



School for Rudolf Steiner Education Ltd

High School Curriculum Classes 8 to 12



2019

Last updated: 28 June 2019

The Lorien Novalis High School Pedagogical Vision

The vision for our High School is born out of an understanding of the changing world and what is needed for young people to face this unpredictable future, balanced with a vision of the emerging human spirit in every individual as given by Rudolf Steiner.

Young people's needs are changing and so too are the expectations of the world. The student's ambitions and motivations are also changing, so we are developing our High School curriculum and timetable to meet, within the individual, the challenges of the future.

There will always remain career pathways that are determined by the industrial world, economic demand and social need and there will always be students who want to pursue them. We will always need doctors, builders and teachers however there is an unrest in the classroom brought about by the rapidly changing technology and the uncertainty and unpredictability of the future, so the model of 'what' and 'how' we teach must change to meet these future needs. There are careers and life paths that have not yet been established and we are preparing children for them.

Student engagement in their learning is becoming more difficult as the distractions of technology become more imbedded in our everyday life. At times there seems to be little point in learning information to pass exams when one can simply Google the answer, so it is the deeper human qualities that we need to strengthen and embellish to imbue the future leaders with a sense of purpose and direction.

We as a school, embrace the paradigm shift, seeing the need for students to develop themselves as creative individuals, giving them a voice about their learning and the desired outcomes. This will result in students being more connected to their learning, more self-motivated, with less pressure, more relaxed and content within themselves and with an increased sense of satisfaction with their learning objectives.

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Class 8 English

Main Lesson: The Logos – The Power and Wisdom of Words

Students explore the role and use of the English language while considering the importance of storytelling and exploring narrative in a variety of genres and text types.

Main Lesson: Greek Tragedy

The class explores ancient Greek tragedy and its far-reaching effect on the Western theatrical canon. Students learn about ancient Greek theatre through the study of Sophocles' great tragedies, *Antigone* and *Oedipus the King*.

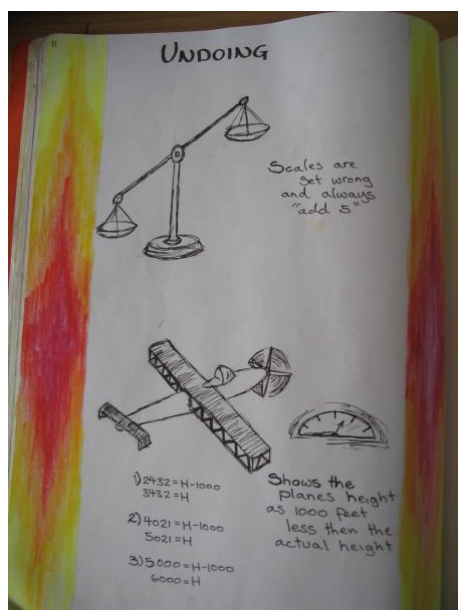
Middle Lesson: Novel Study

A deep study of the novel, *A Company of Fools* by Deborah Ellis, allows students to learn about language techniques and figurative language. We examine the motifs and issues of the novel, and the denouement of the story. This module complements Class 8's History lessons by learning about Medieval Europe and the Plague.

Middle Lesson: The Canterbury Tales

Students are introduced to the first known secular literature written in English. A selection of stories from Geoffrey Chaucer's *The Canterbury Tales* allows students to appreciate the imagination and characters through role play, visual imagery and modern translations of the original Middle English.

Class 8 Mathematics



Main Lesson: The Power of Number

The lesson looks at exponential progressions that naturally or socially occur in our world. It develops the idea of index laws; as well as developing skills in factorisation, including a difference of two squares; plus introducing the need and skills of solving algebraic equations.

Middle Lesson: Finance

An introduction to taxation, including GST. An introduction to credit, personal loans and investments, including increase & decrease of percentages. The use of rates in money e.g. speed, cost of fuel, fuel consumption, and exchanging currencies.

Main Lesson: Change and Rhythm

The cyclic nature of mathematics unfolds in the cosmos, circles, time, breathing and running and

graphing geometrical patterns. Quadratic real-world phenomena are also introduced.

Middle Lesson: Geometry and Measurement

Units of measurement in perimeter, area, volume and capacity, with applications of these to real world situations.

Geometry includes an introduction to tests of congruency.

Class 8 Science



Main Lesson: Chemistry – Lab Techniques

The students are introduced to working in the chemistry laboratory, providing them with safety rules and standards and acquainting them with basic skills to use equipment such as the Bunsen burner. Various experiments are conducted by the students to gain insights into separation techniques and different chemistry concepts like requirements for combustion, heat sources and molecular change in the calcium carbonate cycle are investigated.

Main Lesson: Biology – Classification of Living Things

This lesson introduces students to the classification of living things from the cell level to the five kingdoms. Students learn about what life means, how to classify life, how living things adapt to change and how living

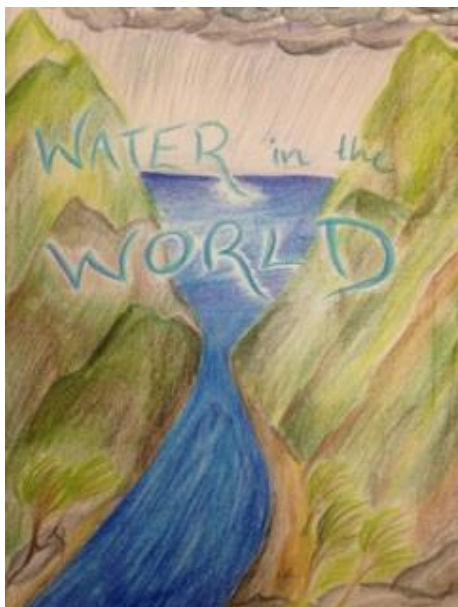
things live together in harmony and disharmony.

Main Lesson: Physics – Electricity and Magnetism

Understanding the electrical forces and their applications is based on first hand investigations. The teaching-learning experiences provide examples of students extending their skills in working out special electrical circuits or building a basic electric motor.

Middle Lesson: Research

Students work in a group on a biology tasks and work collaboratively on writing the report.



Class 8 Geography

Main Lesson: Water in the World

Students examine water as a resource and the factors influencing water flows and availability of water resources in different places.

Middle Lessons: Global Connections

Students focus on the connections people have to places across a range of scales.

Class 8 History



Main Lesson: Vikings

Students study the way of life in Viking society (social, cultural, economic and political features), and the roles and relationships of different groups in society.

Middle Lesson: Polynesian Expansion

This lesson considers theories about the origin and spread of Polynesian settlers throughout the Pacific, including examining the similarities and differences between the different Polynesian cultures.

Middle Lesson: The Black Death

The Black Death in Asia, Europe and Africa: What were the living conditions and religious beliefs of the 14th century? What was the life expectancy, medical knowledge and the beliefs about the power of God in those times?

