GUIDANCE DOCUMENT

This document provides guidance to schools, ITOs and tertiary providers who wish to develop programmes using the Vocational Pathways. Contexts of learning are provided as examples to encourage development in the sector.

Vocational Pathways

An Introduction to Housing and Construction in New Zealand

Guidance for developing a contextualised learning programme for the Construction and Infrastructure Vocational Pathway

Social and Community Services

Manufacturing and Technology

Services Industries

Primary Industries

Construction and Infrastructure

Creative Industries

NCEA Level 1

Level 2

Level 3

Graduate with NCEA Level 2

Pathway to Level 2–6 industry skills or pathway to university professional study for industry

MINISTRY OF EDUCATION
Te Tāhuhu o te Mātauranga

New Zealand Government

Vocational Pathways

CONTENTS

Background

Introduction

This document provides guidance for educators who wish to develop learning programmes using particular Vocational Pathways. It outlines key ideas about Vocational Pathways and delivery approaches that align with a Vocational Pathway philosophy, drawing together secondary and tertiary perspectives on the competencies that are required for NCEA Level 2, and exploring the connections within and across pathways. Programme design is a key feature, which includes examples of practice for organisations to consider when thinking about their own contexts. Finally, considerations related to assessment possibilities are discussed. Questions are posed throughout the book for you to deliberate on and share your thinking with your colleagues.

Aim of Vocational Pathways

The New Zealand Curriculum[1] outlines a vision for all young people:

- who will be creative, energetic, and enterprising;
- who will seize the opportunities offered by new knowledge and technologies to secure a sustainable social, cultural, economic, and environmental future for our country;
- who, in their school years, will continue to develop the values, knowledge, and competencies that will enable them to live full and satisfying lives;
- who will be confident, connected, actively involved, and lifelong learners.

To achieve this vision we need to provide all young people with an education that enables them to develop the *foundational* knowledge and skills that employers are seeking.[2] Employers are already reporting difficulty in filling the jobs that are needed to grow their businesses owing to a mismatch between their expectations and the provision of skills and knowledge by potential employees. Furthermore, recent research has shown that employment growth in New Zealand will be stronger for more highly-skilled professions and trades but weaker in low and semi-skilled professions.[3] Achieving NCEA Level 2, with Level 1 literacy and numeracy, provides the *foundation* skills, knowledge and competencies that will enable students to transition successfully to further education, training and employment.

Vocational Pathways

Vocational Pathways provide students with a framework to consider their options, identify the relevance of their learning and see the links between education and employment, using tools such as the 'profile builder'. Using the Vocational Pathways ensures that deliberate steps are made towards equipping all students with the skills, knowledge and competencies that will allow them to succeed. The pathways also provide direct linkages between what students are learning at school, in a tertiary setting, or with an ITO provider, and the skills they will need in the future. At present there are five pathways, and a sixth pathway for Creative Industries will be available in 2014.

Figure One: The Vocational Pathways
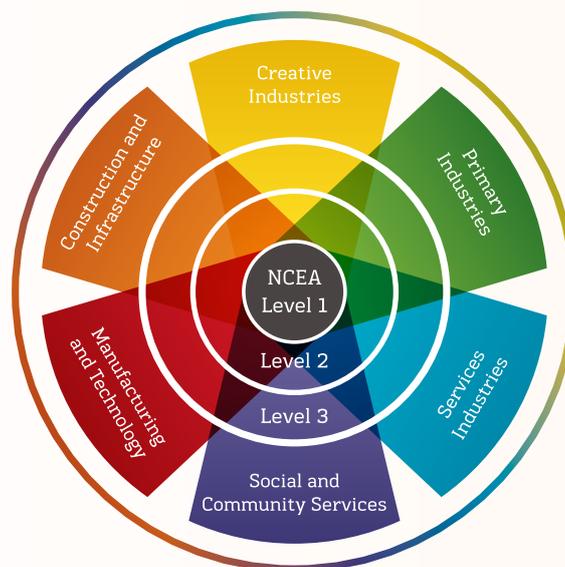
1. Ministry of Education, 2007, p.8
2. Harrity, 2013
3. Ministry of Business Innovation and Employment, 2012, p.5

What is a learning programme?

This section aims to clarify the nature of a learning programme within a Vocational Pathway approach. Learning programmes are defined as a set of interconnected courses based on broadly defined outcomes that progress a student towards a particular qualification. A course is generally one component within a programme, described by specifically defined outcomes and includes content and teaching and learning activities, and assessment set within a time frame. For example, in a school setting a student may follow a programme that consists of an 'academy' course, supported by two additional or optional courses. Alternatively it may be an integrated programme developed across curricula and delivered by several teachers or tutors. Tertiary providers may also work with schools to provide programmes that the schools by themselves cannot offer. You may want to consider the following questions to review the extent to which your learning programmes align with a Vocational Pathways approach.

- How are programmes for all your students presently thought about for development?
- Who has the role of developing these programmes?
- What curricula are the learning programmes based upon?
- How is the student involved in programme creation?
- To what extent do the learning programmes show a direction through study to employment?

# Key ideas about Vocational Pathways

Student-centred approach

Programmes are designed to be responsive; those that respond to the particular needs and interests of students will provide the basis for increased engagement in learning, leading to higher achievement. When an organisation is independently considering the provision of resources and conditions for innovative programmes such as Vocational Pathways, this can appear difficult to achieve. However, by working alongside other partners who share the same aim for their students, the learning options for students broaden (see Figure Two).

