

# Increasing assessor confidence when making assessment judgements at all levels

AS91357. Undertake effective development to make and trial a prototype.

AS91611. Develop a prototype considering fitness for purpose in the broadest sense.

# The Basic Requirements

2.4 and 3.4 are about the execution of a workable prototype to meet a brief and evidence of the following is needed.

- An authentic need and opportunity, including attributes or specifications
- Stakeholders
- A conceptual design ready to explore
- Testing determine the materials and or components to use and the practical techniques and processes required to manufacture the prototype.
- Evaluation and application of the test results
- Informed selection of equipment
- Evaluated feedback
- Trialling of the developing prototype
- The placement and use of the completed prototype in the intended environment or a very close simulation of that environment
- Explanation of fitness for purpose and final specifications
- Explanation of why the prototype would be accepted or require modification

# Evidence should include

- Interactions with more than one stakeholder
- Analysis and understanding of the requirements of the social and physical environment
- Measurable specifications

# Not needed

- Brainstorming a need (91354 and 91608)
- Planning, Costings, HACCP (91355 and 91609)
- Establishing and developing potential ideas (91356 and 91610)

Advice - for the student to be able to execute a workable prototype they must be able to undertake authentic prototyping in situ.

**Make sure the brief allows for this to happen.**

# Context Considerations

Food contexts allow for some of the richest evidence of context considerations - make sure these considerations are given sufficient value in the student work.

**The wider physical environment** relates to the manmade or natural environment where the outcome will be made, served, eaten, sold etc. For example, the marae, school canteen, café. Student could show evidence they have considered.

- The potential impact of the climate or weather conditions in the area where the outcome will be made, served, eaten, sold etc. For example, is it indoor or outdoor, summer, winter? etc
- Health & Safety regulations in a food preparation space
- The legal requirements related to the service or sale of food e.g., food hygiene, storage, shelf life etc
- Infrastructure in place in the space where the outcome will be made, served, eaten, sold etc e.g., tables, chairs, bench space, ventilation, cutlery
- Access, delivery and availability of ingredients or equipment

**The wider social environment** relates to the human factor. In a food context is extremely broad and should be easy for the students to evidence, given the right cues. For example,

- Current or past trends in ingredients, techniques or food presentation etc
- Ethical considerations related to dietary requirements for specific groups of people, portion control, nutritional guidelines etc
- Responsibilities regarding sustainability e.g., food waste, pesticides, treatment of animals, packaging, air miles etc
- Specific cultural and religious preferences regarding ingredients and processes e.g., kosher ingredients or the tikanga related to the preparation, serving or selling food
- Health and Safety risks to the people consuming the food outcome e.g., allergies, bones in the food etc



Don't overlook the evidence of wider context considerations related to the school environment



Ensure the students are only exploring the context considerations that are relevant to their developing outcome.

**What cooking and preparation facilities and equipment are available?** The cooking and preparation facilities that are available at the cafe/school of hospitality are the basics for example, ovens, chillers, fridges, freezers, knives, chopping boards, sinks, and microwaves, there are also electric whisks/ mixers, washer and dryer and a deep fryer.

**What storage space is available for dry goods, refrigerated and frozen foods?** The cafe has storage for dry, refrigerated, and frozen foods, these being a pantry (for dry foods), fridges (for refrigerated foods) and freezers (for frozen foods). At the school cafe there is a cold food storage/ display case under the counter space. There is also a hot food storage/display case to one side of the counter (where you purchase food). We will store our dish in the suitable environment for the time it will be stored and the temperature that we want it to be served, this will most likely be chilled at 5°C or below.

**What packaging and cutlery are available to serve food and drinks?** Now the school cafe has a few packaging for serving, such as paper plates and bowls, and paper/cardboard fold-close boxes, they also have one-use plastic containers, as well as wooden cutlery.

**What facilities/space is available for students and staff to eat the products once they have been purchased?** After purchasing food or drink from the school cafe they can choose to enjoy these at one of the tables adjacent from the cafe or go about their business because of the portable and take-away packaging.