Class 8 Personal Development, Health and Physical Education

Physical Education

Students develop an understanding of the components of a balanced lifestyle and factors that can influence their participation in physical activity. Students participate in:

- Caving: a multi-day Class Trip to experience caving in Bungonia.
- Climbing: a weekly skills development over nine weeks, aimed at building strength in preparation for the caving trip to Bungonia.
- Martial Arts: weekly skills development over 10 weeks, involving Kung Fu.
- Surfing: surfing lessons over multiple days, focusing on skills to read the waves and surf, including identifying rips. This is a short Class Trip to Seal Rocks.
- Swim and Survive: a block of lessons enabling students to build water fitness and develop skills to keep themselves and others safe when in or near water.
- Tennis: weekly lessons over nine weeks, aimed at developing hand eye coordination and depth perception within the context of racket sports.
- Personal Development: Healthy Minds. An integrated unit based on individual and community health issues, exploring aspects of stereotypes and gender roles within modern society.

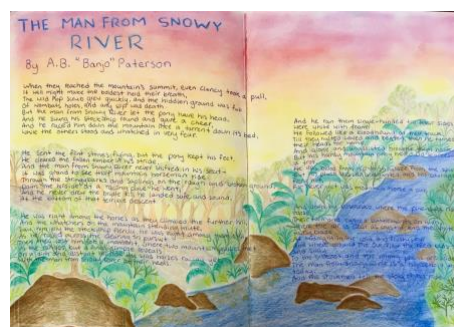
Class 8 Music

Main Lesson: Media Music

This units provides a broad overview of music used in film and advertisement. It provides opportunities for an exploration of performing, composing and listening, with an emphasis on exploring musical concepts through Film and Advertisement Music.

Middle Lessons: Music Ensembles

These lessons familiarise students with the instruments in high school, including keyboards, drum kits, guitars and percussion.



Class 8 Visual Art

Term 1: Byzantine Iconography and Gothic Frescos



A structural and cultural investigation of Byzantine iconography helps Class 8 develop meaning in historical artworks and inspire their own icon. Following this, students also look at the more natural images of Giotto, before finishing the term by creating wet on wet frescos.

Term 2: Gothic Architecture, Perspective Drawing

Class 8 step into the historical context of medieval life, looking at the history and characteristics of Gothic architecture.

Term 3: Gothic Sculpture

Students learn about the history of Gothic sculpture with a focus on the French sculptor Rodin, before creating human figures from clay with emphasis on human emotion.

Term 4: Spirituality in Art, Mandalas

Students learn about the Buddhist Mandala, a spiritual and ritual symbol representing the universe. Mandalas are employed for focusing attention, as spiritual guides and for establishing a sacred space.



Class 8 Language (Mandarin)

Main Lesson: Experiencing Chinese

Students learn to communicate in both spoken and written Chinese. Focusing on communication in daily interactions, for example, greetings, shopping and dining out. Students learn to write a letter in Chinese using Chinese characters.

Middle Lessons: Transportation

Students learn written and spoken Chinese that focuses on skills such as asking directions, learning the names in Chinese of prominent locations, such as the train station, post office and hospital.

Class 8 Drama

Main Lesson: Tales from the Arabian Nights.

The Main Lesson culminates in a class performance. Class 8 students focus on developing an ensemble performance of scripted drama. This year they engaged on the comedic play *Tales from the Arabian Nights*.

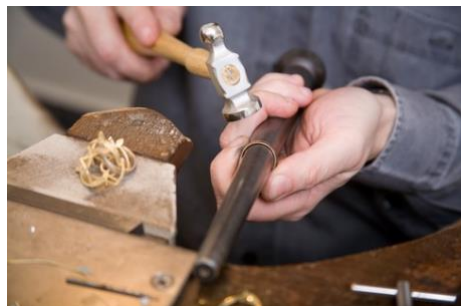
Class 8 Technical and Applied Studies

Block Lesson: Agriculture

Students are introduced to the processes of food and fibre production with a focus on sustainable management.

Block Lesson: Textiles

Students are introduced to the methods of traditional Japanese Shibori dyeing with a focus on using found and foraged items to create their natural dye bath.



Block Lesson: Digital Technology

Students are introduced to the use of Presentation slide documents, Spreadsheets and image graphics.

In addition, students complete an on-line typing course.

Block Lesson: Cars

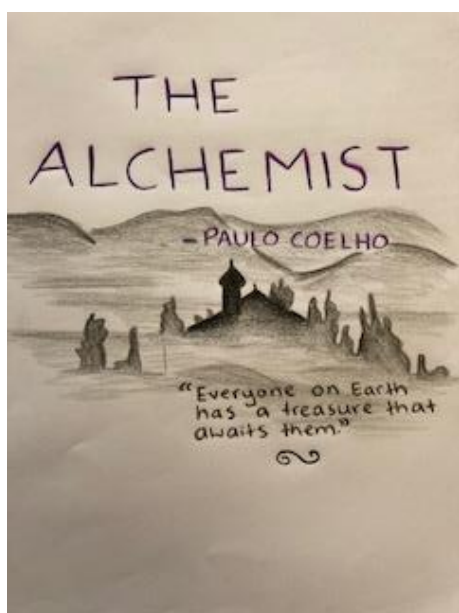
Students are introduced to the concept of designing and building a mousetrap car. This will enable them to investigate the basic engineering systems that explore

how force, motion and energy can be used in systems, machines and structures.

Middle Lesson: Individual project

Under the guidance of a teacher, students undertake an individual, semester-long project of their own choosing. This could involve an enormous range of interests using the context areas of the Technology Mandatory Syllabus. At the end of the semester, students present their project to the other students.

Class 9 English



Main Lesson: Shakespeare *Romeo and Juliet*

Through a close study of *Romeo and Juliet* by William Shakespeare, students develop an understanding of how the conflict unfolds, the rising tension in the play and how the conflict is ultimately resolved.

Middle Lesson: Romantic Poetry

This unit explores Romantic poets spanning the late 18th and early 19th centuries, including Wordsworth, Shelley, Coleridge, Keats and Blake.

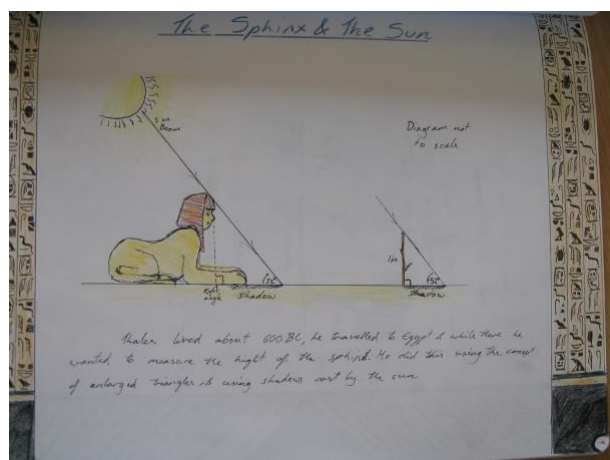
Middle Lesson: Novel Study

Students study *The Book Thief* by Markus Zusak, exploring narrative techniques, figurative language, and the themes presented in the novel.

