



2024

Year 9

SUBJECT

HANDBOOK

Lake Joondalup Baptist College

Contents

Contents	1
Important	2
Welcome to the 2024 Year 9 Subject Handbook	3
The Curriculum Framework	4
Ten Learning Areas at LJBC	4
Learning Enhancement.....	4
Christian Values and Community Focus	5
From the Learning Enhancement Department	6
Electives Selection	8
Additional Compulsory Subjects	9
Christian Education/Friday Live	9
Wellbeing	9
Curriculum Awards	10
Curriculum Team	11
The Arts	12
Year 9 Dance	12
Year 9 Drama	13
Year 9 Media	14
Year 9 Music	15
Year 9 Visual Arts.....	16
English	17
Year 9 English	17
Health & Physical Education	18
Year 9 Health & Physical Education	18
Year 9 Basketball Specialist	19
Year 9 Outdoor Education	20
Year 9 Physical Education Studies	21
Year 9 High Performance Sport (Football Academy)	22
Humanities and Social Sciences	23
Year 9 Humanities and Social Sciences	23
Languages	24
Year 9 French.....	24
Year 9 Japanese	25
LJ Aspire Academic Extension and Enrichment Program	26
Year 9 Aspire Extension Class	26
Mathematics	28
Year 9 Mathematics.....	28
Science	31
Year 9 Science	31
Technologies	33
Year 9 Digital Technologies.....	33
Year 9 Design & Technology	35
Year 9 Foods.....	36
Year 9 Home Economics.....	37
Year 9 Textiles	38
Year 9 iSTEM – Technologies	39

Important

All information is current-to-date and is subject to change as needed.

This page is intentionally left blank

Welcome to the 2024 Year 9 Subject Handbook

The purpose of this handbook is to provide students with information about the academic subjects that are provided in the curriculum at Lake Joondalup Baptist College. All Learning Areas have contributed to this handbook, as has the Curriculum Administrative Team.

Students in Year 9 are currently studying a combination of subjects in the Western Australian Curriculum .

In 2024, Year 9 students will study the compulsory subjects of English, Mathematics, Science, Humanities and Social Sciences, Christian Education, Health & Physical Education as well as a significant Wellbeing program which is designed to build confidence and resilience for all students. Electives in 2024 can be selected from Future Problem Solving (by invitation), The Arts, Technologies, Languages and options in Health & Physical Education.

We encourage our students to choose wisely from the electives available, and to commit to the compulsory subjects, to best prepare their academic foundations for the Senior Secondary School. Year 9 should be considered the preparation year before the start of Senior Secondary, which begins at Year 10. Learning is important for our Year 9 students at this stage that they have an open mindset to ensure they begin to understand the energy needed for their learning as they continue to develop their own sets of skills and talents.

You are welcome to discuss any aspects of the curriculum with the relevant staff at our College. We wish our students well as they pursue their academic goals.

The Curriculum Framework

Ten Learning Areas at LJBC

The Arts

English

Career Education

Christian Education

Health & Physical Education

Humanities and Social Sciences

Languages (French and Japanese)

Mathematics

Science

Technologies

Learning Enhancement

Additional Support

Gifted and Talented

Christian Values and Community Focus

All Learning Areas at Lake Joondalup Baptist College have the following aims embedded within teaching and learning programs:

- To provide a community founded on Christian values, within which a student's full potential (intellectual, emotional, physical, spiritual, cultural, social) can be developed
- To encourage, enhance and develop numeracy and communication skills necessary for continued learning and personal growth throughout life
- To encourage a valuing of the local, global and universal environment, in order to adopt responsible attitudes towards our stewardship of it
- To provide opportunities for developing respect for others and their points of view, the ability to work cooperatively and collaboratively and to provide service for others as an expression of responsible citizenship
- To equip students with an appreciation of their own worth and the value of others
- To develop in students, the confidence and ability to make decisions about all aspects of life, including vocational pursuits
- To help students deal creatively with economic and social realities.

From the Learning Enhancement Department

LJ Aspire Academic Extension Program

The College has high academic standards and an enviable record in assisting academically talented students to excel and reach their full potential. Academically talented students are identified and mentored through the LJ Aspire program which provides them with opportunities to maximise their potential.

Our program provides the following:

- Identification of academically talented students providing differentiation, extension and enrichment
- Development of cognitive, social, and emotional skills including problem solving, critical thinking, communication, collaboration, empathy, and self-awareness
- Exposure of students to a curriculum that allows them to work at higher cognitive levels
- Opportunities for students to participate in a range of academic competitions
- Holistic monitoring of gifted and talented students

Extension Opportunities

We provide the following extension opportunities for academically talented students:

- Differentiated curricula and learning activities in the classroom
- Academic Extension classes in Mathematics, English, Science, and Humanities where students can interact with their academic peers, learn at an advanced pace, engage in open-ended activities and higher order thinking skills that will enable them to pursue greater depth and breadth in their Learning Areas.
- Specialist programs such as the LJ Aspire enrichment class
- Mentoring and monitoring of academically talented students
- Accelerated curricula
- Education plans for exceptionally gifted students

Enrichment Opportunities:

Enrichment activities include opportunities for students to expand their knowledge and skills beyond the normal classroom environment. The following enrichment opportunities are available beyond the classroom:

- Australian Computational and Linguistic Olympiad
- Creative Edge
- da Vinci Decathlon
- Ethics Olympiad
- Evatt Trophy
- Game Changer Awards
- Future Problem Solving Competition
- UN Voice
- WADL School's Debating Competition

The Learning Support Program

Students with learning difficulties have access to programs and curricula to support their development cognitively, physically and socially.

Students with diverse learning needs have access to the following internal and external programs and curricula to support their development cognitively, physically and socially.

Programs:

- **English Foundation** and **Mathematics Essential** classes in Years 7-10 are smaller classes offered to students who have been identified as needing significant levels of support in English and Mathematics.

- Case Managers in the LEC offer an **Organisational Skills Program** with students on their case list. LEC staff meet with identified students on a regular basis to help them with their organisational skills, daily planning, planning for assessments, planning for homework etc.
- **Education assistance** is offered to our funded students and the Mathematics and English Foundation classes.
- **ASDAN programmes** and qualifications are offered to students with significant learning disabilities who are unable to access the mainstream curriculum. This curriculum empowers students through personalised learning and choice to develop core skills in teamwork, communication, problem solving, research and self-management.

Documented Plans:

Students with specific learning needs will either receive a Curriculum Adjustment Plan or an Individual Education Plan, depending on the level they can access the mainstream curriculum.

