**NZQA**

**Approved**

Achievement standard: 91045 Version 3

Standard title: Use planning tools to guide the technological development of an outcome to address a brief

Level: 1

Credits: 4

Resource title: Wired up

Resource reference: Generic Technology VP-1.2 v2

Vocational pathway: Primary Industries

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| Date version published | February 2015 Version 2  To support internal assessment from 2015 |
| Quality assurance status | These materials have been quality assured by NZQA.  NZQA Approved number A-A-02-2015-91045-02-7352 |
| Authenticity of evidence | Assessors/educators must manage authenticity for any assessment from a public source, because learners may have access to the assessment schedule or exemplar material.  Using this assessment resource without modification may mean that learners’ work is not authentic. Assessors/ educators may need to change figures, measurements or data sources or set a different context or topic to be investigated or a different text to read or perform. |

Vocational Pathway Assessment Resource

Achievement standard: 91045

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Learner instructions

# Introduction

This assessment activity requires you to use planning tools to guide the technological development of a post and wire fence that addresses a brief.

You are going to be assessed on how effectively you use planning tools to manage the technological development of a post and wire fence to address a brief. You need to show that you can identify critical review points for key stages and prioritise resources required to ensure the completion of the post and wire fence.

The following instructions provide you with a way to structure your work so you can demonstrate what you have learnt and achieve success in this standard.

Assessor/educator note: It is expected that the assessor/educator will read the learner instructions, and modify them if necessary to suit their learners.

# Task

Respond to the brief you’ve been given (or the one that you have developed) by doing the following:

* refer to the brief for your post and wire fence
* begin by accessing a range of planning tools that will help you to effectively manage the key stages, critical review points, and resources. These tools might include brainstorms, mind-maps, idea banks, reflective journals and scrapbooks, plans of action, Gantt charts, flow diagrams, graphical organisers, spreadsheets and databases
* consider the stages of development and building of the post and wire fence, and establish the key stages through the development, manufacture and completion of your post and wire fence.

Then use planning tools to:

* establish the resources required for each key stage, for example time, materials, tools and specialist knowledge and skills, and prioritise the selection for each key stage in order to meet the brief
* organise the tasks that are required within each key stage (planning actions), and identify the critical review points where you will need to reflect on and revise your planning. You may wish to use a range of planning tools
* identify and review your key planning decisions as you work through the development and manufacture of a post and wire fence
* provide evidence of your use of planning tools to effectively manage the technological development of your post and wire fence to address the brief, in the form of a portfolio.

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Assessor/Educator guidelines

# Introduction

The following guidelines are supplied to enable assessors/educators to carry out valid and consistent assessment using this internal assessment resource.

As with all assessment resources, education providers will need to follow their own quality control processes. Assessors/educators must manage authenticity for any assessment from a public source, because learners may have access to the assessment schedule or exemplar material. Using this assessment resource without modification may mean that learners' work is not authentic. The assessor/educator may need to change figures, measurements or data sources or set a different context or topic. Assessors/educators need to consider the local context in which learning is taking place and its relevance for learners.

Assessors/educators need to be very familiar with the outcome being assessed by the achievement standard. The achievement criteria and the explanatory notes contain information, definitions, and requirements that are crucial when interpreting the standard and assessing learners against it.

# Context/setting

This activity requires learners to use planning tools to effectively manage the technological development of a post and wire fence that addresses a brief. An outcome for the purposes of this achievement standard could be a conceptual design for an outcome, or a technological outcome itself (a prototype). The brief is provided by the assessor/educator, or can be developed by the learners once agreed with the assessor/educator.

# Conditions

Evidence is expected to be gathered from activities to be completed by individual learners over a specified period of time.

Learners will present their evidence as a portfolio. The portfolio can include a variety of media, written and/or digital, in any format up to a maximum size of A3.

# Resource requirements

Learners will require access to examples of planning practices and planning tools (which may or may not include computer-based planning tools).

# Additional information

The brief (assessor/educator or learner generated) should comprise a conceptual statement that communicates what is to be done and why, and specifications sufficiently detailed or measurable in defining the physical and functional requirements sought.

# Assessment schedule: Generic Technology 91045 – Wired up

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| Evidence/Judgements for Achievement | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| The learner uses planning tools to guide the technological development of a post and wire fence to address a brief by:   * establishing key stages and resources required   For example:  The learner uses a modified Gantt chart to plan and establish key stages, dates, and materials required at each stage.   * planning actions to be undertaken within each key stage   For example:  The learner uses a materials order form to show the resources required, and where they will be sourced prior to manufacture.   * identifying key planning decisions   For example:  The learner identifies key planning decisions in a bullet point list, such as deciding that a post hole digger is required, and the need to organise access for the next manufacturing stage.  *The above expected learner responses are indicative only and relate to just part of what is required.* | The learner uses planning tools to manage the technological development of a post and wire fence to address a brief by:   * establishing key stages and resources required   For example:  The learner uses a modified Gantt chart to plan and establish key stages, dates, and materials required at each stage.   * planning actions to be undertaken within each key stage   For example:  The learner uses a materials order form to show the resources required, and where they will be sourced prior to manufacture.   * identifying review points   For example, the learner:   * + reflects on their Gantt chart and planning and identifies points where key decisions will need to be made such as after finishing a 3D model and/or establishing the materials required. * reviewing key planning decisions   For example, the learner:   * + establishes a checklist of key planning decisions, highlights those that need attention, and reviews the next steps to ensure resources are organised   + reviews the key planning decisions through reflective journal entries embedded within their portfolio, and makes changes to the key stage planning sheets as necessary.   *The above expected learner responses are indicative only and relate to just part of what is required.* | The learner uses planning tools to effectively manage the technological development of a post and wire fence to address a brief by:   * establishing key stages and resources required   For example:  The learner uses a modified Gantt chart to plan and establish key stages, dates, and materials required at each stage.   * planning actions to be undertaken within each key stage   For example:  The learner uses a materials order form to show the resources required, and where they will be sourced prior to manufacture.   * identifying critical review points for key stages   For example, the learner:   * + uses a graphic organiser to assist their decision making and ensure resources are available when they are needed, to ensure completion of the outcome within the given time frame   + identifies critical review points on the Gantt chart, and details this on their key planning sheets   + reviews their key planning decisions through reflective journal entries embedded within their portfolio, and makes changes to their key stage planning sheets as necessary. * prioritising resources required to ensure the completion of the outcome   For example, the learner:   * + uses a comparison table to prioritise resources * identifies in their planning tool(s) where resources will require prioritisation, e.g. in the sequence of manufacture, when a specific machine/tool is required, or if they will require access to expert support. Throughout the development and manufacture of the post and wire fence, resources have been pre-organised and accessed in an efficient manner, so that time and money have been saved. The outcome is completed by the due date.   *The above expected learner responses are indicative only and relate to just part of what is required.* |

Final grades will be decided using professional judgement based on an examination of the evidence provided against the criteria in the Achievement Standard. Judgements should be holistic, rather than based on a checklist approach.