

Unit Title: FRUIT AND VEGETABLES & THE SCIENCE OF COOKING FOOD	Year: 10	Time: approx. 43 hours	Term: 1
<u>Key Concept:</u> To enable pupils to learn where food comes from, how to cook a range of dishes safely and hygienically and to apply their knowledge of healthy eating. Pupils will have the opportunity to work through the following contexts: Domestic and local (home and health); Industrial (food and agriculture).			
<u>Aims:</u> Learners will: • be able to demonstrate effective and safe cooking skills by planning, preparing and cooking a variety of food commodities whilst using different cooking techniques and equipment • develop knowledge and understanding of the functional properties and chemical characteristics of food as well as a sound knowledge of the nutritional content of food and drinks • understand the relationship between diet, nutrition and health, including the physiological and psychological effects of poor diet and health • understand the economic, environmental, ethical and socio-cultural influences on food availability, production processes, diet and health choices • demonstrate knowledge and understanding of functional and nutritional properties, sensory qualities and microbiological food safety considerations when preparing, processing, storing, cooking and serving food • understand and explore a range of ingredients and processes from different culinary traditions (traditional British and international) to inspire new ideas or modify existing recipes. <u>Learning outcomes overview:</u> <u>FRUIT AND VEGETABLES:</u> For each food commodity learners need to know and understand:			

- the value of the commodity within in the diet
- features and characteristics of each commodity with reference to their correct storage to avoid food contamination
- the working characteristics of each commodity, with reference to the skill group and techniques table listed in Appendix A, e.g. when subjected to dry/moist methods of cooking
- the origins of each commodity

For each food commodity learners need to be able to:

- experiment with the commodity to explore physical and chemical changes that occur as a result of given actions
- consider complementary actions of a commodity in a recipe
- prepare and cook dishes using the commodities

THE SCIENCE OF COOKING FOOD:

Learners should have a theoretical and practical working knowledge and understanding of how preparation and cooking affects the sensory and nutritional properties of food. To include:

- 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 rely 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

Learners need to undertake experimental work and produce 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:
 - (i) carbohydrates – gelatinisation, dextrinization
 - (ii) fats/oils – shortening, aeration, plasticity and emulsification
 - (iii) protein – coagulation, foam formation, gluten formation, denaturation (physical, heat and acid)
 - (iv) fruit/vegetables – enzymic browning, oxidation
- reasons why particular results may not always be achieved, e.g. a sponge cake sinks, a sauce goes lumpy
- how to remedy situations when desired results may not be achieved in the first instance

All Pupils will:

Carry out 20 hours+ practical cooking, making a range of dishes using fruit and vegetables. List the principles of food safety and hygiene when preparing and cooking ingredients. Describe the principles of *The Eat well Guide* and relate it to their own diet. Name the main nutrients provided by *The Eatwell Guide* food groups. Explain the 8 tips for healthy eating. Describe where a range of fruit and vegetables are from and how they are used to create dishes. Identify some factors that can affect food choice. Apply knowledge of ingredients to design a dish for a specific purpose.

Most pupils should:

Carry out with skill and accuracy 20 hours+ practical cooking, making a range of fruit and vegetables based dishes. Explain the principles of food safety and hygiene when preparing and cooking ingredients. Describe and explain the principles of *The Eat well Guide* and relate it to the diet. Name the main nutrients and their functions provided by *The Eat well Guide* food groups. Explain and apply the 8 tips for healthy eating to their own diet. Describe and categorise a range of fruit and vegetables, state how they are used to create a wide range of dishes. Identify and explain a range of factors that can affect food choice. Apply knowledge of ingredients to design a dish for a specific purpose and justify their choice.

Some pupils will have progressed further and could:

Independently, with skill and accuracy carry out 20+ hours practical cooking, making a range of fruit and vegetables based dishes. Describe the principles of food safety and hygiene when cooking and manage their implementation independently. Describe and explain the principles of *The Eat well Guide*, and use it when devising meals and menus for themselves and others. Name the main nutrients and their functions provided by *The Eat well Guide* and recognise that the amount of energy and nutrients provided by food depends on the portion eaten. Explain and apply the 8 tips for healthy eating to the diet. Describe where a range of fruit and vegetables are from, how they are processed and different ways in which they are used to create a range of dishes. Identify, explain and summarise the factors that affect food choice. Propose a design for a new dish taking into account the specific needs; apply their knowledge of ingredients and healthy eating.

