HTML5, CSS & Bootstrap
- Lego Robotics
- Data – Databases & SQL

## WHAT IS THE ASSESSMENT?

The style of assessments used in Digital Technologies are based on providing solutions to IT scenario-based problems. They are projects, and students work on the tasks during class time.

## THE CRITERIA YEAR 9 & 10 STUDENTS WILL BE ASSESSED ON ARE:

- Knowledge & Understanding
- Digital Systems
- Representation of Data
- Processes & Production Skills
- Collecting, Managing, & Analysing Data
- Defining
- Designing & Implementing
- Evaluating
- Collaborating & Managing

## ASSESSMENT TASKS ARE BOTH INDIVIDUAL AND GROUP AND INCLUDE:

- Projects – product and documentation (multi-modal)
- Practical tasks
- Written tasks – tests, quizzes, and extended response tasks
- Portfolio of work samples

# DRAMA

## HOW WILL I BENEFIT FROM STUDYING DRAMA?

Drama provides a medium for exploration, celebration and entertainment. It enables you to understand yourself and the world around you by looking at contemporary issues and responding to dramatic scripts and performances. The course provides you with knowledge and skills to enable you to understand and experience Drama as an art form. The collaborative nature of the subject gives you opportunities to learn to manage your time and be able to better work in groups.

Drama is a great way to enhance personal confidence and helps you to become better at presenting to an audience.

## WHAT ARE THE TOPICS IN YEAR 9?

- Acting Studies 1
- Shakespeare
- Physical Theatre
- Improvisation/Theatresports

## WHAT ARE THE TOPICS IN YEAR 10?

- Acting Studies 2
- Short Films (script writing and short film production)
- Course Production (involving the presentation of a complete play)
- Theatre for Young People

## WHAT IS THE ASSESSMENT?

Drama has a variety of assessments, but works through three domains.

These are:

1. Forming (creating drama)
2. Presenting (to an audience)
3. Responding (to something that you have read, or that you have seen on stage)

In a semester, you would usually do:

- Two group presentations, based on the unit being studied
- One written task, typically a response to a piece of drama

# ENGINEERING

## HOW WILL I BENEFIT FROM STUDYING ENGINEERING?

Engineering is a course of study which contextualises the Australian Curriculum (Technologies, Mathematics, Science) and prepares students for Senior Engineering. It challenges you to explore open-ended problems and actively construct your learning by undertaking purposeful engineering activities and applying learned technical knowledge, principles, processes, and skills.

The problem-solving process in Engineering aligns with a problem-based framework, requiring engagement with the phases of exploring, developing, generating, evaluating, and refining to mirror real-world scenarios. Engineering allows for the development of critical and creative thinking, communication, collaboration, and teamwork, personal and social skills, and information and communication skills.

## THE MAIN AREAS OF FOCUS THROUGH THE COURSE OF STUDY ARE:

- Engineering Materials Science
- Engineering Mathematics (Mechanics)
- Control Systems (electronics, flow charts, logic)
- Engineering Communication – CAD software (Fusion 360, ArchiCAD)
- Workshop tools & equipment including safe and responsible use
- 21st Century tooling – 3D printers, Laser cutters, CNC routers
- Project-Folio compilation – Presentation & reporting techniques for problem-based learning challenges

## WHAT ARE THE TOPICS IN YEAR 9?

- 3D parametric software – Fusion 360: Modelling, simulation, working drawings
- Architectural Communication – ArchiCAD
- Additive Manufacture – 3D printing
- Laser cutting and etching
- Hydraulics/Pneumatics
- Drones
- Catapults

## WHAT ARE THE TOPICS IN YEAR 10?

Year 10 expands upon the learning experiences from Year 8 onwards with a slight change in course structure with the introduction of more theory (mathematics and materials science) with an examination. This occurs prior to senior subject selection to highlight to students the extent of theory in Year 11 and 12:

- 3D Parametric Software – Fusion 360: Modelling, Simulation, Working Drawings
- Architectural Communication – Archicad
- Additive Manufacture – 3D Printing
- Laser Cutting & Etching
- Foundational Engineering Mathematics & Materials Science Unit (One Semester)

## WHAT IS THE ASSESSMENT?

The problem-based projects in Year 9 and 10 typically span a term and require submission towards the end, of a Project Folio documenting evidence of the learning that has taken place.

