**NZQA**

**Approved**

Achievement standard: 91341 Version 3

Standard title: Develop a spatial design through graphics practice

Level: 2

Credits: 6

Resource title: Manufacturing space

Resource reference: Design and Visual Communication VP-2.34 v2

Vocational pathway: Manufacturing and Technology

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| Quality assurance status | These materials have been quality assured by NZQA. NZQA Approved number A-A-02-2015-91341-02-8149 |
| 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

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Learner instructions

# Introduction

This assessment activity requires you to develop a spatial design for a clothing manufacturing space using graphics practice.

You are going to be assessed on how effectively you develop a spatial design for the clothing manufacturing space. You need to review and refine well-considered design ideas for the clothing manufacturing space that show you have integrated spatial design knowledge throughout the development of the ideas.

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

The design brief is to produce a portfolio of design ideas for a clothing manufacturing space, to meet the following specifications:

* a welcoming entrance for the space
* separate rooms for the storage of stock, toilet facilities, and a place for staff to have coffee breaks and eat their lunch
* space for cutting out, sewing and finishing the garments
* storage space for finished items.

You should adapt or add to the specifications to suit your context. Alternatively you could work with a client to negotiate specifications and define the scope of the brief.

Compiling your portfolio involves these three phases, initial research, initial ideas and ideas development.

Throughout the process, you will evaluate the positive and/or negative aspects of both the functional and aesthetic features of your design ideas in relation to the brief.

To show the progression of your design ideas, you could include visual diaries, sketches, mock-ups, drawings, models, photographs, digital media, display boards or installations. You can support these with annotations (notes) as needed.

## Part 1: Initial research

Search for designs of existing clothing manufacturing spaces. Collect images (photographs and drawings) of spaces that may inspire or assist with design ideas for this space. You could source these from magazines, the internet, books or existing designs.

Consider and make design judgements on the positive and/or negative aspects of the functional and aesthetic design features of these existing designs.

## Part 2: Initial ideas

Develop some initial ideas for your clothing manufacturing space, using sketches and/or mock-ups. The inspiration for these ideas can come from any source, for example, initial research, designs you may have seen, the immediate context or your own creativity.

Treat your sketches or mock-ups as starting points for possible development. At this stage, all ideas are exploratory, but you need to consider ideas that fit within your brief.

## Part 3: Ideas development

Show progression in your thinking by refining and reviewing your initial ideas, integrating spatial design knowledge and identifying which ideas you prefer. Your preference may be for a particular idea or parts or combinations of several ideas. Explain your choices.

Explore, refine and review your selected idea (or combination of ideas), using visual communication techniques and approaches that explain your design thinking. You may wish to consider using computer aided drawing software to develop your ideas. (Talk to your assessor/educator about suitable software that may be freely available on the internet.)

Integrate spatial design knowledge into your design ideas throughout the development to produce well-considered design ideas. Spatial design knowledge includes (but is not limited to):

* design tools used for the development of spatial design ideas
* technical knowledge of materials, processes, sustainability and environmental considerations
* spatial visual communication techniques and approaches.

Explore alternative design ideas to introduce ingenuity and creative flair in response to the brief. You may have client specifications that provide opportunities as well as constraints. Your aim is to produce well-considered design ideas in response to the brief.

In developing, reviewing and refining your well-considered design ideas using graphics practice, you need to do the following:

* Provide design judgements on the relevant aesthetic and functional features of the design, in response to the brief that informs the progression of the design ideas.
* Integrate spatial design knowledge throughout the development of the design ideas. The development of the ideas should be logical, related to research and linked to the initial ideas.
* Support your judgements with qualitative and/or quantitative data gathered through continuing research, as needed. This may include:
	+ analysis of existing manufacturing spaces
	+ ease of use and navigation of the space
	+ optimising storage and flow around the space
	+ psychological and sensory data associated with manufacturing spaces.

Judgements may also reflect your own values, tastes, views, or perspective.

* Make notes explaining the basis for the design ideas and give reasons for the decisions you make.

Throughout the design development process make sure you:

* review and refine well-considered design ideas for the clothing manufacturing space
* show that you have integrated spatial design knowledge through the development of the ideas for the clothing manufacturing space
* effectively develop design ideas through graphics practice
* show linkages and flow from the exploration through the refinement – i.e. the detailing of the ideas – and show how this solves any design problems encountered
* use spatial knowledge such as design tools, technical knowledge of materials etc. and spatial visual communication techniques for example bubble diagrams
* make design judgements that are based on relevant features of the design
* consider the aesthetics (the way it looks) and function (the way it works).

