RESOURCE FOLIO

Introduction

The 8 activities that have been designed to be taught at Corrimal High School which is a public high school within the Illawarra region. Corrimal High School has 455 students who are currently enrolled in the school (Australian Curriculum Assessment and Reporting Authority [ACARA], 2024) , these enrolment numbers have gone up since the previous year. 16% of the students are indigenous and 22% of the students have a language background different to English (ACARA, 2024). Corrimal high school also has a new industrial arts block which was opened in 2022 (NSW Department of Education [NSW DOE], 2022). This new block includes two STEM spaces, a metal and two timber workshops, 4 collaborative learning areas as well as outdoor work benches (NSW DOE, 2022).

Classroom context for Design and Technology

Stage 6 Design and Technology is an ATAR subject that has no pre-requisites from students. It is the first time in 5 years that Corrimal High is able to run a Design and Technology and the excitement from the students was evident through the enrolment numbers into this class. This Yr. 11 Design and Technology class is the largest senior TAS class that is running this year, with 20 students enrolled in the class. The large student enrolment creates a learning environment that is diverse and unique. One student who is an active member in the classroom has high-functioning autism. They have a broad knowledge and a love for design; particularly computing and digital design. This student works well in group activities; however, a loud classroom environment can become very overwhelming for this student. When the classroom becomes loud, they often ask for their group or a partner to work outside. This student is one of the 3 high achieving students in this classroom. These three students consistently complete the classwork to a high standard and have all class activities completed first. These students are encouraged to complete the extension activities or continue on with the development of their project. There are also 3 students who have been identified as low operating students within the classroom. These students struggle with written work, however, show a real interest in the physical projects that will be designed and created in class. The Design and Technology activities have been created to be used midway through Term 1 with the purpose of building up students' skills and preparing students for their mini major project that is due in Term 2.

Summative assessment for the unit:

The summative assessment for the design and technology that students are working towards is the completion of their first mini major project. Students are required to design a children's toy. As part of the submission students will be required to submit a design portfolio and a prototype of their toy.

Classroom context for food

Food Technology is a strong subject at Corrimal High, with the class running the past 10 years. This yr. 12 Food Technology class is the smallest TAS class in the year cohort with 7 students continuing on with the class for the HSC. The Australian Food Industry is the first HSC content area that is taught in yr. 12. This yr. 12 Food technology class is a small learning environment with 7 students. There are 3 gifted high achieving students in the classroom,

all who have goals to get a band 6 in the HSC. These students' complete classwork and assessments to a high standard consistently. They also present practical dishes of an outstanding standard and have had photos of their practical dishes displayed at school events. One student in this class has dyslexia. This student is hard working and completes schoolwork to a sound standard, however they can disengage from a class if it involves independent reading or they have to read aloud. Within the kitchen this student excels and is able to produce beautiful dishes that are at outstanding standard. They have ambitions to become a chef or a pastry chef when they leave school. There are also two students in the classroom who are low students and require assistance during class activities.

Summative assessment for this unit:

The summative assessment task that students are working towards is a case study on an Australian Company. This assessment is a hand-in written task which requires students to research an Australian food company of their choice. Some of the company options include Bega Cheese, Arnott's, Bulla, Boost, Uncle Toby's, Cadbury and Rosella. There are two parts to this case study. In part A students will be required to give a brief description of their chosen company. They will also be required to write 250 words on each aspect of the AFI. Part B of the assessment will require students to examine the role of the chosen company within the AFI and discuss the sustainability of the company.

Reflection

The 8 activities that have been designed were developed closely in reference to both the Stage 6 Design and Technology (NSW Education Standards Authority [NESA], 2013a) syllabus and the Stage 6 Food Technology syllabus (NSW Education Standards Authority [NESA], 2013b) . All 8 activities have been designed in a sequential order for their respective syllabus. These activities build upon prior knowledge and also relate to the assessment task that the classes are working towards.

