THORNLIE SENIOR HIGH SCHOOL

YEAR 10

Guide to Subject Selection

2020

Introduction

The curriculum at Thornlie Senior High School for students in Year 10 is designed to specifically serve the needs of young adolescents. It is the aim of Thornlie Senior High School that every student has the opportunity to succeed academically so that when they exit secondary school they are literate, numerate, and educated/trained sufficiently well to enable them to take their place in our society as responsible and productive citizens. Thornlie Senior High School strives to foster a caring educational environment based on cooperation, self-responsibility and mutual respect while endeavouring to engage and stimulate students in an ever changing world.

This booklet serves to provide parents and students with the necessary information about the curriculum offerings in Year 10 and to assist students and parents in making informed subject selections for 2020.

Parents and students are encouraged to work together to select an appropriate course for 2020. Should you have any questions regarding course selection please contact the school on 9376 2100 during school office hours (8.00 am – 4.00 pm).

Year 10 Course Selection for 2020

Contents

CURRICULUM REQUIREMENTS

Listed below are the course requirements for Year 10 students in 2020. The curriculum is designed to give students an opportunity to experience subjects from the eight (8) different learning areas. From the following table it can be seen that 19 periods are taken up with compulsory subjects. Students need to select 3 more subjects to ensure they are studying a total of 25 periods per week for each semester.

COMPULSORY SUBJECTS	**NO. OF PERIODS PER WEEK FOR THE YEAR**
English	**4**
Mathematics	**4**
Science	**4**
Humanities and Social Sciences	**4**
Physical Education	**2**
Health Education	**1**
3 electives must be chosen with a <u>maximum of two</u> from any one learning area	
The Arts	
Languages	
Physical Education	**NOTE: Only one specialised elective may be chosen**
Science - STEM	
Technologies	
TOTAL ELECTIVE PERIODS PER WEEK	**6**
TOTAL PERIODS PER FOR THE YEAR	**25**

Note:
It is not guaranteed that students will be able to be enrolled in **all** of their requested subjects due to resource and timetable constraints.
If a student selects a high cost elective their enrolment is only guaranteed when their school fees are paid in full.
Failure to pay will result in the student being withdrawn from the subject or being unable to participate fully in the subject.
Please complete the student choice selections thoughtfully as the ranked list for each learning area will assist in placing students in the next available subject.

SPECIALISED AND SCHOLARSHIP PROGRAMS

Thornlie Senior High School offers the following Specialist and Scholarship programs:

- Specialist Rugby
- Academic Excellence
- Instrumental Music

Students indicated their interest in one or more of these programs on entering Year 8 and participated in testing, auditions and trials. Students participating in these programs are invited to continue with the program, if achieving satisfactory progress, through to the completion of Year 10. Other students performing well outside the program may be offered a position in programs in English, Mathematics, Science and Humanities and Social Sciences.

:: Online Literacy and Numeracy Assessment (OLNA) ::

In January 2013, the Western Australian Minister for Education Peter Collier MLC students entering senior school in 2015 and beyond would need to demonstrate a minimum standard of literacy and numeracy to achieve their Western Australian Certificate of Education (WACE) from 2015. This followed feedback from employers and training providers about the low literacy and numeracy capabilities of some school leavers.

All Year 10 students will be required to undertake the OLNA testing during school hours in Term 1 2020 unless they have prequalified due to their NAPLAN results (see below). Students will undertake three (3) tests – Numeracy, Reading and Writing – each test will be taken under test conditions with teacher supervision using the school computers and all have a working time of one hour.

Demonstrating the minimum literacy and numeracy standard
The minimum standard in Numeracy and Literacy is Level 3 of the Australian Core Skills Framework (ACSF).

There are two ways that students can demonstrate the standard:

1. **Prequalification** through Year 9 NAPLAN
   Students who achieve Band 8 or higher in Year 9 NAPLAN Reading, Writing or Numeracy assessments will be prequalified for that component and will not be required to sit the corresponding OLNA component.
   NOTE: If a student achieves Band 8 for Reading and Writing but not for Numeracy, he/she will only be required to sit the OLNA Numeracy component of the assessment.

OR

2. demonstrating the minimum standard through the **OLNA**.

The OLNA is compulsory for those students who have not prequalified in one or more of the components through Year 9 NAPLAN and want to achieve the WACE.

Students who do not prequalify before Year 11 may find themselves in a position where certain Year 11 and 12 courses are not available for them to select. Students will have up to six opportunities (two per year) between Year 10 and Year 12 to demonstrate the literacy and numeracy minimum standard.