Main Lesson: The Art of Rhetoric

Through studying a range of famous speeches, students learn about rhetoric and persuasion. The students explore the ways in which language is used by government, media and people in power, and the idea of propaganda.

Class 9 Mathematics



Main Lesson: Trigonometry

This lesson introduces and develops the concepts of trigonometry from historical situations and from the mathematical concepts of similarity.

Middle Lesson: Advanced Algebra and Coordinate Geometry

Students solve equations with surds, and with indices, they solve quadratics, linear inequalities, more complex linear equations and graphically linear simultaneous equations. Students also complete quadratic

graphs, exponential graphs, graphs of circles, and they factorise quadratics and expand binomials. Optional advanced topics include differences of squares, perfect squares and solving linear simultaneous equations using analytic methods.

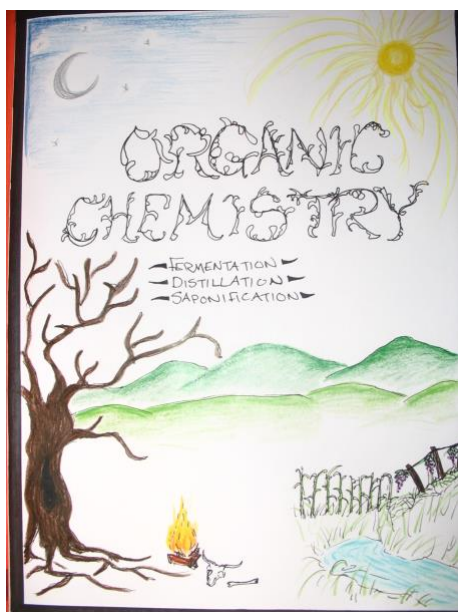
Students make calculations on the Cartesian Plane using coordinate geometry.

(taught as Stage 5 to Classes 9 and 10)

Main Lesson: Statistics and Gambling

The lesson develops skills in analysing data including skewed and bi-modal data, the use of 2-way tables and Venn diagrams, the use of spreadsheets and the analysis of data in the media. Probability experiments are used to better understand gambling. This includes looking at Pascal's triangle and his work in gambling.

Class 9 Science



Main Lesson: Chemistry – Organic Chemistry

The students are introduced to the world of Hydrocarbon-Chemistry and study the processes of fermentation, distillation, saponification and trans-esterification by making bio-diesel.

Main Lesson: Biology – Multicellular Organisms

Students are introduced the workings and interactions of the human body and how multicellular organism interact in ecosystems.

Main Lesson: Physics – Light and Sound

Students are introduced to the historical events that highlight the scientific study of the physical phenomena of light and sound. Students also study the concept of sound waves, vibrations and frequencies, resonance and amplification, the human ear and sense of hearing, Michael Faraday's Christmas lecture about the candle,

the laws of reflection and refraction, the use of prisms and the concept colour theory, the human eye and sense of sight.

Class 9 History

Main: The Environment Movement

A study of the environmental movement, in Australia and abroad, and the way in which this has impacted on and shaped society and government throughout the 20th century.

Middle: The Industrial Revolution

A study of the Industrial Revolution, including social, cultural, political, economic and technological aspects, viewed through the lens of art, literature and innovation of the time.

Middle: World War 1

Students undertake a study of the causes, lead-up, course and outcome of WWI, with a focus on Australia's role in the war

Class 9 Music

Main Lesson: Theatre Music

Students learn about stage musicals and listen to and analyse a range of music from various musicals. Students have the opportunity to perform excerpts from the musicals, including singing, acting and playing instruments.

Class 9 Language (French)

Middle Lessons: Travel Survival

Students focus on learning skills for travelling in countries that speak French, including daily conversations, locations, purchasing food and requests for emergency assistance.

Class 9 Geography

Main Lesson: Sustainable Biomes

Students learn about major world ecosystems (biomes) and the characteristics that make each biome distinct.

Middle Lessons: Health, Happiness and Human Wellbeing

Students examine the nature of human wellbeing and the differences in development that exist within and between countries. Students look at ways of measuring human wellbeing and investigate examples of issues affecting development from Australia and across the world. Students assess the impact spatial variations have on the health and happiness of various communities at a local, national and global scale, whilst examining initiatives to improve human wellbeing at each level.

Class Trip: Central Australia

An experiential lesson on the people, geography, history and culture of central Australia.



Class 9 Personal Development, Health and Physical Education

Health: Influences, Decisions and Consequences

Students explore the range of influences on health behaviours and decisions that may include peers, family and gender. They examine the short- and long-term implications of decisions and behaviours. These are analysed in the context of health issues affecting young people, including drug use, sexual health and road safety.

Personal Development: Bend It Like Beckham

Students explore strategies and skills needed to deal with modern contemporary adolescent issues, including responding positively to challenges, and analysing factors that contribute to positive, inclusive and satisfying relationships.

Physical Education

Students develop an understanding of the components of a balanced lifestyle and factors that can influence their participation in physical activity. Students participate in:

- **Swim and Survive:** Students develop knowledge and skills related to water safety and apply them to practical lifesaving activities. These may include attaining formal lifesaving qualifications.
- **Kayaking:** planning and problem-solving skills are enhanced as students set activity goals, locate and evaluate facilities and resources, and propose strategies to overcome barriers to participation.
- **Stage Combat:** Students complete weekly lessons in Stage Combat to explore the use of balance and controlled movement to create dramatic scenes.
- **Central Australia:** Students embark on a three-week personal development journey. During the trip students develop skills in camping, cooking, hiking and a range of teamwork activities.

Class 9 Visual Art

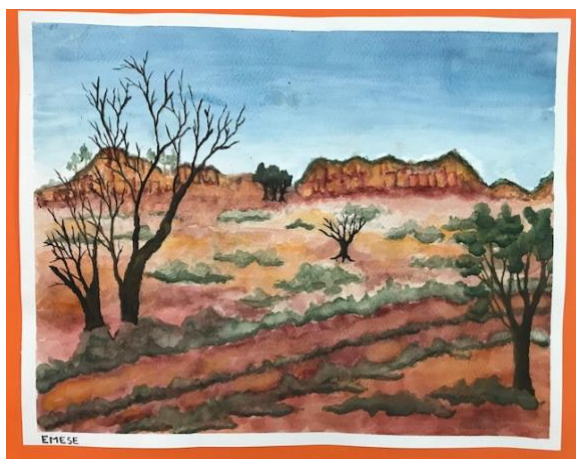
Term 1: Renaissance, Raphael's 'Ideal Composition'

Class 9 study the history of the Renaissance and the role art played in medieval times. Students structurally analyse Raphael's 'Sistine Madonna' focusing on his 'ideal composition'.

Term 2: Da Vinci, Anatomical Drawing

Class 9 study Da Vinci's 'Vitruvian Man' and discuss his knowledge of human anatomy. They respond with exploratory drawings of muscles and bones in charcoal, pencil and graphite.

Term 3: Renaissance, Michelangelo



Term 3 is a continuation of the study on the Renaissance, although this term the class study Michelangelo's *Pieta* and *David*. Students create sculptural drawings in pencil and charcoal and an archetypal sculpture of a hand in clay, focusing on gesture.

