

Manufacturing & Technology

To be globally competitive New Zealand needs to grow its skilled workforce. The industry has said that skills shortages need to be addressed and having skilled staff is one of the most important factors for growth.

To do this, we need to ensure that all young people have the skills and competencies, including literacy and numeracy, to progress into tertiary education and training, and to enter and progress in the workforce.

Approximately 70% of school leavers do not enter degree level study, so there are many students looking at alternative options and careers via a different pathway.

NCEA Level 2 or an equivalent qualification is the minimum qualification that young people now need to succeed in New Zealand's economy. Achieving this means they are better prepared to progress into tertiary study, training or work.

Students can continue their pathway by gaining part or whole industry qualifications as part of NCEA Level 3, either full time at school or part time at school and part time in tertiary study or industry training.

They can also use the Qualifications and Employment Pathways mapping tool to help make good decisions about their next steps.

We know that achieving Level 4 or above qualifications means that young people have the skills to adapt to a changing future and make a positive contribution to growing the future labour market.

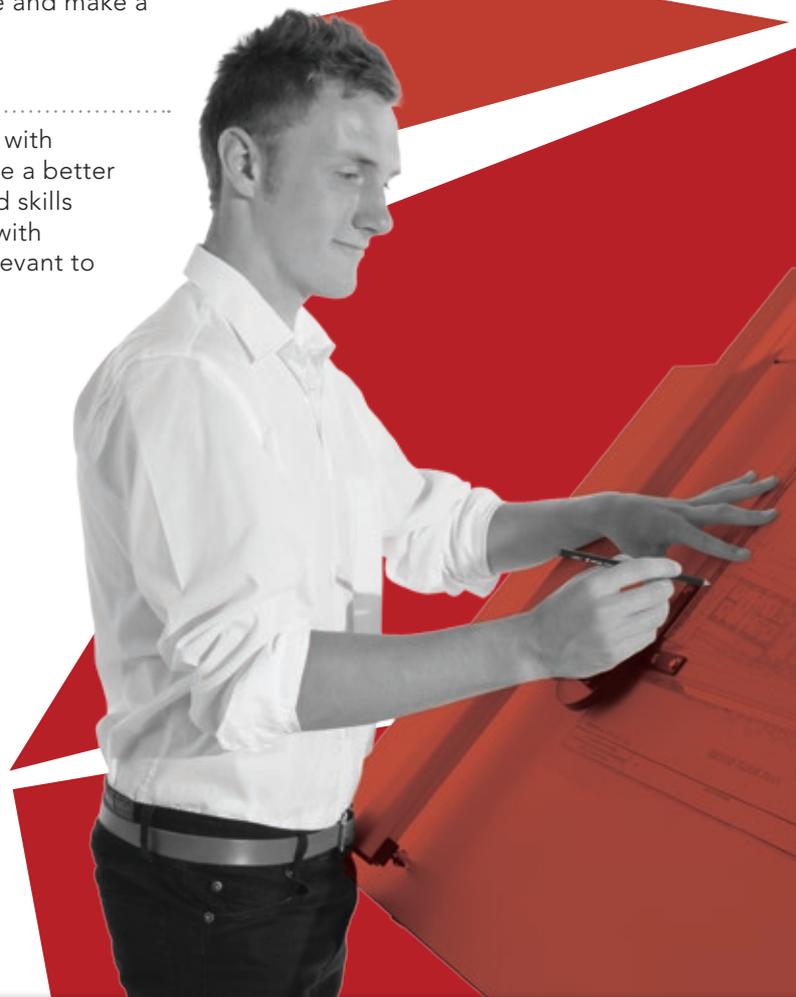
The Vocational Pathways

The Vocational Pathways were developed in collaboration with industry and education to ensure students 16-19 years have a better understanding of the workplace, and the qualifications and skills required by industry. Students can achieve NCEA Level 2 with Vocational Pathways, which shows how their learning is relevant to future work or career options.

There are six industries in the Vocational Pathways:



*I want to create things that move.
My path is Red.*



Making it real

Jimmy is a student who in his final year at school knew he needed some direction and to meet people who could help him understand the industry he was interested in. He also knew that he had to complete his education to get the qualifications he needed, to land his dream job.

Jimmy joined the Top of the South Trades Academy, working towards getting his NCEA Level 2 with a Vocational Pathway in Manufacturing & Technology, with an automotive focus. Participating in the automotive programme allows Jimmy to get the practical experience as well as other key subjects such as maths and English, in one go. He's motivated, can see the options available to him and has a plan of how to enter his career of choice. Jimmy is committed, he travels every week, an hour and a half to get to his programme in the Trades Academy, and the other four days of the week, he completes his studies towards NCEA Level 2 at Tapawera Area School.

I enjoy the hands on experience, I'm treated like an adult and I work in an environment where I can make my own decisions.

Jimmy also says. "I'm even able to cope with school better because I understand the importance of maths and English."

And it's inspired him, at 17, to single handedly take a car wreck and restore it.

His dad gave him an old Toyota Landcruiser and told him it was his if he could make it go. Jimmy rolled up his sleeves, became familiar with mechanics tools and the patience and discipline of dismantling, repairing and putting back together. He knew the world of cars is where he wanted to be. Completing his pathway will help Jimmy turn his passion into a career.

Manufacturing & Technology Vocational Pathway

The Manufacturing & Technology pathway offers a broad range of study options for students such as:

- demonstrate understanding of the chemistry used in the development of a current technology
- develop a product design through graphics practice
- demonstrate understanding of sustainability in design
- apply algebraic methods in solving problems
- Integrate spreadsheet and database data into word processed documents to meet a set brief
- select test equipment and test an automotive electrical circuit
- prevent electrostatic damage to electronic components.

The flexibility of NCEA Level 2 qualifications with Vocational Pathways enables young people to easily change their study options and many options are applicable to multiple pathways. Students can choose subjects which interest them, suit their learning style, or help them with their career choice.

Ask a young person for their Vocational Profile. It's a good way to understand how their learning relates to industry.

A student with NCEA Level 2 with a Manufacturing & Technology pathway will have:

- a foundation qualification: NCEA Level 2 (or equivalent qualification), recognised as the minimum qualification a young person needs to progress
- a Vocational Pathway in one or more industries
- the minimum level of literacy and numeracy required, or more
- a broad understanding of the Manufacturing & Technology industries.



Sources

- www.dol.govt.nz/publications/research/forces-for-change/forces-for-change-06.asp
- NZ Manufacturing Sector: its Dynamics and Competitiveness by Castalia Advisory group is on businessnz.org.nz.