There are a range of different learning and teaching strategies that were considered during the development of these activities. These activities were influenced by the theory of constructivism; that students are active participants in their learning and that new knowledge is constructed from existing knowledge (Mcleod, 2024) . Another theory that influenced the design of the activities was that learning is social, both Dewey and Vygotsky in their respective studies noted that learning is social, and students can benefit from collaborative learning and the interaction with others (Mcleod, 2024). These theories relate to the 4C's of 21st century education. The implementation of this pedagogical practice is vital as it equips students with skills that will be essential for students to be able to be successful outside of school (Landon, 2019). Bloom's taxonomy was also a vital theory that influenced the design of the activities. Blooms taxonomy is an educational framework that splits 6 main cognitive skills into Low Order Thinking and Higher Order Thinking skills (Adams, 2015). Higher Order Thinking [HOT] skills require students to foster and develop critical and creative thinking skills which are two essential skills that students will need for the 21st century (Chiruguru, 2020). The activities encourage collaboration and communication through group activities and class discussions, they require students to think critically and creatively through the design process of their mini major project. The

activities also allow the teacher to conduct diagnostic and formative assessments through observation, questioning, discussion, and the collection of work.

Along with meeting syllabus outcomes and working through content at a syllabus, it is important that general capabilities such as literacy, numeracy and digital literacy skills of students are being developed in each lesson. Australian Institute of Health and Welfare [AIHW] (2022) note that both literacy and numeracy skills provide key foundations for a students' life outside of school. Digital literacy is a 21st century skill which requires students to effectively be able to research, comprehend and interpret information that is accessed digitally (Pilgrim, 2013). The 8 activities provide ample opportunities for students to develop their literacy and numeracy skills as well as their digital literacy skills.

Diverse learning environments require differentiation and specific adjustments to ensure that all students are supported within the classroom. Differentiation is where an activity of lesson is change for individual learning needs to allow students the opportunity to complete the activity at their level (Australian Government Department of Education, n.d) . This may include providing scaffolds and extra support for students who are struggling with the content or providing extension activities for students who are excelling in the content. There are opportunities for differentiation to be applied across all activities designed as a I believe every student should have the opportunity to be able to attempt the activity at their own level.

GM Generation

Description
In class we have been studying emerging technologies across the Australian Food Industry (AFI) including food production and manufacturing. We have looked at the biotechnology that is involved with genetic modification of foods and we also looked at some examples of genetically modified foods and how they have been modified. In this activity you are required to create your own genetically modified food and create an informational poster on your created food.

Outcome: H1.2 examines the nature and extent of the Australian food industry

Instructions
Activity Type: Individual or pair.
Create an infographic of a genetically modified food that you design using the questions below. This infographic can be created on canvas or on a google doc. Submit the file to the submission link on google classroom at the conclusion of this activity.

The name of your GM food.

Describe your GM Food.

Explain why your GM food would be favourable for production

Which shareholder would benefit from the development of the GM food? E.g. farmers, consumers, supermarkets (wholesalers)?

Does the development of this GM food pose any concerns? E.g. environmental, health, agricultural?

Does the creation of GM food benefit the environment? If so, how would this food contribute to sustainable practices within the AFI?

Extension activity:
Design a dish that uses your GM food

Waste Warriors

Description
In class we have been looking at the various aspects of the Australian Food Industry (AFI) including the impact that various operations of the AFI have on the environment. In this activity you will watch two short videos on food waste and answer the questions that have been provided. This activity will show you just how much food is wasted across the world and what strategies can be implemented to reduce this waste.

Outcome: H1.4 evaluates the impact of the operation of an organisation within the Australian food industry on the individual, society and environment

Instructions:
As a class we will watch the two videos together as a class.

https://www.youtube.com/watch?v=ishA6kry8nc

https://www.youtube.com/watch?v=wgLuXvtaLyQ&t=1s

Answer the following questions based on the videos.
Submit your responses on google classroom.