Term 4: Australian Landscapes

Inspired by their class trip to Central Australia and by the work of Albert Namatjira, students paint an outback landscape in watercolour that captures 'distance' as a symbol of 'personal journey'; focusing on symbolism, colour placement and perspective.

Class 9 Drama

Main Lesson: Shakespeare

Class 9 students focus on developing the performance and language skills using Shakespearean text. This year they work towards and perform various fun and entertaining Shakespearean Exerts.

Class 9: Debate

Under the guidance of a teacher, students learn the rules and techniques of public debating. Students consider a range of philosophical ideas and current affairs through persuasive argument and strategic thought.

Class 10 English



Main Lesson: Fairy Tales

This Main Lesson examines the use of storytelling as a way to educate, socialise, pass on values, and demonstrate culture and justice. Students learn about archetypes, symbolism and reinterpretation.

Middle Lesson: Romantic Poetry

This unit explores Romantic poets spanning the late 18th and early 19th centuries, including Wordsworth, Shelley, Coleridge, Keats and Blake.

Middle Lesson: Novel Study

Students study *The Book Thief* by Markus Zusak, exploring narrative techniques, figurative language, and the themes presented in the novel.

Main Lesson: Creative Original Work

Students create a significant portfolio or single piece of creative original work. This undertaking also gives

students the opportunity to integrate research into creative writing. Students choose a theme to inspire their work.

Class 10 Mathematics

Main Lesson: Patterns in Nature, Finance, Gambling and Data

Data and patterns are explored in multiple areas, such as ratios in anatomy; sequences for simple and compound interest; probability in gambling; univariate and bivariate data and concepts of correlation and relationships between data. Students also analyse data found in the media.

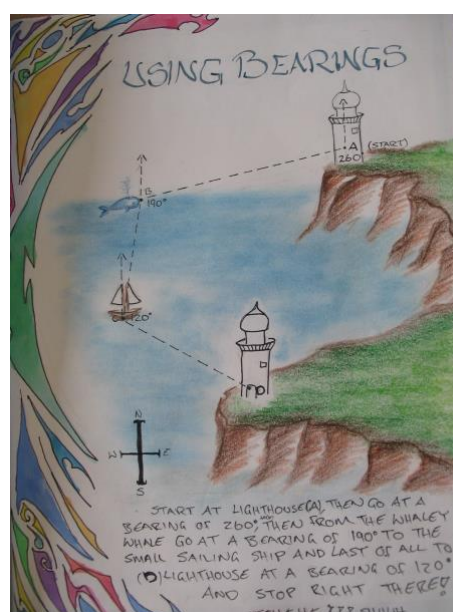
Middle Lesson: Advanced Algebra and Coordinate Geometry

Students solve equations with surds, and with indices, they solve quadratics, linear inequalities, more complex linear equations and graphically linear simultaneous equations. Students also complete quadratic graphs, exponential graphs, graphs of circles, and they factorise quadratics and expand binomials. Optional advanced topics include differences of squares, perfect squares and solving linear simultaneous equations using analytic methods.

Students make calculations on the Cartesian Plane using coordinate geometry. (taught as Stage 5 to Classes 9 and 10)

Main Lesson: Surveyors and Geometric Reasoning

The field of trigonometric study is furthered through a study of surveyor methods, including bearings, angles of elevation and depression, as well as a history of surveying. Students are introduced to geometric reasoning and the method of structured proofs.



Class 10 Science

Main Lesson: Chemistry – Inorganic Chemistry

The students are introduced to the world of acids and alkalis, metals and their salts. They study the process of identifying pH-levels, neutralising acidic or alkaline environments. They look at various metals and their common, but also special, properties and experiment with different metal salts.

Main Lesson: Biology – Genetics and the Theory of Evolution

The students study how genes are passed on through generations and look at the scientific theory of how life evolved over time.

Main Lesson: Physics - Mechanics

The students look at the evolution of simple tools to modern machines. The students perform various experiments and investigations concerning gravity and weight and also move into the area of building design.

Main Lesson: Research

The students each identify their individual scientific research question, organise and complete the set-up prior to conducting the experiment, then log the results and present their findings to their peers.

Class 10 Marine and Aquaculture Technology

Water Safety, the Marine Environment and General First Aid

Students learn about issues related to water safety, aims to develop water confidence for students and to increase their chance of survival should they ever get into difficulty in water. The lessons also look at the marine ecosystem with first aid information specific to the water and the marine environment.

Tides and Currents

Students study introduces the major forces that move water on earth. The module looks at the various types of water movement and effects these have on climate, marine organisms and humans.

Single-sail boats

Introduces students to the theory and practice of sailing small craft. Practical sailing lessons are held at the Balmoral Sailing Club.

Film Festival

Class 10 students will participate in our Lorient Novalis senior student Film Festival in 2019, by creating a film related to marine environments and/or water safety and/or on any other aspect of aquaculture.

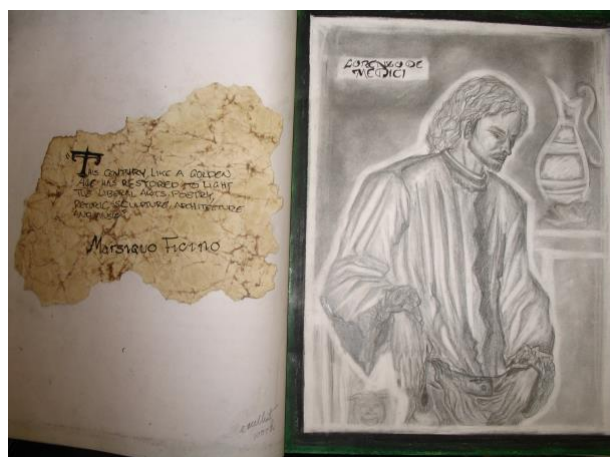
Shipwrecks

Students discover the hardships faced by early mariners, and explore the navigational skills of wayfarers from various periods of time, and learn how the forces of nature and poor instrumentation lead to the wrecking of many ships. Students also research a famous shipwreck and build their own model of that ship.

Motor Boats

This lesson introduces the theory and skills involved in the care and handling of small motor boats. This module gives students the opportunity to gain a NSW Waterways boat licence.

Class 10 History



Main: Changing Rights and Freedoms

A study of the changing rights and freedoms of different people, including a study of the history of Aboriginal people, Stolen Generations, Land Rights, as well as a study of the Civil Rights movement in America and Apartheid in South Africa.

Middle: World War II

Students undertake a study of WWII, including the causes, lead-up, course and outcomes of the war. A particular focus is made on the role and impact on Australia.

Middle: The Gulf Wars and the War in Afghanistan

A study of the 1st and 2nd Gulf Wars, including the role of Australia and other allied countries, and a study of the war in Afghanistan, including the role of western forces, and the global impact, including the way in which this has impacted Australian domestic politics.

Main Lesson: The Renaissance

This lesson is a study of the Renaissance period, with a focus on the way of life in Renaissance Italy (social, cultural, economic and political features) and the roles and relationships of different groups in society.

