**YEAR 10 Course: Draft lessons, term 1**

|  |  |  |  |
| --- | --- | --- | --- |
| LESSON | CLASS ACTIVITY | LEARNING INTENTIONS | ROOM AND RESOURCES |
| Thursday7th Feb | * Introduction to course, basic food safety
* DVD: Chemistry of cooking
 | * To establish class/practical expectations
* To have a basic understanding of some of the properties of food that will be covered in more depth: aeration, denaturation, coagulation, gelatinisation, browning reaction, emulsification and crystallisation
 | T5Group cardsClear filesCloze exercise sheet of class expectationsUnit outlines Computer with click view |
| Friday8th Feb | * Mystery box practical (each group has a mystery box of ingredients they need to use to make up an edible food product)
 | * To practise room routines and practical room expectations
 | Group cardsMystery ingredients for each group |
| Monday 11th Feb | * Sensory tests taste and smell
 | * To introduce students to sensory analysis
 | Blind foldsFood samples |
| Tuesday 12th Feb | * Compare a range of bought ice-creams all vanilla different brands– blind sensory evaluation, appearance, flavour and texture.
* Rank and rate each sample
* Guess the ingredients used in each sample. (prize for the student who guessed the most number of correct ingredients)
* Discussion on what is ice-cream
 | * To give an example of how to set up a sensory evaluation session
* Literacy – use of descriptors
* Understanding of rating and ranking tests and how and when these can be used.
 | T3Ice cream samples in small tasting pots labelled with codesRating and ranking testing sheetsSensory descriptor sheetsGuess the ingredient worksheetIce cream identification and list of ingredients sheet |
| Thursday14th Feb | * Valentines Day Make chocolates: Melt chocolate and use to coat moulds and fill with a range of fillings such as biscuit crumbs, mint filling, and or nuts
 | * Explore how chocolate behaves and discuss the properties of chocolate. Melt it in different ways – Bain Marie, microwave and a little directly in a pot.
 | Different types of chocolate and equipment for melting chocolate different ways. Thermometers, chocolate moulds, fillings for chocolates, food colouring and paint brushes |
| 15th Feb | * Ice-cream – prior knowledge

Students are put into groups of 3 to begin the ice-cream investigation. Introduction to the unit and what is expected. Each group to complete a power point presentation or a poster showing the results of their investigation.Each group presents these findings to the rest of the class at the end of the investigationBrainstorming on A3 paper in groups -What is ice-cream?Why was it developed?Who developed it – what is its history?What ingredients is it made from?How is it made?How is it eaten?When is it eaten?Who eats it?What is its nutritional value?Put the brainstorms up around the room. Each group looks at all the displays and each group is given one of the questions to report back to the rest of the class on using all the posters.Dvd clip on ice cream | * Group dynamics
* Expectations and the outcome for the investigation
* Finding out students prior knowledge
 | T5 planning room |
| 18th Feb | * How right were we?
* Making up vanilla ice cream
 | * Physical and functional attributes of each ingredient used to make a basic vanilla ice cream, custard based
 | T3Ice cream recipes, IngredientsPlastic containers for freezingSticky labelsPhysical and functional attributes sheets |
| 19th Feb | * History of ice-cream research session.

Prepare a brief report to present to the rest of the class | * How to research effectively
* Citation and correct referencing
 | Library LC1 |
| 22nd Feb | * Ice cream churning. Save a small amount of mixture to freeze without churning to compare with the churned ice- cream later.

Meringue making to use up left-over egg whites and explore the properties of egg whites | * How to use an ice- cream maker – to find out how it works and to explore the properties of egg whites.
* How to label a product for freezing
 | T3Chilled ice cream mixes, ice cream makers, recipes , ingredients and equipment for making meringues |
| 25th Feb | * Ice-cream tasting

Each group sets up a sensory evaluation for their ice cream and makes another batch | * Practice at setting up sensory evaluation
* Repeat making a custard base to get a better understanding of the functions of the ingredients being used
 | T3Sensory evaluation sheets |
| 26th Feb | * Churn the ice- cream made yesterday.
* Egg white experiments
 | * Consistency with churning and properties of ingredients
 | T3Ice cream mixesEgg white experiment sheets |
| 28th Feb | * Complete history of ice cream research (present findings to the rest of the class next Thursday)
 | * Group work
* Research skills
 | T9 computer room |
| 1st March | * Tasting student-made vanilla ice-cream and meringues
* Physical and functional characteristics of your ice cream
* Introduction to star diagrams (each group produces a star diagram for their ideal ice-cream)
 | * Tech products
* Food labelling
 | T3 Star diagram sheetSensory descriptor sheet |
| 4th March | * More tasting!

