

Vege Masterchef – Year 8 assignment

Your students will continue to learn:

- the technology process
- to modify and create recipes using seasonal vegetables
- simple food preparation and cooking skills
- to describe the attributes of food products
- to work as a team and manage your time
- to evaluate food products.

Assignment structure

The assignment is made up the following four key tasks:

- research
- generate ideas
- plan of action
- evaluation.

It is suggested that students **complete all four** of these tasks. The Food Technology Unit Plan – Year 8 indicates when to introduce and complete each task, for example, it suggests to start the research task in lesson 2. Please tailor this plan according to your programme.

Optional extension tasks are found throughout the assignment. Include these as time allows or provide them to gifted students.

Choosing a recipe to modify and develop

The initial recipe should be any recipe that contains foods low in sugar, salt or saturated and trans fat. You can choose from the list below or use your own. The students will then modify and develop this further to meet brief specifications.

Please select from the following recipes: *(please see Table 1 for notes on each)*

- Beef patty
- Chilli beans
- Frittata
- Macaroni cheese
- Roast chicken
- Savoury mince
- Vegetable bean patty.

Table 1: Recipe descriptions and suggested modifications

	About the recipe	Examples of how students might modify this recipe to meet specifications <i>(please add other ideas as appropriate)</i>
<p>Beef patty</p>	<ul style="list-style-type: none"> • This is a basic beef patty that already includes two vegetables (carrot and onion). • The predominant type of food is legumes, fish, eggs, poultry and meat. • Brown in colour. • Contains gluten (breadcrumbs) and eggs. • Students should not change the beef patty mixture unless they are able to do recipe testing. Instead, add side dishes and toppings. 	<p>To be colourful:</p> <ul style="list-style-type: none"> • add a lettuce, tomato and cucumber salad (or use as toppings for a burger) • or add tomato salsa • or serve with steamed vegetables, e.g. carrot, purple kūmara, cauliflower, broccoli. <p>To include at least three different vegetables:</p> <ul style="list-style-type: none"> • add 1-2 extra vegetables, e.g. serve with lettuce and tomato salad or steamed cauliflower and broccoli • or if able to do recipe testing, substitute half the grated carrot with half grated beetroot or grated and drained courgette. Then serve with roasted vegetables. <p>To include at least three different types of food:</p> <ul style="list-style-type: none"> • include grains and starchy vegetables, e.g. burger bun, potato rosti, potato wedges, pita bread, brown rice • or include milk, yoghurt and cheese, e.g. cheese, yoghurt dressing • or include healthy oils, nuts and seeds, e.g. add peanut sauce topping. <p>To meet stakeholder needs:</p> <ul style="list-style-type: none"> • make recipe substitutions for allergies, e.g. use gluten free breadcrumbs, egg replacer • choose a different recipe suitable for vegetarians.
<p>Chilli beans</p>	<ul style="list-style-type: none"> • This is a basic chilli bean recipe that already includes two vegetables (onion and tomato). • The predominant type of food is legumes, fish, eggs, poultry and meat. • Red/brown in colour. • Vegetarian. 	<p>To be colourful:</p> <ul style="list-style-type: none"> • add 2 cups corn kernels or mixed frozen vegetables to mixture, e.g. corn, peas, carrots, green beans • and/or add 1 chopped capsicum to mixture. <p>To include at least three different vegetables:</p> <ul style="list-style-type: none"> • add 1-2 extra vegetables to mixture, e.g. corn kernels, mixed frozen vegetables. <p>To include at least three different types of food:</p> <ul style="list-style-type: none"> • include grains and starchy vegetables, e.g. pita bread crisps, brown rice or grated kūmara • or include milk, yoghurt and cheese, e.g. grated cheese topping. <p>To meet stakeholder needs:</p> <ul style="list-style-type: none"> • use butter beans, red kidney beans or choose a mildly spiced chilli bean mixture in place of chilli beans for stakeholders who dislike spicy food.