Class 10 Geography

Main Lesson: Caring for Rivers and Life

This lesson focuses on investigating environmental geography through an in-depth study of inland waterways. The fieldwork includes a site study of a local creek within the Hawkesbury-Nepean Catchment.

Middle Lessons: Changing Places

Students examine the patterns and trends in population movements and the increasing urbanisation of countries. They discuss the reasons for internal and international migration patterns and the consequences of population movements, including the increased concentration of populations within countries.

Class 10 Personal Development, Health and Physical Education

Health: Risky business - Relationships

Students analyse the range of factors that influence risk-taking behaviours in young people, including the relationship between risk and an individual's sense of self and mental health. Students further develop their understanding of the interrelationship of the issues of drug use, sexual health and road safety.

Personal Development: Overcoming Adversity

Using real-life case studies, students identify and examine the qualities of resilient people and the effect on their attitude and approach to challenges in their lives.

Physical Education

Students develop an understanding of the components of a balanced lifestyle and factors that can influence their participation in physical activity. Students participate in:

- Swim & Survive course: Students participate in an enjoyable physical activity of water polo and also take on the range of roles associated with organisation and administration, including coach, trainer, timekeeping, umpire and lifeguard.
- Table tennis: students will learn the fundamentals of the game and learn to play a round robin competition.
- Tennis: students will learn to play singles and doubles and understand the rules that apply to different competition formats.
- Field games: students will play a number of field games that incorporate passing, catching and throwing with the primary focus on developing teamwork and strategy.

Class 10 Language (French)

Introductory French

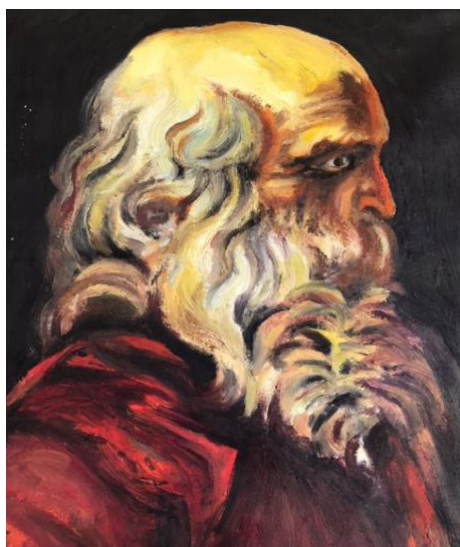
Students explore aspects of French history, including the French Revolution and France's involvement in both world wars. Students research and present information on cultural influences, architecture and the Eiffel Tower, food and degustation, fashion and perfume. They also develop their French accent while practising basic expressions.

Class 10 Music

Main Lesson: Rock Music

Students learn about rock and roll music, starting from the 1950s. They listen and analyse a range of different rock style music, including surf rock, disco and hard rock. Students will have the opportunity to play rock music as a band and develop an understanding of the history of rock.

Class 10 Visual Art



Term 1: Romanticism, Turner and Blake

Class 10 study the history of Romanticism, with case studies on Turner and Blake. Turner's work gives the students a deeper understanding of the etheric forces that shape life. Students critically analyse one of his paintings and respond in watercolour and pastel.

Term 2: Baroque Portraiture

Students undertake charcoal portraiture, enabling them to practice the 'chiaroscuro' technique and the drama of light on a face. Following this, students study Baroque art, particularly the works of Rembrandt and Caravaggio and produce either an oil painting using the chiaroscuro technique.

Term 3: Modern Sculpture

Students learn about the history of modern sculpture, with a case study on Henry Moore. They then design and produce their own modern sculpture. Following this, they study Nicholas Roerich, a Russian painter and philosopher.

Term 4: Modernism

Class 10 examine two influential female artists, America's Georgia O'Keeffe and Australia's Margaret Preston. Both women had distinct modernist visions that expressed the identity and culture of their nations. The landscape and a sense of place were a strong source of inspiration for them both.



Class 10 Drama

Main Lesson: Rock Musical

This year Class 10 students explore the inner rock god. Coupled with theatrical, singing skills and sheer tenacious talent they will develop, rehearsal and perform a stage rock musical to blow your socks off!

Class 11 HSC Preliminary Advanced English

Main Lesson: Reading to Write

Students undertake the intensive and close reading of quality texts from a variety of modes and media. Students develop the skills and knowledge necessary to appreciate, understand, analyse and evaluate how and why texts convey complex ideas, relationships, endeavours and scenarios. Students will write critically and creatively for a range of purposes. They also write to learn throughout the unit. For example, writing notes and keeping a reading journal.

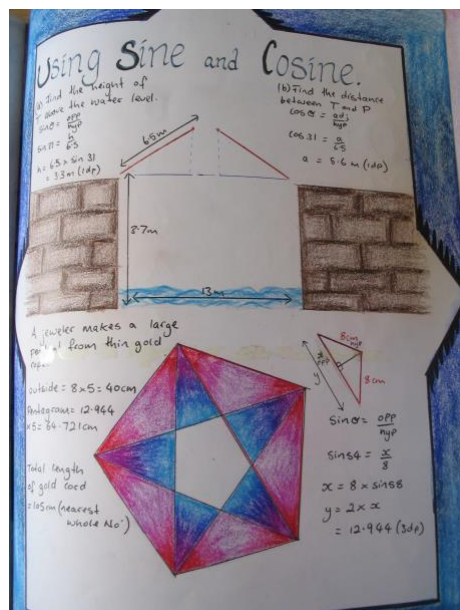
Middle Lessons: Critical Study of Literature

Students develop analytical and critical knowledge, understanding and appreciation of a literary text. Through increasingly informed personal responses to the text, students develop their understanding of the distinctive qualities of the text and notions of textual integrity.

Main Lesson: Narratives That Shape Our World

Students explore a range of narratives that illuminate and convey ideas, attitudes and values from past and present societies. Students examine how narratives may inspire change, consolidate stability or reveal, affirm or question cultural practices. Students analyse a range of texts and through investigation of their textual structures, language and stylistic features, they deconstruct the contemporary Australian social and cultural narratives embedded within these texts.

Class 11 Mathematics Standard



Main Lesson: Data Analysis and Probability

The study of statistics is important in developing students' understanding of the contribution that statistical thinking makes to decision-making in society and in the professional and personal lives of individuals. Students undertake statistical analysis involving the collection, exploration, display, analysis and interpretation of data to identify and communicate key information.

Main Lessons: Financial Mathematics, Algebra

In financial maths, students develop their skills to calculate and graph simple interest, manage earnings, wages and taxation and develop an appropriate budget for a given situation.

Students also learn interest and depreciation and budgeting and household expenses.

Block Lessons: Measurement, Algebra, Measurement and Perimeter and Volume

The knowledge of measurement enables completion of daily tasks, such as making time estimations, measuring medicine, finding weights and understanding areas of materials or substances. Perimeter and volume looks at complex shapes and solids and applies mathematics to real world problems such as catchment areas.

