**NZQA**

**Approved**

Achievement standard: 91068 Version 4

Standard title: Undertake development of design ideas through graphics practice

Level: 1

Credits: 6

Resource title: The inside of the boat

Resource reference: Design and Visual Communication VP-1.35 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-02-2015-91068-02-7204 |
| 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 design ideas for the interior of a new boat or the redesign of an existing boat interior for a local boatbuilding company.

You are going to be assessed on how effectively you develop design ideas, through graphics practice, for the interior of a new boat or the redesign of an existing boat interior for a local boatbuilding company.

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

Design a new boat interior or redesign an existing boat interior for a local boatbuilding company. Boat examples include yachts, motor launches, larger vessels and recreational boats.

Design the boat interior in response to this design brief:

* Reflect the specific requirements of the type of boat chosen, its size and main use so that your solution focusses on the type of boat chosen and meets the requirements of the boatbuilding company and potential client.
* Consider the functional elements of boat interiors (the way it works), for example durability, materials, maintenance, construction, ergonomics, flow, weight and ease of use.
* Consider the aesthetic elements of boat interiors (the way it looks), for example style, form, shape and colour.

Develop a portfolio to show the progression of your design ideas. This could include visual diaries, sketches, drawings, models, photographs, digital media, display boards or installations.

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

***Part 1: Initial research***

During this phase, you will do the following:

* Research a variety of boat interiors to get an idea of the types of materials and design used in this environment.
* Collect images of different interiors from magazines, the internet and/or books, and evaluate the designs, materials and products in these images.
* Record this information in your portfolio, with photographs, diagrams and notes. Refer to it as you develop your design ideas.

## Part 2: Initial ideas

During this phase, you will do the following:

* Produce different initial ideas for your boat interior using drawings and/or mock-ups. These are your starting points for potential development.
* Consider the functional aspects of the interior (the way it works) and the aesthetic elements (the way it looks) for features for your design ideas as well as sources of inspiration. Your inspiration should mainly come from your initial research but you may also be inspired by other sources, for example other designs you have seen, ideas related to your selected setting and your own imagination.

## Part 3: Ideas development

As you develop your design ideas for the boat interior you need to:

* Explore alternatives shapes, forms to suggest different realistic possibilities that could be used in a boat interior.
* Refine and make conclusions about the way it looks, and the way it works for your design features. The development of your ideas should be logical, related to research and linked to the initial ideas.
* Gather and use further research, when needed, to help you develop your ideas; for example:
	+ information on materials used
	+ how space is utilised within the environment of a boat interior.
* Also consider:
	+ how these changes have altered the quality of your ideas
	+ other potential changes that you could make to further improve your ideas.
* Make sure the features of your final design outcome are clearly established and identified at the conclusion of your development work.

Throughout the design development process make sure that you:

* Convincingly explore and refine your design ideas in a coherent and connected manner that integrates design features, that is, the intent of the design is obvious to someone viewing it and coherent means there is a good design flow throughout the development.
* Make design judgements that are convincing and coherent. This means that the logical and connected design judgements need to promote your selected ideas and the decisions you make as you develop your ideas.
* Integrate the design principles of aesthetics, that is the way it looks, and functions, that is the way it works, with the design judgements you make.
* Support your design judgements by:
	+ qualitative data that is subjective and reflects the tastes and views of stakeholders
	+ quantitative data, gained from measuring people to develop appropriate size ranges gathered through research
	+ evidence of computer modelling and/or mock-ups of the design to validate ergonomics and usability requirements.
* Visually communicate the detail of the design ideas that you have explored, in response to the design brief, that show through the visual communication of the ideas you present, for example the drawing skills you display, the sketches you produce and the modelling you produce.

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 undertake effective development of design ideas through graphics practice to design or redesign the interior of a boat.

Learners need to produce a portfolio of design work using graphics practice that shows the development of the design.

# Conditions

This is an individual activity.

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.

# Resource requirements

Learners need access to:

* existing interior marine designs
* marine interior design books
* the internet
* local boatbuilding expertise, if available.

