

# 2022



## North Central Trade Training Centre Charlton Year 9-10 Vic Curriculum 2022



## Contents

What is the North Central Trade Training Centre?	2
Personal Protective Equipment	2
Textiles and Clothing – Materials	3
Wood: Technology – Materials	4
Automotive; Technology – Materials	5
Agriculture and Horticulture: Technology – Materials	6
Metal & Related Materials; Technology – Materials	7
Visual Communication Design: Arts	8
Media Arts	9
F1 in Schools: design & Technologies	10
Computer Game Design: Technologies – Digital	11

## What is the North Central Trade Training Centre?

The North Central Network is a co-operative arrangement of the following schools:

- Boort District School
- Charlton P-12 College
- Donald High School
- Pyramid Hill P-10 College
- St. Arnaud Secondary College
- Wedderburn P-12 College
- Wycheproof P-12 College

Both Birchip P-12 School and East Loddon P-12 College have joined the network as co-opted members. These schools operate the North Central Trade Training Centre, (NCTTC), a set of facilities located in Charlton at the Charlton College campus and accessed by students from all network schools. The principal of Charlton College is responsible for the management of the NCTTC.

The NCTTC provides Vic Curriculum Technology and Arts for students in Years 9-10 and Vocational Education and Training (VET) studies. Vic Curriculum is provided on a Monday/Wednesday and Friday. Schools attending on a Monday are Wycheproof, Boort and Pyramid Hill. On Wednesday St. Arnaud and Wedderburn attend, whilst on Friday, Charlton and Donald attend.

VET studies are delivered on a Thursday.

## Personal Protective Equipment

All students attending the NCTTC are required to wear appropriate personal protective equipment, as directed by the teacher or instructor.

Students at risk of exposure to hazards must use protective clothing and equipment at all times. Students without this protection will not be permitted to participate in any practical activities.

Personal protective clothing and equipment includes safety glasses, welding goggles, earmuffs, dust mask, gloves, sturdy shoes and protective coats or aprons.

Footwear must be sturdy, fully enclosed, non-porous and non-slip e.g. leather type, not runners. Footwear that may cause a safety hazard must not be worn.

Note: Students can bring boots / shoes from home to wear in class. They do not have to be designated "school uniform" type, as Blundstone and similar are fine.

Safety glasses and earmuffs will be provided at the NCTTC campus in all class rooms that require the use of this personal protective equipment.

Protective clothing e.g. Aprons/overalls are the student's responsibility. Casual clothes are not "protective clothing".

## Textiles & Clothing: Technology - Materials

The study of fabrics, applications, design and finishing techniques is applied in the individual production of students projects.

Students also explore the world of felt making, fabric printing, fabric embellishments and crazy patchwork.

In Garment Construction students are given the opportunity to create a variety of different outfits. Patchwork, felting and crafts will also be offered.

No previous experience is necessary as students will be instructed to use all equipment based on safe working practices and the study of commercial patterns and product requirements.

Students in Garment Construction are required to provide all fabric and notions for their intended pieces.



## Wood: Technology - Materials

Woodwork is a great practical subject that allows students to explore their skills through individual production of practical work units.

Students are encouraged to develop individual skills in a positive learning environment while enjoying the facilities available at the NCTTC.

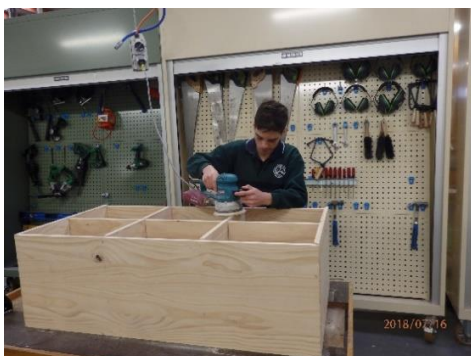
All students will participate in a class induction. This will incorporate setting up the classroom management guidelines, hand and power tool safety induction and general safety induction.

During the program, the students will be required to present a design folio that contains a Design Brief that outlines the important aspects of their production. That is, constraints, specifications and considerations. (Who wants it, What size, Where is it going, How much can they afford to spend, What do they want it made out of, etc.)

The students folio will also contain the criteria for evaluating the product. This criteria will be used to evaluate how well the product solved the problems and met expectations as well as how well the product was made and looks. During the early stages of the program the students will develop a number of design options; these will be computer generated, down loads, photos, magazine cut-outs or hand sketches of possible designs for their production.

The students will then construct a Work Plan that will contain the instructions for making the product. It will include a timeline, a sequence of processes (the steps in the manufacture of the product) and a list of tools, equipment and machines required. The students will then construct their product, extending previously learnt skills and acquiring new ones as they progress. An evaluation of the end product will be carried out with evidence being displayed in the students portfolio.

Note: This program is a pathway to senior study as participation in the program will be a benefit to any student thinking of undertaking the VET Building Studies program either as a VCE, VET or VCAL student.



## Automotive: Technology - Materials

Students will explore the use of systems. (e.g. manufacture of motor vehicles). Students will become aware of technological systems and their role in society and environments e.g. recycling, and safety systems.