Students with a language background other than English, who arrived from overseas and have been attending school in Australia for less than a year before an OLNA assessment period, will be given the opportunity to participate in order to achieve a WACE, but may postpone participation until they have either been in Australia for 12 months or have entered mainstream schooling from an Intensive English Centre.

If you do not pass all three components of OLNA by the end of Year 12, you will not achieve WACE

BIG PICTURE ACADEMY

The philosophy of Big Picture is grounded in educating "one student at a time." It promotes and creates personalised education programs that are unique for each student.

These plans are crafted by students with guidance from their teacher, parents and possibly their industry internship mentor. The learning plan identifies the student's interests and strengths linked to the Big Picture Learning Goals, which then generates authentic project work. The learning plan is reviewed and updated each term. Literacy and numeracy needs are attended to throughout this process.

Students attend the Big Picture Academy when they would usually attend Maths, English, Science, HASS and Health Education. These essential subjects will be taught and shaped around each individual student's interests. Students will attend elective classes, such as Physical Education, Art, Metalwork etc.

Upon entry to the academy, each student will develop their Individual Learning Plan (ILP) which will form the foundation of their work. Each ILP will be tailored to meet the interests and needs of the individual student.

As each student's learning journey in the Big Picture Academy progresses, they will be required to organise and attend an internship with an external business/company within the community. Students will be partnered with a mentor within the workplace who will assist in the consolidation of the student's learning and provide learning opportunities outside the confines of the classroom. It is envisaged that students will attend their internship 1-2 days per week.

During Big Picture Academy class time students work on their individual projects which will form part of their extensive portfolio of findings and information. At the end of each term students will present their findings by way of an exhibition which demonstrates everything that the student has learnt. An exhibition is a highly accountable learning assessment. The students are required to present and defend their learning to their parents, advisory teacher, mentor and other students.

The individual portfolios and internships are integral to the post school pathways for Big Picture Academy students. Internships can (and often do) lead to students gaining employment or apprenticeships. Portfolios can gain students entry into pre-apprenticeships, TAFE or even university.

Students who are interested in applying for the Big Picture Academy need to contact Mr Norcliffe to receive an application form. On completion of the form students are required to attend an interview with their parents/guardians.

Big Picture Academy

THE ARTS

In the Arts Learning Area, students develop creative skills, critical appreciation and knowledge of artistic techniques and technologies in Dance, Drama, Visual Arts and combinations of arts forms. The Arts develops students' sense of personal and cultural identity and equips them for lifelong involvement in and the appreciation of the arts.

DANCE - 10DAN

This course provides an introduction into the Senior Secondary Dance Education. Students will establish an understanding of the important role that dance plays in society. Through participation in the Dance course, students develop transferable skills essential to their future. These include communication skills, collaborative teamwork skills, negotiation and conflict resolution skills, problem solving skills, as well as the ability to organise, analyse and evaluate. Participation may lead to opportunities for future study in dance, fitness or related arts fields.
Key learning activities in this course concentrate on choreography, performance and reflection. This course focuses upon on developing strength and flexibility in genres that include Jazz, Tap, Acrobatics, Cheerleading, Pom, Contemporary, Lyrical and Cultural Dance.

Students experience an intrinsic sense of enjoyment and personal achievement through expressing and challenging themselves physically. As a physical art form, dance is able to offer an opportunity for them to achieve an elite level of movement skills. It is essential that students demonstrate safe dance practices and understand health issues that will enhance their general physical well-being and prolong their dance involvement.

PIANO KEYBOARD MUSIC -10PKM

This course provides the beginner musician as well as developing music students with an opportunity to enhance their musical skills through piano keyboard performance. Music literacy, listening activities and ensemble work will be covered through the medium of performance. Students will each have access to their own individual keyboard with headphones in our lab to allow them to each work at their own pace and level of ability.
Students will learn the note names of the keys, the correct fingering technique for playing pieces of piano music with 2 hands as well as melody and chord work.

Students who have an instrumental or vocal music scholarship with our SIM program are welcome (and encouraged) to enrol in this subject to extend their music training but must also enrol in the scholarship music class as a compulsory requirement to participate in the free lesson program with SIM. Please consider this carefully before making subject selections.

INSTRUMENTAL MUSIC – 10IM

This course continues the specialised program for all students that hold an instrumental or voice scholarship that is run through the School of Instrumental Music program. The course is designed to provide intensive training in music throughout the areas of Aural and Musicianship, Theory and BMK, Arranging and Composing and the History of Music. The course will be delivered through a contemporary music program and students will be striving to arrange and perform the music of others as well as composing and performing original songs.