- The LEC develops **Curriculum Adjustment Plans** for students who can access the mainstream curriculum but need adjustments to teaching strategies, amount of homework, assessments and physical classroom environment in order to accommodate their learning difficulties and allow them to demonstrate their ability.
- The LEC also develops **Individual Education Plans** for students that cannot access the mainstream curriculum on their level, physical classroom/school environment and assessments. These students need personalised modified outcomes, personalised modifications to assessments, learning activities specifically designed for the student and modified study materials.
- **Autism Plans** are developed for students with Autism Spectrum Disorder. Autism Plans organise relevant information and identify key areas for consideration in the education of students with Autism Spectrum Disorder, including curriculum and assessment modifications and accommodations, social skills, communication skills, sensory processing and organisational skills.

Enquiries

Mrs Sarah Ferreira – Head of Learning Area – Head of Learning Diversity K-12
Ms Ashleigh Cartledge – Academic Extension Coordinator

Electives Selection

Apart from the compulsory subjects in Years 7-10, students in Year 9 may choose electives within their curriculum. From the choices made by students, it will be determined whether an elective class will run, as will the number of classes of that elective that will run. If an elective class does not run, or is full, the next available elective class in order of a student's preference will be considered for that student. The Future Problem Solving elective is a selective elective offered to academically able students. Formal recommendation for students to participate in the Future Problem Solving Program will be made by the College and parents will be notified by a letter. It is recommended that students consider their choices of electives in terms of choosing an overall education package with respect to providing substantial curriculum foundation for the senior years ahead. Students should also consider their choices in terms of what they know they are most interested in.

Please note that the iSTEM – Technologies elective has a strong technologies focus.

In Year 9, students choose three electives and two reserves.

Year 9 Electives Selection 2024

You will be asked to enrol for these subjects via the web using *Edval Choice*. All students will be issued with an information sheet explaining the process and the minimum requirements with regards to accessing the site. This information is specific to each student and will give them their individual student access code. It is important that this information sheet be kept safely and students should choose their electives in conjunction with their parents or guardians.

If you do not have the required capacity to enrol at home, then students may do this at school in the Library at lunch time. If you have problems with your access code, please see Mr Downsborough, otherwise all other enquiries must be presented to the Curriculum Office. A copy of the printed form must be signed by the student and parent/guardian and then returned to the electives box in the Curriculum Office. Students should not attempt to enrol in their electives during class time.

Cut-off date:

Monday 7 August 2023

You must select a total of **three (3)** electives plus **two (2)** reserve options by the above date.

Reserve options

While every effort will be made to accommodate your course options, it is more than likely that some students will miss out on some of their preferences because there are not sufficient numbers to run a class, or the class clashes with a higher ordered preference option. Therefore, some thought should go towards reserve options so that a place can be reserved in that class in the case of a student missing out on their first preferences. The order of choosing the subject is important and you should give consideration to which subjects you prefer to study.

Additional Compulsory Subjects

Christian Education/Friday Live

At LJBC we meet all students where they are at with their faith and we endeavour to support their progress in their spiritual walk with God from there. We create an environment where students feel comfortable and encouraged to approach their teachers to ask questions, in a non-threatening atmosphere. During the weekly Christian Education lesson, students are informed and educated about the teachings of the Bible and Christianity. Students are given the opportunity to talk about a variety of contemporary and age relevant issues that help to establish their own moral and value systems. In Christian Education we share the vision motto of the College derived from Micah 6:8: 'Seek Wisdom, act Justly and love Mercy'.

Wellbeing

At the heart of our Wellbeing Curriculum are the College Values that define our relationships and commitment to an integrated, whole school approach to pastoral care.

Based on the Principles of Positive Psychology, our Wellbeing Curriculum focuses on building self-esteem and developing skills to help students manage the challenges presented to them in school.

Allowing students to put the skills and strategies taught in the Wellbeing Curriculum into practice aids in achieving the goal of creating independent and resilient young people. Opportunities for students to engage in healthy risk-taking, goal setting, the development of self-confidence and self-esteem is facilitated by the Wellbeing Curriculum and the Year group camps at the College.

Curriculum Awards

The College recognises students who achieve at high standards through Certificates of Excellence, Letters of Merit, Endeavour Awards and Subject Awards.

Certificates of Excellence are awarded twice in each academic year for Semester 1 and Semester 2. Students who achieve at high standards across a range of Academic Subjects will receive a Certificate of Excellence by attaining 80% in their subjects that are assessed by the School Curriculum and Standards Authority (SCSA) criteria. Typically, for Years 7-9, a student must receive at least 6 A grades in SCSA assessed subjects. Please note this will be changed by the Curriculum Team if there are any adjustments in the number of classes taken by these cohorts. Certificates of Excellence are presented at a Secondary Assembly.

Endeavour Awards are awarded to students who are recognised by their teachers who have demonstrated an approach to learning that will help them to achieve success through work ethic and diligence as well as consistent application and positive cooperation. We believe it is important to recognise their dedication to their studies on their learning journey.

Letters of Merit are awarded twice a year to all students in Years 7-10 who achieve 5 or more A grades across a range of subjects assessed by SCSA criteria. Please note that Semester 2 Certificates of Excellence and Letters of Merit are not awarded until Term 1 of the following year to assist in carefully considering all final grades.

Subject Awards are presented at the end of each academic year at the Secondary Awards Evening. These Subject Awards are given to the top students of each cohort in each Learning Area based on academic achievement. Learning Areas may choose to award up to four students, in each subject, dependent upon criteria of achievement.

Curriculum Team

During the time students and their families are making decisions about choice of elective subjects, it is important to talk about suitable choices with subject teachers and the relevant Heads of Learning Area. The following people will be able to help with enquiries regarding curriculum decisions:

Curriculum Team

Dean of Studies

Mrs Kimberly Eyre

Head of Career Education

Mr Lynton Smith

Learning Areas/Departments

The Arts

Ms Tracy Pender

Career Education

Mr Lynton Smith

Christian Education

Mr Matthew Harris

English

Mrs Amanda Collier

Health & Physical Education

Mr Ben Allsop

Humanities

Mrs Telma Keen

Languages

Mrs Meagan Maassen

Learning Diversity K-12

Mrs Sarah Ferreira

Library

Mr Stephen Sampson

Mathematics

Mr Glenn Tyrie

Science

Mrs Vanessa Budas

Technologies

Mr Tomasz Dudek

Head of Learning Areas/Departments

The following staff can be contacted for technical issues

Dean of Administration

Mr Mark Downsborough

Secondary Learning Technologies Manager

Mr Limpie van Aswegen

The Arts

Year 9 Dance

Subject description

The Dance course acknowledges the inter-relationship between practical and theoretical aspects of dance – the making and performing of movement and the appreciation of its meaning. Students are given opportunities to present dance to an audience, focusing on retention and clarity of movement, projection, focus, expression and musicality. They further discuss the choreographer's use of the elements of dance, choreographic devices and structures, and design concepts for choreographic intent in the dances they make and view. They investigate the evolution of particular dance genres/styles. Through dance, students experience an intrinsic sense of enjoyment and have an opportunity to achieve a high level of movement skills. The course runs for the full academic year.

