**NZQA**

**Approved**

Achievement standard: 91071 Version 3

Standard title: Implement basic procedures to produce a specified digital information outcome

Level: 1

Credits: 4

Resource title: Diseases in the meat industry

Resource reference: Digital Technologies VP-1.41 v2

Vocational pathway: Primary Industries

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| Quality assurance status | These materials have been quality assured by NZQA. NZQA Approved number A-A-02-2015-91071-02-7334 |
| 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 implement basic procedures to produce an information sheet for a meat processing company using digital technologies.

You are going to be assessed on how efficiently you implement basic procedures to produce your information sheet for a meat processing company which meets specifications. You need to demonstrate that you can work independently and accurately.

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

You will prepare an information sheet for Uncle Maxis Meats, a company which processes meat for the New Zealand market.

The management at Uncle Maxis Meats is concerned about the number of meat processing staff who contract diseases while processing meat. They have provided you with some data and text so you can prepare an information sheet for the staff, telling them what they can do to reduce their risk of contracting a disease.

Follow the specifications that have been either provided by your assessor/educator or developed by you and confirmed by your assessor/educator. (See Resource A for sample information sheet specifications.)

Refer to Resources B and C for information about illnesses that can affect meat workers.

You may refer to existing templates for information and ideas, but downloading a template and changing its appearance will not fulfil the requirements of the standard.

You do not have to create content for this assessment activity. You may download suitable text and other content from the internet as long as you address any copyright issues. Alternatively, your assessor/educator may provide text and other content for you to use.

Keep a record of progress to show how you have resolved problems (for example by annotating construction plans, making a schedule of tests and recording the outcomes, or annotating screen shots).

You will be assessed on how well you:

* apply a set of techniques to produce an information sheet that meets specifications
* select software applications (for example at least two of spreadsheet, word-processing, databases and presentation software) and specific features to manage and present information
* apply file management procedures
* apply design elements and/or formatting techniques
* apply data integrity techniques and testing procedures to create the specified outcome and meet specifications
* meet legal, ethical and moral responsibilities for the outcome.

Your independence, as well as your accuracy and efficiency, will be taken into account.

# Resources

## Resource A: Information sheet specifications

The information sheet will:

* be three to six pages in length
* contain information, images and data
* be designed to appeal to a range of people
* be readable
* include a graph showing the proportions of staff who contract each disease
* include a graph showing the total number of staff who get sick each month
* include page numbers as a header/footer
* have a letterhead/title.

## Resource B: Data table

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Diseases 2012** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |
| **Leptospirosis** | 1 | 3 | 2 | 4 | 3 | 4 | 3 | 2 | 3 | 3 | 1 | 1 |
| **Orf** | 3 | 1 | 3 | 2 | 4 | 3 | 6 | 4 | 6 | 3 | 2 | 2 |
| **Campylobacter**  | 5 | 6 | 7 | 10 | 7 | 4 | 7 | 6 | 8 | 5 | 4 | 5 |
| **Salmonella** | 5 | 7 | 9 | 4 | 6 | 4 | 7 | 7 | 6 | 3 | 5 | 7 |
| **Cryptosporidium** | 7 | 9 | 6 | 5 | 3 | 4 | 8 | 8 | 7 | 6 | 3 | 1 |

## Resource C: Text for information sheet

Common illnesses in meat workers

Leptospirosis

How does leptospirosis affect you?

Leptospirosis can be like a bad case of the flu, with headaches, fever and weakness. It will make some people seriously ill, needing intensive care in hospital. They may be off work for several months and have lasting kidney or liver damage. Some people have died from leptospirosis.

How do you catch leptospirosis?

Many animals carry the leptospirosis bacteria, including cattle, bobby calves, pigs, sheep, lambs, goats and deer. Rats can also spread it. Infected animals may not look sick even while they are shedding the bacteria in their urine.

Humans tend to get leptospirosis when infected urine or water (for example puddles) contaminated with urine gets in their eyes, nose or mouth or enters through cuts or cracks in their skin.

Just a splash or spray of urine can spread the disease. Leptospirosis bacteria can survive for days after an animal has been killed (for example in chilled kidneys).

What conditions help the infection to spread?

hot, humid weather, cuts, cracks or grazes on the skin, soggy skin, eating or smoking with unwashed hands, uncovered moustache or beard/mouth, unprotected eyes.

Who is at risk of catching leptospirosis?

Anyone working in and around a meat plant, including maintenance workers and other visitors, may be at risk. Meat workers are most at risk of catching leptospirosis when:

hosing down yards or other areas, tumbling pig carcasses, removing hides or pelts, taking out the bladder, handling gut contents, working with kidneys, handling offal for pet food, working in the rendering area.

What are the symptoms of leptospirosis?

