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**Knowledge Rich Curriculum Plan**

**Year 11 Food Preparation and Nutriton**



| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know how to…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this, students need to already:* | **Assessment**  |
| --- | --- | --- | --- | --- |
| * 1. T - Identifying the Task
 | * Research, plan and carry out an investigation into the working characteristics, functional and chemical properties of ingredients.
* Develop research skills to gather and use primary and secondary sources of information.
* Develop analysis and evaluation skills and explain how findings will influence practical investigations.
* Write a hypothesis or prediction based upon research findings.
* Plan relevant and appropriate practical investigations referring to research findings and hypothesis.
 | NEA- Non-examination AssessmentIdentify- Establish or indicate who or what (someone or something) is.Research- the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions.Plan- a detailed proposal for doing or achieving something.Investigation- The action of investigating something or someone; formal or systematic examination or research. | * Understand the definition of an NEA and how they will be assessed (i.e. worth 15% of the total qualification and must be completed within 8 hours.
 | Research and plan the task: maximum 5 marksStudent’s will be expected to:• use a range of relevant sources to research the task• create a plan of action• predict an outcome |
| 4-5. T- Carrying Out the Task | * Carry out a range of practical investigations into the working characteristics, functional and chemical properties of ingredients as identified in research findings.
* Identify essential controls when carrying out a food investigation.
* Record results from investigation using charts, graphs, tables, sensory testing and annotated photographs.
* Explain how results of each investigation should be used to form the next stage of investigation with reasoning.
 | Investigation- The action of investigating something or someone; formal or systematic examination or research.Characteristic- a feature or quality belonging typically to a person, place, or thing and serving to identify them.Functional properties- describes how ingredients behave during preparation and cooking, how they affect the finished food product in terms of how it looks, tastes, and feels.Chemical properties- A chemical property describes the ability of a substance to undergo a specific chemical change. Ingredients- any of the foods or substances that are combined to make a particular dish.Charts- a sheet of information in the form of a table, graph, or diagram.Graphs- a diagram showing the relation between variable quantities, typically of two variables, each measured along one of a pair of axes at right anglesTables- a set of facts or figures systematically displayed, especially in columns.Sensory testing- Sensory testing involves scientific methods for testing the appearance, texture, smell and taste of a product.Annotation- the action of annotating a text or diagram. | * Know how to research, plan and carry out an investigation into the working characteristics, functional and chemical properties of ingredients.
* Know how to develop research skills to gather and use primary and secondary sources of information.
* Know how to develop analysis and evaluation skills and explain how findings will influence practical investigations.
* Know how to write a hypothesis or prediction based upon research findings.
* Know how to plan relevant and appropriate practical investigations referring to research findings and hypothesis.
 | Investigate the working characteristics, function and chemical properties of ingredientsthrough practical experimentation and use the findings to achieve a particular result:maximum 15 marksStudents will be expected to:• demonstrate their ability to review and make improvements to the investigation byamending the ingredients to include the most appropriate ingredients, process and cookingmethod• demonstrate an understanding of the working characteristics and functional and chemicalproperties of the ingredients selected• record the outcomes of their investigation, the modification and adjustments made duringthe preparation and cooking process, and the sensory preference tests carried out toformulate the results |
| 6-9. Analyse and evaluate the task | * Analyse and interpret the results of investigative work.
* Link the results to research explaining the working characteristics, functional and chemical properties of ingredients tested.
* Write a conclusion to the hypothesis/prediction with reasons and justifications.
* Explain how results can be applied into practical food preparation and cooking.
 | Analyse- examine (something) [methodically](https://www.google.com/search?rlz=1C1GCEB_enGB987GB987&biw=639&bih=568&q=methodically&si=ACFMAn9IMdf-m8dGI-RtPy6zxE7lRCMvAbLd3WykrZKAwe9f8VbBBYjVRzFZrht-2hi_-A5vQOx6rlinSLM2j480fq6HlP6Dvp-C2Uz7cwKV_289u2dNnM0%3D&expnd=1) and in detail, typically in order to explain and interpret it.Interpret- explain the meaning of (information or actions).Investigative- of or concerned with investigating something.Results- an item of information obtained by experiment or some other scientific method; a quantity or formula obtained by calculation.Characteristic- a feature or quality belonging typically to a person, place, or thing and serving to identify them.Conclusion- a judgement or decision reached by reasoning.Hypothesis- a supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation. | * Know how to carry out a range of practical investigations into the working characteristics, functional and chemical properties of ingredients as identified in research findings.