Table 1: Recipe descriptions and suggested modifications (continued)

	About the recipe	Examples of how students might modify this recipe to meet specifications <i>(please add other ideas as appropriate)</i>
<p>Frittata</p>	<ul style="list-style-type: none"> • This is a basic frittata recipe that already includes two vegetables (onion and kūmara). • The predominant type of food is legumes, fish, eggs, poultry and meat. • Golden yellow in colour. • Contains eggs and dairy products. • Vegetarian. 	<p>To be colourful:</p> <ul style="list-style-type: none"> • add 3 chopped silverbeet leaves to mixture • and/or add 1 chopped capsicum to mixture • and/or place 2 sliced tomatoes on top before baking. To include at least three different vegetables: • add 1-2 extra vegetables to mixture, e.g. sliced spinach or silverbeet, chopped capsicum • or serve with lettuce, tomato and cucumber • or serve with tomato salsa. <p>To include at least three different types of food:</p> <ul style="list-style-type: none"> • include grains and starchy vegetables, e.g. toast, pita bread, brown rice, mashed potato • or include milk, yoghurt and cheese, e.g. grated cheese topping. <p>To meet stakeholder needs:</p> <ul style="list-style-type: none"> • choose a different recipe suitable for people with egg and dairy allergies.
<p>Macaroni cheese</p>	<ul style="list-style-type: none"> • This is a basic macaroni cheese recipe that already includes one vegetable (onion). • The predominant types of foods include: grains and starchy vegetables; and milk, yoghurt and cheese. • Golden yellow in colour. • Contains gluten (pasta and breadcrumbs) and dairy products. • Vegetarian. 	<p>To be colourful:</p> <ul style="list-style-type: none"> • add 4 cups frozen mixed vegetables to mixture, e.g. carrot, broccoli, capsicum • and/or add 4 cups chopped spinach and kūmara • and/or place 2 sliced tomatoes on top before baking. <p>To include at least three different vegetables:</p> <ul style="list-style-type: none"> • add 2 extra vegetables to mixture, e.g. mixed frozen vegetables • or serve with lettuce and grated carrot. <p>To include at least three different types of food:</p> <ul style="list-style-type: none"> • include legumes, fish, eggs, poultry and meat, e.g. chopped ham, lean bacon or lentils • or include healthy oils, nuts and seeds, e.g. sprinkle pumpkin seeds over an added beetroot and carrot salad, use an olive oil dressing for added salads. <p>To meet stakeholder needs:</p> <ul style="list-style-type: none"> • make recipe substitutions for people with allergies, e.g. use gluten free macaroni and breadcrumbs, egg replacer.

Table 1: Recipe descriptions and suggested modifications (continued)

	About the recipe	Examples of how students might modify this recipe to meet specifications <i>(please add other ideas as appropriate)</i>
<p>Roast chicken</p>	<ul style="list-style-type: none"> • This is a basic roast chicken recipe that includes no vegetables. • The predominant type of food is legumes, fish, eggs, poultry • Golden brown in colour. • Contains soy. 	<p>To be colourful:</p> <ul style="list-style-type: none"> • serve with steamed vegetables, e.g. carrot, purple kūmara, cauliflower, broccoli • add tomato salsa. <p>To include at least three different vegetables:</p> <ul style="list-style-type: none"> • add 3 extra vegetables, e.g. steamed cauliflower, broccoli, carrot, kūmara. <p>To include at least three different types of food:</p> <ul style="list-style-type: none"> • include grains and starchy vegetables, e.g. potato rosti, potato wedges, brown rice • or include healthy oils, nuts and seeds, e.g. add peanut sauce or drizzle olive oil over an added green salad. <p>To meet stakeholder needs:</p> <ul style="list-style-type: none"> • make recipe substitutions for people with a soy allergy, e.g. remove soy sauce or use balsamic vinegar • choose a different recipe for vegetarians.
<p>Savoury mince</p>	<ul style="list-style-type: none"> • This is a basic savoury mince recipe that includes one vegetable (onion). • The predominant type of food is legumes, fish, eggs, poultry and meat. • Brown in colour. • May contain gluten (stock cubes). 	<p>To be colourful:</p> <ul style="list-style-type: none"> • add 2 diced carrots and 2 celery stalks to mince mixture • or add 2 cups frozen mixed vegetables to mince mixture, e.g. carrot, broccoli, capsicum • or add 2 cups peas and corn to mince mixture and serve in lettuce cups. <p>To include at least three different vegetables:</p> <ul style="list-style-type: none"> • add 1-2 extra vegetables to mince mixture, e.g. corn kernels, mixed frozen vegetables. <p>To include at least three different types of food:</p> <ul style="list-style-type: none"> • include grains and starchy vegetables, e.g. toast, pita bread, brown rice, baked potato • or include milk, yoghurt and cheese, e.g. grated cheese topping. <p>To meet stakeholder needs:</p> <ul style="list-style-type: none"> • for vegetarians, substitute the beef mince with red kidney beans or chilli beans • make recipe substitutions for people with a gluten allergy, e.g. use a gluten free stock cube.

