

**Generic Unit 31<sup>st</sup> May 2007**

**Year 11**

<b>Teaching Sequence</b>	<b>Learning Intentions</b>	<b>Criteria for Evaluation</b>	<b>Assessment Strategy</b>
<p>Introduction to Year 11 and expectations</p> <ul style="list-style-type: none"> <li>▪ NCEA overview</li> <li>▪ Presentation of evidence-expectations</li> <li>▪ Year 11-13 technology-pathways</li> <li>▪ Assessment policies/procedures/formative/summative</li> <li>▪ Timelines-unit overview/programme/deadlines.</li> </ul>	<p><i>Students understand:</i> How achievement/unit standards will be used to assess them in technology, importance of timelines and deadlines, assessment procedures.</p>	<p><i>Students meet deadlines over the course duration</i></p>	<p>Ongoing teacher/student interaction</p>
<ul style="list-style-type: none"> <li>▪ Technology Cycle (year 10) and how the practice exists at Year 11.</li> </ul>	<p>Links between Year 10 and Year 11</p>	<p><i>Students demonstrate that they can identify key steps of the technology cycle.</i></p>	
<p><b><i>Skill development</i></b></p> <ul style="list-style-type: none"> <li>▪ examples of timelines/GANTT charts</li> <li>▪ Develop planning-timeline with given key milestones.</li> </ul>	<p><i>Students understand that:</i> Timing is an important aspect of managing a project</p>	<p><i>Students:</i> developed timeline – incorporates all key stages of tech cycle.</p>	<p>Gantt chart (AS 900045)</p>
<p>Introduction to the Context/Issue</p> <p><b><i>Knowledge and Skill development</i></b> Giving examples on existing solutions who the stakeholders are and identify design features within existing solutions. What determines a quality solution?</p>	<p><i>Students can:</i> Identify design features and functions of existing solutions and who the likely stakeholders were and or the environment in which they belong..</p>	<p><i>Students discuss the breadth of the given issue</i></p> <p><i>Students identify:</i> Design feature of existing solutions, functions and likely stakeholders/environment:</p>	<p>Introductory page with examples of existing solutions, notated and related to given context AS 90046 AS 90050</p>

<p><i>Skill Development:</i></p> <ul style="list-style-type: none"> <li>▪ 2D/3D graphic and layout presentation - freehand drawing methods, working drawings, use of rendering, page presentation and layout and titling.</li> </ul>	<p>Students can: Represent a given object graphically using accepted codes of practice</p>		
<p><b>Planning</b> Show examples of planning tools and discuss the purpose of planning and the organisation of resources prior to key stages. How planning often changes as work develops Key Decisions justified</p>	<p>Students can Select from a range of planning tools Understand that planning is dynamic and responsive to key questions What? Why? Where? How? When? Who? Where?</p>	<p>Students: Use appropriate planning tools for each key stage e.g.: Venn diagram</p> <ul style="list-style-type: none"> <li>▪ flow chart</li> <li>▪ list</li> <li>▪ chart</li> </ul>	<p>Planning tools are used regularly to inform practice and include resources AS 90045</p>
<ul style="list-style-type: none"> <li>▪ Identification of the stakeholders, and location/environment in which the issue resides</li> <li>▪ Start to identify initial key factors.</li> <li>▪ A need (s) or opportunities are stated</li> </ul>	<p>Students can identify those who have an interest in the issue and research the main implications of the environment/location and how the stakeholders and environment will influence a developing solution</p>	<p>Students: Conduct research on stakeholders and environment and highlight key points that they will consider when developing a solution</p>	<p>Key factors are established and organised as Stakeholder, Broader and Knowledge key factors Some consideration given to the priority A need or opportunity is identified AS 90046</p>
<p><i>Knowledge and Skill Development</i></p> <ul style="list-style-type: none"> <li>▪ Students are introduced to a range of materials and are taught the performance properties</li> <li>▪ Students construct a simple object using given materials in order to learn some</li> </ul>	<p>Students develop a 'bank' of appropriate skills for the material(s) they are likely to use</p>	<p>Students: manufacture a given item</p>	<p>(A domain specific unit standard) AS 90050</p>

