 **THORNLIE SENIOR HIGH SCHOOL**

**YEAR 10**

**Guide to Subject Selection**

**2018**

**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 2018.

Parents and students are encouraged to work together to select an appropriate course for 2018. 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 2018

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Curriculum Requirements

***Listed below are the course requirements for Year 10 students in 2018. 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 maximum of two from any one learning area** |
| The Arts  |  |
| Languages |  |
| Physical Education | **NOTE: Only one specialised elective may be chosen** |
| Science - STEM |  |
| Technology & Enterprise |  |
| **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 to be considered. 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 program in English, Mathematics, Science and Humanities and Social Sciences.

Year 10 Course Selection for 2018 and the Western Australian Certificate of Education

:: 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 2018 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**

1. 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.

THE ARTS

The Arts 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. In particular 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.

**HIP HOP DANCE – 10HIP**

The Hip Hop Dance course aims to allow students who have an interest in different styles of hip hop to work together as a crew to put together performance pieces that are able to be presented at various shows and events. Through participation in the Hip Hop Dance course, students will develop transferable skills valuable to their future. Participation may lead to future dance and even employment opportunities in the area of hip hop dance.

The core focus will be on developing choreography and performance skills essential for taking part in areas of entertainment such as Thornlie SHS Dance Concert, ‘GROOVE- Battle of the West’, ACHPER Dance Festival, Telethon and City of Gosnells Carols by Candlelight.

As this course primarily concentrates on student-based teaching and learning, they will experience how to communicate effectively, work in partnership with their peers, negotiate and resolve differences, as well as develop the ability to arrange, examine and reflect upon performance pieces.

Hip Hop will present opportunities for students to present their own choreography and ideas to audiences. A great sense of achievement will follow performances, and generate an understanding of a wide range of production and design concepts, skills and roles, and draw upon on other art forms such as music, art and electronic media to broaden students’ knowledge and interest in the Arts.

Hip Hop will – most of all – be great fun.

**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 - 10SM**

The Arts The Arts

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

**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.

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 – 9MED**

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 English

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.

HEALTH AND PHYSICAL EDUCATION

Health & Physical Education Health & Physical Education

***Health and Physical Education provides students with the opportunity for participation in a variety of physical activities, as well as the study of various ‘health’ contexts that aim to develop their self-management skills along with the knowledge and understanding to be able to make life long healthy choices.***

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 Physical Education General Students may also select **one** of the specialised electives for two (2) periods a week if desired.

As part of the Health Education Program studied in Years 8, 9 and 10 at Thornlie S.H.S. and all government schools in Western Australia, a range of contexts, including **SEXUALITY** and **DRUG** Education are covered. Within sexuality lessons, topics of growth and development, puberty, birth, contraception and other such relevant issues are studied. Drug Education includes legal and illegal drugs, their effects and consequences and the concept of harm minimization.

It has come to our attention that some parents/guardians are not aware of the sensitive nature of some aspects of Health Education. Students are issued with Health Education booklets at the beginning of each semester which will give an indication of these aspects. 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 school.

COMPULSORY HEALTH & PHYSICAL EDUCATION SUBJECTS

**HEALTH EDUCATION - 10HE (Compulsory)**

This is a compulsory course that all Year 10 students will participate in. All students will cover the following topics:-

* **Semester 1: “Keys for Life”:** This program prepares students for a life-time of safer driving, by fostering positive road-user attitudes and behaviours. Students will have the opportunity to pass their ‘Learners Permit Theory test. Other topics: Managing risky situations, Skill/strategies for respectful relationships, health literacy skills
* **Semester 2 Topics:** Personal identity, cultural influences, sexual education, community health activities and factors that affect health

**PHYSICAL EDUCATION GENERAL - 10PE (Compulsory)**

This is a compulsory course that all Year 10 students will participate in. This subject is designed for students to achieve the learning area outcomes in a less competitive context. Physical Education General allows students to develop skills across a variety of different sports. In Year 10 the sports of Cricket, Softball, Softcrosse, Athletics and Badminton are covered.