For Engineering Communication units (Fusion/ArchiCAD) this will take the form of:

- Engineering Drawings
- Floor Plans
- Stress Analysis/Simulation

For PBL Challenges (drones, catapults, hydraulic arms), this will take the form of a Project-Folio which touches on all phases of the Engineering Problem Solving process (Identified Problem, Explore, Develop, Generate, Evaluate & Refine and Recommended Solution). For the Additive Manufacture unit (3D Printers), this will include:

- A practical component;
- Safety test (onguard); and
- Technical report/project-folio

Year 10: Theoretical Examination on Foundational Engineering Concepts – Materials Science and Engineering Mathematics, in preparation for Unit 1 in Year 11

# FOOD & NUTRITION

## HOW WILL I BENEFIT FROM STUDYING FOOD & NUTRITION?

Creativity is a skill everyone should develop to make life interesting and embrace originality. Working with food can be an enjoyable experience as you produce a variety of products, adding your own creative touch.

This subject will provide opportunities to develop essential knowledge of contexts such as food science, nutrition, food presentation, food production and manufacture. You will also gain experience in developing skills needed for a variety of practical techniques to enhance your culinary skills. The design process will be used to allow you to design and create solutions considering constraints such as seasonal foods and a sustainable future. Project-based learning will be used throughout the course.

If you wish to pursue a career in food related areas such as Food Scientist, Chef, Dietitian, Nutritionist, or Teacher, you will benefit from this subject. Food & Nutrition can benefit further studies in food manufacturing and production or merchandising.

## WHAT ARE THE TOPICS IN YEAR 9?

- Semester 1: The Nutritionist
- Semester 2: The Farmer

## WHAT ARE THE TOPICS IN YEAR 10?

- Semester 1: The Entertainer, The Dietitian
- Semester 2: The Dietitian, The Food Scientist

## WHAT IS THE ASSESSMENT?

There will be two assessment tasks for each semester as follows:

- Written Test
- Project & Product

# GERMAN

## HOW WILL I BENEFIT FROM STUDYING GERMAN?

Languages are the key to the world, and not only help you with international travel, but are also an invaluable asset when applying for jobs later. Employers look for workers who have many skills, and who have shown that they can adapt to different environments. The study of languages has also been shown to increase academic success in other fields, as it develops memory and verbal skills in general.

Every two years, in June/July, Hillbrook takes a group of students studying German to our partner school, Ricarda-Huch-Schule Gymnasium, located just outside Frankfurt, for a 3-week exchange. Students spend two weeks staying with a host family and attending school. During this time, we also arrange school-based excursions to interesting landmarks. The remainder of the trip is spent travelling around Germany. Later in the exchange year, in October, our German exchange partners visit us at Hillbrook and join in with school life here.

Learning a language gives you so much more than language skills; it develops intellect, enhances employment prospects, creates friendships with, and knowledge of, another culture and people. You will have regular access to online listening and reading websites to support your learning. A range of listening and interactive language learning tasks, such as Education Perfect, are posted online@Hillbrook during each unit studied.

## WHAT ARE THE TOPICS IN YEAR 9?

Learning German in Year 9 is contextualised through the following themes:

- Finding Your Way Around Town
- Transport
- Holiday Activities
- Weather
- At Home & Housework
- Daily Routines
- Clothing & Physical Descriptions
- Earning & Spending Money
- Shopping
- Celebrations & Invitations

## WHAT ARE THE TOPICS IN YEAR 10?

Learning German in Year 10 is contextualised through the following themes:

- Free Time & Youth Culture
- Rights & Responsibilities of Teens
- The German School System
- Media & Entertainment
- Traveling & Holidays
- Health & Fitness
- My Home: Urban & Rural Settings
- School Exchanges
- The Environment & Recycling
- Jobs & Future Careers
- Traditions & Special Occasions

## WHAT IS THE ASSESSMENT?

- The four macro-skills of German (reading, writing, listening, and speaking) are assessed in test form
- Comprehension (listening and reading) is tested at least once per semester
- Conveying meaning (speaking and writing) is also tested at least once per semester

# INDUSTRIAL TECHNOLOGY SKILLS

## HOW WILL I BENEFIT FROM STUDYING INDUSTRIAL TECHNOLOGY SKILLS?

Industrial Technology Skills is a course in which you investigate the nature and functions of available materials and resources through the application of inquiry, research, and problem-solving methodologies. You are encouraged to apply your learned knowledge and skills towards the creation of products in a variety of contexts.

