**NZQA**

**Approved**

Achievement standard: 90853 Version 2

Standard title: Use information literacy skills to form conclusion(s)

Level: 1

Credits: 4

Resource title: I have an issue with that

Resource reference: English VP-1.9 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-02-2015-90853-02-7224 |
| 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 carry out an independent inquiry into an issue that affects your local manufacturing providers. As you carry out your inquiry, you will use your information literacy skills to form a conclusion or conclusions on your chosen issue.

You are going to be assessed on how you use information literacy skills to form perceptive conclusions that create new ideas. Your conclusion(s) need to be based on the information you have gathered and must be clearly connected to the purpose of the inquiry. You can express your conclusion(s) as opinions, judgements or possible decisions.

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

## Part 1: Choose an issue

You need to choose an issue related to manufacturing and technology that interests you. The issue could relate to recent product design, safety issues, safety related to shifting New Zealand’s manufacturing offshore or the environmental impact of packaging in New Zealand, for example. The issue needs to give you the opportunity to think about different viewpoints. You will present your findings to an appropriate audience.

For example, one learner recently became involved with a local environmental group. The group challenged the learner about manufacturing companies’ use of non-biodegradable packaging products. The learner decided to investigate how possible it was for manufacturing companies to be environmentally friendly and if this should be compulsory for all organisations. The learner decided to present his conclusions to the next meeting of the environmental group.

Make sure that your chosen issue allows you to use information literacy skills to form perceptive conclusions (see Resource A for an outline of the information process).

Before you move to the next step check your chosen issue with your assessor/educator to ensure it allows you to achieve the standard.

You cannot use any of the modelled examples provided in this assessment task.

## Part 2: Frame your inquiry

Frame your inquiry so that the information you gather allows you to draw perceptive conclusions (see Resource B for suggestions to get you started). You will need to develop your conclusions into an appropriate format. In this example, the learner has developed his conclusions about environmentally friendly packaging into a talk which he will give at the next meeting of the environmental group he belongs to.

Brainstorm the issues involved in this inquiry to make sure that you have plenty of scope for your investigation. Include what you already know along with what you wish to find out. For the packaging example, the learner had been thinking about what he had heard at a recent political meeting. The speaker had talked about the amount of non-biodegradable material like glass, plastic and aluminium that ends up in landfills and in the sea. The learner thought about this in relation to the amount of packaging materials used in manufacturing.

Develop your key questions. Decide on at least two key questions that relate to your issue. For example, a question relating to a packaging issue in New Zealand like ‘How much aluminium and plastic is used in manufacturing packaging?’ would only allow you to gather information, but would not allow you to form conclusions about the possibilities and limitations of environmentally friendly packaging products. A better question would be ‘Should it be compulsory for the dominant form of packaging used by manufacturers to be environmentally friendly?’

Obtain your assessor/educator’s approval for your questions before moving to the next step.

## Part 3: Investigate your questions

Search for information. Find information about your key questions in at least six sources. Make sure this includes a range of sources such as from books, magazines, the internet, newspapers, TV or radio programmes or personal interviews.

Create a data chart that records the data you gather. Set it up so you can see which ‘side’ the arguments/evidence align to (see Resource C for an example of a chart that has been started for a packaging issue inquiry).

Evaluate your sources: are they ‘trash’ or ‘treasure’. You may find it useful to use different coloured highlighters for the evidence for each different focusing question, or using underlining, notes, annotations etc. Incorporate your evaluation in the data chart or create a new chart for evaluation (Resource C incorporates evaluation with resource gathering).

The question to focus on is “Has the evidence gathered helped to address the focus question and is it a reliable source?”

Organise your research notes, for example use a clear file with copies of highlighted sources, or set up a chart as a Word document. Remember to reference your sources.

## Part 4: Present your conclusion(s)

Your conclusion(s) needs to be based on the information you have gathered and related back to your key question/s. Your conclusion(s) needs to create new ideas and knowledge and can include opinions, judgements, decisions and/or solutions.

In your presentation show evidence of:

* forming an inquiry or hypothesis
* developing your inquiry by forming appropriate questions
* forming a perceptive conclusion(s) which integrates what you already know about your issue together with the information you have gathered in your inquiry and any recommendations you might make.