Principles of a Vocational Pathways Approach

The Principles of the New Zealand Curriculum[4] set out what is important and desirable in a programme of learning. Figure Three highlights four of the principles and illustrates how these align with the Principles of the Vocational Pathway approach (see page 5).

Figure 2: Collaborative approach to programme design
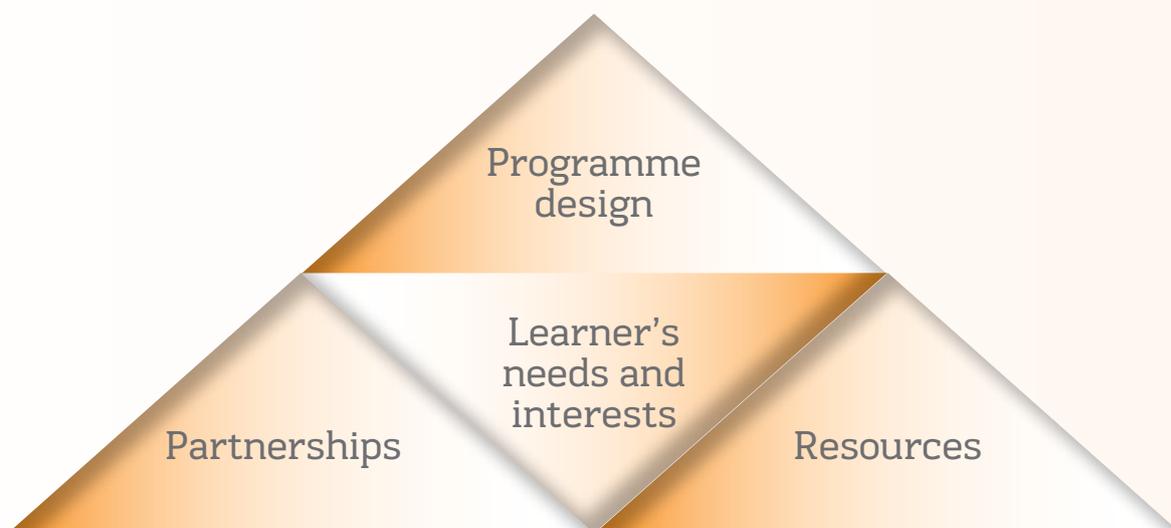
4. Ministry of Education, 2007

Figure 3: Principles underpinning programme design

NZ Curriculum Principles	Vocational Pathways Principles
High expectations The learning programme supports and empowers all students to learn and achieve personal excellence, regardless of their individual circumstances. **Inclusion** The learning programme ensures that all students feel valued and that their learning needs are addressed. **Coherence** The learning programme offers all students a broad education that makes links within and across learning areas, provides for coherent transitions, and opens up pathways to further learning. **Future focus** The learning programme prepares students for the future.	**Principle 1** Programmes of learning and courses are student centred. **Principle 2** Programmes of learning and courses comprise coherent knowledge and skills. **Principle 3** Programmes of learning are within a coherent learning pathway leading to New Zealand qualifications and employment. Please refer to Appendix One, which provides guidance for educators when planning programmes that respond to the Principles of the New Zealand Curriculum and Vocational Pathways.

Benefits for learners

Engaged in a programme of learning related to a Vocational Pathway, or across Vocational Pathways, learners could:

1. Gain a foundation experience, knowledge and skills in a Vocational Pathway

- Learners are equipped with a foundational knowledge, understanding and realistic expectation of the employment sector requirements.
- A graduate can achieve NCEA Level 2, which includes literacy (10 credits) and numeracy (10 credits) at Level 1 or above including
- 60 Level 2 credits from the *recommended* assessment standards for a particular Vocational Pathways sector, of which 20 Level 2 credits are from *sector-related* standards for the same sector, which can be found in the following link.
- May also be eligible for a Vocational Pathway Award in Construction and Infrastructure, which can be requested from June 2014 and will be automatically available from 2015.
- May also be eligible for NCEA Level 2 course endorsement, where students have performed exceptionally well (14 credits at excellence or merit) in individual courses.
- May also be eligible for NCEA Level 2 certificate endorsement, if a student gains 50 credits at excellence or merit level.

2. Be prepared for higher learning

- From February 2014 a Vocational Profile will be accessible on the NZQA website.
- A graduate from a Level 2 "Introduction to Housing and Construction in New Zealand" Vocational Pathways programme will have their foundation for higher learning knowledge, skills and valued competencies acknowledged.
- A graduate will achieve NCEA Level 2 through study at Level 7 of The New Zealand Curriculum and in relevant industry knowledge and skills at New Zealand Qualifications Framework Level 2 or higher.
- NCEA Level 2 with one or more VP Awards will allow students to progress either to NZQF Level 4 Apprenticeships and Certificates, or to NZQF Levels 5 to 6 Diplomas, or to NZQF Levels 5 to 7 degree qualifications. The entry point to all three routes is often through Level 3, but direct entry to Level 4 and 5 can occur at the discretion of the educational provider. It is recommended that learners, along with their family and whānau, make well-informed choices using the available educational and careers information and advice.