Outline ONE environmental impact that is caused by food wastage.

Describe TWO different waste minimisation strategies that can be implemented within a household.

Analyse the impact that food wastage has on the environment.

Extension activity:
Answer the question based on the statement provided. Submit your response to the extension tile
Supermarkets' should be able to reject food based on the appearance or size of the food. Why or why not? Justify your response to the statement above.

Budget Mania

Description
You have been learning about the aspects of the Australian Food Industry (AFI)
Recently looking at the economy and how that influences the AFI. In this activity you will create a shopping list that buys as many products possible while staying under the budget that is provided.

Outcomes: H1.4 evaluates the impact of the operation of an organisation within the Australian food industry on the individual, society and environment

Instructions for the activity:
You will work into pairs or groups to complete this activity. Each group will be assigned a scenario which will give you the size of the family you are buying for, the budget available and the list of items that must be bought. Using the Coles, Woollies, Aldi or Foodworks websites; create a shopping list which includes all the required items. This list should be written down in the google slides provided (make sure to make a copy of the slide before you start making the list). You are able to use more than one supermarket website to create your shopping list.

Group one
Family of 3 - $300
Items that must be bought:
-3 x meat products
-6 x different vegetables
- 3 x different fruit
-3 x snack foods - e.g. muesli bars
- 1 x loaf of bread
-Eggs
-Milk
-1x 500g bag of cheese (the size can be larger)
-1 x confectionary food
-2x 400g (minimum size, can be bigger) box of cereal

Group 2
Family of 2 - $200
Items that must be bought:
-2 x meat products
-4 x different vegetables
-2 x different fruit
-2 x snack foods - e.g. muesli bars
-1 x loafs of bread
-Eggs
-Milk
-1x 250g bag of cheese (the size can be larger)
-1 x confectionary food
-1x 400g (min size, can be bigger) box of cereal

Group 3
Family of 5 -$500
Items that must be bought:
-5 x meat products
-8 x different vegetables
-6 x different fruit
-4 x snack foods - e.g. muesli bars
-3 x loafs of bread
-Eggs
-1 x 3L Milk
-1x 750g bag of cheese (the size can be larger)
-2 x confectionary food
-2x 400g (min size, can be bigger) box of cereal
-1 x frozen food - e.g. chicken fingers

Scaffold shopping list budget:
Scaffold

Item	Bought from	Price

Total		$

Extension activity:
Design a meal that can be made with the items that were bought. You are able to common items that you would find in the pantry such as oil, spices, and common items that you would find in the fridge such as butter, minced garlic.

Case Study – Wicked Sister

Description
You have been learning about the aspects of the Australian Food Industry (AFI). Over the last week we have been learning about the different aspects within the Australian Food Industry (AFI). In this activity you will be conducting a company analysis on Wicked Sista. In this analysis you will be given the same heading as your assessment task. As a class we will work through the analysis, we will model structure responses to the headings based on information that you provide. The responses created will create a template that you are able to use for your assessment task.

Outcomes: H1.4 evaluates the impact of the operation of an organisation within the Australian food industry on the individual, society and environment. H3.1 investigates operations of one organisation within the Australian food industry.

Instructions:
In pairs you will be given 5 minutes to collect information on one of the following headings assigned to you. The information should be written as dot points.
Headings

- levels of operation and mechanisation of the company
- research and development within the company
- quality assurance
- consumer influences on the company such as value added foods
- impact of the company on the environment including waste management, packaging practices, production techniques, and transportation
- impact of the company on the economy, e.g. generation of profit and changes in employment
- impact on of the company society including lifestyle changes
- career opportunities and working conditions within the company

As a class we will fill out the template below and create a structured response to the headings.

Given Heading:

List information found
Information found:

Template for Case Analysis:

Heading:

Structured Response:

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