Prior learning

Pupils will build on the learning in Key Stage 3 Design and Technology. Knowledge and skills include: use of basic equipment and tools, basic practical skills, origin and simple functions of ingredients, healthy eating and *The Eat well Guide*, food choice. Knowledge, understanding and skills needed to engage in an iterative process of designing and making in a range of contexts, such as the home, school and culture.

THE PRODUCTS MADE MAY VARY WITH DIFFERING GROUPS DUE TO SEASONALITY OF PRODUCTS, GROUP PREFERENCES, ALLERGIES, EVEN GROUP SIZES TO ENSURE STUDENTS ENJOY THEIR EXPERIENCE IN FOOD TECHNOLOGY, ALTHOUGH EQUIPMENT USED WILL REMIAN CONSTANT.

Assessment Process:

FP&N Marking Frame

Peer and self assessment (Front cover sheets and star profiles)

- End of module assessment sheets

Risk assessment

Appropriate risk assessment will be undertaken prior to work being carried out in a practical food room. Consult BS4163:2014 and local authority and/or school guidance or other resources.

Risk assessment should address the following areas and those specific to the school, level of supervision, pupils and/or environment:

- personal hygiene;
- hygiene and storage of ingredients;
- food allergens;
- the use of heat sources;
- the use of sharp and bladed equipment;
- the use of electrical equipment;
- Class size and level of supervision.

English:

Reading

Pupils should be taught to understand increasingly challenging texts through:

- learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries;

Writing

Mathematics:

Number

Pupils should be taught to:

- understand and use place value for decimals, measures and integers of any size
- order positive and negative integers, decimals and fractions

Pupils should be taught to write accurately, fluently, effectively and at length for pleasure and information through: ▪ summarising and organising material, and supporting ideas and arguments with any necessary factual detail; ▪ applying their growing knowledge of vocabulary, grammar and text structure to their writing and selecting the appropriate form; Pupils should be taught to plan, draft, edit and proof-read through: ▪ considering how their writing reflects the audiences and purposes for which it was intended; ▪ paying attention to accurate grammar, punctuation and spelling; Grammar and vocabulary Pupils should be taught to consolidate and build on their knowledge of grammar and vocabulary through: ▪ using Standard English confidently in their own writing and speech; Spoken English Pupils should be taught to speak confidently and effectively, including through: ▪ using Standard English confidently in a range of formal and informal contexts, including classroom discussion; ▪ giving short speeches and presentations, expressing their own ideas and keeping to the point; ▪ Participating in formal debates and structured discussions, summarising and/or building on what has been said. Complete evaluations	▪ interpret percentages and percentage changes as a fraction or a decimal ▪ use standard units of mass, length, time, money and other measures, including with decimal quantities; ▪ Use a calculator and other technologies to calculate results accurately and then interpret them appropriately. Ratio, proportion and rates of change Pupils should be taught to: ▪ change freely between related standard units [for example time, length, area, volume/capacity, mass] Statistics ▪ Construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts, and pictograms for categorical data, and vertical line (or bar) charts for ungrouped and grouped numerical data.
PSHE: (non-statutory) Health and well-being ▪ what constitutes a balanced diet and its benefits (including the risks associated with both obesity and dieting); What might influence their decisions about eating a balanced diet?	SMSC: Opportunity for designs to incorporate personal preference, maybe even religious constraints Use of 'multicultural' staple ingredients
Assessment Opportunities: Baseline 'COLD' Test End of Topic 'HOT' test	Skills: Self managers / Team Workers / Reflective Learners / Effective Participants / Creative Thinkers / Independent Enquirers. Out of School Learning:

NEA 1 Mock Task
Literacy Task

Out of College : this is set every 3rd lesson and will be a variety of different tasks from research, literacy, numeracy and differentiated chosen tasks.

Independent Learning: There will be opportunities for learners to enhance their knowledge with resources on google classroom.