



Technology (Mandatory)

Technology is a mandatory course in Years 7 & 8 which enables students to trial a number of different course options. This helps students decide which elective courses they would like to choose in Years 9,10, 11 and 12.

Information communication and technology skills are incorporated into all units to develop computing abilities.

In 2015 students completed the following project work in Years 7 & 8.

- Food Technology – Party Business & Snack Attack.
- Textiles Technology – Stool cover and creative bag.
- Wood Technology – Festival stool & storage box
- Metal Technology – Sea life jewellery and wind chime

Students thoroughly enjoy these units. They are able to design, analyse, experiment, research and evaluate.



Y9/10 Design & Technology

This year has seen exciting new projects in Design Technology allowing our students to develop skills in designing, making and experience the use of emerging technologies. They've encountered projects that aimed to develop their problem solving ability and creativity. They were taught how to record their ideas clearly and effectively using a wide range of techniques including sketching, rendering and Computer Aided Design.

During Year 9 our students undertook an intensive skills development project making a multi-game box to build confidence using a wide range of tools and machinery. The students went on to use these skills and new found precision to design and make a passive amplifier for a smartphone or tablet device. The results were highly creative and manufactured to a very high standard.

During term 4 the group were introduced to Arduino control technology where they undertook an online project to develop skills in coding allowing them to control a range of inputs and outputs.

Next year, during Year 10, the students will be solving a self-identified design and make project of their choice. This exciting opportunity will be made all the more challenging with the addition of new Computer Aided Manufacturing equipment including a laser cutter and 3D printer!



Y9/10 Engineering

Engineering Studies students gained a wide variety of skills and knowledge through fun and challenging projects this year.

Students had an enjoyable hands-on approach to subject content. Skills development and knowledge acquisition was gathered through problem solving and understanding engineering concepts. Each unit was set up as a competition to test the student's skills in a set of challenges to see which project is faster, stronger or travels further.

In 2015 students completed the following project work in Years 9 & 10:

- Bridge structures
- Bottle rocket car
- Mechanical cricket stumps
- Glider



Y9/10 Industrial Tech Timber

This year our students threw traditional craft out of the window in favour of making a range of cool products including retro style cabinets, hand planes for bodysurfing and skateboard decks!

Students experienced the following skills:

- preparing and selecting timber
- marking out
- cutting & shaping
- basic joints
- board widening
- using adhesives & applying surface finishes

All student outcomes were manufactured with a great degree of precision with excellent quality surface finishing.

The creative decorative detailing achieved with pyrography and paint added a individualised touch to the products.

The course offers students a great foundation in preparation for Design Technology at HSC or VET Construction.



Y9/10 Food Technology

Year 10 students had interesting and informative experiences this year dealing with many aspects of food in society.

Nutritional needs of the individual were explored for a wide variety of health related issues. Personal interests in diet related disorders were researched for diabetics, vegetarians, athletes and people suffering from obesity, food allergies and intolerances. Creating and producing meals for specific dietary concerns was very rewarding especially taste testing each individual product.

The café culture so popular in today's world provided the theme for year 10 food technology students during semester one and two. Realistic experiences were gained in utilising the espresso machine in the onsite Café Luce at LHCS.

Students explored the various types of establishments in the hospitality industry and created their own virtual business. New food trends and ingredients were used as students developed their practical skills in developing and producing their signature dish. Their flare for creativity and presentation was outstanding.

The most challenging unit undertaken by the year 10 students was met with great enthusiasm and ended with excellent results. Food product development started with students undertaking research on the process of developing a new food product to be introduced to a specific target market. The students needed to research, survey, prototype production, taste test, evaluate, and sell their product.

This year has been an extremely successful one for the Year 10 food technology students.



Y9/10 IST

Information Software Technology

IST is an elective course in Years 9 & 10 which focuses on increasing students computing knowledge and skills. These skills are becoming increasingly important for work, home and study.

Computational knowledge and skills were developed through project based work.

In 2015 Yr 9 & 10 students completed the following projects:-
Year 9

- Photoshop – Avatar Poster
- Video editing – Tropfest film
- Flash animation– Music video clip

Year 10

- Webpage design – Promotional webpage
- Robotics – Lego Mindstorms programming
- Programming – Game design using Unity and Scratch



Y9/10 IT Construction

IT Construction students develop a preliminary range of skills and knowledge about the construction industry through a range of tasks. Students have been developing skills in WHS, safe use of tools, materials and machinery, site processes, and workshop production.