# Resources

## Resource A: Information literacy skills

Information literacy skills include:

* framing your inquiry
* selecting and using appropriate inquiry methods and processing strategies
* understanding question types (open, unbiased)
* understanding keyword strategies
* being aware of a range of sources (written, oral, visual, media and internet)
* understanding how to evaluate sources − trash or treasure − ‘trash’ sources are not related to your inquiry, while a ‘treasure’ source relates strongly to your key questions
* using scanning and skimming to select relevant sources (involves highlighting key words and phrases in your texts)
* recording details from the sources you will refer to or quote in your report
* using note-making strategies (for example bullet points, charts, keeping records of source material)
* locating and checking the sources for your existing knowledge.

## Resource B: Inquiry process – where to start

Build some background knowledge on the issue by:

* recording what you know already about the issue and how you know this. Sources may be found on the internet, in newspaper articles, on TV, or in magazines
* looking for some preliminary information from different stakeholders, for example manufacturing and technology business owners, employees and/or customers.

Briefly record ideas from several viewpoints in order to understand the range of views on the issue.

Draw up a PMI (Plus, Minus, Interesting) ideas chart to help you in forming your conclusion(s).

## Resource C: Examples from a learner’s data/evaluation of sources chart

Note: You cannot use any of the modelled examples for this assessment task.

### Source 1

<http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=10728197>

‘New Zealand coffee roaster claims world first compost coffee bag’ is an article published in the New Zealand Herald about foil bags for coffee that can be composted. They are made from wood pulp and corn starch developed by Hamilton-based Convex Plastics. The firm is a Christchurch coffee roaster. He did it because coffee consumption is increasing so much that there is a huge increase in the use of packaging and he wanted it to be environmentally friendly.

Evaluation: Useful as it showed that it can be done and this small firm would not have done it if it was expensive to produce.

### Source 2

<http://www.foodproductdesign.com/articles/2009/09/sustainable-packaging.aspx>

This article is about a not-for-profit industry group that helps companies try and produce sustainable packaging. It talks about a cradle to cradle approach to their packaging, which means you see it through from beginning to end, not just when you have packaged up the product but at the end of the packaging’s actual life too.

The group tries to get manufacturing organisations to use sustainable packaging by showing that it will reduce their energy consumption, decrease carbon emissions and limit the use of fossil based fuels, and reduce costs.

Evaluation: Good as this showed that there can be advantages for the manufacturer too and not just for the environment, and that will be likely to encourage some to do it.

### Source 3

<http://abe-research.illinois.edu/pubs/factsheets/Styrofoam.pdf>

This article was about the good and bad facts about polystyrene.

It was useful because it sets out facts such as ‘Recycling is technically possible, but it is not economically justifiable at this time’. It explained why it is used for hot drinks because it is a poor conductor of heat.

Evaluation: Very useful because it showed that at the moment this is a very useful product for what it can do, and although it is not environmentally friendly, manufacturers have to balance that with the fact that it is very good for what it does.

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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 carry out an independent inquiry into a topical issue based around manufacturing and technology. As learners carry out their inquiry, they will use information literacy skills to form perceptive conclusion(s) on their chosen issue.

# Conditions

This is an individual activity.

Model key parts of the inquiry process to ensure learners focus on the process.

The learner must choose the issue independently but it must be approved by the assessor/educator before the learner moves on to the next step. Check that learners have chosen issues that can be considered from at least two different viewpoints.

The learner can choose key questions independently, but they must be approved by the assessor/educator before the learner moves on to the next step.

# Resource requirements

Learners will select their own texts as part of their inquiry. These texts may be written, oral, and/or visual. Learners should be encouraged to choose a range of varied source types.

# Additional information

Methods of collecting evidence should reflect learners’ needs and the nature/context of your learning programme and the facilities/environment you work in.

You may select a more appropriate method of collecting evidence without influencing the intent or validity of this task, for example it could include an electronic portfolio or blog/wiki.

## Other possible contexts for this vocational pathway

Telecommunications: Examining issues around whether radio waves are harmful to mobile phone users.

Manufacturing: Producing a report about an issue involving a manufactured product which explores/identifies design features, functions and benefits (examples could include vehicles, toys, iPhone, iBook, skateboards).