**Did you find out about allergies and special diets of the customers?** By serving the public we will have to keep in mind that people may be gluten free, vegan, vegetarian, dairy free, and have allergies and will have to label our product with the allergens that it may contain. As our recipe is dairy free and gluten free, we will mainly have to worry about informing people that it contains peanuts (in the peanut sauce), and prawns which are not vegetarian or vegan.

**Which culture and religious aspects did you consider in the development of the outcome?** During this project we will have to consider different cultures and religions that may have different restrictions on what they can and can't eat. For example, in the Jewish religion eating shrimp is not considered to be kosher, most Hindus do not eat beef, and both Jewish and Muslim people usually do not eat pork. With the recipe we are making we will easily be able to make a chicken and/or vegetarian version, so that every person at our school is able to benefit from what we will be making.

Often context considerations are also factors related to fitness for purpose so when assessing the work, you can make a judgement about fitness for purpose using the evidence of context considerations. Often the wider context considerations are also integrated into the specifications for the outcome.

# Attributes

An attribute is a broad, non-specific characteristic of an outcome, e.g., healthy for teenagers, gluten free, gives energy..

Ideally attributes become specifications as the student explores and refines their idea or prototype.

Specifications should be seen in the evidence of testing, trialling and evaluations and students should seek deliberate feedback that focuses on the specifications. At the end of the development process the food prototype should be suitable for production and the specifications should indicate this.

# Measurable Specifications

- My product has nutrients for a growing teenager. Seeds are nutritious because it's a good source of fibre which will allow students to feel full. It has 12.5 grams of dried apricots which are rich in vitamin A, C and E good for cell function, growth and development. It has only 1 tablespoon of the coconut oil and 3 tablespoons of syrup which is not a lot for the portion sizes. The coconut oil is a natural saturated fat which is a good fat for the human body.
- The almond meal contains protein and is also low in GI which releases slow energy. This make suitable for people who are gluten intolerant.
- My bar contains 12.5 grams of rice bubbles which contains protein and carbohydrates The protein will help but also helping with the growth and repair of the body. Carbohydrates give energy to the body which allows the body to function.

# Testing

Testing and trialling sits at the heart of these standards because students must use the results from testing to inform the making and trialling of the prototype.

Students are generally more successful when they **begin this standard with a concept ready to be explored/tested** using ingredients, techniques, equipment etc. They have an initial idea, perhaps a recipe or visual clue which they use to guide the development of their prototype. They don't spend valuable time testing lots of different unrelated recipes trying to figure out what to make. If they have a firm idea from the beginning, they can begin refining it straight away.

Tests could include but are not limited to –

- Comparing different recipes for the same product
- Changing out ingredients to alter the texture
- Altering ingredients to change the taste
- Improving the nutritional value of the recipe
- Testing different cookery techniques, times etc

All tests should be evaluated, have feedback and relate to the products specifications.

# Merit requires ongoing testing



Level 2



Level 3

Grades higher than Achieved require evidence of **ongoing testing**. In a food context, the best evidence of ongoing testing often comes from those students who develop the prototype from one single recipe or idea and use testing and trialling to **determine the probability of that idea being successful**.

Before beginning the prototyping standard, they have already arrived at a place in their technological practice where they know, for example, if it is sweet or savoury, meat or vegetarian lasagne, pizza or nachos etc. It is likely they have different questions about the specifications for that idea that need confirming. It is those specifications that should be explored in the testing and trialling. This will include exploring materials/ components, practical techniques and processes and tools and equipment.



- P** The test was purposeful
- O** The outcome was clear
- F** Feedback was given
- D** A decision was made

Try using the acronym POFD when assessing the evidence from testing.

**P for purposeful** - Does the evidence reveal the student knew what they were testing for or was it hit and miss?

**O. Is there proof of the outcome** of the testing, were the results recorded and analysed?

**F. Is the feedback relevant?** Did the feedback change anything? Feedback on the testing helps to confirm or challenge the test results and adds another layer of legitimacy to the evidence.

**D. What decisions did the student make** or what conclusions did they arrive at based on the results and the feedback?

The most successful testing purposefully searches for and compares the strengths and weaknesses that were revealed in the test results. By making comparisons the student is more likely to show evidence of deliberate choice which is clearly substantiated by the results of the tests

In this extract the evidence of relevant testing is clear. The testing has been undertaken to ensure the effectiveness of the developing prototype.