Table 1: Recipe descriptions and suggested modifications (continued)

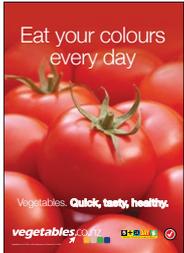
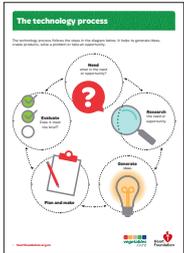
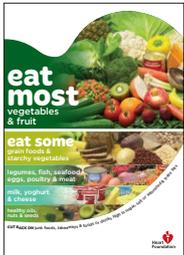
	About the recipe	Examples of how students might modify this recipe to meet specifications <i>(please add other ideas as appropriate)</i>
Vegetable bean patty	<ul style="list-style-type: none"> • This is a vegetarian patty that already includes two vegetables (carrot and courgettes) in the mix. • The predominant type of food is legumes, fish, eggs, poultry and meat. • Fairly colourful (yellow with orange and green specks). • Contains gluten (breadcrumbs) and eggs. • Students should not change the beef patty mixture unless they are able to do recipe testing. Instead, add side dishes and toppings. 	<p>To be colourful:</p> <ul style="list-style-type: none"> • add a lettuce, tomato and cucumber salad (or use as toppings for a burger) • or add tomato salsa • or serve with steamed vegetables, e.g. carrot, purple kūmara, cauliflower, broccoli. <p>To include at least three different vegetables:</p> <ul style="list-style-type: none"> • add 1-2 extra vegetables, e.g. serve with lettuce and tomato salad or steamed cauliflower and broccoli • or if able to do recipe testing, substitute half the grated carrot with half grated beetroot. Then add a side of roasted vegetables. <p>To include at least three different types of food:</p> <ul style="list-style-type: none"> • include grains and starchy vegetables, e.g. serve with a burger bun, potato wedges, pita bread • or include milk, yoghurt and cheese, e.g. cheese, yoghurt dressing. <p>To meet stakeholder needs:</p> <ul style="list-style-type: none"> • make recipe substitutions for people with allergies, e.g. use gluten free breadcrumbs, egg replacer.

Note:

- When students include at least three different vegetables, they will automatically be adding fruit and vegetables to their dish. Therefore, to meet the specification of including three different types of food from the Visual Food Guide, they will usually only need to add at least one other type of food, for example: grains and starchy vegetables; milk, yoghurt and cheese; or healthy oils, nuts and seeds.
- When recipes may include several types of food but in very small amounts, encourage students to focus on increasing these amounts to make the types of food more prominent, e.g. if the recipe contains ½ an onion, add an extra vegetable.
- Encourage students to use time saving strategies, such as using canned lentils in place of dried lentils or give team members designated tasks.

Tools and resources

Use the following tools to help teach students about healthy eating and the food technology process.

Tool	Description
<p>Eat your colours</p> 	<p>These are brightly coloured posters showing different coloured vegetables. Use these to inspire and encourage students about using colourful vegetables when preparing and cooking a meal.</p>
<p>Seasonal availability</p> 	<p>This is a leaflet that shows which vegetables are in season in New Zealand.</p>
<p>The food technology process</p> 	<p>This is a simple diagram that shows the food technology process: need, research, generate, plan and make, and evaluate. Provide a copy to your students when you introduce the assignment.</p>
<p>The visual food</p> 	<p>The visual food guide is based on a cardio-protective eating pattern, so it focuses on looking after your heart and overall health. It's a simple tool for you to use that shows:</p> <ul style="list-style-type: none"> • the balance and proportions of heart-healthy foods to eat • similar foods can be substituted for each other, and • the variety and types of food to eat for good heart health. <p>This can be printed as a poster for the classroom.</p>



Research

Good research makes sure that your food product meets stakeholder needs and is fit for purpose.