3. Understand and be aware of the pathways from education towards employment

- See what future courses and qualifications are available after completing the current programme of learning.
- Understand how the programme of learning can lead towards future employment.
- Understand how key competencies are being developed in this programme and how they are valued by future employers in the Construction and Infrastructure pathway.
- Understand how and why subject knowledge, skills and practices are important in this programme and how they contribute to the world of work across the Construction and Infrastructure sector.
- Understand how learning in the Construction and Infrastructure pathway can open up discussion of issues that are important to the wider community and industry.

Getting started

Schools, tertiary organisations and ITOs are at different places on the journey to provide Vocational Pathways for all students. In some instances collaborative relationships between organisations have been forged a long time ago, in an attempt to respond to student needs and interests, whilst in others this is still growing. This section is intended to help you wherever your starting point may be.

Strengthening and building partnerships

Collaboration and communication between secondary, tertiary and ITOs will enable educators to develop a full understanding of their students' needs, and how best to accommodate them. You may want to use the following questions to initiate conversation and reflection.

- What are our learner needs? What evidence do we have to inform us? How do we use it?
- How will students' progress and needs be monitored and shared?
- Who do we currently have relationships with?
- What possible new partnerships could be formed? Who should do this?
- How would new partnerships create benefits for our students?
- How could partnerships be strengthened?
- How will new initiatives be tracked and monitored?
- How could we alter our business model or share funding to accommodate greater changes?

Figure Four: Essential components for designing an effective learning programme

FIRST LEVEL OF PLANNING	
Students	Evidence is used to identify all student needs and interests, and students are engaged in learning.
Current learning programmes	Partners review current programmes and assess to what extent programmes are meeting the needs of the students, including those at risk of disengaging and those currently not achieving.
Community and Industry	Collaboration with the community, possible new partnerships are established, and others strengthened. Resources may be reviewed again.
Resourcing	Partners assess current resourcing and explore possible new options with community input. Educator and other expertise, for example industry, is explored, identified and sourced, this includes the need for particular expertise to support or extend students. The requirements for facilities, equipment , materials and tools are scoped.

SECOND LEVEL OF PLANNING	
Programme design	Programmes created incorporate relevant industry content and the learning areas in the New Zealand Curriculum, and focus on essential skills and key competencies, with progression to further education and employment.
Teaching and learning/ delivery approaches	Educators use evidence of teaching approaches that have a positive impact on their students. A reflective approach is used by all educators and students (see teaching and delivery section).
Location of learning	Partners identify and utilise the most appropriate locations for learning.
Connections	Connections with workplace, community and industry are actively maintained.
Assessment approaches	Assessment delivery caters for individual student needs. Quality Assurance processes exist and are monitored.

Teaching and delivery approaches

Regardless of the location of learning, there is extensive, well-documented evidence about the kinds of teaching approaches that consistently have a positive impact on the achievement of students. The research tells us that students learn best when educators:

- create a supportive learning environment;
- encourage reflective thought and action;
- enhance the relevance of new learning;
- consistently make connections between learning and the world of employment;

- facilitate shared learning;
- make connections to prior learning and experience;
- provide sufficient opportunities to learn;
- inquire into the teaching–learning relationship.[5]

Successful integration of E-learning into programmes of learning also supports and motivates students to achieve.[6] Whilst this list is by no means exhaustive, Figure Five outlines a number of other teaching delivery approaches that could be considered.

Figure Five: Teaching and delivery approaches

Contextualised learning	• real life and industry related contexts • cultural contexts • build products where possible, for actual clients.
Problem solving	• use problem-based scenarios • use actual situations in real time • OR use virtual simulations.
Skills development	• introduce a wide range of foundational skills and competencies • skills are taught and practised regularly in a variety of situations.
Work-integrated learning experiences	• visits to a range of relevant industry sites • meet a range of industry employees across levels of the industry • use available funding mechanisms to support work-integrated learning experiences (e.g. Gateway and STAR).
Relationship building	• affirmation of identity, language and culture • relationships are positive and learning engages students' interests and cultural perspectives • students' achievements, attitudes, personal backgrounds and interests are sought.
Special education needs	• teaching environments are modified to include all students • learning difficulties and/or problematic behaviours lead to appropriate student support.
Health and Safety	• the physical and cultural health and safety of individuals, groups and visitors is well managed.
Learning and assessment feedback	• all formative feedback is regular, on time, in manageable chunks, and next steps are clearly identified • all summative feedback identifies next steps and sets achievable challenges and goals.
Reflective practice	• educators constantly reflect on what is going well and not so well and adjustments are regularly made. Educators encourage students to do the same.