Class 11 Mathematics Advanced

Main Lesson: Trigonometric Function

The Lesson furthers student knowledge of trigonometry, and introduces the need to define the trigonometric ratios for obtuse angles, which is followed by the establishment of trigonometric ratios of angles of any size. Radians are introduced as another measure in which angles of any size can be found.

Students develop their ability to prove identities, simplify expressions and solve trigonometric equations; which may include the use of trigonometric identities.

Main Lesson: Differential Calculus

The aim of this lessons is for students to develop an understanding of the concept of a derivative as a function that defines the rate of change of a given function. This concept is reinforced numerically, by calculating difference quotients, geometrically, as gradients of secants and tangents, and algebraically. The derivatives of power functions are found and used to solve simple problems.

Middle Lessons: Functions, Exponentials and Logarithms, and Statistical Analysis

Functions: Students develop their use of mathematical language to describe functions, their properties and respective graphs while applying this knowledge to everyday problems and applications.

Exponentials and logarithms: Students develop an understanding of numbering systems, their representations and connections to observable phenomena such as exponential growth and decay.

Statistical Analysis: Students develop their ability to recognise, describe and apply statistical techniques in order to analyse current situations or to predict future outcomes.

Class 11 Photograph, Video and Digital Art

Main Lesson

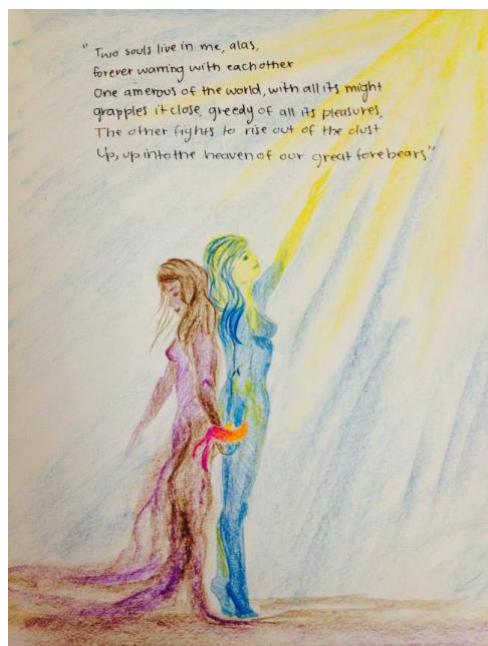
Whilst learning broadly about Digital Imaging, students will manipulate forms and discover how various techniques, approaches and technologies can be applied to the construction and transformation of imagery in digital works.

Other Lessons

This year students will be gaining practical and conceptual skills in Photography, Digital imaging and Video production. Throughout the year students will be introduced to practical Photography, Digital imaging and Video techniques while learning the critical skills in the context of historical and contemporary practises. Utilising these new skills students will focus their knowledge into their own creative film piece while also learning to explore and present a point of view through the digital medium.

Class 11 Philosophy

Philosophy is taught as a combined Class 11 and 12 lesson.



Main Lesson: Clash of Ideologies

This module investigates the powerful clashes in ideology that characterised the Twentieth Century and have shaped the ideological foundations of today's world. Students explore the building of a New World Order across the planet guided by diverse philosophical movements.

Main Lesson: Spiritual Currents in World History

Students explore the origins of the main religious philosophies and movements of the East and the West; the evolution and historical development of religious philosophies; the knowledge content and mode of expression of sacred writings, and their reception across history and cultures; the variety of major religions such as Hinduism, Buddhism, Taoism, Confucianism and Zen Buddhism (in the East) and Judaism, Christianity and Islam (in the

West), focussing on their belief structures; the internal conflicts within religious organisations and their impact on society and culture; and fundamental religious narratives and their influence on cultures and societies.

Main Lesson: Philosophy and History of Education

The critical role of education in shaping human societies has been recognised throughout human history. Especially in our time, each generation sees as its fundamental task the redefining of the purpose and the practice of education. This points to a fundamental truth about the nature of education: it is a distinctive characteristic of human societies and cultures.

Main Lesson: Projective Geometry

In this module, the fundamental concepts of space and time are explored through philosophical enquiry and practical application of geometrical skills. Students are encouraged not only to think about the concepts and their transmutations over the course of human history but also to gain an imaginative experience of them through the practice of Projective Geometry. Students will develop an understanding and appreciation of the human experience and changing attitudes and interpretations of time and space beginning with Ancient philosophical systems (e.g. Egyptian, Dream Time, Euclidean) through to the development of non-Euclidean Geometry, and in particular Projective Geometry. Students will question the differences between Asian and Greek/Western beliefs about the nature of space and time. Students will explore the constructions of many projections and develop their skills in undertaking these constructions thereby augmenting an intellectual grasp of the concepts with direct practical experience.

Class 11 Drama

Main Lesson: Comedy

Class 11 take on a comedic play that challenges their sense of timing and characterisation. At this level of drama, there are more demands for greater focus, more challenging characterisation as well as maintaining and extending performance skills in movement and vocalisation to create dramatic meaning.

Class 11 Sport, Lifestyle and Recreation

Main Lesson: First Aid

Students undertake a First Aid course, completing practical and theoretical components, and achieving a recognised First Aid certificate. (This lesson is shared with Class 12.)

Middle Lesson: Outdoor Recreation

Students learn how to plan for and prepare for the trip to Vanuatu.

Class Trip

Students complete a ten-day diving experience that includes the Class Trip to Vanuatu.

During this trip the students experience open sea diving and diving in amongst a living coral reef. The students participated in a much-needed community service by collecting crown-of-thorns starfish, which are an ecological hazard in that area, and are killing the coral.

Middle lesson: Dance

Students will examine a range of dance performances in relation to the nature and origin of style, the social attitudes and images used to convey the routines. Students will be encouraged to analyse dance styles through movement, identifying similarities and differences in dance steps, holds and formations.

Class 11 Visual Art



Term 1: Impressionism, Monet

Class 11 study Impressionism and their assessment requires them to structurally analyse the work of Monet. They paint a landscape with a focus on loose and rapid brushwork and an accurate depiction of light using pure and intense colours. Following this, they touch on Neo-Impressionism where they break down forms even more and practice the technique of 'pointillism'.

Term 2: Human Form, Anatomical Drawing

Class 11 focus on the human form, mastering proportions from varying angles and with a variety of materials. Students extend their knowledge with an excursion to 'The Archibald

Prize' at NSW Art Gallery, before painting their own portrait.

Art Nouveau

Class 11 study the history and characteristics of Art Nouveau, with a case study on Gustav Klimt. They are given a self-directed assessment task which asks them to use their knowledge of Klimt, particularly his focus on decorative and organic forms and create a large mixed media work, together with a body of research and visual diary entries.

Post-Impressionism

Class 11 study Post-Impressionism with a case study on Paul Cezanne. Cezanne paved the way for modern art, and it is his unique method of building form with colour, expressive brushwork and dramatic tonal contrasts that inspires this unit.