The test is **purposeful** as the student knew why they were testing, and they had a clear aim, they knew what they were hoping to find.

The **outcome** of the test is clear and shown in the table using ratings out of 10.

**Feedback** is given which informs the **decision** to make the meatballs 4.5cm in size.

### Meatball Tests

Aim: To find the best size and taste four beef meatballs

Ideally, we want meatballs to be 2 – 3 bites to eat. If they are too small the customer will eat them too quickly and maybe not taste the beautiful seasoning.

We want the taste to be appealing to a range of people, not bland or overly spicy or salty.

Size	Ease of Cooking	Ease of Eating
3.5cm	8/10 - cooked quickly	8/10 - A bit small
4.5cm	8/10 - cooked a little more slowly than 3.5cm <sup>3</sup> but still cooked quickly	9/10 - wasn't too big nor too small and quick to eat. Was a good bite size
5.5cm	6/10 - fell apart health :)	6/10 - too big to eat in one bite

Taste	Ease of making	How it tastes
Plain	9/10	5/10 - no flavour
Beef Stock	9/10	9/10 - good flavour but not too much
Paprika	9/10	6/10 - not enough flavouring
Cheese	9/10	8/10

**Conclusion:** From these tests, we have decided to make cheese and beef stock meatballs because they had the most flavour. The feedback was they were meaty flavoured and not salty, and the cheese added a great texture.

We think that the best size is 4.5cm because it was a nice bite sized food.

# Using results from testing to inform the making & trialling of the prototype



There are some photos that I missed because I forgot to take them.

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I found when making the pasta that using a KitchenAid was faster because the mixture mixed faster than using the fork. The time for using a fork took 3-4mins whereas, using the KitchenAid took between 1-2mins to use. However, using the fork was better because I was able to feel the dough when mixing it. Using a pastry brush was better because it allowed the tomato paste to spread evenly than using the spoon.

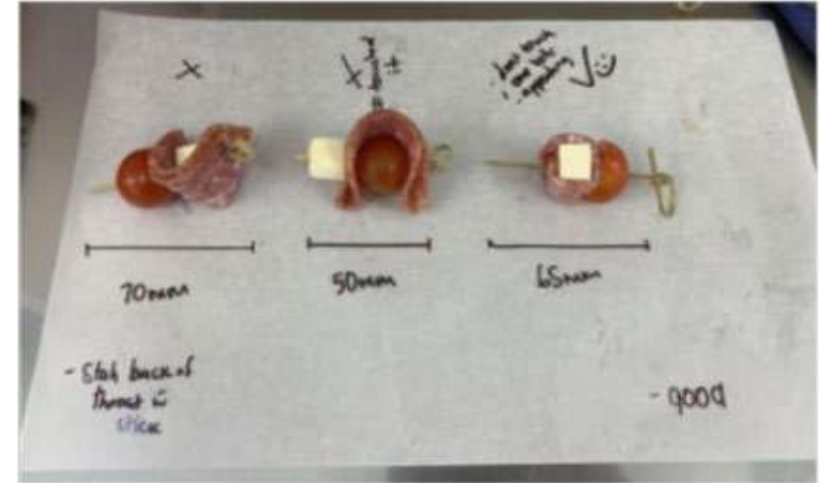


These extracts reveal trialling to select suitable tools and equipment. They student is making comparisons between options.

# Trialling

*For this trial, I am also going to focus on the size of the skewer I present my canape on to make it appropriate and meet all requirements. I am going to trial three different lengths 50mm, 65mm and 70mm. While I was doing this trial one of my stakeholders came over and said why don't you try and present your ingredients in a different way on each stick to also trial how it looks. By halving the amount of salami used and wrapping it around the feta cheese it looked more 'interesting' and easier to be able to eat.*

*Overall, I got very positive feedback from this trial. It gave my stakeholders a chance to give feedback on whether the stick is too short or too long or if it touches the back of your throat when trying to eat it or your fingers touch the food. The 65mm one was the most successful and was able to be balanced within the middle of the skewer to ensure that you did not touch the food with your finger when picking it up. The feedback that I received said that it was a retro dish that looked appetising although it could be a little more 'exciting'.*



This example of trialling also shows refinement of the prototype, a requirement for Merit.