* Know how to identify essential controls when carrying out a food investigation.
* Know how to record results from investigation using charts, graphs, tables, sensory testing and annotated photographs.
* Know how to explain how results of each investigation should be used to form the next stage of investigation with reasoning.
 | Analyse and evaluate the task: maximum 10 marksStudents will be expected to:• analyse the data and results collected, draw conclusions• justify findings, the reasons for the success or failure of the ingredients selected to trial• evaluate the hypothesis and confirm if the prediction was proven |
| 10-11- Mock Exams  |  |  |  |  |
| 12- Analysing the Task | * T- Students will know how to analyse the official NEA2 brief.

Understand the requirements of the food preparation task including: * analyse a task and carry out research on a life stage/dietary group or culinary tradition
* demonstrate a range of technical skills • plan a final menu for chosen life stage/dietary group or culinary tradition
* prepare, cook and serve three dishes in a three-hour session
* analyse and evaluate final menu.
 | NEA- Non-examination AssessmentIdentify- Establish or indicate who or what (someone or something) is.Research- the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions.Plan- a detailed proposal for doing or achieving something.Investigation- The action of investigating something or someone; formal or systematic examination or research. | * Understand the definition of an NEA and how they will be assessed (i.e. worth 35% of the total qualification and must be completed within 10 hours.
 | N/A |
| 13-19- Investigate and plan the task (to include trialling and testing): | * Plan and carry out research into chosen life stage, dietary group or culinary tradition.
* Develop research skills to gather and use primary and secondary sources of information.
* Develop analysis and evaluation skills and explain how findings will influence practical investigations.
* Present research in a concise and effectively communicated portfolio of work.
* Plan relevant and appropriate practical activities.
* Make a range of suitable dishes showcasing technical skill, creativity and practice making skills.
* Demonstrate a good understanding of ingredients and making processes.
* Work with confidence, independence and accuracy. Work safely and hygienically at all times.
* Present dishes with a good level of technical skill and with a suitable level of finish and decoration for serving.
* Carry out sensory analysis of all the dishes to determine final choice of menu.
* Evaluate and determine the final menu dishes.
 | Investigation- The action of investigating something or someone; formal or systematic examination or research.Characteristic- a feature or quality belonging typically to a person, place, or thing and serving to identify them.Functional properties- describes how ingredients behave during preparation and cooking, how they affect the finished food product in terms of how it looks, tastes, and feels.Chemical properties- A chemical property describes the ability of a substance to undergo a specific chemical change. Ingredients- any of the foods or substances that are combined to make a particular dish.Charts- a sheet of information in the form of a table, graph, or diagram.Graphs- a diagram showing the relation between variable quantities, typically of two variables, each measured along one of a pair of axes at right anglesTables- a set of facts or figures systematically displayed, especially in columns.Sensory testing- Sensory testing involves scientific methods for testing the appearance, texture, smell and taste of a product.Annotation- the action of annotating a text or diagram. | * Know how to analyse the official NEA2 brief.

Understand the requirements of the food preparation task including: * Know how to analyse a task and carry out research on a life stage/dietary group or culinary tradition
 | Students will be expected to:• use a range of research skills to investigate the task• demonstrate knowledge and understanding in the choice of dishes when selecting a finalmenu• plan the task and produce a clear dovetailed sequence of work to include health and safetypoints and quality points. |
| 20-23 - Investigate and plan the task (selection of dishes and production plan): | * Select suitable final dishes to make for the three-hour making session.
* Produce a three-hour time plan that includes food safety. Justify reasons for choice of final dishes and menu with reference to skills, ingredients, nutrition, cooking methods, costs, provenance, sensory properties and portion size.
 | Skills- the ability to do something well.Ingredients- any of the foods or substances that are combined to make a particular dish.Nutrition- food or nourishment.Provenance- the beginning of something's existence; something's origin.Sensory properties- an intrinsic, physical characteristic of an ingredient that can be perceived by the human senses.Portion size- A portion is the amount of a food that you eat at one time, for example how much food you put on your plate at a meal or how much is in a packet. | * Have planed and carried out research into chosen life stage, dietary group or culinary tradition.
* Developed research skills to gather and use primary and secondary sources of information.
* Developed analysis and evaluation skills and explain how findings will influence practical investigations.
* Presented research in a concise and effectively communicated portfolio of work.
* Planned relevant and appropriate practical activities.
* Made a range of suitable dishes showcasing technical skill, creativity and practice making skills.