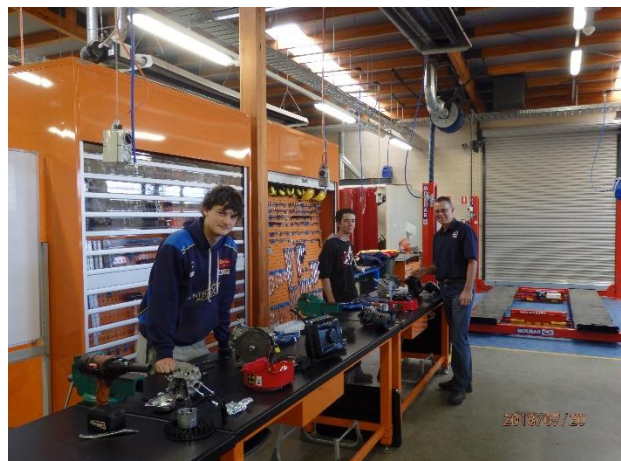
Students will develop options and possible solutions through constructing or repairing models to detailed specifications, using specialist tools and techniques and work in a safe and responsible manner. Principles, which could be explored by the study of 2 or 4 stroke motors, include fuel, lubrication, and ignition, cooling or charging systems. Repair of bicycles.

### PROCESS:

The process will involve 4 stages:

- 1 Investigation: analyse the principles and control of systems and how systems have developed over a period of time.
- 2 Design: prepare a design, using graphics that demonstrates the development of ideas. Compare two designs and justify the preferred design.
- 3 Produce: use specialised techniques to construct, repair and adjust.
- 4 Evaluate.

This program is a pathway to senior study in Automotive as part of a student's VCE or VCAL program.



## Agriculture & Horticulture: Technology - Materials

Students have the option of electing to undertake a range of activities in which they are interested in relating to what happens in agriculture and horticulture in this region. Usually these activities are; Cropping, Sheep Husbandry, Fencing and Tree Propagation to name a few. However, other areas can be undertaken depending on the season, time allowed, related experience and finances.

Students do have to complete some theory related to the How, Why and When of their topic as well as undertake Occupational Health and Safety training before using any equipment, machinery or handling animals. An assignment containing the four elements of Technology Studies; Investigate, Design, Produce and Evaluate, will be required to be completed, as well as a record of what the student has undertaken during the semester. Students are required to have suitable footwear and clothing for the seasonal conditions and practical tasks to be completed.

Throughout the semester students are encouraged to participate in as many activities as possible. Any trees, vegetables or plants grown can either be taken home or planted at the Trade Training Centre, or on the farm area. A large number of indigenous trees are grown for the local Landcare group, farmers and local community groups. At all times teamwork and group participation is required.

This program is a pathway to senior study in Agriculture as part of a student's VCE or VCAL program.



## Metal & Related Materials: Technology – Materials

Technology (Metal) will introduce a range of processes and skills which will be applied to a design. The first design brief under investigation is a compulsory project that will involve designing, costing, production and an evaluation process. This year the project was a small metal box. Students then made a choice of a copper raising, a piece of jewellery or a sheet metal tool box.

Once completed, students were able to manufacture projects of their own choice. Students will be advised if they have the skills and knowledge to design and produce projects that they decide on. A number of students completed practical and theory tasks on a welding process or made more advanced projects.

A large number of new and previously acquired skills and techniques are applied to problem solve the designs.

This program is a pathway to senior study in Engineering as part of a student's VCE or VCAL program.





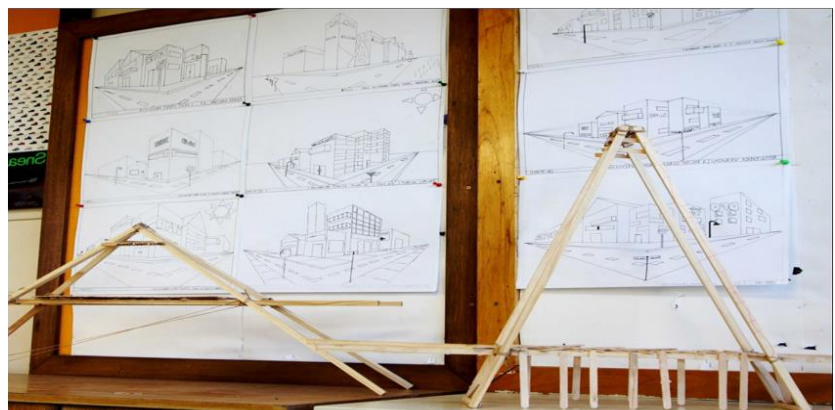
## Visual Communication Design: Arts

Visual Communication is an exciting opportunity for students to use their imagination and artistic flair to develop a folio of work. Visual Communication is a precursor to further study in Graphic Design, Architecture, Advertising and Industrial Design. Students will look at practical ways to apply design, including Technical Drawing Techniques, Packing Design, T-Shirt Design, Architecture and Advertising. The course also incorporates both manual technical skills as well as computer generated designs using the Adobe Studio collection.