techniques and processes using accepted codes of practice.			
<i>Knowledge development</i> Codes of Practices and ethical considerations for product development. This includes: material marking out, cutting and joining methods; modelling methods; properties of commonly used materials including their limitations and possibilities; use of tools and machinery when manufacturing products.	Students know the relevant codes of practice for product development	Students: Select the appropriate technique and demonstrate accuracy	Worksheet AS 90050
Development of initial brief with specifications.	<i>Students can</i> develop an initial brief that reflects stakeholder needs/desires and location constraints	<i>Students initial brief</i> ▪addresses stakeholder needs/desires and location needs. ▪specification established from prioritised key factors	Initial brief AS 90046 AS 90050
<ul style="list-style-type: none"> <li>▪ Research and Exploration of conceptual ideas in relation to a selected environment/ stakeholders: existing solutions, design features, environment considerations, needs and opportunities.</li> </ul>	Students can: <ul style="list-style-type: none"> <li>• layout information so that it can be clearly read; and</li> <li>• communicate design features of concept ideas.</li> <li>• Communicate with stakeholders and seek feedback</li> </ul>	Students: layout communicates information clearly <ul style="list-style-type: none"> <li>• clearly communicate design ideas</li> <li>• Stakeholder feedback is communicated</li> </ul>	Concept ideas are discussed for viability
Concept development including: <i>Skill development:</i> <ul style="list-style-type: none"> <li>▪ modelling techniques to test ideas</li> <li>▪ ongoing planning and brief refinement, knowledge development and materials</li> </ul>	Students can: <ul style="list-style-type: none"> <li>• Test and trial key ideas for inclusion/exclusion</li> <li>• Plan for each step including resources</li> <li>• Develop brief as decisions</li> </ul>	Students: record key steps in developing their prototype in order to communicate with stakeholders and gain feedback	Model, Trials, Photographs and or sketches show development process and the developing brief reflects the key decisions

<p>properties and uses.</p> <ul style="list-style-type: none"> <li>▪ Sketching to communicate ideas</li> <li>▪ Communicate regularly with stakeholders</li> <li>▪ finalise prioritised key factors</li> </ul>	<p>are made</p> <ul style="list-style-type: none"> <li>• Justify key decisions as in material choice</li> <li>• Prioritise and Justify key factors</li> </ul>		<p>made</p> <p>AS 90050</p>
<ul style="list-style-type: none"> <li>• Ongoing refinement of brief and development of conceptual design into a final design informed by planning. Production of working drawings.</li> </ul>	<p><i>Students can:</i> Use planning to inform the development of their final design</p>	<p>AS90045 See assessment schedule <i>Students use:</i> Planning to inform design development Working drawing is a true representation of product to be manufactured.</p>	<p>Planning documentation As 90045 Working drawing checked for accuracy AS 90050</p>
<ul style="list-style-type: none"> <li>▪ Prototyping-assembly.</li> </ul>	<p><i>Students can:</i> Assemble and tests to demonstrate their design features potential fitness for purpose (to stakeholders).</p>	<p><i>Students</i> demonstrate potential are fitness for purpose.</p>	<p>submits prototype and written justifications AS90050</p>
<ul style="list-style-type: none"> <li>▪ Confirmed Final Brief and Specifications</li> </ul>	<p>Students check: Accuracy of Final brief and Specifications</p>	<p>AS90046 See assessment schedule</p>	<p>Final Brief and Specification AS 90046</p>
<ul style="list-style-type: none"> <li>• Prototype Evaluation (in situ) with stakeholder and in intended location.</li> </ul>	<p>Students can demonstrate that their outcome is fit for purpose with its intended location</p>	<p>AS 90050 See assessment schedule Students can develop an outcome and the final evaluation shows that it is fit for purpose.</p>	<p>Test evidence and evaluation of outcome being used in situ, including stakeholder feedback. AS90050</p>