# Level 2. Refinement

## My first recipe refinement

### Before

- 1 Onion
- 2 tsp Garlic
- 2 Red chillies
- 2 tsp Ginger
- 1 cup Olive oil
- 50g Butter
- 2 tsp Turmeric
- 1 tsp Chilli powder
- 1 tsp Cumin
- 1 tsp Garam masala
- 3 Tbsp Tomato paste
- ½ jar Pasta sauce
- 1 tsp Oregano
- 2 Boneless skinless chicken breast
- 1 cup Heavy cream
- 1 cup Jasmine rice

### After

- 1/2 Onion
- 1 tsp Garlic
- 1/2 red chilli
- 1 tsp Ginger
- 1/2 cup Olive oil
- 1/2 tsp Turmeric
- 1 tsp Chilli powder
- 1 tsp Cumin
- 1 tsp Garam masala
- 3 Tbsp Tomato paste
- ½ jar Pasta sauce
- 1 tsp Oregano
- 1 Boneless skinless chicken breast
- ½ cup Heavy cream
- ½ cup Jasmine rice



To secure a grade of Merit at Level 2 there are 2 criteria to judge.

1. the evidence must show the student has evaluated tests to determine the suitability of their resources, processes and techniques.
2. the evidence of testing and feedback should be ongoing – i.e., the student hasn't just gone with the first option but explored their ideas and there is feedback every step of the way.

As a result of my first recipe trial, I have decided to cut back the recipe by half the amount of ingredients and I have decided to not have so much spice which was feedback from my stakeholders.

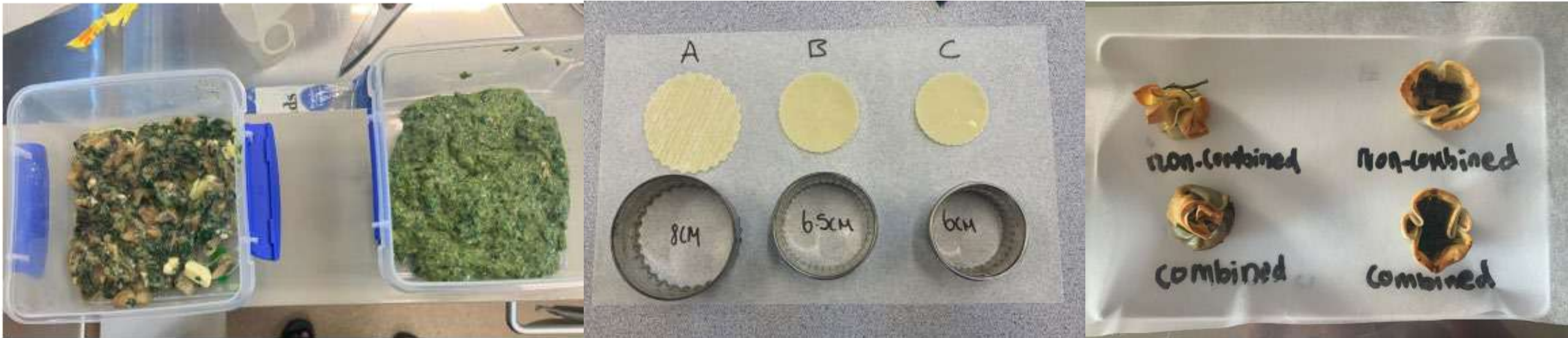
I remade the recipe considering my modifications and using the same method and it was good, but it has come to my attention that my butter chicken dish isn't original enough.

Therefore, I am going to brainstorm and produce ideas on how to add a twist to my dish. I looked at recipe books and picture online to see what I could do.

I discovered these ideas.

- ❖ cut the chicken into strips instead of chunks, dip it in olive oil so that the spices stick and then roll it in herbs. Then oven roast the chicken instead of cooking it in the sauce like normal.
- ❖ After the chicken is cooked put the strips on top of the rice then put my curry sauce on top then add the garnishes.