Class 12 HSC Advanced English

Main Lesson: Texts and Human Experiences

Class 12 will study the way that experiences are found in and mediated through texts. Students will deepen their understanding of how texts represent individual and collective human experiences, examine how texts represent human qualities and emotions associated with these experiences, and evaluate how language is used to shape these representations.

Main Lesson: Critical Study of Literature

In this Main Lesson, students will develop detailed analytical and critical knowledge, understanding and appreciation of TS Eliot's poetry. Through informed and personal responses to the poetry, students understand the distinctive qualities of the text, notions of textual integrity and significance. Central to this study is the close analysis of the text's construction, content and language to develop students' own interpretation of the text.

Middle Lesson: Textual Conversations

Textual Conversations is a comparative study of Shakespeare's play *The Tempest* and Margaret Atwood's novel *Hag-Seed*. Students compare and contrast the two texts, and appreciate how and why Atwood has appropriated *The Tempest*. *Hag-Seed* is a reimagining of Shakespeare's play, and as such has common and disparate aspects that can be attributed to the two different contexts, values and perspectives.

Middle Lesson: Craft of Writing

This Middle Lesson encourages Class 12 students to strengthen and extend their knowledge, skills and confidence as writers. They will write for a range of audiences and purposes to convey ideas with power and precision. Students will appreciate, examine and analyse three short prescribed texts as well as texts from their own wide reading, as models and stimulus for the development of their own ideas and written expression.

Class 12 Mathematics Standard 2

Main Lesson: Financial Mathematics

Students learn financial mathematics including shares, dividends, annuities, credit cards, loans and credit. Students study annuities, future and present value and using annuities to model repayment schedules and investments.

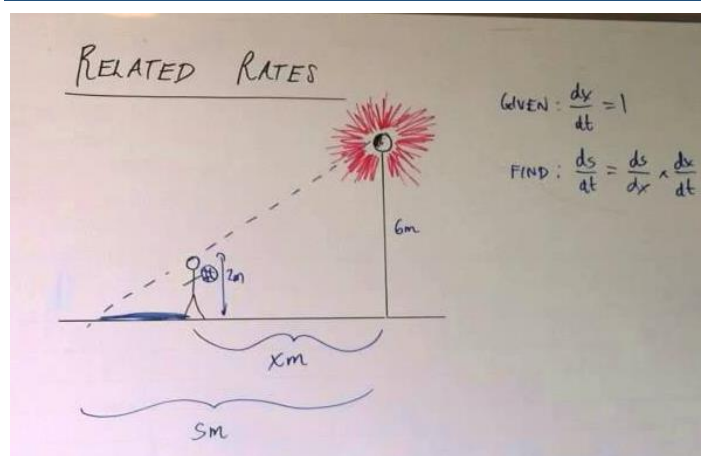
Middle Lesson: Non Linear relationship, the Normal Distribution and Non Right Angled Trigonometry

Students learn to apply Non Linear Relationships to problems such as population growth and radioactive decay. Students look at the Normal Distribution and how it occurs in many natural and generated datasets. Students learn to apply Non Right Angled Trigonometry to field surveys and navigation problems.

Main Lesson: Network Analysis and Critical Paths

Students analyse networks and learn to calculate the minimum spanning trees, consider Eulerian and Hamiltonian walks and calculate the shortest path through a network. Students look at task scheduling, float and Critical Path analysis. These topics are relevant to industry, in logistics, telecommunications and project management.

Class 12 Mathematics



Main Lesson: Calculus – Geometrical Applications of Differentiation

The Class 12 Mathematics course commences with the introduction of calculus, focusing on the manipulation, significance and the applications of the first and second derivatives.

Middle Lessons: Exponentials, Logarithms, Trigonometry, Series & Probability

Learning is then expanded during the Middle Lessons to the use, representation and differentiation of exponential, logarithmic and trigonometric functions. The course also develops students' understanding of probability, and the financial applications and calculations involved with sequences and series.

Main Lesson: Integral Calculus

The topic of calculus is further deepened during the Main Lesson to explore integration as a way of finding area under algebraic functions, including exponential, logarithmic and trigonometric functions.

Class 12 Sport, Lifestyle and Recreation

Main Lesson: First Aid

Students undertake a First Aid course, completing practical and theoretical components, and achieving a recognised First Aid certificate. (This lesson is shared with Class 11.)

Middle Lesson: Dance & Fitness

Students will learn a number of Ballroom dances and make comparisons with other dance styles in relation to the nature and origin of style, the social attitudes and images used to convey the routines. Students will be encouraged to analyse dance styles through movement, identifying similarities and differences in dance steps, holds and formations. Students will explore a range of fitness programs and styles while engaging in a weekly gym visit. This will lead to students being able to design their own fitness program or training regime.

Class 12 Drama

Main Lesson: Final Performance

Class 12 present a script that explores the complexities of human emotion and relationships. Students take on dramatic scripted texts of a higher level of sophistication than in younger years, culminating in their final high school dramatic performance.

Class 12 Eurythmy

The class work towards their final Eurythmy performance.

Class 12 Philosophy

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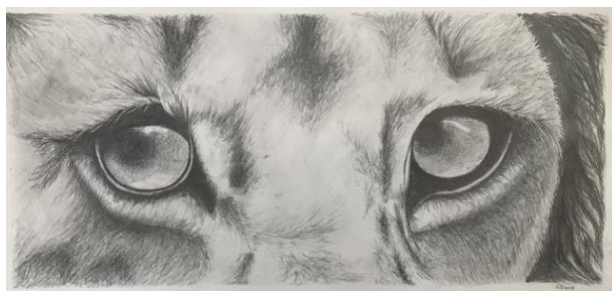
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Class 12 Visual Art



Surrealism

Class 12 study Surrealism and closely examine the works of Salvador Dali, whose art inspires their assessment, to contemplate their own unconscious and the space that exists between dreams and reality.

Following this, they touch on two modern Australian artists: Miranda Skoczek, whose

work is a post-modern interpretation of Surrealism; and Tiel Seivl-Keevers, whose art shares the ambiguity of Surrealism but is more organic in form.

Expressionism

Class 12 study the history of Expressionism and learn about the driving forces behind modern art, with an assessment case study on Kandinsky.

Advanced Drawing, 'Perception'

Class 12 work on advanced drawing skills using charcoal, graphite and pencil, capturing light and movement. They examine perception in art, and how every person perceives and understands things based on their own feelings and experiences.

Combined Classes 7, 8, 9: Practicals

Students have a range of offered term-long activities. This could include a range of activities such as: knitting, sewing a teddy bear, making a wooden outdoor chair, bushwalking, creating a mosaic, skateboarding, beginner ukulele lessons, band, sculpture and jewellery making, and the list goes on.

Combined Classes 7, 8, 9: Environmental Investigation

Students will undertake environmental investigations looking the school, they investigate the environmentally friendly programs that already exist within our school, i.e water tanks- why use them, how much water can they harvest, water recycling- how does a septic system water work, solar panels- how do they work, they could play with simple solar kits. The new block has a natural gully that can be slowly regenerated with native plants and student work. Students also investigate the local environment within the wider community, what programs are run by the local councils, research some environmental issues within the local community and how they could be solved, become involved with local landcare / rivercare groups.