IT Construction is an enjoyable hands on approach for students to develop skills that will help the transition into stage 6 VET construction.

The tasks are workshop and site based projects and include;

- WHS
- Timber nail caddy
- Excavation and levelling
- Timber stool
- School improvement projects such as the learning commons upgrade



Y9/10 Child Studies

In 2015 students in child studies experienced numerous valuable learning opportunities which enhanced their understanding of child growth and development. Some of the experiences included:

- A guest speaker from Karitane along with two young mums discussed their experiences as a parent trying to raise a child and complete tertiary studies. Issues associated with raising a child were discussed so that students developed a greater understanding of the expectations, roles and responsibilities of being a parent.
- A pre-natal yoga class helped students gain an appreciation of what it is like to exercise during pregnancy and the benefits of exercise for both mum and BABY.
- Ms Cork and Mrs Meagher visited the class with their babies to talk to the students about caring for a newborn. It was fun to watch a baby bathing while learning about the routines of a newborn.
- Volunteers from The Australian Breastfeeding Association visited the class to inform students of the benefits of breastfeeding for both baby and mum. The visitors were impressed with the student's enthusiasm and insightful questions.
- Students created a cute patchwork baby blanket. They also took home overnight, a computerised real care baby to simulate the responsibilities required for a new baby.
- Students participated in observations lessons in the local preschool and primary school. They created a picture book and read it to the younger children to enhance cognitive learning and social skills in young children.
- Students visited the support unit to learn about the diverse needs of children. They learnt about their daily routines and the technology that assists them in their day-to-day lives.



Y11/12 Design & Technology

This year our Design Technology students from both Year 11 and 12 have produced outstanding and innovative products.

Year 11 developed an amazing collection of lighting products in response to a one word brief of 'illuminate'. Their highly creative outcomes ranged from a contemporary candle holder to a sound controlled light display that changes colour and flashes to the beat of music!

This year Year 11 students were introduced to control technology using Arduino coding and both 2 and 3 dimensional Computer Aided Design.

The major projects developed by Year 12 HSC students were outstanding in their design and quality of manufacturing. The challenging outcomes included multi-functional furniture, a communication system for water-skiers and an eco-friendly surfboard made entirely from recycled timber.

With this year's HSC projects setting a very high benchmark and the recent acquisition of a Laser Cutter and 3D printer the Lucas Heights 'Tech Zone' is looking forward to even greater challenge and success!



Y11/12 Food Technology

Year 11 and 12 Food Technology students enjoyed learning about all things food related. HSC results in 2014 & 2015 in Food Technology at LHCS were well above state average and numerous students achieved band 6 results.

Practical tasks in Food Technology were designed to complement Board of Studies Syllabus requirements to assist students learn content for the HSC examinations.

Students studied Pure Gelato as part of Food Manufacture. They made ice-cream to simulate industry standards.

McDonalds was studied as part of the Australian Food industry unit. A store excursion to McDonalds was obviously necessary.

Developing and selling their own food product by following Food Product Development steps solidified knowledge in this area.

Nutrition knowledge was embedded throughout the course. This was particularly relevant when they researched their own nutritional requirements and made a menu suitable for their own dietary needs.



VET Construction

VET Construction students in 2015 developed a range of skills and knowledge about the construction industry through a range of tasks. Students were encouraged to consider which role they would consider as a career path within the industry. Such as a builder or manager.

Students found the course to be an enjoyable hands on approach to the construction industry. Tasks were developed to ensure students are work ready and excited by a potential career in the booming construction industry.

Projects completed were workshop and site based and included;

- WHS
- Programming, costing and scheduling
- Timber Toolbox
- Timber Concrete float
- Joinery units
- Concrete slab form, pour, finish and cure
- Brick and Block work
- School improvement projects such as the learning commons upgrade



Y11/12 Hospitality

Year 11 Hospitality Food and Beverage students are to be congratulated on their passion for this subject which was translated in the excellent functions they managed during 2015.

These valuable experiences enabled each student to develop skills in responsibility, industry and management skills in a team environment within Lucas Heights Café Luce.

This talented and dedicated group of students excelled in all aspects of the course throughout the year displaying an admirable work ethic.

In this Dual Accredited course students achieved industry based competencies through;

- 70 hours of work placement within the Industry – over 90 % of students gained employment opportunities
- Event management of functions including Breakfast at Lunch, Sport day catering, Melbourne Cup luncheon, Open night and the Design Showcase Evening
- Preparing and serving food and beverage to industry standards for a variety of functions.