

*Respect. Responsibility. Reliability.*

# Year 10

# Subject Selection Guide

## Science

**Head of Department:** Mr Ben Cramp



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# Science

Year 10

## Physics

Prerequisites:  
LEN (C) or ENG (C) YR 9  
Science (C) & MAT (C)

## Chemistry

Prerequisites:  
LEN (C) or ENG (C) YR 9  
Science (C) & MAT (C)

## Psychology

Prerequisites:  
LEN (C) or ENG (C) Year 9  
Science (C) & MAT (C)

## Biology

Prerequisites:  
LEN (C) or ENG (C) YR 9  
Science (C) & MAT (C)

## Aquatic Practices

Prerequisites:  
LEN (C) or ENG (C) YR 9  
Science (C) & MAT (C)

Senior  
Pathways

Physics  
GENERAL SENIOR  
SUBJECT

Prerequisites:  
ENX (C) or ENG (B)  
YR 10 Physics (C) &  
MAX (C) or MAT (B)

Chemistry  
GENERAL SENIOR  
SUBJECT

Prerequisites:  
ENX(C) or ENG (B) YR  
10 Chemistry (C) &  
MAX (C) or MAT (B)

Psychology  
GENERAL SENIOR  
SUBJECT

Prerequisites:  
ENX (C) or ENG (B)  
& MAX (C) or MAT  
(B)

Biology  
GENERAL SENIOR  
SUBJECT

Prerequisites:  
ENX (C) or ENG (B)  
& MAX (C) or MAT  
(B) YR 10 Biology (C)

Aquatic Practices  
APPLIED SENIOR  
SUBJECT

Prerequisites:  
AQP (C)



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## **Subject:** Physics

### **Course Outline:** *Prerequisites ENX (C) or ENG (B) YR 10 Physics (C) & MAX (C) or MAT (B*

Physics provides opportunities for students to engage with classical and modern understandings of the universe. Students learn about the fundamental concepts of thermodynamics, electricity and nuclear processes; and about the concepts and theories that predict and describe the linear motion of objects. Further, they explore how scientists explain some phenomena using an understanding of waves. They engage with the concept of gravitational and electromagnetic fields, and the relevant forces associated with them. They study modern physics theories and models that, despite being counterintuitive, are fundamental to our understanding of many common observable phenomena.



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## Pathways

### Physics General (General Senior Subject)

A course of study in Physics can establish a basis for further education and employment in the fields of science, engineering, medicine and technology.



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## **Subject:** Chemistry

### **Course Outline:** *Prerequisites ENX(C) or ENG (B) YR 10 Chemistry (C) & MAX (C) or MAT (B)*

Chemistry is the study of materials and their properties and structure.

Students develop their appreciation of chemistry and its usefulness; understanding of chemical theories, models and chemical systems; expertise in conducting scientific investigations. They critically evaluate and debate scientific arguments and claims in order to solve problems and generate informed, responsible and ethical conclusions, and communicate chemical understanding and findings through the use of appropriate representations, language and nomenclature. Students learn and apply aspects of the knowledge and skills of the discipline (thinking, experimentation, problem-solving and research skills), understand how it works and how it may impact society.



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## Pathways

### Chemistry (General Senior Subject)

A course of study in Chemistry can establish a basis for further education and employment in the fields of forensic science, environmental science, engineering, medicine, pharmacy and sports science.



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**Subject:** Psychology

**Course Outline:** *Prerequisites ENX (C) or ENG (B) & MAX (C) or MAT (B)*

Psychology provides opportunities for students to engage with concepts that explain behaviours and underlying cognitions. Students examine individual development in the form of the role of the brain, cognitive development, human consciousness and sleep. They investigate the concept of intelligence; the process of diagnosis and how to classify psychological disorder and determine an effective treatment; and the contribution of emotion and motivation on individual behaviour. They examine individual thinking and how it is determined by the brain, including perception, memory, and learning. They consider the influence of others by examining theories of social psychology, interpersonal processes, attitudes and cross-cultural psychology.



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## Pathways

### Psychology (General Senior Subject)

A course of study in Psychology can establish a basis for further education and employment in the fields of psychology, sales, human resourcing, training, social work, health, law, business, marketing and education.





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**Subject:** Biology

**Course Outline:** *Prerequisites ENX (C) or ENG (B) & MAX (C) or MAT (B) YR 10 Biology (C)*

Biology provides opportunities for students to engage with living systems. Students develop their understanding of cells and multicellular organisms. They engage with the concept of maintaining the internal environment. They study biodiversity and the interconnectedness of life. This knowledge is linked with the concepts of heredity and the continuity of life



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## Pathways

### Biology (General Senior Subject)

A course of study in Biology can establish a basis for further education and employment in the fields of medicine, forensics, veterinary, food and marine sciences, agriculture, biotechnology, environmental rehabilitation, biosecurity, quarantine, conservation and sustainability



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## **Subject:** Aquatics

### **Course Outline:** *Prerequisites – AQP (C)*

Aquatic Practices provides opportunities for students to explore, experience and learn practical skills and knowledge valued in aquatic workplaces and other settings.

Students gain insight into the management of aquatic regions and their ecological and environmental systems, helping them to position themselves within a long and sustainable tradition of custodianship.

Students have opportunities to learn in, through and about aquatic workplaces, events and other related activities. Additional learning links to an understanding of the employment, study and recreational opportunities associated with communities who visit, live or work on and around our waterways.



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## Pathways

### Aquatics Practices (Applied Senior Subject)

A course of study in Aquatic Practices can establish a basis for further education and employment in the fields of recreation, tourism, fishing and aquaculture. The subject also provides a basis for participating in and contributing to community associations, events and activities, such as yacht and sailing club races and competitions and boating shows.