Combined Classes 9, 10: Extended Learning Project

Students, are offered the freedom to choose a project of their choice. Projects in 2018 ranged from juggling to car engines, from 1800's fashion design to advanced watercolour paintings, from filming to forging, from Capoeira to cooking, from computer programming to song writing to performing.

Students work individually or in small groups, under the guidance of a teacher to complete their Project.

Stage 5 Music Elective

A number of dedicated and passionate musicians are undertaking the Stage 5 Music Elective. This is a two-year course over Classes 9 and 10. This course includes the Main Lesson and practical music lessons listed for Classes 9 and 10. The students study the Music Elective courses through a range of different topics, with one of the focuses being Australian Music. All students are required to undertake individual study of an instrument or voice as part of these courses, and to be part of the School Ensemble.

The courses vary, ranging from topics based on Theatre Music, Rock Music, Classical Music and Music for Small Ensembles. The Elective Music Program is divided into three components: Performance, Composition and Listening. Technology is incorporated into the course, with an emphasis on composition and listening.

Combined Classes 10, 11, 12: Film Festival

Our senior students will be presenting their work at the Film Festival in September 2019. Films will come from any of the following categories: instructional, recreational or scenic, documentary or fictional.

Class 10 students will focus on a film that is related to marine or aquaculture, Class 11 students will make a film that is related to one of the following: driving, inclusivity / bullying, or the environment, and Class 12 students will make a short film related to their Major Work Project.

Combined Classes 10, 11, 12: Vocational Educational Training (VET)

Students who complete less than 2 years in any of the following would gain a Statement of Attainment listing the Units of Competency that have been completed.

Note about eligibility for the HSC: Each of the VET units listed here is a Board Developed Course (BDC) and count as 2-units towards the HSC qualification; with the exception of Early Childhood, which is a Board Endorsed Course. Students studying VET Early Childhood would still need to be on a pathway towards the HSC, and would need to complete an additional 2-unit BDC to be eligible for the HSC.

Entertainment (Live Production and Services)

This course is completed over 2 years and includes the compulsory 70 hours (35 hrs each year) of Work Placement, plus 12 of the required 15 Units of Competency, allowing students to gain a Statement of Attainment towards the Certificate III.

The course concentrates on developing the skills to work effectively in an entertainment environment. The course focuses mainly on lighting (operating lights, rigging) audio (audio mixer, microphones, amplifiers and speakers), visual (projector) and stage (props and settings).

Information and Digital Media Technology

This course is completed over 2 years and includes the compulsory 70 hours (35 hrs each year) of Work Placement, plus 12 of the required 17 Units of Competency, allowing students to gain a Statement of Attainment towards the Certificate III.

The course develops skills relating to computer software, including WH&S as it relates to computer usage, as well as installing and configuring operating systems. Students are taught how to diagnose issues using software; computers as tool to produce simple WEB sites, formatting images and creating documentation; and the history and the development of social media.

Hospitality (Kitchen Operations)

This course is completed over 2 years and includes the compulsory 70 hours (35 hrs each year) of Work Placement, plus 13 of the required 13 Units of Competency, allowing students to gain the full qualification of the Certificate II.

The Course includes a range of hospitality skills such as safe food handling practices to safe work practices, preparing and presenting simple dishes using basic methods of cookery and sourcing and using information on the hospitality industry.

Construction

This course is completed over 2 years and includes the compulsory 70 hours (35 hrs each year) of Work Placement, plus 12 of the required 12 Units of Competency, allowing students to gain a Statement of Attainment towards the Certificate III.

The Course enables students to work towards being competent in a range of construction skills. These competencies cover skills such as reading plans and drawings, measuring and marking, site communication, applying OHS standards, using hand power tools, handling construction materials and building small projects.

Early Childhood Education and Care

This course is completed over 2 years and includes the compulsory 120 hours of Work Placement, plus 9 of the required 18 Units of Competency, allowing students to gain a Statement of Attainment towards the Certificate III. Opportunities will be provided to complete at approximately 40 to 60 hours of work placement during school hours.

High School Teaching Staff

Leanne is the Head of High School, and has taught Mathematics for over 20 years, 15 of those years at Lorien Novalis School. Leanne has a Bachelor of Science in Mathematics and a Master of Education, as well a Diploma in Steiner Education.

Margaret is co-Guardian of Class 12 and is the high school Music and Mandarin teacher, and also teaches VET Entertainment. Margaret coordinates Individual Education Plans for high school students. Margaret has taught for 14 of years at Lorien Novalis School. She has a Bachelor of Education (Music).

Glenn is co-Guardian of Class 12 and teaches Mathematics, junior Physics and Information & Digital Technology. He has taught for 8 years. Glenn has a Bachelor of Science (Mathematics) and Post Graduate Diploma in Education.

Olivia is co-Guardian of Class 11 and she is the high school Visual Art teacher. She is an exhibiting artist. Olivia has a Bachelor of Fine Arts and a Graduate Diploma of Education.

Tony is co-Guardian of Class 10 and he teaches PDHPE and Sport Lifestyle & Recreation. He has been a teacher for 27 years and at Lorien for 15 years. Tony has a Bachelor of Arts (Honours) in Human Movement Studies and a Certificate in Education.

Elli is co-Guardian of Class 10 and she teaches History and Philosophy, as well as crafts and cooking. She has taught for 6 years; she has a Bachelor of Arts and a Masters of Teaching. Elli attended a Steiner school as a child.

Marcus is co-Guardian of Class 8 and is the high school Drama teacher. He has professionally worked on stage and screen. Marcus has a Bachelor of Fine Arts (Acting). He is a graduate of Lorien Novalis School, from Kindergarten to Class 12.

Angela is co-Guardian of Class 8 and is the high school English teacher. She has taught at Lorien Novalis School for 7 years, after working for 20 years as an editor and writer. Angela has a Bachelor of Arts Honours (Drama and English) and a Bachelor of Teaching.

Stefan is the Class 9 Guardian. He teaches Class 10 Chemistry and Physics. He has taught at Lorien Novalis for over 20 years. Stefan has a Bachelor of Science, Graduate Diploma in Engineering and a Graduate Diploma in Education.

Eric assists the Class Guardians and is our Biology, junior Chemistry and Technology & Applied Studies teacher. He is also a learning support teacher. Eric has taught for 11 years; he has a Bachelor of Education (Technology & Applied Studies).

Donna is our VET coordinator and teaches VET Hospitality (Kitchen Operations). Donna has taught for over 20 years and has a Bachelor of Education.

Jim has been involved in education for over 40 years. He teaches Geography and Technics, and assists Class Teachers and Class Guardians with trip planning. Jim has a Bachelor of Educational Studies.

Anita is the High School VET Early Childhood Education and Care Teacher. She has been an Early Childhood Teacher for over 20 years, 6 of those at Lorien Novalis Preschool. She has a Bachelor of Teaching Early Childhood.

Stephanie joins our High School as an English teacher and she assists with Learning Support.