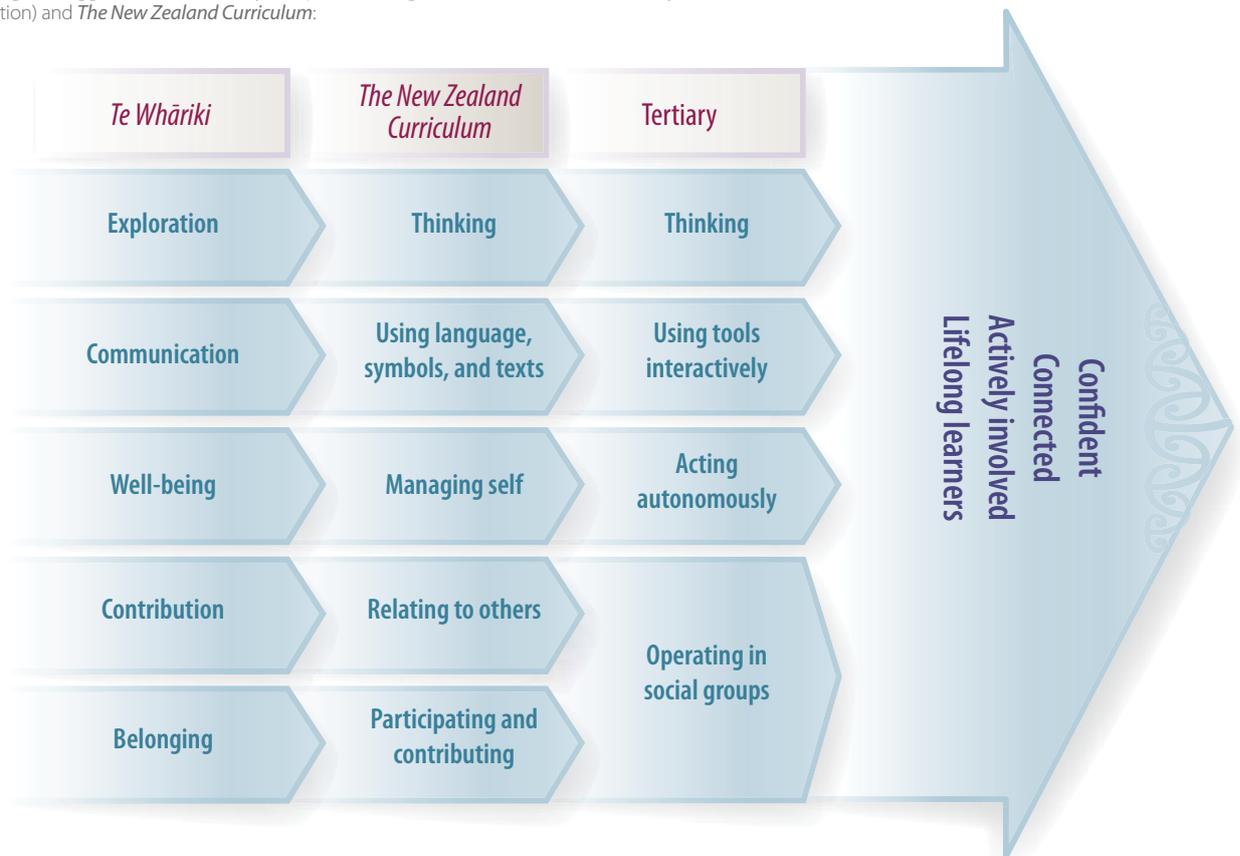5. New Zealand Curriculum p.33
6. Ministry of Education, 2007

Key competencies and tertiary competencies

For students to successfully live, learn and work as members of society, the development of competencies needs to be an integral element of any programme design. Figure Six shows the competencies that have been developed for schools and tertiary providers and how these align with each other.[7]

Career management competencies have also been identified as a useful tool for educators to take into consideration when planning programmes and responding to the needs and interests of students.

Figure Six: The key competencies: Cross-sector alignment

This diagram suggests how the tertiary competencies align with those of *Te Whāriki* (Early Childhood Education) and *The New Zealand Curriculum*:

Te Whāriki	The New Zealand Curriculum	Tertiary	
Exploration	Thinking	Thinking	Confident / Connected / Actively involved / Lifelong learners
Communication	Using language, symbols, and texts	Using tools interactively	
Well-being	Managing self	Acting autonomously	
Contribution	Relating to others	Operating in social groups	
Belonging	Participating and contributing		

7.   Ministry of Education, 2007, P.42

Key competencies within the Construction and Infrastructure Vocational Pathway

Figure Seven: Elements of key competencies that can be experienced, supported and developed, whilst following the Construction and Infrastructure Vocational Pathway

Key competencies	Elements that can be experienced...	Students who experience key competencies in contexts...
Managing self **Acting autonomously**	self-motivation time management travel money management gear safety self-respect	are reliable, resourceful, resilient, enterprising can get to where they are meant to be, at the right time
Thinking	making sense of information, ideas and experiences developing curiosity making decisions and shaping actions	are able to ask questions can challenge assumptions or perceptions
Using language symbols and texts **Using tools interactively**	making meaning of codes of communication and of knowledge understanding and using symbolic systems of language – oral/aural/written/visual Using words, number and images Applying of technologies	are able to understand a range of communication codes can choose which code/notation to use at different times
Relating to others **Operating in social groups**	actively listening recognising different points of view negotiating sharing ideas	are able to work co-operatively as part of a team can share ideas and information
Participating and contributing **Operating in social groups**	active involvement contributing in a group making connections with others creating opportunities for others	have a sense of belonging and the confidence to participate in new situations can balance rights, roles and responsibilities

Contexts for learning in a Housing and Construction programme

Vocational pathways can provide the opportunity for students to have greater choice of programmes. These programmes should be broad and foundational, located within a relevant employment sector, and not locked into single industries. Partnerships between providers may be required to create more choice. Schools, tertiary organisations and ITOs should aim to provide contexts that are relevant, interesting, challenging and provide for a wide range of abilities.

Some examples of learning contexts have been provided below. This is not an exhaustive list, and is presented to stimulate further thinking and adaptation for contexts that are relevant to your students. Considerations for planning of the teaching and learning approaches related to these contexts have been outlined earlier in this document. Alongside thinking about the examples of contexts for learning, you may wish to use the following questions to check back on your planning.