Assessment

Making – Practical assessment includes choreography and dance performance across a variety of dance styles.

Responding – Theory based assessment includes research investigations and written responses to professional dance.

Pathways

Leads to Year 10 Dance.

Professions include

Dancer, musical theatre, choreographer, teacher, lecturer, arts management/administration, production/stage management, personal training, yoga instructor

Enquiries

Ms Tracy Pender – Head of Learning Area – The Arts

Year 9 Drama

Subject description

This is an enjoyable and invigorating Drama course packed with variety, excitement and an increasing expectation of focus and discipline. Students will learn how to develop acting techniques appropriate to different styles of drama. The course will assist students in progressing skills in communication and teamwork along with ensemble performance creation. The subject will appeal to students who have a keen interest in acting and theatre production. Students will be able to unleash creativity through different roles such as costume design and set design.

Class work includes:

- Improvisation skills
- Creating scripts
- Devising and rehearsing scripted performances
- Viewing and responding to theatre productions
- Researching styles of theatre (Melodrama and Realism)
- Presenting a class production

In Year 9 Drama, students are given opportunities to refine their knowledge and skills to present drama as an event. They will work with published scripts, using selected drama forms and styles. The course will enhance students' study of English and develop creative and critical thinking, confidence and effective communication whether working individually or as a team. Students will engage in workshops with professional actors. The course runs for the full academic year.

Assessment

Making – practical assessments include original and scripted performances and performing a production role (ie director, set designer).

Responding – written responses to performances

Pathways

Leads to Year 10 Drama.

Professions include

Teaching and lecturing, management and personnel services, public relations, marketing and promotions, occupational therapy, drama therapy, psychology, counselling, acting, directing, arts and events management, arts administration, production/stage management, production design, arts education, production design (sound, lighting, costume, set), front of house management, radio presenting, journalism, writing.

Enquiries

Ms Tracy Pender – Head of Learning Area – The Arts

Year 9 Media

Subject description

This course will appeal to students who have a keen interest in films and TV programs. Students will create media works in groups and write and respond individually to professional media works. While viewing film excerpts and making their own films, they will gain knowledge of a range of media concepts and hands on practical application of the use of digital technologies.

Class work includes:

- Filmmaking fundamentals
- Making a short suspense film
- Excursion to film on location at Whiteman Park
- Viewing and responding to a suspense film scene
- Filming a TV news bulletin
- Making a movie trailer

Students will develop an understanding of the codes and conventions used in films and TV and apply these as they learn filming and editing skills and techniques. The course will supplement students' study of English and also help students gain confidence to work in teams with defined roles and responsibilities, teaching them problem-solving group skills and creative thinking strategies. The course runs for the full academic year.

Assessment

Making - film production practical assessments	80%
Responding - theory based assessments including written responses to professional media works	20%

Pathways

Leads to Year 10 Media.

Professions include

Marketing, digital content creator, publicity and promotions, communications officer, public relations, social media manager, videographer, IT, event coordination, film director, management and personnel, multimedia design, game making, animation, documentary filmmaking, camera operation, sound recording, TV production, editing, advertising production, radio production, journalist, acting.

Enquiries

Ms Tracy Pender – Head of Learning Area – The Arts

Year 9 Music

Subject description

Students will expand their practical music skills through rehearsal and performance, explore the various musical styles, and develop their aural listening skills. Students will also develop composing ICT skills using music software. This course will provide students with essential knowledge and skills to further their music education in Years 10 through to 12.

Minimum standards for success

Satisfactory skills on own instrument or vocal ability. Individual lessons on own instrument or vocal lessons each week.

Assessments

Making – practical and composition assessments	60 %
Responding – skilled listening, aural and theory assessments	40%

Homework and study expectation

Music is a self-motivated study program which includes daily practise on voice or instrument and keeping up to date with set tasks and homework.

Pathways

Year 9 students can choose Year 10 Music or VET certificates in upper school.

Professions include

Music event coordinator, sound engineer, booking agent, artist/band manager, music therapy, professional musician (jazz, rock, alternative, classical), music teacher, specialist instrument tutor, TAFE or university lecturer, specialist recording artist, session musician, composer, movie soundtrack composer.

Time off campus

Opportunities will arise for students to perform in public.

Enquiries

Ms Tracy Pender – Head of Learning Area – The Arts
Mrs Tammy van der Nest – Director of Music PK-12

Year 9 Visual Arts

Subject description

This course covers a range of techniques including drawing with a variety of media, painting, ceramics and printmaking. This hands-on course will appeal to students who have an interest in creating art, incorporating ideas into a project and all other arts forms. Students may have the opportunity to participate in workshops with professional artists and to exhibit their work in the annual Visual Arts Exhibition to which family and friends are invited.

Class work could include:

- Drawing according to a certain theme
- Constructing a clay sculpture
- Painting
- Printmaking using various techniques
- Viewing and responding to artworks
- Researching a famous artist

The course runs for the full academic year.

Assessment

Making - practical assessments

Responding - theory based assessments

Pathways

Leads to Year 10 Visual Arts; students showing particular aptitude in Visual Arts in Year 10 can choose from Visual Arts courses in upper school.

Professions include

Architecture, advertising, animation, illustration, graphic/web design, interior design, fashion and textile design, curating, arts event coordinating, theatrical costume making and design, photography, make-up art and other professions requiring drawing or creative thinking skills.

Enquiries

Ms Tracy Pender – Head of Learning Area – The Arts

English

Year 9 English

Subject description

English is compulsory for all Year 9 students. English is organised into three strands - language, literature and literacy - to support students' growing understanding and use of Standard Australian English. These strands are taught concurrently and focus on developing students' knowledge, understanding and skills in reading, viewing, speaking and writing.