* Demonstrated a good understanding of ingredients and making processes.
* Worked with confidence, independence and accuracy. Work safely and hygienically at all times.
* Presented dishes with a good level of technical skill and with a suitable level of finish and decoration for serving.
* Carried out sensory analysis of all the dishes to determine final choice of menu.
* Evaluated and determined the final menu dishes.
 | Students will be expected to:• use a range of research skills to investigate the task• demonstrate knowledge and understanding in the choice of dishes when selecting a finalmenu• plan the task and produce a clear dovetailed sequence of work to include health and safetypoints and quality points. |
| 24 - Practical Exam Week | * P- Students will know how to cook three dishes which meet the requirements of the exam board brief.
 | T- Sequencing- Arrange in a particular order.T- Timing- The choice, judgement, or control of when something should be done.T- Mise-en-place- Preparation before starting to cook.T- Cooking- The practice or skill of preparing food by combining, mixing, and heating ingredients.T- Cooling- Having the effect of making something less warm or hot.T- Hot-Holding- The process of keeping the cooked food at a safe temperature while it is ready for service.T- Completion- The action or process of completing or finishing something.T- Serving- Present (food or drink) to someone. | * Students need to already know the Food Department routines and expectations including; removing blazers, handwashing, tying hair back, putting an apron on, filling sinks with hot water/washing up liquid, storing bags appropriately and meeting their class teacher at the front of the room.
* Students need to already know how to appropriately prepare themselves and the environment for a practical lesson using the acronym HATTIE.
* Students need to already know how to turn on the oven.
* Students need to already know how to weigh ingredients.
* Students need to already know how to safely use a range of equipment.
* Students need to already know to place their product in the oven/ use the hob.
* Students need to already know to safely remove their product from the oven/ hob
* Students need to already know how to wash up- using the departmental washing up procedures.
 | Formal Exam setting with moderator. Students have 3 hours to cook all chosen exam dishes.  |
| 25-26. Assess the production of the presented dishes. | * T- Students will know how to provide a review of their planning, preparation, and cooking, highlighting areas of success and of potential further development.
 | T- Analyse- Examine (something) methodically and in detail. T- Planning- The process of planning activities or events in an organized way so that they are successful or happen on time.T- Preparation- The state of being ready for something that will happen, or an action taken to become ready.T-Cooking- The activity of preparing or cooking food.Highlight- To attract attention to or emphasize something important.Success- The achieving of the results wanted or hoped for.Development- the process of growing or changing and becoming more advanced. | * Students need to already know the brief and how to measure their skills against the exam board practical criteria.
 | Recall, revisit and activate opportunities within the lesson.Teacher/ LSA support where necessary. |
| 27-28. Revision- Principles of Nutrition.Diet and Good Health | * Define macronutrients and micronutrients in relation to human nutrition and their role in human nutrition.
* Identify the recommended daily intake (RDI) and the percentage energy values of protein, fat and carbohydrates: monosaccharides (sugars) polysaccharides (starch) and non-soluble polysaccharides (dietary fibre) vitamins and minerals, for:
* (i) a range of life-stages: toddlers, teenagers, early, middle and late adulthood
* (ii) individuals with specific dietary needs or nutritional deficiencies to include coeliac disease; diabetes (type 2 diabetes only to be considered), dental caries; iron deficiency anaemia; obesity; cardiovascular disease (CVD); calcium deficiencies to include bone health; nut or lactose (dairy) intolerances
* (iii) individuals with specific lifestyle needs to include vegetarians: lacto-ovo, lacto, vegan, and those with religious beliefs that affect choice of diet, to include Hindu, Muslim, Jewish
 | Macronutrients – the nutrients needed in larger amounts, protein, carbohydrates and fatMicronutrients – the nutrient needed in smaller amounts, vitamins and minerals Basal metabolic rate - the number of calories you burn as your body performs basic (basal) life-sustaining functionTotal daily energy expenditure – your basal metabolic rate and activity level Amino acids - Simpler units of protein, made up of long chains.High Biological Value (HBV) - Protein foods containing all the essential amino acids.Low Biological Value (LBV) - Protein foods lacking in one or more the essential amino acids.Kwashiorkor - A form of malnutrition linked to protein deficiency. | * Macronutrients are defined as a class of chemical compounds which humans consume in the largest quantities.
* Micronutrients are required by humans throughout life in small quantities to facilitate a range of physiological functions.