In your programme of learning and delivery how are you:

- ensuring that the contexts chosen both meet the needs and interests of your students as well as a way of opening up their world?
- building on the Principles of the NZ Curriculum and Vocational Pathways?
- supporting the development of the key competencies?
- incorporating sound teaching and learning delivery approaches?
- making connections to other areas of learning and experiences?

Figure Eight: Examples of contexts for learning

Sustainable housing design for the future of New Zealand	• Introduction to history of housing in New Zealand. • Pre 1930. Post WWII. 1990s. 2005–2013. Homes of the future. • Case studies.
Proud to be Kiwi made	• Traditional building methods 1840 to1980 – strengths and limitations. • Compare and contrast traditional design and construction materials and techniques with those of 2013 – advantages and disadvantages.
Culture and construction –consider the opportunities	• Design and build for culture. Consider a community that wants a new facility. How does the design of buildings welcome, celebrate or inhibit ethnic communities? • For example – consider the cultural interests and needs of Māori, Pasifika, recent Middle Eastern immigrants to New Zealand society. Design a new community building – how will various cultural requirements be accommodated within the design? • Examples might be: marae, Pasifika church, community centre, kōhanga reo, school, etc.
Materials match the environment	• Materials must manage earthquake, water, fire and wind loads. Which do this best and why? Investigate and present findings. • What are the best combinations of materials to manage earthquake, water, fire and wind loads? Investigate three materials and how they are used to manage one of these four loads. Justify your conclusions.
What makes buildings leak?	Leaking building 1990s – design, construction, and approvals methods. What went wrong? • Investigate the interrelationship between consumer desire, engineering and architectural design, construction, and local council approval processes that led to this situation. • Was system failure at the heart of this problem?
Design an urban infill project	How could better use be made of environmental space to produce designs that meet the needs of all stakeholders? • Take a real city where there is pressure for additional housing. • Select a suburb and develop a 'moderate scale infill design' that meets local cultural needs, social requirements and good design principles.
Green building or green wash	How would you evaluate a building as 'green', and what is the difference between this and 'green wash'? • Can differences be rated for consumer information? • Discuss the need for a 'Warrent of Fitness' for houses. Would this widen the disparity between rich and poor?
Standing on shaky ground	Investigate a known building collapse in New Zealand history – Christchurch or Napier. • What has been learnt about engineering and architectural design of this building that can be done differently in the future? • Comment on the use of materials in this building.

Healthy homes	What's wrong with New Zealand houses? • Investigate pre or post WWII design and construction of New Zealand houses and describe commonly found health-related issues. • What can be done to improve the performance of these houses?
Affordable housing	The house building and construction industry is affected by economic and socio-political forces. • Investigate the relationship between economic forces (such as mortgage interest rates, patterns of home ownership and the relationship to income, investment housing and land values near cities and discuss how these combine to affect affordable housing possibilities today.
The role of good design	What are generally agreed principles of good design? • Describe how 'good design' principles have been applied in a housing example you have researched. • Has their application in the housing example led to a 'fully sustainable' house design? Justify.
Alternative energies – the powered house of the future	What are alternative energies? How do they work and how can they contribute to sustainable housing?

Excerpts of programme design

The excerpts of learning programmes illustrate how two providers have gone about meeting the needs of the students within the Construction and Infrastructure pathway. The intention of these examples is to stimulate discussion about what a programme may look like in your area for all students. Both providers are still currently working with the community to strengthen their programme approach. Other examples could incorporate programmes that are designed for students to follow the Construction and Infrastructure Pathway, in preparation for degree-level study and careers such as engineering, architecture, quantity surveying or project management.

Auckland West Vocational Academy

Massey High School has established a number of vocational academies under the title of Auckland West Vocational Academy. The Carpentry Academy is a full time one year programme taught by a full time tutor. It is also supported by a number of building related organisations such as Site Safe, and manufacturers such as Ramco and Paslode.

Aim: For learners to gain competent carpentry knowledge and skills.

Context of learning: In the course of the year, the students build a $65m^2$ house. Academy students are expected to work extended hours, some Saturdays and four extra days in the holidays.

Qualification: Students can gain over 100 Level 2–4 credits, achieve Level 2 BCATS qualification and gain NCEA Level 2 with Construction and Industry as their vocational pathway.

Pathway: Successful completion allows entry into any of the Level 4 Allied Trades courses at Unitec. There is no academic prerequisite for this academy and many enter it with a chequered school record.

For more information about the AWVA please refer to the Contextualised Learning Examples

Tairawhiti Schools Trades Academy @ EIT – Carpentry programme

A developing partnership between Tairawhiti secondary schools – some of the most isolated schools in the country. EIT offers students a range of learning opportunities and extends career horizons in new ways.

Aim: For learners to engage in learning they see has a purpose, and to give students the opportunity for further study and work in a vocational pathway.

Context of learning: Students attend EIT each Friday and complete the remainder of their programme related to the New Zealand Curriculum Monday–Thursday. In the course of a year, where possible, students work on community projects; for example, students were involved in the external renovation of a Historic listed building in Gisborne.

Qualification: Students are assessed against ITO standards for the carpentry programme and gain credits for the remaining New Zealand Curriculum programme. Schools are looking at providing a greater integration between academy and non-academy learning.

Pathway: The academy programme provides pathways into tertiary training.

For more information about EIT please refer to the Contextualised Learning Examples

Design the content and approach for a learning programme.