Strands	Content
Language	Students will learn about the English language through variations and change. They will learn how to use language for interactions and to understand text structure and organisation. Students will also learn how to express and develop ideas, develop vocabulary and to understand grammar and its usage.
Literature	Students will understand literature and its meaning through content and context; to respond to texts by examining literary texts and to identify personal ideas, experiences and opinions. Students will learn to use a variety of texts as a starting point to create imaginative writing.
Literacy	Students will develop the ability to interpret and create texts with appropriateness, accuracy, confidence and fluency. Students study texts from different cultures and history and will learn to comprehend what they read and view as they develop a more sophisticated process of interpretation.

Assessment

Students will demonstrate their achievement through their creation of a range of persuasive, imaginative and informative text types along with analysis through formal essays, short answer responses and oral presentations.

Pathways

Students are placed in the Extension class through a range of data including teacher recommendation. Being selected for Extension in Year 8 does not automatically mean they will be in Extension for Year 9. Students will need to demonstrate a high level of application, focus and study to meet the highest standards for their own academic achievement. Students who have been identified as having difficulties in English that require greater individual attention may be selected for placement within the Foundation class.

Enquiries

Mrs Amanda Collier – Head of Learning Area – English

Health & Physical Education

Year 9 Health & Physical Education

Subject description

The two subjects of Health & Physical Education are compulsory for all Year 9 students. Health Education has an emphasis on understanding risk factors that influence our health, drug education and describing respectful relationships. In Physical Education, the focus will be on elements of speed and accuracy in different movement environments, while continuing to develop the efficiency of specialised movement skills. Students will explore ways to evaluate their own and others' performances through evaluation of skills and movement patterns of their own and their peers. They transfer previous knowledge of outcomes in movement situations to inform and refine skills, strategies and tactics to maximise success. The development of strategic thinking skills is applied to striking, net and invasion games.

Assessment

Health:

Being Healthy, Safe and Active	40%
Communicating and Interacting for Health and Well Being	30%
Contributing to Healthy and Active Communities	30%

Physical Education:

Moving Our Body	40%
Understanding Movement	30%
Learning through Movement	30%

Pathways

Health & Physical Education enables students to apply the knowledge and skills they have learnt to their present lifestyle. The subject also provides prerequisite knowledge for students wanting to work or pursue further study in sporting, fitness, health and medical related fields.

Enquiries

Mr Ben Allsop – Head of Learning Area – Health & Physical Education

Year 9 Basketball Specialist

Subject description

Basketball specialist is a course for anyone wanting to further their understanding and skills in Basketball. Two sessions a week will be provided by our highly qualified basketball coaching staff. These basketball sessions will contribute towards meeting the Western Australian Curriculum Physical Education outcomes.

The sessions will look at the development of basic fundamentals and build upon them to develop high tuned individual skills. Students will learn the general principles of offence and the use of set plays and play systems which will enable them to better utilise their skills in their club situations. They will also learn defensive styles and systems to also help their wider understanding. The students will also learn the fundamentals for coaching and officiating in basketball, so that they can plan and lead simple sessions and understand the rules fully and be able to officiate games for others. The sessions will include Strength and Conditioning components, specific for basketball. Students are taught the body management skills necessary for elite athletes to ensure longevity and success in a demanding competitive environment.

Assessment

Physical Education (Basketball):

Moving Our Body	40%
Understanding Movement	30%
Learning through Movement	30%

Pathways

This Sport Pathway seeks to develop high performing student athletes with the skills and resilience to be successful on the court as well as off it.

Enquiries

Mr Ben Allsop – Head of Learning Area – Health and Physical Education

Year 9 Outdoor Education

Subject description

Outdoor Education aims to provide the knowledge and skills for outdoor activities and experiences, including archery, orienteering and snorkelling. Students will be introduced to the basic concepts of Outdoor Education, safety and environmental awareness. Interpersonal and self-management skills are developed alongside practical skills in a group based practical context.

Assessments

Investigation	20%
Practical Skills	40%
Response	20%
Interpersonal Skills	10%
Self-Management Skills	10%

Pathways

Outdoor Education enables students to apply the knowledge and skills they have learnt to their present lifestyle. It teaches students to assess risk and become more self-reliant. The subject leads on to Outdoor Education in Year 10 and also provides prerequisite knowledge for students wanting to work or pursue further study in sport and recreation related fields.

Enquiries

Mr Ben Allsop – Head of Learning Area – Health & Physical Education

Year 9 Physical Education Studies

Subject description

Physical Education Studies aims to provide the knowledge and skills for students to engage in sport and recreation activities. Students will explore coaching fundamentals, functional anatomy, the components of fitness and strategies and tactics of the focus sport. Interpersonal and self-management skills are developed alongside practical sporting skills in a group based practical context.

Assessment

Practical Sport	50%
Theoretical Sport	50%

Pathways

Physical Education Studies enables students to apply the knowledge and skills learnt to their present lifestyle. The subject leads on to Physical Education Studies in Year 10 and also provides prerequisite knowledge for students wanting to work or pursue further study in health, sporting and fitness fields.

Enquiries

Mr Ben Allsop – Head of Learning Area – Health & Physical Education

Year 9 High Performance Sport (Football Academy)

Subject description

High Performance Sport is the elite pathway for students in the Football Academy, access to this course is by invitation only. Three sessions a week will be provided by our highly qualified football coaching staff. These football sessions will contribute towards meeting the Western Australian Curriculum Physical Education outcomes.

One period a week will be the classroom based 'leadership' lesson focusing on Academy values, coaching and umpiring. One flexible 'Strength and Conditioning' session is held outside school time during the week. Students are taught the body management skills necessary for elite athletes to ensure longevity and success in a demanding competitive environment.

Assessment

Physical Education (Football):

Moving Our Body	40%
Understanding Movement	30%
Learning through Movement	30%

Pathways

The High Performance Sport Pathway seeks to develop high performing student athletes with the skills and resilience to be successful on the field as well as in the classroom.

Enquiries

Mr Ben Allsop – Head of Learning Area – Health & Physical Education

Humanities and Social Sciences

Year 9 Humanities and Social Sciences

Subject description

In Year 9, Humanities and Social Sciences consists of Civics and Citizenship, Economics and Business, Geography and History. Each topic will run for one term, and are compulsory for all students.

Civics and Citizenship – Students continue to build on their understanding of the concepts of the Westminster system, democracy, democratic values, justice and participation. They examine the role of key players in the political system, the way citizens' decisions are shaped during an election campaign and how a government is formed. Students investigate how Australia's court system works in support of a democratic and just society.