Flavoured ice creamsGuess the ingredientsPhysical and functional attributes | * Literacy skills more use of descriptors
* Thinking skills
* Looking at labels
 | T3Ice cream samples in small tasting pots labelled with codesRating and ranking testing sheetsSensory descriptor sheetsGuess the ingredient worksheetIce cream identification and list of ingredients sheet.Photographs of the labels on the ice cream containers |
| March 5th | * Making flavoured ice creams (each group making up a recipe of their choice chosen last week)
 | * How to follow a recipe and explore the properties of the ingredients used
 | Trays set up for each group with the ingredients they need |
| March 7th | * Evaluation of work so far
* Each group briefly presents their findings on the history of ice cream and an evaluation of the ice creams made. Which were preferred and why? What was the function of each ingredient used?
 | * To share work so far
* Presentation and research skills
 | T5 Group posters |
| March 8th | * Churning of flavoured ice creams
* More sensory analysis. Students choose an appropriate sensory test to test the ice creams made and prepare the test sheet.
 | * How to set up a sensory evaluation and collect useful information
 | T3 |
| March 12th | * Exploring ingredients

Each group has a worksheet with tasks and questions-* Mix and match exercise
* Guess the ingredients
* Exploring ingredients 1. Looking at eggs
* Exploring ingredients 2. Cooking eggs
 | * Literacy for tech products
* Using the senses and prior knowledge to guess ingredients (the ingredients were all found in bought chocolate or vanilla ice cream. Students had previously looked at the labels on the ice cream containers)
* Applying knowledge learnt and reinforcing the terms used for tech products (Levels 3 and 4 of the NZC Tech Products)
 | T3Work sheetsMix and match tech product terminology sheetsIngredients on saucers for blind tasting. Label the top and bottom of the saucer with the code. Cocoa, cocoa liquor, milk powder, glucose, sucrose, salt, vanilla flavouring, sunflower oil, sweetener, milk, cream.Eggs (2 eggs per group) thermometer (one per group) |
| March 14th |  |  |  |
| March 15th | Relief |  |  |
| March 18th | * Writing up setting agents
 |  |  |
| March 19th | * Brandy snaps
 |  |  |
| March 21st | * Churn ice cream and fill brandy snaps
 |  |  |
| March 22nd | * desserts
 |  |  |
| March 25th | * Demonstrate making Easter eggs and hokey pokey
 | * Properties of ingredients.

Examples of forming, manipulation and transformation | T3Easter egg moulds, chocolate moulds, paint brushes, chocolate, mix and match terminology exercise. Students complete this at the beginning of the lesson. Leave it on their table and use it to work our examples of each one. |
| March 26th | * Easter egg making
 |  |  |
| March 28th | * Complete chocolates and Easter eggs. Wrap
 |  |  |
| April 4th | * Introduction to setting agents.

Each group has to set 500ml of water with any or a combination of the setting agents out on the trolley. Cornflour, arrowroot, flour, gelatine, caster sugar, jelly crystals. |  |  |
| April 5th | * Repeat of above lesson making changes based on what they found out
 |  | T5 |
| April 9th | * Setting agents
* Swiss roll
 |  |  |
| April 11 | * Exploring setting agents
 | * Revision of terminology and setting agents including uses and conditions required
 |  |
| April 12 | * Exploring materials tech products test
 |  | T5 |
| April 15th | * Modelling using a nutritional analysis programme.
 |  | C1 computer room |
| April 16th | * Cleaning the room
 |  |  |
| April 18th  | * Cleaning the room
 |  |  |
| April 19th | Relief. Going over the test and setting agents DVD. |  |  |

The unit could have a tech products and characteristics of tech focus where students develop their ideal ice cream using and gaining knowledge of the structure and composition of the ingredients and how they use this information to manipulate the ingredients they are using to come with their “ideal” product.

Next step would be to develop a layered dessert for specified stakeholders for a particular occasion – tech practice focus but incorporating all the knowledge used.