Consider the following example, which provides a possible framework and some starters for joint planning between secondary, tertiary and ITO providers to develop a learning programme. Partners may need to work together to make sure all the areas below are adequately covered.

Figure Nine: Example of a framework for planning the learning programme

Graduate profile
Identify attributes of learners exiting from a learning programme.

Broad Learning Outcomes
Identify knowledge, skills and capabilities valued by the sector.

Planning Categories
Plan for each of the learning outcomes using these categories:

1. Industry specific content
Identify the skills, capabilities and knowledge that are valued.

2. New Zealand Curriculum content
Identify relevant content from the New Zealand Curriculum that supports development of valued knowledge, skills and capabilities.

3. Key competencies
Consider how the learners will develop the key competencies, core capabilities and soft skills valued in your sector.

Refer to pages 8–9 of this document for guidance

4. Delivery arrangements and resourcing
Consider appropriate resourcing to meet the needs for learners.

Examples:
– Develop shared delivery arrangements between schools and tertiary providers
– Identify learner interests and available businesses and arrange work placement opportunities

5. Assessment
Use an appropriate balance of recommended and sector-related achievement and unit standards to enable learners to achieve NCEA Level 2 with a Vocational Pathways Award.

Progression
Can the learner progress to further qualifications and/or employment from this learning programme?

Assessment Approaches

There are many possible assessment standards available within and across Vocational Pathways for educators and students to choose from, to complement their learning programme. The range of standards for the Construction and Infrastructure Pathway can be found here.

Figure Ten provides an example of what an assessment programme *could* look like for one student who is following the Introduction to Housing and Construction in NZ programme at NCEA Level 2.

Figure Ten: An example of an assessment programme for one student

Vocational Pathway

60 credits from Vocational Pathway *Recommended* standards, including 20 credits from *Sector-Related* standards

NCEA Level 2 or equivalent

Minimum of 80 credits

(includes 20 credits from any other Level)

(includes Literacy and Numeracy requirements)

Achievement

Successful transition to further study or employment

Sector-related

- Construction and mechanical technologies 91344, 91347, 91348, 91349, 91350
- Design and visual communication 91388, 91399

Total 23 credits

Recommended assessment standards

- Chemistry 91161, 91163, 91166
- Earth and Space Science 91187, 91191
- Education for sustainability 90811
- Generic Technology 91357, 91359, 91361, 91363
- Geography 91243
- Mathematics and Statistics 91256, 91257, 91259
- Physics 91168, 91169, 91171
- Computing 2791

Total 69 credits

Assessment Standard

This is the collective word used to describe all quality assured unit and achievement standards. Each standard describes what a candidate who has achieved the standard knows and can do. Both unit and achievement standards carry a number of credits. Candidates who achieve the standards gain credits which are recorded on the centrally managed Record of Achievement.[8]

Unit Standards: Are developed by ITOs and by two NZQA units, the National Qualifications Services and Māori Qualifications Services.

Achievement Standards: Are developed by the Ministry of Education, and derived from the achievement objectives of the New Zealand Curriculum, 2007.

8. NZQA: http:/www.nzqa.govt.nz/qualifications-standards/standards/

Vocational Pathway Award

A Vocational Pathway award may be gained within the Construction and Infrastructure Pathway, as a result of achieving in the 'Introduction to Housing and Construction' programme. As with any NCEA qualification a vocational pathway student may also gain a certificate of endorsement or a course endorsement.

Figure Eleven: Vocational Pathway Award

NCEA Level 2 achieved

with **Vocational Pathway Award**

with **Course Endorsement**

with **Certificate of Endorsement**

An award and an endorsement may be achieved *with* **an NCEA Level 2**

Requirements for NCEA Level 2 are:

80 credits, of which:

- **a minimum of 60 credits are at Level 2;**
- **and the other 20 credits are from Level 1 or another Level; and**
- **include literacy and numeracy credits at Level 1 or above.**

Literacy requirement

A minimum of 10 credits through either:

- specified achievement standards available through a range of subjects and English for Academic Purposes
- unit standards (minimum of 10 credits) or unit standards – package of three literacy unit standards (minimum of 10 credits – **all** three are required).

Numeracy requirement

A minimum of 10 credits through either:

- Achievement standards – specified achievement standards available through a range of subjects (minimum of 10 credits) or
- Unit standards – package of three numeracy unit standards (minimum of 10 credits – **all** three are required).

Additional recognition of achievement available

Vocational Pathway award

Achieves 60 Level 2 credits from the *Recommended* assessment standards for a Vocational Pathway sector, including 20 credits from the *Sector-related* standards for the same sector.

Course Endorsement

Students will gain an endorsement for a course, if, in a single {school} academic year, they achieve:

- 14 or more credits at Merit or Excellence and at least 3 of these credits are from externally assessed standards, and 3 credits from internally assessed standards.

Note: This does not apply to physical education, religious studies and Level 3 visual arts.

Certificate Endorsement

If a student gains 50 credits at Excellence, their NCEA will be endorsed with Excellence.

Likewise, if a student gains 50 credits at Merit (or Merit and Excellence), their NCEA will be endorsed with Merit.

Foundation for further learning

Figure Twelve, taken from the Vocational Pathways information booklet for Construction and Infrastructure, shows the types of jobs that are available for young people at the different levels of education.

