Name: ID:

**Cheese anyone?**

Achievement Standard 91047: Level 1, Version 3, Credit 6

**Undertake development to make a prototype to address a brief.**

This achievement standard involves undertaking development to make a prototype to address a brief.

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| **Achievement** | **Achievement with Merit** | **Achievement with Excellence** |
| Undertake development to make a prototype to address a brief. | Undertake development to make a refined prototype to address a brief. | Undertake development to make a justified prototype to address a brief. |

Marking notes and observations:

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*I confirm that this is my own work, and I understand the school policy on authenticity.*

*Signed:: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

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| **Not Achieved** | **Achieved** | **Merit** | **Excellence** |

*\_\_\_\_\_ I accept this grade \_\_\_\_\_ I do not accept this grade and intend to appeal*

*Signed:: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**Student Instructions**

This assessment activity requires you to make and evaluate the fitness for purpose of feta cheese for a cheeseboard.

This is an individual assessment task.

You will have approximately 7 weeks of in-class and homework time to complete this task.

You will be assigned a member of staff to be your stakeholder.

You will be assessed on how well you use resources and apply practical techniques and processes to make your prototype, and evaluate the prototype’s fitness for purpose.

**Task**

Before you begin work, study your brief carefully to ensure that you are clear about the outcome expected, and the requirements specified. Make sure you talk to your teacher about what you intend to make and what your next step is.

To develop and make your prototype you will need to:

1. Talk to your stakeholder (member of staff) about how they would like their cheese.
2. Update the specifications to reflect your stakeholders’ wishes.
3. Trial and select ingredients.
4. Trial and select appropriate equipment and utensils.
5. Trial and select suitable techniques and processes.
6. Trial your cheese and gain stakeholder feedback.
7. Refine your brief specifications to reflect the ingredients, equipment and processes you will use.
8. Use the ingredients, equipment and processes you have decided on to make your final prototype.
9. Test your prototype for fitness for purpose.
10. Use the results of your test to evaluate the products fitness for purpose.

See Student Resource A for more information on each of these steps.

See Student resource B for more information on fitness for purpose.

**Final submission**

Include:

1. Your completed prototype.
2. Your refined brief and specifications.
3. Photographic evidence (photos of you making your cheese) and notes of trialling and selecting ingredients, equipment and practical techniques and processes (why you chose to use those ingredients, equipment and processes).
4. Your evaluation of the prototypes ability to address the brief when used in its intended physical and social environment (its fitness for purpose).

**Brief**

At Interval many Te Awamutu College staff meet in the staffroom to socialise, unwind from a busy morning and share morning tea together. At this time of year when it is cold and wet outside and there is not much fresh fruit grown at home, many staff look for more fulfilling options for morning tea. Because eating and sharing food is very sociable one of the most popular and enjoyed morning tea options is a cheeseboard. The staff already have access to a hard and sharp cheddar cheese, a soft and gooey camembert and a strong and smelly blue cheese, what they really need is a soft but crumbly feta cheese to contrast their other cheeses.

**Specifications**

The cheese needs to:

* Be Feta
* Have a crumbly texture
* Have a salty taste
* Be softer than a cheddar cheese
* Have a flavour that the staff like
* Be able to be served on a cheeseboard
* Be made at school in the food room
* Be made following safe hygiene and food safety practices

**Refined specifications** (new or added from stakeholder feedback)

**Student Resource A**

Here is a more in-depth explanation of each of the steps you will need to complete for this assessment, with possible examples you could try.

It is up to you how you record this information, but make sure that you are able to present it in a way that can be easily read and marked.

Every decision, conversation and time you cook is evidence for this assessment, so make sure you record it!

1. Talk to your stakeholder (member of staff) to find out what specifications (what they like and don’t like) they have. This could be in the form of an interview, e-mail or a questionnaire you give to them, look to the sensory analysis you have done on cheese for questions to ask.
2. Add these new specifications to the brief you were given so you have a new updated list of specifications.
3. Trial ingredients to select those that will best fit the purpose of the prototype. Record notes of what ingredients you trial and what you and your stakeholder liked and didn’t like about them. For example, if your brief says that your cheese must be cow’s milk feta, make sure you use cow’s milk to make the feta. If your stakeholder has said that they want their cheese to taste like sundried tomatoes, then select and use sundried tomatoes in your feta.
4. Select appropriate equipment and utensils for the development and making of your prototype. Record the equipment you used for each trial, what worked and what needs to be changed? For example, you could:

* try using different equipment to cut your curd and see what difference this makes,
* try using draining racks that are higher or lower, how does this affect the draining of the whey?