If you get leptospirosis, you may not start to feel ill for a week or longer. Go to the doctor if you have any of these symptoms:

headaches, aching muscles, eyes hurting in bright light, fever or chills, nausea or vomiting.

Tell the doctor that you work in a meat processing plant and should be tested for leptospirosis. If they won’t do this, get the doctor or occupational health nurse at your plant to call your doctor, or go and see another one.

How can you protect yourself from leptospirosis?

always wear your protective clothing, safety glasses or visors, waterproof gloves and boots, carefully wash your hands and forearms before eating, drinking, smoking or touching your lips, face or eyes, wash your face if you have a moustache or beard, cover cuts and abrasions with waterproof plasters, wash off urine splashes immediately with water or saline (salt water), report any flu-like symptoms to your doctor and remember to mention that you are a meat worker.

Stomach infections

How do stomach infections affect you?

Campylobacter, salmonella and cryptosporidium infections are often described as food poisoning. The illnesses are much worse than a normal ‘tummy upset’ and, in a small number of cases, can be fatal.

Campylobacter, salmonella and cryptosporidium are three bugs found in a range of animals and food from animals. These bugs can all be avoided if you maintain good personal hygiene at work and at home.

How long does the infection last?

campylobacter: 2–5 days, and sometimes up to 10 days; salmonella: 5–7 days; cryptosporidium: 2 weeks or longer.

What should you do to get better?

If you have one of these stomach infections:

you need to get lots of rest and take lots of fluids (to replace what you’ve lost), get medicine from your doctor if you get really sick, have a clear laboratory test before you can come back to work after having any of these infections, and if you have cryptosporidium you’ll need to check with your doctor before returning to work.

What are the symptoms of stomach infections?

You could have:

diarrhoea , abdominal cramps, fever, nausea (feeling sick), vomiting (being sick).

Salmonella will make you feel ill more quickly (within half a day or up to three days) than cryptosporidium (between two and seven days) and campylobacter (three to five days).

There can also be some long-term effects. With campylobacter, abdominal cramps sometimes continue and relapses can occur. With salmonella, a small number of people get sore joints and irritated eyes and suffer painful urination for months or years. It can also lead to chronic arthritis.

How do you catch stomach infections?

You can get infected with these bugs by:

not washing your hands after going to the toilet, handling raw poultry or raw milk, handling pets or farm animals, especially dairy cattle and calves (cryptosporidium).

The bugs can get into your mouth from your fingers, food, cigarettes or even by wiping your face.

How can you protect yourself from stomach infections?

always wash (with soap) and dry your hands after going to the toilet and before handling food, don’t eat chicken, pork, mince or sausages unless they’re well cooked and there’s no pink meat, washing a chopping board or bench after you’ve had raw meat, chicken or sausages on it, before any other food goes on it, don’t leave uncooked food or leftovers sitting around – cover it up and put it in the fridge, remember: clean, cook, cover, chill.

Orf

Orf is a skin disease that occurs in people and animals. In sheep, orf is usually called ‘scabby mouth’. Orf is caused by a virus.

Who is at risk of orf?

Orf is most commonly seen in people who come into contact with infected sheep and lambs, such as farm workers and meat workers. The virus can also be caught from goats and deer.

How do you catch orf?

Meat workers sometimes get orf by touching infected animals. The orf virus enters the body through a break in the skin such as a cut, scratch, blister or burn.

The virus is very hardy and may persist on animal skin or wool.

It can also be caught from contaminated knives, shears, stalls, trucks and clothing.

What are the symptoms of orf?

A small raised spot (like a pimple) appears about three to six days after contact with the virus. The spot can grow as large as a 20 cent piece and is surrounded by a pale ring that will turn red. If it breaks open, a few small watery drops emerge.

The sore is more irritating than painful and may feel prickly. If it is on the palm of your hand, on a finger or near a joint, it may interfere with your work.

It becomes weepy and develops a crust before it dries and forms a scab, under which the skin starts to heal.

There may be a pain in your armpit. While complications are rare, a rash can sometimes occur all over the body.

Symptoms may last for three to six weeks.

How is orf treated?

The infection is viral, so antibiotics will not work. If you have a sore, see your doctor or a nurse.

You can help treat the sore by:

keeping it dry, to speed healing and prevent a more serious infection, dress the sore with a waterproof dressing, change the dressing often, to keep the sore dry and clean, don’t try to open the sore or probe it with a needle, don’t rub the sore on or near your face.

How can you protect yourself against orf?

wear plastic-type over-gloves when processing meat, cover cuts, scratches, grazes or burns with a waterproof dressing until the wound has healed, after handling animals, wash your hands thoroughly with soap and water to help remove any virus you may have picked up, wash any clothes you have worn on the farm or while working with animals, wear all of the protective equipment (PPE gear) supplied by your supervisor.