There could be evidence of computer modelling/mock-up etc. of the design to validate ergonomics and usability requirements.

Make sure the features of your final design outcome are clearly established and identified at the conclusion of your development work.

When you submit your completed portfolio for assessment, make sure it includes all the visual and written work required.

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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 produce a portfolio of effective design work using graphics practice that shows the development of a spatial design idea for a clothing manufacturing space.

# Conditions

This is an individual activity.

# Resource requirements

Learners need access to specialist spatial knowledge, for example, design books and the internet.

# Additional information

Check learners’ work during the assessment task as they work towards an outcome. These checks could be at key stages of the process or other appropriate points.

Give learners feedback during their portfolio work.

## Other possible contexts for this vocational pathway:

* workspace design and layout used to manufacture products, for example, the layout of an electronics factory
* any other manufacturing or work space that requires the design of a physical/3D appearance for example, a bakery used to manufacture bread products.

# Assessment schedule: Design and Visual Communication 91341 – Manufacturing space

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| Evidence/Judgements for Achievement | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| The learner develops a spatial design for a clothing manufacturing space through graphics practice by:* exploring and refining design ideas that draw on spatialdesign knowledge
* making design judgements on the positive and/or negative aspects of aesthetic and functional features of the design in response to the brief and supporting design judgements with qualitative and/or quantitative data from research

For example:The portfolio draws on spatial knowledge to develop ideas that explore and refine the manufacturing space for a clothing manufacturer.The learner has made design judgements about the positive and/or negative aspects of the style, form and appearance. (Aesthetics)The learner has made design judgements about the positive and/or negative aspects of the layout of stock storage and control/flow through the manufacturing process, navigation, optimisation of space and flow, ease of use. (Function)The design judgements are supported with research about styles and appearance of manufacturing spaces, their ease of use and possible improvements to existing manufacturing spaces, how stock moves through the process and is stored and managed.*The above expected learner responses are indicative only and relate to just part of what is required.* | The learner clearly develops a spatial design for a clothing manufacturing space through graphics practice by:* exploring, reviewing and refining design ideas that incorporate spatial design knowledge
* making design judgements on relevant features of the design, in response to the brief, that inform the progression of design ideas and supporting design judgements with qualitative and/or quantitative data from research

For example:The portfolio incorporates spatial design knowledge to develop ideas that have explored, refined and reviewed ideas for the manufacturing space for a clothing manufacturer.The learner has made design judgements on the relevant features of aesthetics, such as style, form, appearance, harmony, rhythm and contrast, which inform the progression of the manufacturing space design.The learner has made design judgements on the relevant features of function, such as, layout, ease of use, optimisation of stock movement and human factors affecting staff performance and analysis of psychological and sensory data, which inform the progression of the ideas for the manufacturing space.The design judgements are supported with research of styles and appearance of manufacturing spaces, their ease of use and possible improvements to existing manufacturing spaces, how stock movement is optimised throughout the process to ensure handling is efficient.*The above expected learner responses are indicative only and relate to just part of what is required.* | The learner effectively develops a spatial design for a clothing manufacturing space through graphics practice by:* exploring, reviewing and refining well-considered design ideas that integrate spatialdesign knowledge throughout the development
* making design judgements on relevant features of the design, in response to the brief, that inform the progression of design ideas and supporting design judgements with qualitative and/or quantitative data from research

For example:The portfolio integrates spatial design knowledge to develop ideas that have explored, refined and reviewed well-considered ideas for the manufacturing space for a clothing manufacturer.The learner has made design judgements on the relevant features of aesthetics, such as style, form, appearance, harmony, rhythm and contrast, which inform the progression of the manufacturing space design.The learner has made design judgements on the relevant features of function, such as, layout, ease of use, optimisation of stock movement, human factors affecting staff performance and analysis of psychological and sensory data, which inform the progression of the manufacturing space.The design judgements are supported with research of styles and appearance of manufacturing spaces, their ease of use and possible improvements to existing manufacturing spaces, how stock movement is optimised throughout the process to ensure handling is efficient.*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.