The course provides a unique opportunity for you to experience the challenge and personal satisfaction of undertaking practical work in a new and exciting environment. You will hopefully be able to confidently transfer your skills and problem-solving abilities to future life situations. Industrial Technology Skills also aims to assist in the development of fine motor coordination, confidence, and self-esteem through achievement-oriented tasks.

## THE MAIN AREAS OF FOCUS THROUGH THE COURSE OF STUDY ARE:

- Project research, interpretation of technical specs, production planning, and development
- Tools, materials, surface finishing, and sustainability
- Fabrication and resource management of traditional and contemporary technologies
- Construction techniques and planning
- Industrial and personal safety awareness and practices

## WHAT ARE THE TOPICS IN YEAR 9?

- Timber jointing, shaping and finishing are investigated through various contexts.
- Sheet and solid metals fabrication, oxy-acetylene welding and metal forming.
- Typical projects include sheet metal toolboxes, CO2 dragsters, trinket boxes, picture boxes, bolt figurines, and self-designed toys for young children.
- Students are required to identify and understand a problem or need, select appropriate strategies and resources that may solve the problem, implement a plan and then evaluate the practical outcome.
- Through the two-year course, students are exposed to a range of intellectual processes while developing practical skills associated with tools, equipment and safety.

#### WHAT ARE THE TOPICS IN YEAR 10?

- Year 10 expands upon the learning experiences from Year 9, with student responsibility and choice taking an increasingly greater role in the course. The students' knowledge of industrial machinery and associated technologies and awareness of the role of safety is also developed in preparation for senior studies and personal life skills.
- Typical projects include coffee tables/bedside tables, wrought iron candelabras and push kart design and fabrication.

#### TECHNOLOGIES

We are developing Year 9 and 10 student skills using a range of technologies including 3D printers, CNC Routers and Laser Cutters.

#### WHAT IS THE ASSESSMENT?

- The assessment in Years 9 and 10 involves varied types of practical project work supported by appropriate theoretical components.
- The two key assessable dimensions are – Knowledge & Understanding and Processes & Production Skills.

# JAPANESE

## HOW WILL I BENEFIT FROM STUDYING JAPANESE?

Students who learn another language develop cognitive flexibility and problem-solving ability which can be applied not only when problems and solutions are clearly evident, but also when critical thinking and creative approaches are required.

Because of Australia's location within the Asia-Pacific region, it is becoming increasingly important for young Australians to be able to converse with people in their own language. Japan provides Australia with its largest overseas market and opportunities in commerce, technology, law, health care, international relations, tourism, and education are available to students who have a knowledge and understanding of Japanese language and culture.

The range of job opportunities is constantly expanding within the established trade and business links between Australia and Japan. Knowledge of Japanese will establish a career advantage for young Australians. Learning Japanese is a fun and challenging experience that gives plenty of opportunities to develop linguistic skills, as well as a greater understanding of an intriguing culture.

## WHAT ARE THE TOPICS IN YEAR 9?

Learning the Japanese language in Year 9 is contextualised through the following themes:

- Daily Routine
- School
- Fun events at School
- Hobbies
- Anime
- Festivals

## WHAT ARE THE TOPICS IN YEAR 10?

Learning the Japanese language in Year 10 is contextualised through the following themes:

- Milestones
- Languages
- Food
- Shopping
- Free Time
- Neighbourhood
- School Trips
- Part-time Work
- Careers & Aspirations
- Homestay in Australia

## WHAT IS THE ASSESSMENT?

- The four macro-skills of Japanese (reading, writing, listening, and speaking) are assessed in test form
- Comprehension (listening and reading) is tested at least once per semester
- Conveying meaning (speaking and writing) is also tested at least once per semester

# LITERACY & NUMERACY ENHANCEMENT (LANE)

## HOW WILL I BENEFIT FROM LITERACY AND NUMERACY ENHANCEMENT (LANE)?

The LANE program is designed to support students in the development of their literacy or numeracy skills across the curriculum.