Students in this course will also be introduced to units that focus on working in the music industry by giving them opportunities to plan and manage the staging of live performances, focusing on the aspects of sound, lighting, recording and stage production in order to put on live concerts and shows.
Students that play an instrument or have confidence as a lead singer that have not participated in the SIM program are welcome to enrol.

GRAPHIC DESIGN - 10GD

Students are introduced to a range of basic design processes and practices as well as design materials. Students learn the basic drawing skills and techniques used in commercial design. This can include the advertising sector, book and magazine illustration, brochure design, logo design, posters, leaflets, typeface design and Adobe Illustrator/Photoshop Tutorials.

This course includes elements in, for example, the use of colour, digital media, interactive media, graphics technology (including 3D), technical graphics (manufacturing a product and its packaging) and visual communication. Whilst these fields share a common link through digital technology, Graphic Design also includes traditional 2D media, such as screen-printing.

The Arts

Year 10 Graphic Design provides opportunities for practical and well supported learning to help students develop skills required to successfully continue their education in the Design units for Year 11 and 12. The Year 10 Graphic Design assessment covers three points:

- **Arts Ideas** and **Art Skills & Practice**
  Tasks can include drawings, computer tutorials; using Adobe Illustrator / Photoshop and / or using design briefs to create finished practical projects.
- **Art Responses**
  Tasks can include writing/drawing tasks; analysing and reflecting about different designers and their work. Learning about the use of elements and principles of design
- **Arts In Society**
  Research / Investigation tasks; where students research subject matter to influence their design work. This can involves writing short answers to extended answers, collating images, materials, etc. or small practical tasks

MEDIA – 10MED

Students accepted into this exciting course use the latest technologies as they work in area such as film and TV, animation and multimedia.

Arts Media students will develop skills, as they work independently and in teams, in areas such as scriptwriting, camera operation, digital editing, digital photography, digital sound and multimedia.

By doing the Arts Media course students develop the skills, self-discipline, creativity and confidence that are required in the upper school Media Production courses and the media industry.

VISUAL ARTS - 10VA

In Year 10, students will learn to use visual language and artistic conventions, in both written and practical work. They will further develop and refine their ideas and techniques to resolve artworks by documenting the design, production and evaluation processes. Students will extend their knowledge of art practices, and use their understanding of a variety of art styles in the making of their 2D and 3D artworks. They will be encouraged to increase their knowledge and practise of safe and sustainable visual arts practice. Students will produce finished artworks to be exhibited and evaluated, with consideration to their own artistic intentions, personal expression, and audience.
Students will be encouraged to develop greater understanding of how contexts of culture, time and place impact on the development of ideas and production of art forms. They will continue to explore artistic influences, while being encouraged to express greater individualism in their application of ideas and materials.

ENGLISH

In the English Learning Area, students learn about the English language - how it works and how to use it effectively. They develop an understanding of the ways in which language operates as a social process and how to use language in a variety of forms and situations. They learn to speak, listen, view, read and write effectively.

English is a **compulsory** course and all students will study English for **four** (4) periods per week for the year. English courses at Thornlie Senior High School are designed using the Australian Curriculum. These courses are also designed to facilitate a smooth transition into upper school courses.

The English curriculum is built around the three interrelated strands of language, literature and literacy. Teaching and learning programs should balance and integrate all three strands. Together, the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

In Years 9 and 10, students interact with peers, teachers, individuals, groups and community members in a range of face-to-face and online/virtual environments. They experience learning in familiar and unfamiliar contexts, including local community, vocational and global contexts.

Year 10 Achievement Standard

Receptive modes (listening, reading and viewing)

By the end of Year 10, students evaluate how text structures can be used in innovative ways by different authors. They explain how the choice of language features, images and vocabulary contributes to the development of individual style.

They develop and justify their own interpretations of texts. They evaluate other interpretations, analysing the evidence used to support them. They listen for ways features within texts can be manipulated to achieve particular effects.

Productive modes (speaking, writing and creating)

Students show how the selection of language features can achieve precision and stylistic effect. They explain different viewpoints, attitudes and perspectives through the development of cohesive and logical arguments. They develop their own style by experimenting with language features, stylistic devices, text structures and images.