1. Trial and select suitable techniques and processes for making your prototype. Record what techniques you used for each trial and what worked and what needs to be changed. For example, you might:

* heat your milk higher before you add your yoghurt and rennet,
* add your rennet without diluting it first,
* leave your rennet for longer to set before you cut it,
* cut your curd smaller so it dries out more, you might stir your curd twice before you hoop it,
* leave your cheese to drain for longer before you brine it,
* change the percentage of salt in your brine,
* brine your cheese for longer or less time,
* leave your cheese to mature for longer before you serve it,
* marinate your cheese in oil and herbs before you serve it.

1. Aim to trial your cheese at least 3 times and get stakeholder feedback as to what they like and don’t like for each trial, you are aiming to end up with a cheese that they really like.
2. Refine your brief specifications by adding the new ingredients, equipment and processes that you have decided to use for your final prototype.
3. Use the ingredients, equipment and processes you have decided on to make your final prototype.
4. Test your prototype for fitness for purpose within its intended physical (the place where the cheese will be used) and social (the staff member who will eat it) environment. Get final stakeholder feedback on the prototype and make sure they explain how it meets their needs and specifications.
5. After you have tested your prototype and gained your final stakeholder feedback you need to evaluate how well you think your cheese has met the refined brief and specifications. Refer to each specification and say how you know that your cheese has either met this or not met this specification (use your stakeholder feedback). **Also refer to Student resource B.**

**Student Resource B**

A prototype is a finished outcome that is ready to be trialled in its intended location (environment).

**An Example evaluation.**

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| **Brief for a camembert cheese** (extract) | **Evaluation** (extract) |
| **Brief**  Anna is having some friends from work over to her house on Friday night to celebrate the end of the week. Anna wants to have a cheeseboard for her guests to nibble on before dinner is ready. She has a hard cheddar cheese and a smelly blue cheese but really wants a nice soft, slightly gooey and creamy camembert cheese to go contrast her other cheeses.  **Specifications**  The camembert needs to:   * Have a thick layer of compressed white mould. * Be a round shape and between 2 and 3 cm high. * Have a soft texture. * Have a slightly gooey and runny middle. * Have a good flavour but not be too mature and strong. | *By using a starter culture that had the white mould bacteria in it I was able to start growing mould on the outside of my camembert. I was able to make sure that the mould would be thick by leaving the cheese for 2 weeks at 14\*C so that the mould could grow very long. To then get the mould compressed I wrapped the cheese tightly in special cheese paper. My stakeholder said that she liked how the mould was nice and thick.*  *My camembert cheese met the specification of being round and between 2-3 cm. I made sure it met this specification by using a round mould for the curd and by filling the mould almost to the top so that when it drained and compressed it would still be 3cm high.*  *My cheese had a nice soft texture and my stakeholder commented on this on her sensory analysis (attached). When my stakeholder used the cheese on her cheeseboard on Friday night she said that the middle was too runny when she cut it. This might have happened because I left the cheese to mature for 5 weeks instead of 4 weeks in order to get a good flavour.* |

Assessment schedule: Technology 91047 Make a Prototype to Address a Brief

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| Evidence/Judgements for Achievement | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| The student undertakes development to make a prototype to address a brief.  The student selects and uses materials, tools and equipment in the making of their prototype.  The student applies practical techniques and processes suited to the material chosen to make their prototype.  The student evaluates the prototype in terms of its fitness for purpose in its intended physical and social environment. | The student undertakes development to make a refined prototype to address a brief.  The student selects and uses materials, tools and equipment in the making of their prototype.  The student conducts trials to select suitable materials and/or components, tools and equipment.  The student trials practical techniques and processesto informthe selection and application of these techniques and processes.  The student uses appropriate selected materials, components, tools and equipment in the application of suitable selected practical techniques and processes to make their prototype.  The student evaluates the prototype in terms of its fitness for purpose in its intended physical and social environment. | The student undertakes development to make a justified prototype to address a brief.  The student selects and uses materials, tools and equipment in the making of their prototype.  The student conducts trials to select suitable materials and/or components, tools and equipment.  The student trials practical techniques and processesto informthe selection and application of these techniques and processes.  The student uses appropriate selected materials, components, tools and equipment in the application of suitable selected practical techniques and processes to make their prototype.  The student trials the prototype in its intended physical and social environment to gain evidence of its fitness for purpose in its intended physical and social environment*.*  The student evaluates the prototype in terms of its fitness for purpose, using trialling and other relevant evidence, including stakeholder feedback, to make their judgement. |