The 'dots' in Figure Twelve show the level (or levels) of qualification usually associated with the role. Sometimes you need a specific qualification to get into a job, but in many areas you can work towards higher qualifications by learning on the job. Check out the job profiles on www.careers.govt.nz, or talk to your careers advisor to find out more.

Figure Twelve: Job opportunities in the Construction and Infrastructure Pathway

NZQF Level	2	3–4–5	5–6	7	8–10
	NCEA Level 2	Certificate	Diploma	Degree	Postgraduate Degree
Architect				●	●
Architectural Technician			●	●	
Boat Builder	●	●			
Bricklayer	●	●			
Building Contractor	●	●			
Building Inspector	●	●		●	
Building Insulator	●	●			
Cabinet Maker	●	●			
Caretaker	●				
Carpenter	●	●			
Civil Engineer				●	●
Civil Engineering Technician/Draughtsperson			●	●	
Concrete Worker	●	●			
Construction Manager	●	●	●		
Crane Operator		●	●		
Diver	●	●			
Driller	●		●		
Earthmoving Machine Operator	●	●			
Electrician		●			
Energy Auditor				●	
Environmental Engineer				●	●
Fabrication Engineer	●	●			
Floor and Wall Tiler	●	●			
Floor Covering Installer	●	●			
Fork-Lift Operator		●			
General Labourer	●	●			
Glazier	●	●			
Interior Designer	●		●	●	
Joiner	●	●			
Landscape Architect				●	
Landscape Gardener	●				
Lift Technician	●	●			
Line Mechanic		●			
Locksmith		●			
Metal Worker	●	●			
Mine/Quarry Manager		●	●		
Miner/Quarry Worker	●	●			

NZQF Level	2	3–4–5	5–6	7	8–10
	NCEA Level 2	Certificate	Diploma	Degree	Postgraduate Degree
Mining Engineer				●	●
Naval Architect/Boat Designer				●	●
Painter and Decorator	●	●			
Plasterer	●	●			
Plumber and Gasfitter		●			
Project Manager			●	●	
Property Manager		●	●	●	
Quantity Surveyor			●	●	
Railway Shunter		●			
Roading Construction Worker	●	●			
Roadmarker	●	●			
Roofer	●	●			
Rubbish/Recycling Collector					
Scaffolder	●	●			
Stonemason	●	●			
Survey Technician			●		
Surveyor				●	
Water/Waste Water Treatment Operator		●		●	
Welder	●	●			

Review

The purpose of this booklet was to provide you with some guidance to support you to develop learning programmes within and across the Vocational Pathways. As you continue the development of these programmes you may find it helpful to consider the questions that are posed through the booklet, including the ones on the right.

- What are you currently doing that is working well for students?
- How do you identify those students who are not doing so well, and analyse why this may be the case?
- To what extent are your programmes meeting the needs of your priority learners (Pasifika, Māori and students with special educational needs)?
- How do you currently allocate funding for off-site learning?
- How could funding from partner organisations be used differently to support the partnership approach?
- What may need to be done differently?
- How do you know what needs to be done differently?
- What can you do today?
- What can you do in the longer term?
- Who has consent to assess the Assessment Standards?
- Can this consent be developed across tertiary and secondary providers?
- How do you ensure you meet the requirements of the New Zealand Curriculum, and of industry, for 15–19 year olds?

To find out more information on Vocational Pathways, please visit our website
http://youthguarantee.net.nz/vocational-pathways/

Appendix

PRINCIPLES

Foundation for further learning principles to help guide providers when developing or reviewing contextualised learning programmes for Vocational Pathways.

PRINCIPLE 1: Programmes of learning and courses are student-centred.

How do educators:

1 Explicitly plan for, deliver and assess in response to the prior knowledge and skill, and previous experiences, students bring to the course?

2 Use this knowledge to inform teaching decisions about what students need to learn or do next?

3 Design the learning environment to be inclusive for all students, including those with moderate education needs?*

4 Explicitly plan approaches to teaching and learning delivery that respects all students' current needs, potential, interests, desires, cultural views including world views, and ethnic/gender perspectives?

5 Explicitly plan approaches to teaching and learning and assessment delivery that respect the identity, language and culture of all students, ensuring delivery and assessment is conducted through respectful and caring relationships with every student?

6 Explicitly plan approaches to teaching and learning and assessment delivery that include a targeted focus on improving achievement outcomes for Māori and Pasifika students, students with special education needs, and students from low socio-economic backgrounds?

7 Explicitly investigate the literacy and language needs, and/or numeracy knowledge and skill needs of all students prior to, or at commencement of, every course, and explicitly provide relevant support, actively managing this through all course delivery and assessment?

8 Proactively ensure pastoral or broader social support is planned for and available as required?

PRINCIPLE 2: Programmes of learning and courses comprise coherent knowledge and skills.

How do educators:

1 Use the Vocational Pathway sector descriptors to guide development of programmes and courses that are educationally coherent and robust, and also situated within a broad vocational employment context?

2 Plan programmes that provide a coherent body of systematically organised discipline knowledge and skills, practices and competencies which progress within courses and throughout the programme?

Note: Discipline knowledge would be drawn from relevant sciences, English, technologies, mathematics, design, social sciences, arts, languages etc.

3 Plan courses that provide a coherent body of specialist knowledge and skills, practices and competencies from an employment sector that is embedded in a relevant and engaging context?

4 Deliver and assess the coherent body of specialist knowledge and skills, practices and competencies from this employment sector's particular field of practice?