1 Thinking of your family, what do you already know about your key stakeholder needs?

Hint: find out about allergies, cultural preferences (e.g. are they vegetarian?) and favourite foods.

Example answer:

- Mum is allergic to shellfish.
- My family is vegetarian.

2 Compare your answers (above) with your team mates and choose the ones you will focus on for your final dish.

The needs that we will focus on are: (write here)

Example answer:

- vegetarian
- shellfish allergy
- gluten allergy.

3 What vegetables are currently in season or available to you?

Tips

- Use the seasonal availability flyer.
- Visit the school/community garden.
- Visit a fresh produce market.
- Visit a supermarket website.

Extension task

Brainstorm or collect one-course dinner recipes that use seasonal vegetables.

Tips

- This is a good opportunity to incorporate digital technology.
- Direct students to heartfoundation.org.nz or Vegetables.co.nz.
- Provide students with recipe books, e.g. Heart Foundation cook books.



Generate ideas

Look at your recipe and answer the following.

1 Does the recipe meet the brief specifications? **Fill** in the table.

Tips

- Refer to the recipe description and suggested modification Table 1 (page 2-5) to help you assess answers for this task.
- Encourage students to be specific with ingredient amounts as this will help with planning.
- Remind students that making large changes to some recipes, e.g. doubling the vegetable amount, may require recipe testing. However, successes and failures can be captured in their evaluation.

Recipe *Beef patty*

Specification	Yes /No	If no, how could you modify, develop and improve the recipe so that it meets this specification? Write two ideas for each .	Tick the ideas for your final recipe
It is colourful (at least three different colours)	No	e.g. <ul style="list-style-type: none"> • top burger patty with lettuce, tomato and cucumber salad. • add tomato salsa. 	<input checked="" type="checkbox"/> <input type="checkbox"/>
It uses at least three different vegetables that are in season	No	e.g. <ul style="list-style-type: none"> • add 4 lettuce leaves, 1 sliced tomato and ¼ sliced cucumber. • serve with steamed cauliflower and broccoli. 	<input checked="" type="checkbox"/> <input type="checkbox"/>
It includes at least three different types of food	No	e.g. <ul style="list-style-type: none"> • serve burger patty on a wholemeal burger bun and top patty with grated cheese. • serve with grilled wholemeal wraps and top with cottage cheese. 	<input checked="" type="checkbox"/> <input type="checkbox"/>
It meets key stakeholder needs (at least one important need)	No	e.g. <ul style="list-style-type: none"> • use gluten free breadcrumbs • use gluten free burger buns. 	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
It can be made and ready to eat within the time frame	Yes		<input type="checkbox"/> <input type="checkbox"/>

Extension task

Brainstorm other ways that you could modify and improve the dish.

Hint: think about flavour, spices/herbs, texture, food presentation, culture, sustainability.

Tips

- Use an Asian-style dressing to add an extra flavour.
- Use parsley from the garden to garnish or use home pickled vegetables.
- Add nuts for extra flavour and texture, etc.



Plan of action

1 Write your **final recipe** that has been modified to meet specifications.

Tips

- Provide extra note paper for students to draft their recipe before writing their final recipe.
- Encourage students to come up with a creative name for their recipe.

2 List **equipment** you need.

3 Make a **shopping list** (give a team copy to your teacher).

Extension task

Create a timeline using the timeline activity sheet.



Product evaluation

Using the brief specifications as criteria to evaluate your food product is an important part of evaluation. You should also think about other key attributes that make a food product successful and fit-for-purpose, such as taste, smell and appearance.