Washing hands

Clean hands are hands that are washed with soap and dried with a clean towel. It’s important to always wash your hands before handling food, but just as important to wash them after:

handling raw meat and poultry, going to the toilet, changing nappies, handling pets, working in the garden.

Wash knives and utensils and scrub chopping boards in between preparing raw and cooked foods.

Remember:

always wash your hands before eating or smoking, take care with raw chicken, pork and mince, always wear the right protective clothing (for example safety glasses/visor, gumboots, leggings, gloves), always cover cuts and scratches, if your face gets splashed with urine, blood, etc., wash your face immediately, wear all personal protective equipment (PPE) provided, if you have flu-like symptoms, tell your doctor that you are a meat worker and should be tested for these illnesses

The information above is adapted from ACC4712 *Common Illnesses in the Meat Industry* <http://www.acc.co.nz/publications>.

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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 select and manipulate content and/or data, skilfully and efficiently, using at least two software applications to create a specified digital information outcome, such as an information sheet.

Two approaches are possible when using this standard for assessment:

* learners are stepped through the design and creation process and all produce a similar outcome, following a common set of specifications
* the assessor/educator creates the specifications in discussion with the class and/or allows individual learners to vary the selected outcome.

Adjust the sample specifications in Resource A to suit your context and selected outcome.

# Conditions

This is an individual assessment task.

Learners should complete all their practical work in such a manner that assessors/educators can assess how the techniques are implemented as well as the quality of the outcome.

# Resource requirements

Access is needed to computers and appropriate software (for example Word, Excel, Access, Numbers, Pages, Base and Calc).

# Additional information

Learners may not use desktop publishing software. The assessor/educator may provide the text electronically, but only as a pdf or text file so that learners decide what software to use.

# Assessment schedule: Digital Technologies 91071 – Diseases in the meat industry

|  |  |  |
| --- | --- | --- |
| Evidence/Judgements for Achievement | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| The learner implements basic procedures to produce an information sheet for a meat processing company by:* applying a set of techniques to produce the information sheet

For example:The learner creates the information sheet following the specifications and the step-by-step plan. * selecting appropriate software and specific features to manage and present information

For example:The learner creates the information sheet using at least two software applications such as word processing and spreadsheeting.* applying file management procedures

For example:The learner applies some file management procedures by using suitable folder names and filenames. For example *Diseases Infosheet* in a folder called *Maxis Meats*.* applying appropriate design elements and/or formatting techniques

For example:The learner uses some design and formatting features of the two software applications. Their finished information sheet shows some evidence of awareness of design principles. The learner has considered the hierarchy of headings and text in the layout of the document.For spreadsheet software, the learner could be expected to:* + insert/delete rows and columns as required; enter and calculate numerical data using mathematical formulae. SUM is used to calculate the total numbers contracting each disease
	+ format text (font, bold, italics, size, etc.) so that it is readable and suitable for purpose
	+ format numbers e.g. considering the data type
	+ size and align cells (e.g. height, width, align, split, merge)
	+ sort, select and graph information. One of the graphs is a pie graph that shows the proportions of workers who contract the various diseases. The graph has a title, legend, shows the percentages and only the correct information.

For word processing software, the learner could be expected to: * + select, apply and adjust fonts, margins, line spacing, tabs and to create tables, columns, borders and shading, plus headers and footers
	+ create an outcome that resembles their design concept through manipulating elements such as alignment (left, right, centre, justified), contrast (through font selection, style, size, colour, shading, reverse text, drop caps), repetition (of fonts, heading treatments, colour), proximity (main heading, subheadings, paragraphs), balance (placement of blocks of text, use of white space, column breaks), harmony (through font selection, colour treatment, graphics and text).
	+ lay out text in a way that shows consideration of the principles of white space
	+ use headings to break up the text into paragraphs about each disease and present information using bullet points and subheadings.
* applying data integrity and testing procedures to ensure the outcome meets specifications

For example:The learner uses print preview and actual printouts to check graphs display correctly and uses a calculator to spot check formula calculations. Graphs are an appropriate size. Checks are made to ensure all specifications have been met, e.g. graph shows the total number of staff who get sick each month.Draft copies are printed, annotated and changes made. There may be some minor spelling errors.* following appropriate legal, ethical and moral responsibilities

For example:The learner does not include any images or text that may be offensive or inappropriate to the target audience, e.g. images of sick animals would not be appropriate.*The above expected learner responses are indicative only and relate to just part of what is required.* | The learner skilfully implements basic procedures to produce an information sheet for a meat processing company by:* showing accuracy in applying techniques and testing procedures