Students create a wide range of texts to articulate complex ideas. They make presentations and contribute actively to class and group discussions, building on others' ideas, solving problems, justifying opinions and developing and expanding arguments. They demonstrate understanding of grammar, vary vocabulary choices for impact, and accurately use spelling and punctuation when creating and editing texts. An overview of the tasks students are required to complete is given below.

English – 10EN

The English curriculum is built around the three interrelated strands of language, literature and literacy. Teaching and learning programs should balance and integrate all three strands. Together, the strands focus on developing students' knowledge, understanding and skills in listening, reading, viewing, speaking, writing and creating. Learning in English builds on concepts, skills and processes developed in earlier years, and teachers will revisit and strengthen these as needed.

English

HEALTH AND PHYSICAL EDUCATION

Health and Physical Education is a **compulsory** course. All students will study Health Education for one (1) period per week, **and** two (2) periods of General Physical Education. Students may also select **one** of the specialised electives for two (2) periods a week if desired.

In Year 10, the content provides students with the opportunity to begin to focus on issues that affect the wider community. They study external influences in health decisions and evaluate their impact on personal identity and the health of the broader community. Students continue to develop and refine communication techniques to enhance interactions with others, and apply analytical skills to scrutinise health messages in a range of contexts.

In continuing to improve performance, students transfer learned specialised movement skills with increasing proficiency and success across a variety of contexts. They use feedback to improve their own and others' performance with greater consistency, and critically evaluate movement responses based on the outcome of previous performances. Through the application of biomechanical principles to analyse movement, students broaden their understanding of optimal techniques necessary for enhanced athletic performance.

Students self-assess their own and others' leadership styles and apply problem-solving approaches to motivate participation and contribute to effective team relationships. They are also provided with opportunities to assume direct control of physical activities in coaching, coordinating or officiating roles.

The Health and Physical Education curriculum provided opportunities for students to develop, enhance and exhibit attitudes and values that promote a healthy lifestyle.

Please do not hesitate to contact the Health and Physical Education Department at school if you require any further information regarding this on 9376 2100 - Extension 218.

P.E. Uniforms: Parents need to be aware that all students must change for all Physical Education classes. Students are required to wear a plain royal blue shirt, plain black shorts or track suit and sports shoes. "Thornlie SHS" PE shirts and shorts are available for purchase through the uniform shop.

COMPULSORY HEALTH & PHYSICAL EDUCATION SUBJECTS

HEALTH EDUCATION - 10HE
Students identify and apply relevant criteria to determine reliability of online health information and whether it is suitable for use in a particular context.

Students evaluate a range of characteristics of respectful relationships, such as showing respect for self and others, and personal differences and opinions.
They describe and apply appropriate skills and strategies to resolve and manage conflict within different environments.

Topics include
Semester 1: Drugs & Alcohol, Keys for Life.
Semester 2: Mental Health, First Aid, Contraception & STIs and Nutrition.

PHYSICAL EDUCATION GENERAL - 10PE
Students perform a variety of individual movement skills and sequences demonstrating improved control, accuracy and efficiency in their performance. In competitive contexts, they implement a variety of tactics to achieve an intended outcome.

Students provide simple descriptions on how to measure heart rate and breathing rate in response to changes in physical activity. They use simple terms to describe linear, angular and general motion when reflecting on ways to improve performance outcomes. When faced with movement challenges, they select and implement simple tactical responses to achieve an intended outcome.

Sports include
Semester 1: Volleyball, Basketball, Softball and Soccer.
Semester 2: Athletics, Touch Rugby, Badminton and Tennis.

Health & Physical Education

SPECIALISED PHYSICAL EDUCATION ELECTIVES

All of the following Specialised Physical education courses are high cost units due to bus use, hire of venues, hire of outside instructors and the use of specialised equipment. The subject charges are compulsory. A deposit of 50% of your school fees is required before your child can participate in the courses.

GIRLS JUST FOR YOU - 10GJY

This course incorporates some unique practical experiences, but also has a theory focus, which concentrates on self-esteem, positive body image, nutrition and fitness for teenage girls. Activities include Boxing, Zumba, yoga, aerobics, walking, rock climbing, ten-pin bowling and a make-up course.

As places in this course are limited and students are often off campus using public facilities, students who choose this course must **have** and **maintain** a record of exemplary behaviour. Also for identification while at external venues students must wear the "Thornlie SHS" P.E. shirt.

NETBALL - 10NET

Prerequisites: Students ***must*** be a competent netball player and have an interest and desire to improve their skills.