5 Deliver and assess the coherent body of systematically organised discipline knowledge and skills, practices and competencies at regular intervals in courses throughout the programme?

6 Plan partnerships that effectively deliver different types of knowledge in the sites most appropriate for learning different types of knowledge and skills, practices and competencies?

7 Plan for and support the development of students' generic competencies, by explicitly embedding opportunities to practice and reflect on these abilities and skills throughout all courses?

* Note resource: Universal Design for Learning

PRINCIPLE 3: Programmes of learning are within a coherent learning pathway, leading to New Zealand qualifications and employment.

How do educators:

1 Situate course learning within broad life/world contexts, using the Vocational Pathway sector descriptions where possible?

2 Plan clear and authentic connections within and between programmes, within and between courses and towards next destinations?

3 Situate their programmes within a learning pathway that is transparent to the student, has clear and achievable next steps to study or employment and includes genuine progression links to next qualification steps?

4 Present their programmes and qualifications to students, their family and whānau, within current and authentic market opportunities for future employment, study or training?

5 Demonstrate that their programmes lead every student enrolled towards worthwhile qualifications from NCEA Level 2 to NZQF Level 4, with options for further progress?

6 Demonstrate that the qualifications they offer are recognised across New Zealand?

NOTE

These Principles have been developed and tested for consistency against the following documents and strategies:

Tertiary Education Strategy 2010–2015, New Zealand Curriculum 2007, Best Evidence Synthesis for Teacher Professional Learning and Development, and Best Evidence Synthesis for School Leadership and Student Outcomes, Ka Hikitia 2013–2017, Pasifika Education Plan 2013–2017, Success for All Strategy vision and work programme for inclusive education, Better Public Service Targets L2 and L4, Ministry of Education Statement of Intent 2011/12–2016/17, New Zealand Qualifications Framework, and emerging Youth Guarantee and foundation education policy.

References

Harrity, E. (2013). *Vocational Pathways: Using industry partnerships and personalised learning to improve student outcomes*. Retrieved from: http://www.fulbright.org.nz/wp-content/uploads/2013/08/axford2013_harrity.pdf

Ministry of Business Innovation and Employment. (2012), *Medium-Long Term Employment Outlook: Looking Ahead to 2020*. Wellington: MBIE

Ministry of Education. (2007). *The New Zealand Curriculum*. Wellington, New Zealand: Learning Media Ltd.

Links

Best Evidence Synthesis for School Leadership and Student Outcomes
http://www.educationcounts.govt.nz/__data/assets/pdf_file/0015/60180/BES-Leadership-Web.pdf

Best Evidence Synthesis for Teacher Professional Learning and Development
http://www.educationcounts.govt.nz/__data/assets/pdf_file/0017/16901/TPLandDBESentire.pdf

Better Public Service Target Targets L2 and L4
http://www.ssc.govt.nz/better-public-services

Career Management Competencies
http://nzcurriculum.tki.org.nz/Curriculum-resources/Career-education/Career-management-competencies

Construction and Infrastructure Vocational Pathway Information booklet
http://youthguarantee.net.nz/assets/Uploads/MOE-VP-Construction-RD2-final2.pdf

Ka Hikitia: Ensuring Success 2013–2017
http://www.minedu.govt.nz/theMinistry/PolicyandStrategy/~/media/MinEdu/Files/TheMinistry/KaHikitia/KaHikitiaAcceleratingSuccessEnglish.pdf

List of Assessment standards for Construction and Infrastructure Pathway
http://youthguarantee.net.nz/vocational-pathways/education-providers-/construction-and-infrastructure/

Ministry of Education Statement of Intent
http://www.minedu.govt.nz/theMinistry/PublicationsAndResources/StatementOfIntent/SOI2013.aspx

NZQA
http://www.nzqa.govt.nz/qualifications-standards/standards/

NZ Qualifications Framework
http://www.nzqa.govt.nz/studying-in-new-zealand/nzqf/

Pasifika Education Plan 2013–2017
http://www.minedu.govt.nz/NZEducation/EducationPolicies/PasifikaEducation/~/media/MinEdu/Files/EducationSectors/PasifikaEducation/PEPfoldup12Feb2013.pdf

Science Safety
http://seniorsecondary.tki.org.nz/Science/Learning-programme-design/Safety-and-ethical-considerations

Success for All Strategy
http://www.minedu.govt.nz/NZEducation/EducationPolicies/SpecialEducation/OurWorkProgramme/SuccessForAll.aspx

Technology Safety
http://technology.tki.org.nz/Curriculum-support/Safety-and-Technology-Education

Tertiary Education Strategy 2010–2015
http://www.minedu.govt.nz/NZEducation/EducationPolicies/TertiaryEducation/PolicyAndStrategy/~/media/MinEdu/Files/TheMinistry/TertiaryEducationStrategy2010/TES2010to2015.pdf

Universal Design for Learning
http://www.educationcounts.govt.nz/publications/special_education/education-that-fits-review-of-international-trends-in-the-education-of-students-with-special-educational-needs/chapter-sixteen-universal-design-for-learning

Vocational Pathway Award
http://youthguarantee.net.nz/assets/assets/VP-Award-Profile-FINAL-Amended-Version-3Sept13.pdf

Vocational Profile builder
http://youthguarantee.net.nz/vocational-pathways/profile-builder/

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www.youthguarantee.net.nz