Economics and Business – Students are introduced to the concepts of specialisation and trade while continuing to further their understanding of the key concepts of scarcity, making choices, interdependence, and allocation and markets. They examine the connections between consumers, businesses and government, both within Australia and with other countries, through the flow of goods, services and resources in a global economy. The roles and responsibilities of the participants in the changing Australian and global workplace are explored.

Geography – The concepts of place, space, environment, interconnection, sustainability and change continue to be developed as a way of thinking, which provides students with an opportunity to inquire into the production of food and fibre, the role of the biotic environment and to explore how people, through their choices and actions, are connected to places in a variety of ways. Students apply this understanding to a wide range of places and environments at the full range of scales, from local to global, and in a range of locations.

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 making of the modern world from 1750 to 1918. They consider how new ideas and technological developments contributed to change in this period, and the significance of World War I.

Assessment

Students will take part in fieldwork activities, complete tests, conduct research and enquiry projects, conduct interviews and discuss ideas, concepts, and understanding.

Assessments will be on content knowledge and skills.

Enquiries

Mrs Telma Keen – Head of Learning Area – Humanities

Languages

Year 9 French

Subject description

This course is designed to help students develop a better understanding of the use of French language, Francophone culture and its people. The course encourages students to see how language is affected by culture; for example, students will explore appropriate contexts for using formal and informal language. Students learn to communicate through a variety of different activities, such as bookwork, web-based learning predominantly using Education Perfect and games. Students will explore the differences between English and French linguistic elements such as regular and irregular verbs, prepositions and the present and past perfect tenses.

The topics covered for this year group are:

- How to communicate in class and ask questions in French
- Daily Routine and household tasks
- Inviting somebody to go somewhere with you and making arrangements to meet
- Travel and French speaking countries throughout the world
- Talking about a past holiday
- Illness, injuries and going to the doctor

The course runs for the full academic year.

Assessment

As part of the Western Australian Curriculum Framework, the Languages Learning Area has a focus on the following outcomes:

Cultural understanding
Language learning strategies
The system of target language

These outcomes are demonstrated through assessing the following skills:

Listening
Listening, responding and speaking
Viewing, reading and responding
Writing

Prerequisite

Students who have studied French in Years 7 and 8 with a Learning Area Grade minimum 'C' grade may continue in Year 9. Permission may be granted to students who have not studied French in Year 7 and Year 8 in exceptional circumstances.

Texts

Tricolore 4 (5th edition) 1 Student Book and Workbook (ISBN number 9780 198374756)

Students will also be given additional booklets.

Pathways

Career pathways include business and commerce, tourism and hospitality, engineering, teaching or linguistic studies. Many university courses are designed so a language can be studied in tandem with the course.

Enquiries

Mrs Meagan Maassen – Head of Learning Area – Languages

Year 9 Japanese

Subject description

Students will build upon the topics learnt in Years 7 and 8 to develop a better understanding of Japanese people and their culture, so that they feel encouraged in their attempts to speak, listen, read and write in Japanese. Students learn to communicate through a variety of ways such as interactive activities, bookwork and web-based learning predominantly using Education Perfect. Students will participate in an incursion at LJBC mid-year, and a cultural excursion later in the year. In addition, there is an opportunity to participate in Japan camp offered to any student in Years 9, 10, 11 and 12.

The topics studied throughout the year are:

- School Life (what is school like for Japanese students, classroom objects, talking about subjects you study and like, telling the time and creating your timetable, important school events in the different seasons, etc.)
- Hobbies (What are your hobbies, using technology, adjectives and describing anime and manga characters)
- Birthdays and special events that occur throughout the year (Japanese festivals and events as well as Australian)

The course runs for the full academic year.

Assessment

As part of the Western Australian Curriculum Framework, the Languages Learning Area has a focus on the following outcomes:

Cultural understanding
Language learning strategies
The system of target language

These outcomes are demonstrated through assessing the following skills:

Oral interaction
Listening and responding
Viewing, reading and responding
Writing

Prerequisite

Students who have studied Japanese in Years 7 and 8 with a Learning Area Grade 'C' grade may continue in Year 9. Permission may be granted to students who have not studied Japanese in Year 7 and Year 8 in exceptional circumstances.

Texts

iiTomo 2 Activity book is the required textbook. Students will also be given supplementary booklets.

Pathways

Career pathways from studying Japanese include business and commerce, tourism and hospitality, engineering, teaching or linguistic studies. Many university courses are designed so a language can be studied in tandem with the course.

Enquiries

Mrs Meagan Maassen – Head of Learning Area – Languages

LJ Aspire Academic Extension and Enrichment Program

Year 9 Aspire Extension Class

This course is offered by invitation only from the Learning Enhancement Centre.

Subject Description

The Aspire Extension Class is an educational program that focuses on the development of critical, creative and innovative thinking skills to prepare students for increasingly complex life and work environments in the 21st century. It challenges students to apply their imagination and thinking skills to some of the significant global issues facing both the world of today and the future, equipping them with the skills and vision needed to solve problems associated with these issues and helping them to have a positive impact on the society of the future.

In Term 1, students will develop creative and critical thinking skills through interesting and hands-on activities. The focus will be on the following:

- Unlock Your Creativity: SCAMPER, Random Input, Ideation and idea development
- Critical Thinking: Problem Solving, Advanced research skills, Futuristic thinking and innovation
- Communication and collaboration: Team challenges, Creative presentations

In Term 2, students will connect to the world by using the Future Problem Solving model to get to the core of environmental, social and scientific problems of the future. The topics that will be covered will provide students with a greater awareness of important global issues, as well as the opportunity to develop innovative solutions in order to create positive change. They will also use this knowledge to participate in the International Future Problem Solving Competition.

To develop their critical thinking skills, they will be introduced to the fundamentals of Philosophy and Ethics in Term 3 and learn how to think and reason critically about these ideas through debates and team presentations. Selected students will also participate in the International Ethics Olympiad Competition.

In Term 4, students will be introduced to Design Thinking as a strategy for innovation and get the opportunity to create a final product in their team using coding and electronics.

Outcomes

Students involved in Future Problem Solving are challenged and motivated to:

- Think more creatively by becoming involved in activities to increase flexibility, fluency, originality and elaboration of their thinking
- Develop research skills needed for the collection of data from past and contemporary sources
- Relate effectively with others as members of a small, cohesive team
- Improve oral and written communication skills for the better understanding of their ideas by others
- Become interested in the future since this is where they will spend the rest of their lives
- Solve problems by learning and effectively using a six-step, creative problem solving process
- Think critically and analytically
- Develop thinking strategies

Assessment

In Semester 1, students work in pairs to develop a response to a given prompt in art and poetry, engineering, or ideation. By allowing students to choose their discipline, this project fosters student-centred learning. In addition, students work in teams to explore global issues as part of the Future Problem Solving Competition. They then engage in a six-step problem solving process to solve a futuristic scenario. The team projects are evaluated by accredited, external evaluators. This assessment is competitive and the top scoring teams receive invitations to participate in the Australian National Finals.