Year 10 Netball works to consolidate and extend students skills, tactical knowledge and fitness for netball. Students will work to improve coaching knowledge along with individual and team netball techniques. Students will also have the benefit of occasional guest coaches from Netball WA.

From this course, students will be selected to represent Thornlie Senior High School at interschool tournaments and matches. Students are expected to participate in all classes and any associated training or match activities.

OUTDOOR EDUCATION - 10OED

This course is designed for the student who has a strong interest in the outdoors. It allows them to achieve the Health and Physical Education outcomes in a non-sporting context. Students will take part in activities which include; Survival Swimming, Snorkelling, Canoeing, Orienteering, Mountain Biking, Rock Climbing, Abseiling and Camp Preparation. This course is a great introduction for any student thinking of choosing Outdoor Education in Years 11 and 12.

As places in this course are limited and students are often off campus using public facilities, students who choose this course must **have** and **maintain** a record of exemplary behaviour. Also for identification while at external venues students must wear the red "Thornlie SHS" Outdoor Education shirt which can be bought through the Physical Education office.

Please note that as the first half of the course is water based, students choosing Outdoor Education **must be a confident and competent swimmer.**

PHYSICAL RECREATION - 10PR

This course provides students the opportunity to achieve the H + PE outcomes in a non-competitive environment. It is designed to give students experiences in a variety of recreational pursuits. These include: Beach Volleyball, Floor Ball, Badminton, Lawn Bowls, Ten Pin Bowling and Pot Black.

As places in this course are limited and students are often off campus using public facilities, students who choose this course must **have** and **maintain** a record of exemplary behaviour. Also for identification while at external venues students must wear the "Thornlie SHS" P.E. shirt.

Health & Physical Education

SPECIALISED RUGBY - 10RDP

This course is designed as a continuation of the Year 9 Specialist Rugby Development Program and provides a progression into higher level skill development and knowledge in Rugby Union, Rugby League, Touch and League Tag for Year 10 players.

Students will continue to receive expert tuition from Thornlie SHS Rugby Academy staff, RugbyWA and NRL Junior Development Officers, guest coaches and speakers. Our aim is to continue to develop each student's individual skills, physical fitness, game abilities, and knowledge, so that they may reach their full potential in their chosen code. Within this program we will continue to place an emphasis on personal goal setting, values and leadership skills. Individuals will also be given an opportunity to learn and apply the different officiating skills at matches and carnivals and may choose to obtain entry level qualifications in a particular area e.g coach / referee. Students will once again have the chance to gain selection into one of our school representative teams and compete in one or more of the Union, League, Touch and League-Tag inter-school competitions and carnivals held throughout the year.

Selection Criteria

Successful applicants will need to meet one of the criteria listed below

- **Successful** completion of the Year 9 Specialist Rugby Course with a final assessment grade of C or higher
- **Hold** a current Rugby Scholarship or Traineeship at Thornlie SHS, having displayed a high standard of performance and behaviour in the Year 9 program
- **Be** offered a Talent Identification Scholarship, having attended both a specific skills assessment and an interview with School and Academy Co-ordinators.
- **Be** offered general entry into the program having displayed a keen interest in and suitable physical skills for Rugby Union and Rugby League. **P.N**: This type of entry is only possible should a vacancy exist in the class.

Health & Physical Education

HUMANTIES & SOCIAL SCIENCES

The Humanities and Social Sciences Learning Area develops students' understanding of how individuals and groups live together and interact with their environment. Students develop a respect for cultural heritage and a commitment to social justice, the democratic process and ecological sustainability.

Humanities & Social Sciences is **compulsory** for all students in Year 10. Students will study HASS for **four** (4) periods per week for the year.

Humanities & Social Sciences aims to provide students with the skills, understandings and values to be effective citizens in Australian society.

HUMANITIES & SOCIAL SCIENCES - 10HASS

In Year 10 Humanities and Social Sciences consists of Civics and Citizenship, Economics and Business, Geography and History. Students develop increasing independence in critical thinking and skill application, which includes questioning, researching, analysing, evaluating, communicating and reflecting. They apply these skills to investigate events, developments, issues and phenomena, both historical and contemporary.