# Assessment schedule: English 90853 – I have an issue with that

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| Evidence/Judgements for Achievement | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| The learner uses information literacy skills to form conclusion(s) on a chosen issue by:* framing the inquiry within an authentic and relevant manufacturing and/or technology context based on carefully considered information needs within the industry. This may include identifying an area or direction for investigation, or posing question(s)

For example: The learner wondered if something could and should be done about the amount of packaging that used materials like plastic, glass and aluminium, that was then dumped in landfills or left to pollute the sea. He decided to investigate if biodegradable packaging should be compulsory. He decided to present his conclusions to the environmental group he had recently joined.* selecting and using appropriate strategies for locating and processing information

For example:The learner created a data chart that recorded and categorised the material he gathered. Notes were taken using different coloured highlighters for the evidence for each different focusing question, underlining, an annotation, etc. Recording source details such as title, author, publication place and date.* evaluating the reliability and usefulness of selected information in relation to the inquiry

For example:The learner used different highlighters to evaluate the usefulness and reliability of the information in addressing the focus questions.* forming conclusion(s). This involves creating ideas and knowledge based on information gathered in the inquiry. This may include expressing an opinion or judgement, reaching a decision, or suggesting a solution

For example:*… the paper products that are bio-degradable compared with plastic, will create much less of an environmental impact but they are not always as useful as plastic for packaging some items, such as ...* *The above expected learner responses are indicative only and relate to just part of what is required.* | The learner uses information literacy skills to form convincing conclusion(s) on a chosen issue by:* framing the inquiry within an authentic and relevant manufacturing and/or technology context based on carefully considered information needs within the industry

For example: The learner wondered if something could and should be done about the amount of packaging that used materials like plastic, glass and aluminium, that was then dumped in landfills or left to pollute the sea. He decided to investigate if biodegradable packaging should be compulsory. He decided to present his conclusions to the environmental group he had recently joined.* selecting and using appropriate strategies for locating and processing information

For example:The learner created a data chart that recorded and categorised the material he gathered. Notes were taken using different coloured highlighters for the evidence for each different focusing question, underlining, an annotation, etc. Recording source details such as title, author, publication place and date.* evaluating the reliability and usefulness of selected information in relation to the inquiry

For example:The learner used different highlighters to evaluate the usefulness and reliability of the information in addressing the focus questions.* forming convincing conclusion(s). This involves creating ideas and knowledge based on information gathered in the inquiry. This may include expressing an opinion or judgement, reaching a decision, or suggesting a solution

For example:*… the research that Scion is doing with establishing ways to avoid ‘creep’ in corrugated paper products will help to ensure that food packaging is both hygienic and convenient, and will provide an answer for those who still say that they need to use plastic bottles and pottles for …* *The above expected learner responses are indicative only and relate to just part of what is required.* | The learner uses information literacy skills to form perceptive conclusion(s) on a chosen issue by:* framing the inquiry within an authentic and relevant manufacturing and/or technology context based on carefully considered information needs within the industry

For example:The learner wondered if something could and should be done about the amount of packaging that used materials like plastic, glass and aluminium, that was then dumped in landfills or left to pollute the sea. He decided to investigate if biodegradable packaging should be compulsory. He decided to present his conclusions to the environmental group he had recently joined.* selecting and using appropriate strategies for locating and processing information

For example:The learner created a data chart that recorded and categorised the material he gathered. Notes were taken using different coloured highlighters for the evidence for each different focusing question, underlining, an annotation, etc. Recording source details such as title, author, publication place and date.* evaluating the reliability and usefulness of selected information in relation to the inquiry

For example:The learner used different highlighters to evaluate the usefulness and reliability of the information in addressing the focus questions * forming perceptive conclusion(s). This involves creating ideas and knowledge based on information gathered in the inquiry. This may include expressing an opinion or judgement, reaching a decision, or suggesting a solution

For example:*... It is possible to have one’s cake and eat it too: sustainable paper packaging can be beneficial in its environmental and social impact, but one needs to look beyond the surface. For example, some fast food companies consider they are already being sustainable by using paper food buckets, but this packaging has been produced from trees harvested from endangered forests, (e.g. the green swamp in North Carolina). Other organisations are part of a growing group of knowledgeable and aware companies which, for example, only purchase products for packaging that are derived from wood harvested under a sustainable forest management system. So, in conclusion, I would say that ...**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.