# Level 3 . Develop a refined prototype



At Level 3 the Merit criteria requires students to be evaluating the ways the combination of selected materials and/or components and practical techniques and processes work together to ensure their effectiveness in making a prototype. When looking for evidence of refinement you are looking for purposeful, targeted trialling that will inform the making of a more fit-for-purpose prototype. Without trialling to refine the outcome, the probability of the prototype being workable is hit and miss.



This extract from a Level 3 folio is another good example of how simple trialling has allowed for refinement and development of a more fit for purpose outcome. Fitness for purpose in the broadest sense is also being considered here as this trial aims to increase the social acceptability of the outcome.

By stir-frying them in butter it meant that there is a higher oil content in the canape which led to the residue being left on the plate when presented. These are two things that were mentioned by stakeholders and would need to be adapted if I was to further develop this product. I need to reduce the oil content or cook the vegetables in a different way so the texture is consistent throughout all canapes also leaving no oily bits left on the plate. This also needs to be removed as we do not want any oil spilling or dripping onto the guests when eating the food. Oiliness of a canape results in it being avoided if other options were available as it is seen to be fatty. This is something i want to avoid, and therefore i will make these changes in my final trials

# Develop a refined prototype



*TRIAL ONE*



*TRIAL TWO*



*TRIAL THREE*



*TRIAL FOUR*

Refinement is not undertaking more and more new testing for the sake of testing. Refinement could be considered the final steps taken to control the quality of that final prototype.

It's the small tweaks to optimise the prototype and it should be based on the feedback and evaluations of the testing.

Using **measurable specifications** to guide all the tests and trials is good technological practice (see the Processing AS3.60).



# Feedback should

- Come from more than 1 person
- The people giving the feedback should be carefully selected
- Be woven throughout the evidence
- Be relevant
- Inform decision making

EN2 at both levels states that stakeholder feedback must be used to inform the making and trialling of the outcome and a student cannot make an authentic judgment of fitness for purpose without it.

Good feedback offers the student an opportunity to refine the outcome because the feedback is purposeful. Feedback should not just confirm what the student already knows but could offer suggestions for refinement or alternatives. Guided questions which encourage feedback about the prototype's specifications is the best way to get relevant and purposeful feedback. You might have to show student how to ask purposeful questions to help them get relevant feedback.

my stakeholders mentioned how there wasn't that much flavour to the frittata and when it was reheated the next day the product didn't look or taste too appealing as it was when it was first made

Chop choc into small pieces to increase surface area to melt faster

"There could be a better depth of pastry so that it is thinner and you can add more curd into it."

# Evaluating the Feedback

Many stakeholders believed that the fried rice was too dry and there wasn't enough moisture therefore making it hard for some to swallow. There was however plenty of flavour throughout the fried rice and the different vegetables that were included also gave the overall fried rice an authentic flavour. Another improvement that could be made as suggested by some stakeholders is possibly adding in some more soya sauce so that not only does it add in a flavour but it also helps to control the moisture in the rice. Many of my stakeholders did mention that they would buy this product from the tuck shop if it was served warm as it would be a great product to eat during colder winter days. Minor improvements such as adding in a range of different vegetables and adding in more protein could give the overall concept a boost. My stakeholders also implied that fried rice was a great concept to consider as a tuck shop product as there are different attributes within the recipe that can be changed. These changes are good as it allows a wider range of flavours to be created therefore creating more options for a wider group range.

Feedback should be analysed and evaluated. Without feedback the student has no authentic way to determine if the decisions they are making are leading their prototype in the right direction or towards malfunction.

It's important the feedback is responded to - this shows the student has considered how other people's opinions have been valued and informed the making and trialling a fully suitable prototype.

# Synthesis

Requires critical thinking skills. Such as -

Analyse

Critique

Compare

Evaluate

As the students think critically, they will likely be **inferring relationships** between what they have discovered, they **find commonalities or differences** that link the information and should be **making strong connections** between ideas.

A key thing to consider in assessment is that **synthesis doesn't just happen at the end of the journey**, the evidence of those connections will likely be throughout the students work and this is what allows them to justify the making and trialling of their prototype.

To justify means to **support an idea or decision with evidence**. Look for evidence that reveals the student has made clear decisions that are informed by testing, trialling and feedback.