# Additional information

Adapt this activity to focus on design for a different item that suits your context, such as

* design of marina layouts (as this area of marina design is vastly different from the current context, you would need to adapt it to make this work)
* boat hull design, e.g. America’s Cup yacht.

If you decide on either of these strategies, you will need to adapt the activity and add instructions that focus on these aspects.

## Other possible contexts for this vocational pathway:

* electronic product design in the aircraft industry
* design of food products or packaging in the baking/food industry that relate to a food technologist’s role
* design of wine labels or products for a boutique winemaker
* clothing/hat design for a clothing designer.

# Assessment schedule: Design and Visual Communication 91068 – The inside of the boat

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| Evidence/Judgements for Achievement | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| The learner undertakes development of design ideas through graphics practice to design or redesign the interior of a boat by:* exploring design ideas by considering possible alternatives in response to a brief
* refining the design ideas by considering design details
* making design judgements that consider qualities of design ideas in terms of the principles of aesthetics and function in response to the design brief
* visually communicating the details of design ideas in response to the design brief

For example the learner:Produces a portfolio of their design development that shows:* + the cabin layout and flow
	+ the accommodation requirements considering the multiple uses of the boat
	+ the materials used (i.e. hard wearing, durable)
	+ how the multiple demands of the users are met.

Throughout their design development the learner talks to potential users to gain feedback on the interior and focusses on how their design looks and works for the client.The learner visually communicates, with sketches, drawings, and models the detail of the design ideas they explore in response to the design brief.The design outcome meets the requirements of the brief, e.g. the specifications given in the brief have been met and the design(s) gives a possible solution for the interior of the boat.*The above expected learner responses are indicative only and relate to just part of what is required.* | The learner undertakes informed development of design ideas through graphics practice to design or redesign the interior of a boat by:* purposefully exploring and refining design ideas in relation to the considerations and decisions that are meaningful to the design context
* making design judgements where ideas and decisions are informed by design principles and the brief context

For example the learner:Produces a portfolio showing that through their design development they have considered, explored, refined and added detail to the design ideas. This could be in the form of:* + various alternatives of the boat interior features explored to minimise cost and increase room/flow/storage etc.
	+ evidence of cabinet design and layout, furniture and/or upholstery details, engineering design and layout
	+ people flow and movement analysis
	+ modelling used to inform the design development.

The learner uses research data to inform the solution, like the limitations of the physical environment and the corrosiveness of a marine environmentThroughout the design development process, the learner makes design judgements that are informed by the way the design of the interior looks and functions. These judgements reflect the design principles e.g. balance, rhythm, alignment, proximity, usability, user friendliness, and the brief context.The design outcome meets the requirements of the brief, e.g. the specifications given in the brief have been met and the design(s) gives a possible solution for the interior of the boat.*The above expected learner responses are indicative only and relate to just part of what is required.* | The learner undertakes effective development of design ideas through graphics practice to design or redesign the interior of a boat by:* convincingly exploring and refining design ideas in a coherent and connected way that integrates design features
* making design judgements that are convincing and coherent in promoting ideas selected and decisions made

For example the learner:Throughout the development of their design ideas, considers, explores and refines alternative versions of the features of the boat interior:* + detail is added to the interior to maximise space and minimise cost
	+ the durability of materials used is investigated to ensure the design performs as intended
	+ the design is attractive and meets any theme given by the client
	+ the design development flows in a logical way and is easy to follow
	+ there is evidence of modelling through the use of 3D computer programs used to validate the design against the brief.

Throughout the design development process the learner makes design judgements that are convincing to promote the design ideas selected and the design decisions made.The learner supports design judgements by qualitative data that is subjective and reflects tastes and views to meet the client needs and/or quantitative data, e.g. numerical data (i.e. data gained from measuring people to develop appropriate size ranges).The learner justifies the material used e.g. *the design is made of this particular wood or fabric because it will be hardwearing and durable in a marine environment* or *I like the range of colours used here because they blend together and make me think of the beach.*The design outcome meets the requirements of the brief, e.g. the specifications given in the brief have been met and the design(s) gives a possible solution for the interior of the boat.*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.