- **Civics and Citizenship**
  Students continue to build on their understanding of the concepts of democracy, democratic values, justice, and rights and responsibilities by exploring Australia's roles and responsibilities at a global level and its international legal obligations. They inquire in to the values and practices that enable a resilient democracy to be sustained.
- **Economics and business**
  Students are introduced to the concept of economic performance and living standards while continuing to further their understanding of the concepts of making choices, interdependence, specialisation, and allocation and markets through examining contemporary issues, events and/or case studies delving into the reasons for variations in the performance of economies. They explore the nature of externalities and investigate the role of governments in managing economic performance to improve living standards. They inquire into the ways businesses can manage their workforces to improve productivity.
- **Geography**
  The concepts of place, space, environment, interconnection, sustainability and change continue to be developed as a way of thinking, through an applied focus on the management of environmental resources and the geography of human wellbeing at the full range of scales, from local to global and in a range of locations.
  There are two units of study in the year 10 curriculum in Geography, Environmental Change and Human Well-being. Students will undertake an in-depth study of a specific environment to examine changes. They also examine different concepts and measures of human well-being.
- **History**
  Students develop their historical understanding through key concepts, including evidence, continuity and change, cause and effect, perspectives, empathy, significance and contestability. These concepts are investigated within the historical context of the modern world and Australia from 1918 to the present, with an emphasis on Australia in its global context. The focus of study will be World War Two and the Civil Rights Movements in America and Australia.

Humanities & Social Sciences

LANGUAGES

In the Languages Learning Area, students learn to communicate effectively in languages other than English. They gain an understanding of other societies, the ability to interact with people and cultures other than their own and practical skills which they can use in future social, cultural and vocational areas. Through languages, students are also able to further develop their skills and understandings in English and literacy in general.

Languages are an integral part of a balanced academic course of study. Thornlie Senior High School encourages all students with an aptitude and interest in languages to continue their studies into Year 10 and beyond.

JAPANESE - 10JSL

An additional language is a valuable asset in a rapidly globalising Australia. Being able to communicate with people around the world gives students the chance to learn more about their own lives, as well as the lives of others. Japanese has been taught in Australia for over 100 years and is the most widely taught second language in Australian schools.

Japan is one of Australia's closest friends in our Asia-Pacific neighbourhood. Japan remains our second-closest trading partner, and Japanese-speaking Australians are highly-valued employees all over the world.

Japan and Australia participate in close cultural exchange. From dance to painting, music to sport, learning more about Japanese language and culture will open students' eyes to a history and people that are constantly changing, and always fascinating.

In Year 10, students will build on the language skills they acquired in Year 9, and explore the culture and language of Japan through the topics of school life, family and holidays.

High achievement in this course will set students on a course to complete Japanese: Second Language in Years 11 and 12.

PLEASE NOTE THAT ENROLMENT IN YEAR 10 JAPANESE REQUIRES COMPLETION OF YEAR 9 JAPANESE.

Languages

MATHEMATICS

In Mathematics, students learn to use ideas about number, space, measurement and chance. Students will use mathematical ways of representing patterns and relationships, to describe, interpret and reason about their social and physical world. Mathematics plays a key role in the development of student' numeracy and assists learning across the curriculum.

Mathematics is **compulsory** with all students studying Mathematics for **four** (4) periods per week for the year.

Students in Year 10 will be exposed to mathematical concepts appropriate to the ability range of the students.

The class allocation (based on Year 9 achievement) will provide students with the maximum opportunity to progress and demonstrate achievement.

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MATHEMATICS - 10MA

By studying Mathematics, students develop the ability to

- appreciate the essential role mathematics has had, and continues to have in their lives, and that of the community
- demonstrate interest, enjoyment and confidence in the pursuit and application of mathematical knowledge, skills and understanding to solve everyday problems
- use mathematical thinking processes and skills in interpreting and dealing with mathematical and non-mathematical situations.
- explore and apply Problem-Solving strategies when dealing with situations when no solution method is obvious, and the solution method is not given in advance.
- demonstrate perseverance in undertaking mathematical challenges
- describe and analyse mathematically the spatial features of objects, environments and movements.
- use direct and indirect measurement and estimation skills to describe, compare, evaluate, plan and construct.
- use their knowledge of chance and data handling processes in dealing with data and with situations where uncertainty is involved.
- use numbers and operations and the relationships between them efficiently and flexibly.
- use algebraic symbols, diagrams and graphs to understand, to describe and to reason.

Mathematics

SCIENCE

In the Science Learning Area students learn to investigate, understand and In the Science Learning Area students learn to investigate, understand and communicate about the physical, biological and technological world and value the processes that support life on our planet. Science helps students to become critical thinkers by encouraging them to use evidence to evaluate the use of science and society and the application of science in daily life.

Science is **compulsory** and all students will study Science for **four** (4) periods per week for the year. Students may also select **one** of the specialised electives for two (2) periods a week if desired.