For example, for spreadsheet software, the learner could be expected to accurately:* + set cell widths and heights that are appropriate for the information they contain (e.g. by using auto width and height, setting specific measurements or using wrap text)
	+ format data in cells (e.g. decimal places 0, dates)
	+ enter all data
	+ use formulae to provide results (SUM to calculate the total numbers contracting each disease)
	+ sort and display information (e.g. by type)
	+ select data and graph types that are appropriate for the purpose (e.g. pie)

The learner ensures graphs are readable. The graph has a title, legend, shows the percentages and only shows the correct information.For word processing software, the learner could be expected to accurately:* + select fonts appropriate for the purpose (e.g. headings, subheadings and content have a logical structure)
	+ customise margins to the document’s needs
	+ set line spacing (e.g. space before and after headings and paragraphs)
	+ set text spacing (e.g. condensed or expanded)
	+ set paragraph styles (e.g. block or indented)
	+ set suitable tabs and align numbers to enhance readability
	+ structure the document, using appropriate columns and breaks if required
	+ lay out text in a way that considers the principles of page layout
	+ use headings to break up the text into paragraphs and present the information using bullet points and subheadings.

The learner ensures there are no orphan headings or lines, borders and shading display correctly when printed. Information in headers/footers displays correctly (e.g. in terms of pagination, placement, style, size and alignment). If images are used text flows around them.* showing independent decision-making in applying techniques and testing procedures

For example, the learner independently:* + creates the information sheet using two software applications by following the instructions
	+ decides on and makes effective use of formatting features and a range of design elements such as alignment (text, columns, tables, graphs); contrast (using font selection, style, size, colour, shading, reverse text, and drop caps); repetition (consistent use of fonts, heading treatments and colour to simplify reading); proximity (spacing between headings, subheadings, paragraphs and graphic elements to visually structure information); balance (placement of text blocks and use of white space and column breaks); harmony (font selection, colour treatment and linkage of graphs/graphical elements and text)
	+ selects and applies a wide range of appropriate techniques and procedures (e.g. by selecting relevant information for a graph)
	+ organises their files (e.g. systematically naming and storing them)
	+ reviews and tests aspects of the sheet for functionality (e.g. checking calculations to ensure data integrity; checking graphs display appropriately; proofreading to ensure errors are eliminated and no text is missing or in the wrong place; checking for consistent use of styles for headings, subheadings, bullets).

The learner creates an information sheet that meets specifications and is functional for the intended audience.* following appropriate legal, ethical and moral responsibilities

For example:The learner does not include any images or text that may be offensive or inappropriate to the target audience, e.g. images of sick animals would not be appropriate.*The above expected learner responses are indicative only and relate to just part of what is required.* | The learner efficiently implements basic procedures to produce an information sheet for a meat processing company by: * independently and accurately undertaking techniques and procedures in a manner that economises the use of time and resources

For example, the learner:* + creates a well-structured, accurate, fit-for-purpose document using at least two software applications. They use efficient methods rather than trial and error (e.g. when setting tab stops, margins or bullets), and make effective use of pagination, paragraphing, page breaks and continuous breaks
	+ enters text and other data using efficient fingering and keyboard shortcuts
	+ uses spreadsheet software effectively to create graphs (e.g. using the most efficient formulae and labour-saving auto fill and labelling options)
	+ is familiar with a wide range of relevant techniques, procedures and design elements and uses these to implement their design concept (e.g. by quickly choosing the most suitable type of graph to show percentages; selecting labelling; customising alignment, font size and colour; and placing text to ensure maximum readability and usability)
	+ chooses appealing colours that harmonise with other visual elements in the sheet; and uses formatting to engage and support the reader by, for example, ensuring consistency in the layout
	+ uses efficient file-management procedures (i.e. names folders and files logically and inserts file name and pathway in the footer)
	+ creates an information sheet that is functional, suited for the intended audience, and easy to read and digest
	+ saves the information sheet in alternative formats such as Word and pdf so it could be used for online viewing
	+ efficiently reviews and tests the data for completeness and accuracy (e.g. checks the results of formulae using a calculator/auditing tool)
	+ considers use of white space, headings break up the text into paragraphs about each disease and the information is presented using bullet points and subheadings
	+ ensures there are no widows and orphans
	+ ensures text flows around the images, if used
	+ inserts a bar graph that shows the number of people who get sick. The graph has appropriate headings, fonts, labels and legend
	+ checks for errors. All information is correct and the information sheet meets the specifications
	+ prints draft copies, annotates and makes any necessary changes
	+ optimal tools from inside the software are used to create the information sheet.
* following appropriate legal, ethical and moral responsibilities

For example:The learner does not include any images or text that may be offensive or inappropriate to the target audience, e.g. images of sick animals would not be appropriate.*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.