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, body image, nutrition and fitness for teenage girls. Activities include kick boxing, Zumba, swimming, yoga, aerobics, canoeing, walking, camp cooking, rock climbing, ten-pin bowling, Pot Black 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**

Health & Physical Education Health & Physical Education

**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, Indoor Cricket, 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.

**SOCCER -10SOC**

Health & Physical Education Health & Physical Education

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

This course works to consolidate and extend students soccer skills, tactical knowledge and fitness. Students will work to improve individual skills along with team strategies and tactics. Students will have the opportunity to represent Thornlie Senior High School at any relevant interschool competitions and matches. Students will also learn the skills of coaching and will have the opportunity to coach soccer games of various levels. Students are expected to wear soccer boots to all lessons.

**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.

HUMANTIES & SOCIAL SCIENCES

Humanities & Social Sciences Humanities & 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.

LANGUAGES

Languages 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.

**ITALIAN – 10ITA**

The program for Year 10 will include such topics as travelling to Italy, a White Christmas, Getting into Shape, Around Rome on a Moped and Italian Food.

Students will continue to consolidate their Italian language skills in the areas of speaking, listening, reading and writing. The course also brings students up to date with very modern learning tools through ICT, podcasts and other modern forms of communication. They begin to learn how to access Italian youth magazines, newspapers and radio.

High achievement in this course will equip students to continue with Italian in Years 11 & 12.

**JAPANESE - 10JPN**

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.

MATHEMATICS

Mathematics Mathematics

***In Mathematics, students learn to use ideas about number, space, measurement and chance, and 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.

SCIENCE

Science 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 Science

**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:

1. accelerate selected groups through the curriculum to enable them to enhance their scientific skills and knowledge in the different science disciplines.
2. 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.
3. 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.

TECHNOLOGY & ENTERPRISE

Technology & Enterprise Technology & Enterprise

***In the Technology and Enterprise 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 ENGINEERING - 10CE**

**Prerequisites**

* A keen interest in computer hardware and networking
* A working internet connection at home
* Year 9 Computer Engineering (pre-requisite)

Students will continue their study of competencies for the Certificate II in Information, Digital Media & Technology. A range of different topics explored in this course include:

|  |  |
| --- | --- |
| * Occupational Health & Safety
 | * Printers and Scanners
 |
| * Operating Systems
 | * Networks
 |
| * Hardware Connections
* Social Media Tools
 | * Software Installation
* Troubleshooting
 |

***Note: This qualification may be / is subject to change due to Training Package review.***

*Trading as an* ***RTO (Registered Training Organisation), Thornlie Senior High School*** *is required to supply all students with extended information on Courses and Policies before entry into the course. Please read the enclosed* ***VET (Vocational Education and Training) Courses Information Booklet 2012*** *if you are electing to take a VET subject*

Technology & Enterprise Technology & Enterprise

**COMPUTER PROGRAMMING - 10CP**

**Prerequisites**: Computing background preferred but not essential.

Understanding of computer programming, databases and game creation is a very useful skill to have in this day and age. Computer Programming covers the basics of programming and is a good lead up to the computer science course in Years 11 and 12. This course covers basics such as HTML and javascript, but mostly revolves around object-oriented programming such as Scratch to create games. 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 a 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

**INTRODUCTION TO ACCOUNTING & FINANCE – 10IAF**

In this course students learn the nature and purpose of accounting and business management, as well as preparing students for employment opportunities in the IT, accounting and finance industry. This course combines the development of word processing, spreadsheets, research, and PowerPoint computing techniques with real life practical situations that occur in the workplace. Students will acquire knowledge of data entry procedures, techniques and formats and apply their knowledge to a wide range of challenging tasks relevant to the world of small business owners, accountants and financial advisors.

This course introduces concepts of accounting and record keeping, as well as learning how businesses are set up, marketed and run. The financial skills students will acquire will range from basic budgeting, simple profit and loss statements, balance sheets, and then progress to journals, bank reconciliations and cash control records. This course is suitable for students who want to get ahead in the real world. Students considering studying Accounting or Business Management and Enterprise in Year 11 will benefit from this course.

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.

Technology & Enterprise Technology & Enterprise

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.

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.**

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