Students who select the LANE program will be reviewed and a decision will be made based on the following: feedback from teachers, parents, and applicable staff, NAPLAN and PAT testing, as well as academic achievement and subject data. Class numbers are kept low in order to be of most benefit for students.

## WHAT ARE THE TOPICS IN YEAR 9 & 10?

The LANE program is run in addition to timetabled Mathematics and English classes. Students will study topics which are similar to their classroom Mathematics and English topics. LANE as additional lessons mean that more time can be spent with each student to review and rephrase learning and understanding of the core content.

Our Senior Pathways program in Year 10 helps to prepare students for Years 11 and 12. During the program, which runs in lieu of LANE, students learn time management and organisational skills that help to establish routines and habits for senior. Students also find this a valuable time to work on their current subject load with our Enrichment Centre team, including study skills and assessment preparation.

## WHAT IS THE ASSESSMENT?

There is no homework or assessments set for LANE. At the end of the semester, progress will be reviewed and students will receive a comment from their LANE Teacher.

# MUSIC

## HOW WILL I BENEFIT FROM STUDYING MUSIC?

Music makes life better! In addition to the fundamental artistic benefits of being a musician, our Music course aims to assist you in developing life-enhancing skills in teamwork, self-discipline, and self-confidence. It exposes you to a wide range of musical styles and gives you greater ability to express your opinions of these styles.

You will gain experience in performing within the class environment and also have the opportunity to present your skills to the wider school community. It is expected that classroom music students will be learning an instrument or voice during their period of study. This may be within the school co-curricular program or externally.

You will utilise online music notation software throughout the course to develop composition skills relevant to the area of study. Underpinning course subject matter is development of aural skills.

## WHAT ARE THE TOPICS IN YEAR 9?

Musical skills in Year 9 are contextualised through a study of the following genres:

- Wiggle it! Music for Children
- Program Music
- Jazz Styles
- World Music

## WHAT ARE THE TOPICS IN YEAR 10?

Musical skills in Year 10 are contextualised through a study of the following genres:

- Keyboard Styles
- Chamber Music
- The Popular Song
- Studio Recording Project

## WHAT IS THE ASSESSMENT?

Music operates within three main dimensions in Year 9 and 10. These dimensions are:

1. Musicology
2. Composing
3. Performing

In both semesters, students will be assessed on each of these dimensions. In Terms 1, 2, and 3 there is typically an analysis exam, a composition assignment and a practical performance. In Term 4 there is an enriched task, incorporating multiple dimensions.

# DISCOVERING DATA EXTENSION ELECTIVE

## HOW WILL I BENEFIT FROM STUDYING DISCOVERING DATA?

This latest subject in the project based Aspire series looks at how a number of professions use data to make decisions about important research queries. These questions are examples of the type used when examining and analysing data:

- What services does the Australian population need in 10, 20, 30 years' time?
- What is the price of anonymity and is it worth paying for?
- How do we know whom a new product will appeal to?
- How do we know that a vaccine is effective before we use it on millions of people?

You will learn how to analyse, visualise data, draw conclusions, and present your findings. These skills will be found in many of your senior subjects.

## WHAT ARE THE TOPICS IN YEAR 9?

### Semester 1: Data & Demographics

- What follows the global human population boom?
- How do you design a community that is adaptive to change?

### Semester 2: Data & Sport

- What makes an athlete elite?
- Is a team of champions better than a champion team?

## WHAT ARE THE TOPICS IN YEAR 10?

### Semester 1: Data & Business

- How can trade be win/win?
- How do you value a commercial relationship?

### Semester 2: Data & Health

- What does success look like?
- Is it better to incorrectly tell someone who is well that they are sick or to tell someone who is sick that they are well?

## WHAT IS THE ASSESSMENT?

Project Based Learning is used to assess students in this subject. Students will apply their learnt skills to complete a project in each topic. Responses include: essay, scrubbing and scraping data, graphing, statistics, graphics and coding.

# ASPIRE ENGLISH - ELECTIVE

## HOW WILL I BENEFIT FROM STUDYING ASPIRE ENGLISH?

This English elective is designed for students with creative flair and an interest in writing. The subject allows you to plan activities independently, collaborate, work in teams and communicate ideas as you develop your written expression across a variety of forms. These include journalistic writing, film/script writing, new media, poetic, and narrative writing.