In Semester 2, assessments will be based on the development and discussion of ethical cases and the building of a STEM project.

LJ Aspire Academic Extension Program

The College has high academic standards and an enviable record in assisting academically talented students to excel and reach their full potential. Academically talented students are identified and mentored through the LJ Aspire program which provides them with opportunities to maximise their potential.

Our program provides the following:

- Identification of academically talented students providing differentiation, extension and enrichment
- Development of cognitive, social, and emotional skills including problem solving, critical thinking, communication, collaboration, empathy, and self-awareness
- Exposure of students to a curriculum that allows them to work at higher cognitive levels
- Opportunities for students to participate in a range of academic competitions
- Holistic monitoring of gifted and talented students

Extension Opportunities

We provide the following extension opportunities for academically talented students:

- Differentiated curricula and learning activities in the classroom
- Academic Extension classes in Mathematics, English, Science, and Humanities where students can interact with their academic peers, learn at an advanced pace, engage in open-ended activities and higher order thinking skills that will enable them to pursue greater depth and breadth in their Learning Areas.
- Specialist programs such as the LJ Aspire extension class
- Mentoring and monitoring of academically talented students
- Accelerated curricula
- Education plans for exceptionally gifted students

Enrichment Opportunities:

Enrichment activities include opportunities for students to expand their knowledge and skills beyond the normal classroom environment. The following enrichment opportunities are available beyond the classroom:

- Australian Computational and Linguistic Olympiad
- Creative Edge
- da Vinci Decathlon
- Ethics Olympiad
- Evatt Trophy
- Game Changer Awards
- Future Problem Solving Competition
- UN Voice
- WADL School's Debating Competition

Prerequisite

By invitation only.

Pathways

This is a skills-based subject that takes students beyond memorisation and teaches 21st century skills that are becoming increasingly important in an era of rapid change, especially in the workplace.

Enquiries

Ms Ashleigh Cartledge – Academic Extension Coordinator

Mathematics

Year 9 Mathematics

Subject description

Mathematics is compulsory for all Year 9 students. There are four levels to suit the ability and needs of each student: Specialist, Extension, General and Essential Mathematics.

Students are provided with essential mathematical skills and knowledge in *Number and Algebra*, *Measurement and Geometry* and *Statistics and Probability*. The numeracy capabilities that all students need in their personal, work and civic life are developed and students are provided with the fundamentals on which mathematical specialties and professional applications of Mathematics are built.

Students in the Mathematics Learning Area are encouraged to:

- be confident and creative users and communicators of Mathematics, who are able to investigate, represent and interpret situations in their personal and work lives and as active citizens
- develop an increasingly sophisticated understanding of mathematical concepts and fluency with processes, so that they are able to pose and solve problems and reason in *Number and Algebra*, *Measurement and Geometry*, and *Statistics and Probability*
- recognise connections between the areas of Mathematics and other disciplines and appreciate Mathematics as an accessible and enjoyable discipline to study

Students will be placed into levels according to their performance. There will be some movement of students between the levels when required. It is desirable that students work at a level that is both challenging and at which they can succeed and gain confidence in their ability to achieve well.

Proficiency strands in Mathematics

The proficiency strands **understanding**, **fluency**, **problem-solving** and **reasoning** are an integral part of mathematics content across the three content strands: number and algebra, measurement and geometry, and statistics and probability. The proficiencies reinforce the significance of working mathematically within the content and describe how the content is explored or developed. They provide the language to build in the developmental aspects of the learning of mathematics. The achievement standards reflect the content and encompass the proficiencies.

At the Year 9 level:

- **Understanding** includes describing the relationship between graphs and equations, simplifying a range of algebraic expressions and explaining the use of relative frequencies to estimate probabilities and of the trigonometric ratios for right-angle triangles
- **Fluency** includes applying the index laws to expressions with integer indices, expressing numbers in scientific notation, listing outcomes for experiments, developing familiarity with calculations involving the Cartesian plane and calculating areas of shapes and surface areas of prisms
- **Problem-solving** includes formulating and modelling practical situations involving surface areas and volumes of right prisms, applying ratio and scale factors to similar figures, solving problems involving right-angle trigonometry and collecting data from secondary sources to investigate an issue
- **Reasoning** includes following mathematical arguments, evaluating media reports and using statistical knowledge to clarify situations, developing strategies in investigating similarity and sketching linear graphs.

Achievement standards in Mathematics in Year 9

Number and Algebra

At Standard, students solve problems involving simple interest. They apply the index laws to numbers and express numbers in scientific notation. Students expand binomial expressions. They find the distance between two points on the Cartesian plane and the gradient and midpoint of a line segment. Students sketch linear and non-linear relations.

Measurement and Geometry

Students interpret ratio and scale factors in similar figures. They explain similarity of triangles. Students recognise the connections between similarity and the trigonometric ratios. They calculate areas of shapes and the volume and surface area of right prisms and cylinders. Students use Pythagoras' Theorem and trigonometry to find unknown sides of right-angled triangles.

Statistics and Probability

Students calculate relative frequencies to estimate probabilities, list outcomes for two-step experiments and assign probabilities for those outcomes. They compare techniques for collecting data from primary and secondary sources. Students construct histograms and back-to-back stem-and-leaf plots. They make sense of the position of the mean and median in skewed, symmetric and bi-modal displays to describe and interpret data.

Assessment

Students will be assessed through projects, investigative tasks and tests throughout the year.

Pathways

See table on next page.