When you are making Excellence judgements ask yourself '*is there any aspect of the prototype that has not been confirmed in the evidence*' and '*are there any questions still to be answered?*' and if there are, it is highly likely the work is not indicative of Excellence.

# Trialling the Prototype

The key to achieving these standards is the placement and use of the completed prototype in the intended social and physical environment.

This is how the student gains specific evidence about the 'real world' suitability of the prototype, does it do what they intended it to do or is it fit for purpose.

The student can then legitimately explain any decisions to accept or modify their prototype. This can only be done if they have trialled the final prototype to gain evidence of its effectiveness.

## Why we chose our final meal.

As a group we decided to make spaghetti and meatballs for our final recipe. This decision was based on our research and trials. Beef is a good source of protein (31g), the recipe is very kid friendly (tested on students), cost efficient (less than \$5) to make and time efficient (make it in under 45mins). The skill level is not too hard for the students to make, and the students said they enjoyed the process and felt successful.

This meal is super easy to make and is a perfect meal to teach a kid how to cook it, meaning it applies to our issue of improving kids cooking skills. We also sneaked vegetables (Carrots are a good source of vitamin a which is important for eyes and skin) into this meal without adjusting the meal's taste.

After looking at the students' food preferences and after trialling 3 different savoury recipes the ingredient in our recipe definitely caters best for all the kids. We are confident knowing that they will enjoy the spaghetti and meatballs.

We completed a budget and compared the costs of the initial recipes. This meal is the most cost-efficient, so it will be a good meal for the kids to make at home.

Ethically the meal is good as it only uses local ingredients therefore our carbon footprint is lower. It does use beef which affects the environment, but it could be argued that by using beef we are supporting our local farmers thus helping the economy.

Here are some pictures from the day, these include the kids preparing to cook, the kids cooking and the kids with their final meal:



# My final evaluations

My attributes were

- ❖ Use a new cooking method you haven't used before
- ❖ Meet NZ nutritional guidelines
- ❖ High standard of presentation (we eat with our eyes)
- ❖ Recipe must reflect an international cuisine
- ❖ Use locally sourced seasonal ingredients
- ❖ Minimal food waste in preparation
- ❖ Will freeze easily
- ❖ Suit the stakeholder's palette
- ❖ Be an adaptation on a traditional international cuisine.

In my final dish I used the oven roasting technique to cook my chicken instead of pan frying.

The turnout of my dish was great and just what I was aiming for. It is healthy because it has protein, less fat because I took out the cream and I have added seeds and turmeric which has healthy properties.

My aim was to create my own original dish, inspired by my chosen culinarian Matty Matheson and I wanted to present it looking very professional. I think I achieved this by using the white plates that showed off the bright colours of the food.

As I was testing my recipes as they changed, I was very careful not to waste food. I reduced the original size of the recipe because it was too much and only really wasted some seeds because I burned them and some rice which I had not cooked long enough. My stakeholder loved the flavours, and the feedback was 100% positive.

I have altered Matty Matheson recipe to make it more unique by adding coconut flavours, seeds not nuts and marinated the chicken and roasted it. My final dish was a very manipulated version of butter chicken. I am happy that I could contribute aspects of Matty Matheson's food recipes into this dish along with the originality that I used to expand the horizons of the butter chicken.

It was a challenge to source all local ingredients, so I modified this element a little and chose to source NZ grown seeds and free-range chicken to address any ethical concerns. I think that the dish has the perfect amount of sauciness which is essential in me liking a dish because I love sauce. This and the chicken goes very well with the fluffiness and creaminess of the coconut cream/turmeric rice. I feel like if this dish were to be served in restaurants under the name of butter chicken, people would be pleasantly surprised. I am happy that all the photos and inspiration that I gathered and put in the earlier slides gave me such great ideas to manipulate my dish. I think that this is one of the main reasons why it came together so successfully. I also am very happy that the teacher I served my dish to enjoyed it so much.

Overall, I am very pleased with the outcome of my original dish that I have created from this project and believe it is fit for purpose. I wouldn't change a thing about the recipe now I'm done.

The trialling of the prototype should be supported with a final evaluation of fitness for purpose. This example refers to how the initial attributes became specifications because of testing, trialling and the feedback – revealing synthesis.