* Be able to recommend guidelines for a healthy diet
* Identify how nutritional needs change due to age, life style choices and state of health
 | Recall, revisit and activate opportunities within the lesson.Teacher/ LSA support where necessary. |
| 29-30. Revision- The Science of Food and Food Spoilage | * Have a theoretical and practical working knowledge and understanding of how preparation and cooking affects the sensory and nutritional properties of food which includes:
* Why food is cooked, to include, digestion, taste, texture, appearance and to avoid food contamination
* How heat is transferred to food through conduction, convection and radiation and how and why the production of some dishes relies on more than one method of heat transference
* How selection of appropriate cooking methods can: (i) conserve or modify nutritive value, e.g. steaming of green vegetables (ii) improve palatability e.g. physical denaturation of protein
* The positive use of micro-organisms such as bacteria in dairy products: cheese, yoghurt; meat products: salami, chorizo and fermentation of sugar in drinks
 | Conduction - is the process of heat being transferred between objects through direct contactConvection - process by which heat is transferred by movement of a heated fluid such as air or water.Radiation - Grills in cookers and toasters use radiation to cook food. They emit waves of radiation, when these waves reach the food they are absorbed and heat up the food.Bacteria - A type of very small organism that lives in air, earth, water, plants, and animals, often one that causes disease: Microorganisms - Usually single cell microscopic organisms such as bacteria, moulds and fungi.  Moulds - A fungus that grows in filaments creating a fuzzy appearance on food. It is a soft, green or grey growth that develops on old food. May give some cheeses their characteristic colours and flavours.  | * Have undertaken experimental work and produced dishes by following or modifying recipes to develop and apply knowledge and understanding related to:

the working characteristics, functional and chemical properties of ingredients to achieve a particular result:* carbohydrates – gelatinisation, dextrinization
* fats/oils – shortening, aeration, plasticity and emulsification
* protein – coagulation, foam formation, gluten formation, denaturation (physical, heat and acid)
* fruit/vegetables – enzymic browning, oxidisation
 | Recall, revisit and activate opportunities within the lesson.Teacher/ LSA support where necessary. |
| 31-32 Revision- Where food comes from | * Have a theoretical and practical working knowledge and understanding of
* food origins to include where and how foods are grown, reared, or caught
* food miles, impact on the carbon footprint, buying foods locally
* impact of packaging on the environment versus the value of packaging
* sustainability of food: the impact of food waste on the environment, local, global markets and communities, effect of food poverty
* food security: access to safe sufficient food for all (World Health)
 | Transportation - The action of transporting someone or something or the process of being transported. Food Miles - The distance the food travels from food to plate. Climate Change - A large-scale, long term shift in the planet's weather patterns or average temperatures. Recycling - The action or process of converting waste into reusable material.T – Packaging - Materials used to wrap or protect goods.Composting- Make (vegetable matter or manure) into compost.Traceability - The ability to track any food through all stages of production, processing and distribution.Farm to Fork - Used to refer to the various processes in the food chain from agricultural production to consumption. | * Had the opportunity to explore and gain knowledge of foods and recipes from at least two international countries (these countries are at the discretion of the centre and do not have to significantly differ from the UK.) To include:
* The distinctive features, characteristics and eating patterns of different cuisines. Cuisine is defined as a style characteristic of a particular country or region, where the cuisine has developed historically using distinctive ingredients, specific preparation and cooking methods or equipment, and presentation or serving techniques.