Enquiries

Mr Glenn Tyrie – Head of Learning Area – Mathematics

Pathways

Year 9	Year 10	Year 11
<p>Extension</p> <p>Students gaining a Learning Area Achievement (Cohort) 'A' or high 'B' in Year 8</p>	<p>Extension (Pre-Methods)</p> <p>Students gaining a Learning Area Achievement 'A' or high 'B' in Year 9</p>	<p>Mathematics Specialist</p> <p>Students gaining a Learning Area Achievement 'A+' in Year 10 Pre-Methods</p>
		<p>Mathematics Methods</p> <p>Students gaining a Learning Area Achievement 'A' or 'B' in Year 10 Pre-Methods</p>
		<p>Mathematics Applications</p> <p>Students gaining a Learning Area Achievement 'C' in Year 10 Pre-Methods</p>
<p>General</p> <p>Students gaining a Learning Area Achievement 'C' or 'B' in Year 8</p>	<p>Pre-Applications</p> <p>Students gaining a Learning Area Achievement high 'C' or 'B' in Year 9</p>	<p>Mathematics Applications</p> <p>Students gaining a Learning Area Achievement 'B' in Year 10 Pre-Applications</p>
		<p>Mathematics Essential</p> <p>Students gaining a Learning Area Achievement 'C' or 'D' in Year 10 Pre-Applications</p>
<p>Essentials</p> <p>Students gaining a Learning Area Achievement low 'C', 'D' or 'E' in Year 8</p>	<p>Pre-Essentials</p> <p>Students gaining a Learning Area Achievement 'C', 'D' or 'E' in Year 9</p>	<p>Mathematics Essential</p> <p>All Pre-Vocational students</p>

Science

Year 9 Science

Rationale

Science provides an empirical way of answering interesting and important questions about the biological, physical and technological world. Scientific knowledge affects the way we live. Science is a dynamic, collaborative and creative human endeavour which provides us with skills to explore, investigate, predict and solve problems in our physical world. Science knowledge is revised and refined regularly as new evidence arises.

Science provides opportunities for students to develop an understanding of concepts and processes which enable students to contribute positively to society by making wise, informed decisions about national and global issues which affect our lives.

Students can experience and should enjoy the benefits of scientific discovery which help develop their critical, creative and thinking skills. Student enquiry should challenge them to question, identify and draw evidence-based conclusions using scientific methods.

Curriculum

The science content includes the three strands of Science Understanding, Science as a Human Endeavour and Science Inquiry Skills. The three strands of the curriculum are interrelated and their content is taught in an integrated way.

Science Understanding

The Science Understanding strand comprises four sub-strands.

Biological sciences: this sub-strand is concerned with understanding living things.

- Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment
- Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems

Chemical sciences: this sub-strand is concerned with the behaviour and composition of substances.

- All matter is made of atoms that are composed of protons, neutrons and electrons; natural radioactivity arises from the decay of nuclei in atoms
- Chemical reactions involve rearranging atoms to form new substances; during a chemical reaction mass is not created or destroyed
- Chemical reactions, including combustion and the reactions of acids, are important in both non-living and living systems and involve energy transfer

Earth and space sciences: this sub-strand is concerned with the Earth's dynamic structure and its place in the cosmos.

- The theory of plate tectonics explains global patterns of geological activity and continental movement

Physical sciences: this sub-strand is concerned with understanding the nature of forces and motion, and matter and energy.

- Energy transfer through different mediums can be explained using wave and particle models

Science as a Human Endeavour

There are two sub-strands of Science as a Human Endeavour. These are:

Nature and development of science: This sub-strand develops an appreciation of the unique nature of science and scientific knowledge, including how current knowledge has developed over time through the actions of many people.

Use and influence of science: This sub-strand explores how science knowledge and applications affect peoples' lives, including their work, and how science is influenced by society and can be used to inform decisions and actions.

Science Inquiry Skills

There are five sub-strands of Science Inquiry Skills. These are:

Questioning and predicting: Identifying and constructing questions, proposing hypotheses and suggesting possible outcomes.

Planning and conducting: Making decisions regarding how to investigate or solve a problem and carrying out an investigation, including the collection of data.

Processing and analysing data and information: Representing data in meaningful and useful ways; identifying trends, patterns and relationships in data, and using this evidence to justify conclusions.

Evaluating: Considering the quality of available evidence and the merit or significance of a claim, proposition or conclusion with reference to that evidence.

Communicating: Conveying information or ideas to others through appropriate representations, text types and modes.

In the practice of Science, the three strands will be taught in an integrated way.

Streaming

All students will study the three interrelated strands described above. In Year 9 the majority of students will study this in a general course. A selected number of students will be invited to participate in an extension science course based on their demonstrated high level of ability where they will be further challenged in their understanding of scientific concepts. Some students will be best suited to a foundation level science course which allows for modification of the learning programme and/or assessments consistent with individual education or curriculum adjustment plans.

Assessments

Assessments typically comprise topic tests, scientific investigations and research tasks.

Enquiries

Mrs Vanessa Budas – Head of Learning Area – Science

Technologies

Year 9 Digital Technologies

Subject description

Year 9 Digital Technologies focuses on further developing understanding and skills in digital design as well as computational thinking. The course focuses on engaging students with specialised learning in preparation for vocational training or learning in the senior secondary years. Students have opportunities to analyse problems and design, implement and evaluate a range of solutions. They consider how human interaction with networked systems introduces complexities surrounding access to data of various types. The course runs for the full academic year.

In Semester One, students develop knowledge and skills in being able to compare different operating systems and identify the roles and functions of software and internal computer system components. Students develop an understanding and skills by using different methods for the manipulation of data. Lossy and lossless compression methods are used to manipulate text, images, video and audio. Concepts surrounding cryptography, encryption and cybersecurity are introduced. Finally, students continue their learning of programming concepts and further develop their coding skills using Microsoft BlockCode to manipulate worlds in Minecraft: Education Edition.

In Semester Two, students complete a major programming project utilising events, coordinates, variables, and conditionals to solve a range of problems. Students also learn about computational thinking and developing algorithms, specifically pseudocode and drawing flowcharts. This knowledge serves them well as they learn some basic statements and syntax of the Python programming language and follow a software development process to design and create a simple game using this programming language.

Australian Curriculum

Strands	Content
Knowledge and Understanding	Students learn about the role of hardware and software in managing, controlling and securing the movement of data in a digital system. Students understand how different methods of manipulation, storage and transmission of data occur.
Process and Production Skills	Students Explore techniques for acquiring, storing and validating quantitative and qualitative data. They design the user experience of a digital system. Design algorithms are represented diagrammatically and in structured English, and validate plans and programs through tracing. Identify and define the needs of a stakeholder, to create a brief, for a solution.

Assessment

Progress will be monitored using the Australian Curriculum:

Research/Investigation	40 - 50%
Response/Production	40 - 50%

Pathways

Skills acquired will be very useful for ongoing studies in Digital Technologies and future Technology and Engineering related careers. Design and coding skills taught will serve students well in the Year 10 and 11/12 courses offered at the school. Students can also use Digital Technologies as a stepping-stone to further study at TAFE or university.