Students are also given the opportunity to explore and expand their knowledge of what it is to be a designer and the process which is undertaken to complete a successful design outcome. This process will prepare students not only for further studies, but also allows them to analyse the visual communications around them. Students are given the opportunity to add their individual touch to their work, whilst developing a greater understanding of the design world.

Visual Communication will also enhance the way students think about their own ideas and views, while recording the process within their folios. All that is required from students is a willingness to explore ideas, and a flair for design and drawing. Visual Communication is a fun and productive class for all design abilities.

This program is a pathway to senior study as part of a student's VCE or VCAL program.

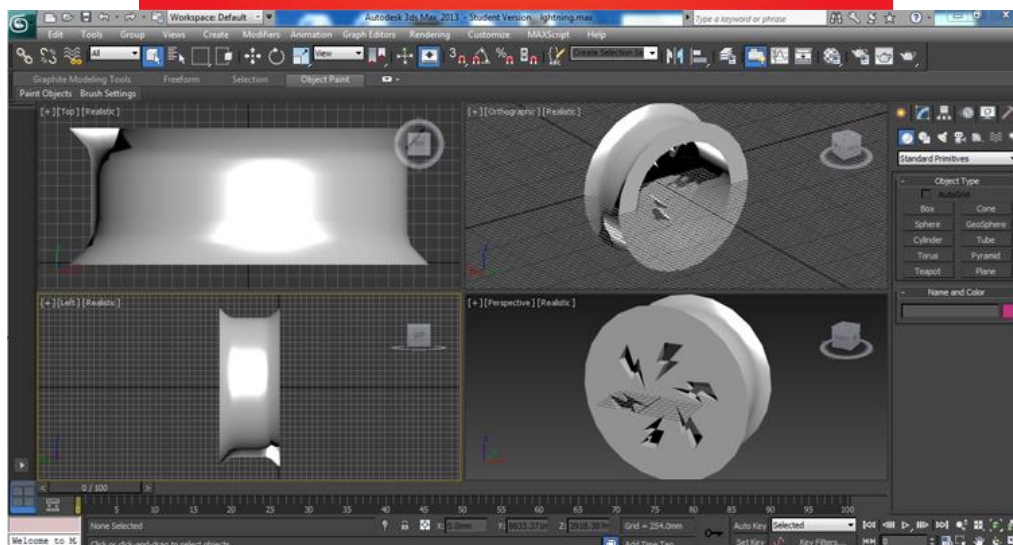


## Media Arts: Arts

Interactive Media is aimed at students who wish to create media products. Students undertaking this course will produce a series of media pieces covering the various types including: Film, Photography, Sound Recording and Editing, Green Screen and Special Effects, 3d Modelling and Animation, 2d Animation and Interactive Content. Students will also examine existing media pieces to establish purpose, audience, narrative and representations.

Students will each produce a professional media piece with the specific intention of entering Trop Jr (Short film festival), ABC Heywire competition (Documentary competition) and The Moran Photography competition. Students will also have the opportunity to develop interactive digital content and web based publishing. The creation of the pieces will include both individual and group work for the students to contribute to several productions.

This course is a precursor to VCE Media Studies and VET Media and Creative Industries (Media).

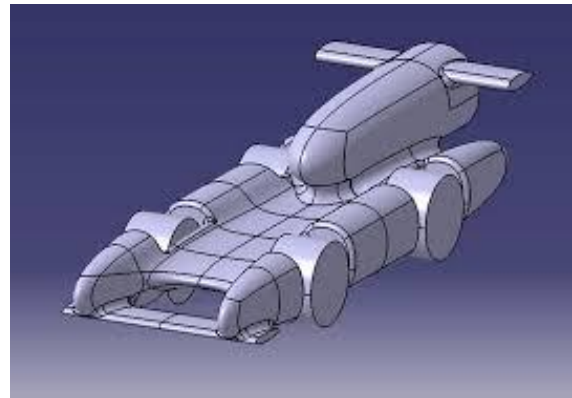


## F1 in Schools: Design & Technologies

F1 in schools provides an exciting opportunity for students to design, analyse, test, manufacture and race a prototype F1 vehicle combining all of the above disciplines. In addition, each student will have the opportunity to use contemporary 3D printing technology to manufacture part of their vehicle.

They will use industry standard 3D modelling software that will be used to design the car and to create a tool path for its manufacture. A team of students will make a car using Computer Aided Manufacturing system. A Smoke and Wind Tunnel along with a range of software to help test the product's aerodynamic properties, will be used. Teams will also be involved in designing marketing materials including team shirts, caps, team logos and a presentation Folio.

Success in this course will lead to opportunities to compete in the biggest engineering competition in the world.



## Computer Game Design: Technologies - Digital

This course explains the design and development of how computer games are made! Students examine the process of game development from concept to the testing stages. This will include 3 dimensional animation, low polygon modelling, texture mapping and sprite creation in Blender. In addition to this, students will develop skills in Unity Game creator, learning how to control characters, create environments and use coding.

Students will create a space invaders style game to apply practical knowledge of the game development process and create a game for the Australian STEM video game challenge. This course is largely information technology orientated and the programs used to create the games are freely available to students if they wish to pursue this interest in the future.