You will develop skills in the process of composing creative texts and apply the extensive drafting, editing, and polishing required to succeed in creating a tightly woven text. Enjoying reading is also a vital part of this course. The subject engages with both canonical and popular texts from a wide range of authors and times.

Each semester, you will produce a major project. Most of these projects will be created in a team. You will have the opportunity to share your work publicly with a variety of audiences. Skills developed in this course will directly benefit all students studying English or Literature in Years 11 and 12.

## STUDENTS WHO ARE CONSIDERING THIS SUBJECT SHOULD:

- Be passionate about English
- Have above average written skills – achieving a B or better in their English work
- Be motivated and independent workers
- Be aware that as a project-based subject, most work is completed in groups

## WHAT ARE THE TOPICS IN YEAR 9?

### Semester 1: Aspire to write like a podcaster

Students focus on developing an understanding of podcasting. In Term 2, students undertake a project, producing a podcast for a particular audience, using the skills developed in Term 1.

### Semester 2: Aspire to write like a poet

Students will read, discuss and analyse a variety of poetry across a range of times and places. They will begin a reflective blog on their readings and publish their own work. Their project will be to show how poetry can still be relevant to your life today through a public performance or publication.

#### WHAT ARE THE TOPICS IN YEAR 10?

##### Semester 1: Aspire to write like a playwright

Read and discuss at least two plays/scripts to analyse the elements of script writing. The group project is to write a one act play suitable for high school students to perform.

##### Semester 2: Aspire to write like an author

Students plan their own project, which must be a substantial piece of work suitable for publication in an online anthology.

#### WHAT IS THE ASSESSMENT?

In a semester, you would usually complete:

- An individual spoken/written creative or reflective task
- One major project

# ASPIRE SCIENCE - ELECTIVE

## HOW WILL I BENEFIT FROM STUDYING ASPIRE SCIENCE?

Aspire Science is an interdisciplinary, project-based subject requiring students to investigate and solve problems. You will engage in a range of individual and collaborative, hands-on practical activities and learn underlying skills across a variety of disciplines. The learning is balanced through student directed and supported projects as well as field excursions, guest speakers and involvement in external competitions.

Students should be passionate about applying Science, and have strong grades in problem solving in Science inquiry skills. Aspire Science will operate as a two-year rotational program. As such, students in Years 9 and 10 will rotate through a range of topical innovation contexts.

## STUDENTS WHO ARE CONSIDERING THIS SUBJECTS SHOULD:

- Be passionate about Science
- Be achieving a B or better in their Science subjects
- Be motivated and able to work both cooperatively and independently

## WHAT ARE THE TOPICS IN YEAR 9?

Year 9 topics are likely to include:

- Simple Machines
- Rube Goldberg Machines
- The Stockholm Water Prize
- Bacteria

## WHAT ARE THE TOPICS IN YEAR 10?

Year 10 topics are likely to include:

- Complex Machine
- Circular Economy and Sustainable Electricity
- Harmonics and Making Musical Instruments

#### WHAT SKILLS WILL I LEARN?

- Literacy
- Numeracy
- Information & Communication Technology Capability
- Critical & Creative Thinking
- Personal & Social Capability
- Ethical Understanding
- Collaboration
- Problem-solving

#### WHAT IS THE ASSESSMENT?

In Years 9 and 10 students will be formally and informally assessed on their capacity to demonstrate the links they have made between concepts and their ability to show how they have worked collaboratively.

# CHOOSING SUBJECTS

The Year 9 - 10 curriculum is structured to give students more electives choice and retain the opportunity to experience a broad range of learning experiences.

## Subject Selection Advice

### DO

Think broadly, gain a wide set of experiences:  
intellectual, practical, creative, individual, and personal

### DO

Think of your talents and interests when choosing subjects

### DO

Give strong consideration to a language other than English  
(Japanese or German). We are a global community  
and languages are a crucial element in this.

### DON'T

Think career or post school courses;  
there is plenty of time for that later.

### DON'T

Focus too much on Year 12 at this early point; that comes later.  
This is a time to engage in a variety of learning experiences, to enjoy them, and to develop  
talents and interests!