Enquiries

Mr Tom Dudek – Head of Learning Area – Technologies

Year 9 Design & Technology

Subject description

This course leads into Year 10 Design & Technology and then into Years 11 and 12, General Materials and Design - Wood and/or Metalwork, Engineering Studies and General Design. Students will develop practical design skills while working with wood, and will be introduced to other materials such as polymers. Students will apply various production methods to design, create and produce solutions to different design problems. They will learn to use machinery such as routers, band saws, sanding machinery, pedestal drills and various other fabrication machines. The course runs for the full academic year.

Australian Curriculum

Strands	Content
Knowledge and Understanding	<p>Students apply a technology process to create or modify products, processes, systems, services or environments to meet human needs and realise opportunities</p> <p>Students investigate and make judgements on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions</p>
Process and Production Skills	<p>Students understand how the nature of materials influences design, development and use</p> <p>Students apply design thinking, creativity, innovation and enterprise skills to develop, modify and communicate design ideas</p>

Assessment

Progress will be monitored using Design and Technologies specific strands.

Component of theory-based assessment	30 - 40%
Component of practical assessment	60 - 70%

Pathways

This course can lead to the Year 10 Design and Technology course as well as the following courses in Years 11 and 12: Materials and Technology – Wood and/or Metalwork General courses.

Enquiries

Mr Tom Dudek – Head of Learning Area – Technologies

Year 9 Foods

Subject description

This course develops life skills for Year 9 students and runs for a full year.

Students investigate the Australian Guide to Healthy Eating, Healthy Eating Pyramid and Food Assistance Programs. They prepare a variety of recipes from all courses of a menu; including soups, mains, side dishes and desserts. A highlight for students is the construction of a decorated Chocolate House.

Australian Curriculum

Strands	Content
Knowledge and Understanding	Students use the technology process to develop meal plans.
Process and Production Skills	Students use a variety of food products to produce items for all courses of a formal menu. Students develop practical skills in utilising all equipment found in a domestic kitchen during this course.

Assessment

Knowledge and Understanding	25%
Processes and Production Skills	25%

Pathways

Year 10 Foods, Year 11/12 Hospitality, Year 11/12 General Food Science and Technology. Careers in Hospitality, Nutrition and Teaching.

Enquiries

Mr Tom Dudek – Head of Learning Area – Technologies

Year 9 Home Economics

Subject description

This course develops life skills for Year 9 students and includes both Foods and Textiles context, each running for one semester.

In Foods, students investigate the Australian Guide to Healthy Eating, Healthy Eating Pyramid and Food Assistance Programs. They prepare a variety of recipes from all courses of a menu; including soups, mains, side dishes and desserts. A highlight for students is the construction of a decorated Chocolate House.

In Textiles, students design and construct a variety of practical projects; including a polar fleece hoodie with optional pockets and an embellished pencil case or bag with zip. They examine different textile sources, the production of fabrics and garments and the design process. The course runs for the full academic year.

Australian Curriculum

Strands	Content
Knowledge and Understanding	Students use the technology process to develop meal plans and design and construct practical projects in textiles. Students work with and examine a variety of textiles to understand how they are constructed and their different uses.
Process and Production Skills	Students use a variety of food products to produce items for all courses of a formal menu. Students develop practical skills in both the food and textiles component of this course.

Assessment

Foods and Textiles each:

Knowledge and Understanding	25%
Processes and Production Skills	25%

Pathways

Year 10-12 Foods, Textiles, Children Family and Community, Hospitality, Nutrition, Fashion Designer, Tailor/Dressmaker, Teaching.

Enquiries

Mr Tom Dudek – Head of Learning Area – Technologies

Year 9 Textiles

Subject description

This course develops life skills for Year 9 students and runs for a full year.

Students design and construct a variety of practical projects; including a polar fleece hoodie with optional pockets and an embellished pencil case or bag with zip. They examine different textile sources, the production of fabrics and garments and the design process.

The course runs for the full academic year.

Australian Curriculum

Strands	Content
Knowledge and Understanding	Students use the technology process to develop, design and construct practical projects in textiles. Students work with and examine a variety of textiles to understand how they are constructed and their different uses.
Process and Production Skills	Students use a variety of materials and fabrics to produce a number of garments. Students develop practical skills in using various equipment and tools, sewing machines and overlockers.

Assessment

Knowledge and Understanding	25%
Processes and Production Skills	25%

Pathways

Year 10-12 Textiles, Children Family and Community, Fashion Designer, Tailor/Dressmaker, Teaching.

Enquiries

Mr Tom Dudek – Head of Learning Area – Technologies

Year 9 iSTEM – Technologies

Subject description

iStem – Technologies is the learning and application of Science, Technology, Engineering and Mathematics. Students solve a range of problems by utilising principles in an integrated approach within the Design & Technology and Digital Technologies scope and sequence.

Students gain and apply knowledge, broaden their understanding and develop creative and critical thinking skills while engaging in project-based learning. By incorporating design, engineering, electronics, laser cutting and 3D and CAD designs, students use principles and skills taught in science, technology, engineering and mathematics. Students are challenged to apply their understanding of these key disciplines to manage projects and work collaboratively.

The project-based approach allows students to develop key skills including; problem-solving, creativity, critical analysis, teamwork, independent thinking, initiative, communication and digital literacy.

Australian Curriculum

Strands	Content
Knowledge and Understanding	Investigate and make judgements, within a range of technologies specialisations, on how technologies can be combined to create design solutions
Process and Production Skills	Students develop their drawing knowledge both manual and computer-based.
	Students use a project-based learning process to undertake various Design Challenges.
	Students use a project-based learning process to complete a portfolio of work that uses a variety of computer programs including TurboCAD and TinkerCAD
	Students work independently and collaboratively to manage their time and resources using digital technology. Considers time, cost, risk and safety.

Assessment

Progress will be monitored using Technologies - Design and Technologies specific strands. Assessment projects make use of CAD software, 3D printers and laser cutters to create a Night Light, a Pinball Game and an Air-Powered Dragster. Skills taught cover the use of all needed equipment, including electronics; where knowledge and skills in building circuits and soldering components are also developed.

Pathways

This course will give students a grounding for a pathway into Year 10 iStem – Technologies. In Year 11 Students will be able to enter into a pathway in General Dimensional Design (Product Design and Architecture) and/or General or ATAR Engineering Studies.

Enquiries

Mr Tom Dudek – Head of Learning Area – Technologies

Lake Joondalup Baptist College

Kennedya Drive Joondalup Western Australia 6027

PO Box 95 Joondalup Western Australia 6919

T +61 8 9300 7444 | F +61 8 9300 1878 | W <http://www.ljbc.wa.edu.au/>