* Traditional and modern variations of recipes to include variations of recipes to include changing use of food commodities, changes to nutritional guidelines, and use of modern cooking methods and or equipment
* Meal structures: presentation of menus within different cultures
 | Recall, revisit and activate opportunities within the lesson.Teacher/ LSA support where necessary. |
| 33 Revision- Factors affecting food choice | * Have a theoretical and practical working knowledge and understanding of:
* How sensory perception guides the choices that people make, how taste receptors and olfactory systems work
* the sensory qualities of a range of foods and combinations and how to set up tasting panels for preference testing
 | Climate Change - A large-scale, long term shift in the planet's weather patterns or average temperatures. Recycling - The action or process of converting waste into reusable material.Packaging - Materials used to wrap or protect goods.Composting - Make (vegetable matter or manure) into compost. | * Understand the range of factors that influence food choices, including, enjoyment, preferences, seasonality, costs, availability, time of day, activity, celebration or occasion and culture
* Identify the choices that people make about certain foods according to religion, culture, ethical belief, medical reasons or personal choices
* Know how to make informed choices about food and drink to achieve a varied and balanced diet, including awareness of portion sizes and costs
* Understand how information about food is available to the consumer, including food labelling and marketing and how this influences food choice
 | Recall, revisit and activate opportunities within the lesson.Teacher/ LSA support where necessary. |
| 34 Revision Preparation and Cooking Techniques | * Demonstrate skills from each skill group to include:
* Planning for cooking: (i) a single dish (ii) a number of dishes in one session (to ensure a dovetailed action plan)
* preparation of ingredients to select recipes, e.g. weigh and measure liquids and solids, use knife skills, combine and shape, tenderise and marinate
* cooking a selection of recipes, e.g. water-based methods, using the oven, set a mixture, select and adjust cooking times and temperatures, judge and manipulate sensory properties: seasoning, test for readiness
* presenting a selection of recipes, e.g. shaping and finishing a dough, glazing and food styling, preparing fruits and vegetables as a garnish
 | Conduction - is the process of heat being transferred between objects through direct contactConvection - process by which heat is transferred by movement of a heated fluid such as air or water.Radiation - Grills in cookers and toasters use radiation to cook food. They emit waves of radiation, when these waves reach the food they are absorbed and heat up the food | * Select appropriate preparation, cooking and serving techniques when producing dishes
* Work safely: follow correct personal and food safety and hygiene practices and procedures
* Work independently: make own judgements, e.g. cooking methods, cooking time, manipulating taste, texture and appearance
* Use sensory descriptors appropriately and correctly
 | Recall, revisit and activate opportunities within the lesson.Teacher/ LSA support where necessary. |
| 35. Exam Week & boost and secure sessions.  | * Students will draw on the unit of works knowledge in application to exam style questions.
* Students will know how to approach exam style questions.
* Students will know how to correctly answer the examination questions using key command words.
* Any hinge points identified from the exam will be addressed in a reteach
 | Review of all key terminology during warm-up sessions.  | • Define macronutrients and micronutrients in relation to human nutrition and their role in human nutrition.• Identify the recommended daily intake (RDI) and the percentage energy values of protein, fat and carbohydrates: monosaccharides (sugars) polysaccharides (starch) and non-soluble polysaccharides (dietary fibre) vitamins and minerals, for:  (i) a range of life-stages: toddlers, teenagers, early, middle and late adulthood  (ii) individuals with specific dietary needs or nutritional deficiencies to include coeliac disease; diabetes (type 2 diabetes only to be considered), dental caries; iron deficiency anaemia; obesity; cardiovascular disease (CVD); calcium deficiencies to include bone health; nut or lactose (dairy) intolerances (iii) individuals with specific lifestyle needs to include vegetarians: lacto-ovo, lacto, vegan, and those with religious beliefs that affect choice of diet, to include Hindu, Muslim, Jewish• Have a theoretical and practical working knowledge and understanding of how preparation and cooking affects the sensory and nutritional properties of food which includes:  Why food is cooked, to include, digestion, taste, texture, appearance and to avoid food contamination How heat is transferred to food through conduction, convection and radiation and how and why the production of some dishes relies on more than one method of heat transference  How selection of appropriate cooking methods can: (i) conserve or modify nutritive value, e.g. steaming of green vegetables (ii) improve palatability e.g. physical denaturation of protein  The positive use of micro-organisms such as bacteria in dairy products: cheese, yoghurt; meat products: salami, chorizo and fermentation of sugar in drinks• Have a theoretical and practical working knowledge and understanding of food origins to include where and how foods are grown, reared, or caught  food miles, impact on the carbon footprint, buying foods locally impact of packaging on the environment versus the value of packaging  sustainability of food: the impact of food waste on the environment, local, global markets and communities, effect of food poverty food security: access to safe sufficient food for all (World Health)• Have a theoretical and practical working knowledge and understanding of: How sensory perception guides the choices that people make, how taste receptors and olfactory systems work  the sensory qualities of a range of foods and combinations and how to set up tasting panels for preference testing  • Demonstrate skills from each skill group to include: • Planning for cooking: (i) a single dish (ii) a number of dishes in one session (to ensure a dovetailed action plan) • preparation of ingredients to select recipes, e.g. weigh and measure liquids and solids, use knife skills, combine and shape, tenderise and marinate • cooking a selection of recipes, e.g. water-based methods, using the oven, set a mixture, select and adjust cooking times and temperatures, judge and manipulate sensory properties: seasoning, test for readiness • presenting a selection of recipes, e.g. shaping and finishing a dough, glazing and food styling, preparing fruits and vegetables as a garnish | Students will complete an end of key stage assessment on the topic.  |