# Fitness for Purpose Level 3

- Technical Feasibility & social acceptability
- Sustainability of the resources used
- Ethical nature of the testing practices
- Cultural appropriateness of trialling procedures
- Determination of life cycle, maintenance and disposal
- Health and safety

A student operating at Excellence at L8 of the curriculum will most likely show **substantial links to ffpbs in their specifications** and it will be clear during the development of the prototype and in the resolved prototype.

Ideally the evidence will only consider the criteria **relevant** to their prototype. The criteria in Explanatory Note 4 are not a tick box exercise, and it is important that the student hasn't just addressed these criteria without thinking if they apply to their work or not.

*Example of cultural and social acceptability of testing procedures* Originally, fried rice comes in little Chinese takeaway boxes giving the overall product an authentic and traditional feel to it. Psychologically, this engages a person associating the background and the origins of the fried rice with the physical product they are handling. This boosts the senses of a person and allows them to enjoy the product a lot more as they are engaging their psychological background with their current product.



When using the rolling pin to crush the biscuits I felt like I had control on how big the pieces of biscuits could be compared to the food processor. It also saved me time to clean up as I'm only using one piece of equipment to make the base in. I placed the biscuits into a bag and used the rolling pin to crush the biscuits from the outside. I personally think this is the best way to crush the biscuits. When using the rolling pin to crush the biscuits my stakeholders and I found the base held together better. This could be because not every crumb is finely crushed. It is easy for me to crush big parts by themselves.

*Example of technical feasibility & social acceptability*

## Fitness for Purpose in the Broadest Sense

- **Must have skinless, boneless, free range chicken breast** → We have decided to use free range chicken breast because it is more sustainable, and the chicken has been treated better. It is more costly, but we will try and make that up in other areas. The chicken breast is easier to work with (Look at functional modelling for more notes) and having the skin removed means it will be more appealing to the people who ate more health conscious.

When it comes to using the pasta machine, it is good to grab a scrap piece of paper and run it through the pasta machine to get any excess dried up dough that is stuck in the pasta. This is because you can't wash the pasta machine in hot soapy water because it is hard to dry it and it will go rusty, so putting a piece of paper in the pasta machine will eliminate the excess pasta dough. Then use a cloth to wipe the machine after every use. Bacteria will grow onto the excess dough if left/stuck in the pasta machine.

*Example of health and safety, technical and social acceptability.*

*Example of ethical nature of testing practices, determination of life cycle, sustainability of resources and social and technical acceptability. There is even a bit of H&S.*

# Takeaways

- The needs of the **social and physical environment** are as important as the needs of the stakeholder using the prototype in those environments.
- Ensure the **specifications are measurable** (and that they are specifications, not attributes or key factors). Let the specifications guide the testing and get the students to direct their feedback to be about those specifications
- This student should **target one idea and refine it into a workable prototype**. Evidence which reveals students have tested volumes of disparate ideas to find one that is suitable generally do not secure grades above Achieved.
- **Testing usually precedes trialling**. Both the testing and trialling should be purposeful, have a **clear outcome, feedback and inform a decision** about fitness for purpose.
- Encourage students to **use a range of relevant stakeholders** and to **gather relevant feedback which must be evaluated** to show how it could inform the development of their outcome.
- Merit grades require refinement. **Refinement is not undertaking more and more new testing** - it's the small tweaks to optimise the prototype.
- To **synthesise requires evidence of analysis, critiquing, comparing and evaluation to show connections between ideas**, which ultimately shows justification of the decisions made. Synthesis should happen throughout the evidence.
- To fully justify fitness for purpose **evidence of the prototype being used in situ**, of relevant feedback and a final evaluation with measurable specifications is essential.



# Assessor Support

For additional assessor support go the bright blue Assessor Support link on the NZQA Technology Subject page.



This link gives you access online modules for Technology with more up to date modules and tools coming in the new year.

These can only be accessed via Pūtake which requires an ESL login. Your Principals Nominee can help you set this up.

Assessors can also request face to face best practice workshops or guest speakers from NZQA. Alternately email NZQA directly.

[workshops@nzqa.govt.nz](mailto:workshops@nzqa.govt.nz)