SCIENCE - 10SC

All science students follow a program developed around the four content strands of the Australian Curriculum: Earth and Space Science, Chemical Science, Biological Science and Physical Science as well as the process strands Science as a Human Endeavour and Science Inquiry Skills.

Special programs have been developed to:

(i) accelerate selected groups through the curriculum to enable them to enhance their scientific skills and knowledge in the different science disciplines.

(ii) consolidate other groups by allocating more time on process skills and mastering concepts of Science. Such a group has limited numbers to allow teachers to give more individual attention.

(iii) All students have the opportunity to move between these programs.

SCIENCE ELECTIVE SUBJECT

The Science Learning Area offers an elective Science unit for those wishing to do further studies in Science in addition to the above compulsory unit. Enrolling in this elective will replace one of the three

STEM ELECTIVE – 10STEM

The aim of the course is to allow students to integrate and apply their science, technology, engineering and mathematical (STEM) skills. Project based inquiry learning is used to develop their capabilities in these areas.

Throughout the course, students will collaborate and work effectively in teams. They utilise their communication, time management and leadership skills to produce innovative solutions. Students will use current technology to design, create, program and test robots, animations and game applications to respond to their commands, overcome obstacles, and complete set challenges. They will build on their understanding of electrical and mechanical scientific concepts, while computing accurate solutions using mathematics. They will practice creative thinking, with analytical and problem solving skills to engineer solutions to real world problems.

Select groups will participate in the State Robocup Junior and First Lego League competitions using our LEGO Mindstorms NXT robots, with the possibility to compete on a National level. They will also be building and testing solar vehicles, sponsored by the STELR Program initiative of the Australian Academy of Technology and Engineering, and the Australian Power Institute.

The course aims to build on students' interest in STEM and highlights the widening range of education pathways and career opportunities in these fields. Many industries are becoming more focused on innovation and creativity, which will be fostered in this course. There will be exposure to industry and university experts who will present the latest technologies to the students. This course exposes them to computer science, engineering and ICT career pathways.

Science

TECHNOLOGIES

In the Technologies Learning Area, students apply knowledge, skills, experience and resources to the development of technological solutions that are designed to meet the changing needs of individuals, societies and environments. Students become innovative, adaptable and reflective as they select and use appropriate materials, information, systems and process to create solutions that consider the short and long – term impact on societies and environments.

The Technology and Enterprise learning area comprises three departments – (i) Digital Technologies and Business, (ii) Design and Technology, and (iii) Home Economics.

DIGITAL TECHNOLOGIES AND BUSINESS

COMPUTER PROGRAMMING - 10CP

Prerequisites: Computing background preferred but not essential.

Understanding of computer programming, databases and programming is a very useful skill to have in this day and age. Computer Programming covers the basics of programming leading into computer science course in Years 11 and 12. This course covers basics such as HTML, Python and Javascript. Basics of databases and design will also be covered. In this subject students will be writing code for both webpages and game creation. Hardware and networking devices will also be covered to give students an overall grounding in information technology and how the world really works.

Students will need good problem solving skills, logical thinking and the acceptability of new ideas is necessary. Students will create programs, web sites and games that incorporate real world skills. This class is a pathway to computer science and applied information technology.

ACCOUNTING, BUSINESS and LAW

Business, economic and legal activity affects the daily lives of all Australians as they work, spend, save, invest, travel and play. It influences jobs, incomes and opportunities for enterprise. The Year 10 Accounting, Business and Law course is a rigorous and challenging introduction to the three dynamic fields of study that are pathways to the subjects and Certificate II offered in our upper school. The objective of this course is to ensure students develop in their roles as active and informed citizens, consumers, workers and entrepreneurs.

In the Accounting stream, students focus on the basic skills of recording, reporting, presenting and interpreting financial information which sets an ideal foundation both for further study and for a future career within the profession. In the Law stream, students touch on basic legal problem-solving skills, an understanding of the WA civil and criminal justice system, and the ability to read, interpret and analyse statute and case law. The course looks at developing students' social responsibility within our community and beyond. In the Business stream, students develop effective decision-making skills related to consumer behaviour and the management and evaluation of entrepreneurial financial matters, resulting in confidence in the areas of business management, consumer and financial literacy.

This course is ideal for students with a strong background in literacy and numeracy, looking for a future career in accounting, business management, law and criminology.