1 Select or circle yes or no (Y/N) for each of the following:

My food product...	
is colourful (at least three different colours)	Y / N
uses at least three different vegetables that are in season	Y / N
includes at least three different types of food	Y / N
meets key stakeholder needs (at least one important need)	Y / N
can be made and ready to eat within the time frame.	Y / N

Insert a photo of your final product here:

*If students would like to **include an image digitally**, they can follow these steps:*

- 1. Use a snipping or capture tool to copy the image.*
- 2. Go to the PDF worksheet, click the location where you want to paste the image, and then click Paste (Ctrl+V).*

Tips

- Encourage students to write at least 1-2 simple statements or bullet points, and provide specific examples where possible.*
- Use the sensory evaluation sheet or a sensory word bank as additional evaluation tools.*
- Students who completed the Conceptual statement extension activity can use their statement and table of attributes to further evaluate their food product.*

2 Fill in the table below.

Hint: how did the food product taste and look? Did it meet the brief specifications? How well did you use your time and work with your team?

What went well?

e.g. my food product met all the brief specifications. For example, our stakeholders needed a gluten free recipe, and replacing the breadcrumbs for gluten free breadcrumbs made this possible. Each team member did their delegated job and helped one another where needed. For example, when my team mates were serving the food, I started stacking dirty dishes.

What did not go well?

e.g. the burger patties were different sizes and cooked at different times. We ran over time.

What could be improved?

e.g. to make the patties all the same size, use kitchen scales or a measuring cup to divide the mixture equally. Patties of equal size will take the same amount of time to cook, helping us keep on schedule.

3 If possible, take photos of your product and showcase these to your whānau, class or school.

Extension task

Create a recipe card for your recipe and share this with your whānau, class or school.



Extension task

The Brief

In your own words, explain what this assignment is about? (Look at the scenario, brief and technology process chart).



The specifications

Understanding the specifications of the brief will help you come up with ideas for your product.

- 1 What does the term specification mean? **Tick** the correct answer.
 - The **requirements** of a desired outcome or food product, e.g. the colour, texture, ingredients, purpose.*
 - A **desired outcome** or food product that would meet a need or realise an opportunity.
 - The **planning** of actions and events to a timescale.
- 2 One of the specifications for your food product is to meet key stakeholder needs. Who are your key stakeholders for this brief? **Tick** all that apply.
 - whānau and friends*
 - café
 - myself
 - my teacher.

Extension task

Brainstorm some ways that you can find out your key stakeholder needs.

Example answer:

- *Ask them directly (record the interview with permission using a smart phone or tablet).*
- *Create an online survey.*
- *Use Google Classroom to create a discussion group and invite family to join.*
- *Look at what my family eats at home or has in the pantry, etc.*



Extension task

Conceptual design

Conceptual design is a description of a proposed technological outcome that uses media such as **working drawings**. These drawings also serve as a plan or guide for the construction or manufacture of something you want to make.

Complete a **working drawing** for your chosen food product that shows the:

- recipe title
- number of serves
- ingredients
- attributes (physical and functional)
- presentation method.

Tip

- *Use the working drawings (potato wedges with salsa) activity answer sheet as an example, or create your own to show students.*



Extension task

Conceptual statement

A conceptual statement in a developed brief communicates the purpose of the technological practice – what is to be done and why.

- 1 Write a conceptual statement that explains the following:
- **what** you are designing
 - **who** you are designing it for (stakeholder)
 - **four** key materials you are using, e.g. ingredients, equipment
 - **why** you are making this
 - **when** and **where** you will make this.

Statement: *(write here)*

Example answer:

We are making beef burgers for our families using seasonal vegetables, e.g. lettuce, tomato, cucumber. The burger patties will be pan fried using a frying pan. We are making this to learn simple ways to make healthier and affordable meals. We will make this in class on Friday, however, I plan to make this for my family at home over the weekend.

Use the following table to explain key attributes (one for each sensory category). These will be the criteria for evaluating your food product.

Tip

- *Use a sensory word bank or encourage students to create their own by searching the internet or reading food magazines.*

	Chosen attribute (e.g. spicy taste)	How will you achieve this attribute?
Appearance 	<i>e.g. fresh</i>	<i>e.g. use fresh bright green lettuce, a ripe red tomato, fresh cucumber and a toasted burger bun.</i>
Taste/flavour 	<i>e.g. sweet and spicy</i>	<i>e.g. top beef patty with 1 teaspoon of sweet chilli sauce.</i>
Aroma/smell 	<i>e.g. grilled</i>	<i>e.g. grill the cheese or beef patty.</i>
Texture 	<i>e.g. crunchy</i>	<i>e.g. use fresh crunchy lettuce and toast the bun.</i>