Technology & Enterprise

DESIGN & TECHNOLOGY

ENGINEERING SYSTEMS - 10ES

This course builds on the knowledge and skills acquired in Year 9 Engineering Systems and gives students learning experiences in a broad range of engineering systems.

Welding (Arc, MIG & Oxy), electronics, engine maintenance, manufacturing, Occupational Health & Safety, design process, small engines, automotive systems and multi-cylinder engines, are just some of the exciting topics students can do.

Engineering Systems students will have the opportunity to make some projects in order to apply their welding and manufacturing skills. Diagnosing problems and carrying out repairs and maintenance on small engines and multi-cylinder engines also from much of the content covered in this course.

There is a strong focus on safety in using the tools, equipment, and machines for the tasks that are set.

This subject is highly recommended for those students wishing to enrol in Year 11 Materials Metals or Engineering Pathways (VET) courses.

MATERIALS METAL - 10MM

This course is aimed at those students who have limited or no experience in Year 8 or 9 Metalwork but wish to attain the necessary background to enrol in Materials Metals at Year 11/12 level.

Students will learn how to safely use a range of workshop equipment such as marking out tools, the guillotine, benders, lathes, welding and polishing machines.

The emphasis of the course is on making a range of interesting projects in a safe, structured environment that allows the students to develop skills and build confidence in working with metals.

Design development through investigation is an integral part of this course.

MATERIALS WOOD - 10MW

This course is aimed at those students who have limited or no experience in Year 8 or 9 Woodwork but wish to attain the necessary background to enrol in Materials Wood at Year 11/12 level.

Students will learn how to safely use a range of workshop equipment such as wood lathes, electric drills, bandsaws, finishing machines, electric sanders etc. Students will also use equipment associated with staining and spraying finished pieces. This course has a strong focus on design, safety and the enjoyment that comes from designing and making a range of interesting projects.

Students who wish to extend their knowledge and experience further in this area should choose the Furniture Woodwork VET course for future Year 11 studies.

TECHNICAL GRAPHICS - 10TG

In Technical Graphics, drafting skills are developed through the use of symbols, conventions and standards to demonstrate various drawing techniques. Included in this course are drawings of assembled components, pictorial representations of objects and a variety of graphic techniques using computer assisted drafting (CAD) software such as AutoCAD. This course provides an opportunity for students to apply a high level of drafting skills and techniques.

Students will be involved in program development and creating exercises for this course using both conventional and computer assisted techniques.

This course is highly recommended for those students looking for a career in drafting, architecture or engineering. Our school has an impressive record of placing graduating Year 12 students into employment through this path of study.

Students should choose this course if they wish to enrol in Design (Technical Graphics) in Year 11.

Technologies

HOME ECONOMICS

SPOTLIGHT ON MY FOOD – 10SMF

Students investigate the sensory and physical properties of food that affect the consumption of raw and processed foods. Students learn about a balanced diet, the function of food in the body and apply nutrition concepts that promote healthy eating for adolescents. They study health and environmental issues that arise from lifestyle choices. They work individually and in teams to further develop their food preparation, meal planning, equipment and food handling skills through the preparation of safe, quality food products. Students demonstrate a variety of mise-en-place and precision cutting skills and cooking techniques. They demonstrate a variety of safe workplace procedures, processing techniques and food handling practices at all times. They investigate factors and trends which influence the purchase of locally produced foods and explore food labelling and packaging requirements in Australia. They devise food products, follow and adapt recipes to prepare healthy meals and snacks that meet individual needs.

This course has a high practical food content.

Students **will be required** to attend either a period 0 or period 6 for practical lessons; this will be determined by the timetable.

CHILDCARE - 10CC

An emphasis on practical activities in this subject will help students learn about children from conception and birth through to pre-school age.

Students will explore the implications of becoming a parent the roles and responsibilities of parenting and consider the ways parenthood would affect their lives in the future. Students will have the opportunity to investigate the physical, social, emotional and intellectual needs of young children and how to satisfy these in a caring way. As part of this course students will develop working packages suitable for them to use when babysitting preschool children, such as puppets, soft toys and picture books.

This is an interesting and relevant course for anyone interested in children, and/or working in the childcare industry.

FASHION DESIGN - 10FD

This course is for students who are interested in developing skills in fashion design and sewing their own clothes. Basic sewing skills will be covered to ensure confidence in using domestic sewing equipment. Fashion design process will be taught – including historical and contemporary fashions.

Students will have the opportunity to create their own design and carry it through to the production of personal garments.

Students will be required to provide fabric for personal items during this course.

Technologies