KESTEVEN AND SLEAFORD HIGH SCHOOL

Year 10

Food Preparation & Nutrition Scheme of Learning

Term 3

Intent – Rationale

Using the learning from terms 1&2, students will be able to demonstrate the ability to adapt and change recipes to suit the needs of the specific nutritional needs, like and preferences of specific groups of people. Students with develop their knowledge & understanding of Food Sources and the supply chains of many foods. How many foods are processed and produced, to develop their own level of inquisitive understanding through independent research. To gain excitement in the world around us and how foods are accessed, provided and prepared so as to remove the 'taken for granted' elements of food production. To bring together prior learning and cross curricular links specifically to the historical and geographical elements of this term. Students will begin to apply knowledge of some aspects of Food Science and implement this into their planning, food choice and practical work.

Sequencing – what prior learning does this topic build upon?	Sequencing – what subsequent learning does this topic feed into?
Yr. 7 – Seasonality of ingredients **Yr. 7 Food Miles & Food Security** **Yr. 8 Buying Local, Reducing the Carbon Footprint and Food Miles** **Yr. 8 & 9 Nutritional Analysis** **Costing Exercises from yrs. 7-9** **Yr. Energy Saving Equipment Task** **All previous practical skills**	• Application into future planning, making choices based on SMSC, budgets and the environment. • Ongoing practical skills • Preparation for NEA2 issued yr11 • Preparation for written examination summer 2022
What are the links with other subjects in the curriculum?	**What are the links to SMSC, British Values and Careers?**
• **Mathematics – calculation of Food Miles, Weighing & measuring, Nutritional Analysis** • **English – Following instructions, carrying out research and application of suitable & relevant information** • **Geography – environmental impacts, farming, use of maps, identifying areas & regions** • **History – developments through the ages, impact of significant time periods.** • **Computing – use of IT for the delivery of information. Excel sheets for nutritional analysis, costing calculations and food miles**	SP: 1. Own beliefs & religions considered with planning and delivery of practical work. Work as a whole group to respect these matters in the classroom 2. Encourage excitement & enjoyment through the classroom activities & their own adaptations of recipes 3. Always looking for creativity in practical work 4. Evaluation of practical work. Dirt time where required M1. Food Safety & H&S key, implications of rules 2. High expectations 3. Debates, conversations effective and respectful SO: 1, 2 & 3 Presentations, team work, sharing of skills. Support for each other C: 1,2 &4 through practical work, selections of recipes, food provenance & the environment. BV 1, 4, 5 Careers> GB4

What are the opportunities for developing literacy skills and developing learner confidence and enjoyment in reading?	What are the opportunities for developing mathematical skills?
	• **Mathematics – calculation of Food Miles, Weighing & measuring, Nutritional Analysis, proportions, %, RDA, DRV's**

Food Preparation & Nutrition Scheme of Learning

Year 10 – Term 3

Intent – Concepts

What knowledge will students gain and what skills will they develop as a consequence of this topic?

Know

The journey of cereal products to provide for our staple sources of foods. The structures of some cereal, sugars, fruits, vegetables and the categorisation of these. The advantages of sourcing foods locally and the impact this can have on the local environment but also world-wide.

The rearing of meat, fish & poultry, the Quality control and assurance procedures that are in place for both the animals and the consumers. How intensive farming and organic methods of farming feature in the food production chain, finding the advantages & disadvantages to all.

The advantages and disadvantages of primary & secondary processing methods; with a focus on milk and milk products, bread and pasta. The importance of temperature and technology in the production and processing of foods.

How the United Nations has impacted on the availability of foods in many areas, though the understanding of 'Food Security' to maximise availability, accessibility and utilisation of foods across the globe.

How technology has developed to allow for 'safe' and 'lasting' foods can be produced whilst incorporating many forms of additives. Students will develop knowledge in how to read food labels to identify specific additives and processes used in food production.

Students will develop grater knowledge in their practical skills, build confidence experiment further with a range of techniques and methods.

Apply

Knowledge will be applied through independent work, questions, worksheets, the planning and delivery of practical work in line with topics being delivered.

Homework will be set to deepen knowledge and understanding allowing for application of correct knowledge. Structures of foods will be developed through drawing and labelling exercises. Food science activities will take place with the use of a range of products tested for their thickening ability. Testing for viscosity, taste, texture and appearance through practical activity in groups.

The use of demonstration (live & video) in the preparation of meats & fish to develop practical skills, choices of ingredients will respect SMSC & British Values. Milk processing will develop through independent research, models replicated to show differences in milk types, shelf life. Under COVID taste testing will not take place for this activity

Students will delve into cupboards at home to investigate food labelling to identify key additives and processes being used. Food Security is a project encouraging students look beyond the shores of the uk to see the impact of a lack of Food Security in many areas, This will then link to prior learning of Malnutrition.

Extend

Students are encouraged to use many of the food programmes available to become more aware of skills, process and food issues in our modern lifestyles whilst considering the implications of food developments over time. They are encouraged to consider the Hunter gatherer , Roman times through the war years into the modern age.

Magazines in the library along with a range of resources in Geography & History.

The selection of practical skills and dishes is encouraged to challenge beyond student comfort zones whilst considering the budgets, allergies & intolerances.

KESTEVEN AND SLEAFORD HIGH SCHOOL

What subject specific language will be used and developed in this topic?			What opportunities are available for assessing the progress of students?
• Staple Foods • Cytoplasm, cell wall, vacuole • Categorisation of fruits & vegetables – Leaves, Fruits, Root, Flowers, Bulbs, Stems, Tubers, Seeds & Pods, Citrus, Soft/ Berry, Hard Fruits. • Seasonality • Imports/ Exports • Productivity • Carbon Footprint / Carbon Offsetting / Eco Footprint/ Food Miles • Animal Welfare • Organic Farming • Intensive Farming • Sustainability • Pasteurised • Sterilisation / aseptic • Prove • Yeast • Enzymes • Yogurt	• Classifications of Fish – white, flat, Oily, Shellfish, Molluscs, Crustaceans • Fishing Methods – Trawling, Dredging, Gill Netting, Harpooning, Jigging, Long Lining, • Pole & Line Fishing, Purse seining, Traps & Pots, Cyanide Fishing • Bycatch • Fish Farming Methods – Farming, Sea Rearing, Sea Ranching • Traceability • Primary & Secondary Processing • Milling / Extraction Rate/ Fortified • Chemical Raising Agent • Coeliac Disease	• Gluten • Emulsion • Homogenisation • Cook Chill / Blast Chill/ Chilling/ Freezing • Cryogenic Freezing • Dehydration • Modified Atmospheric Packaging (MAP) • Accelerated Freeze Drying (AFD) • Hermetic • Food security • Malnourished • Fairtrade • Genetically Modified • Additives /Preservatives/ Antioxidants/Colourings/ Flavourings/ Flavour Enhancers/ Sweeteners/ Intense Sweeteners / Bulk Sweeteners/ Thickeners / Gelling Agents • Functional Foods	• End of unit assessment • Practical skills/ outcomes • Homework tasks – Teams & paper exercises • Presentations – individual & group • Question & answer sessions • Kahoot quizzes.

KESTEVEN AND SLEAFORD HIGH SCHOOL

Intent – Concepts

Lesson title	Learning challenge	Higher level challenge	Suggested activities and resources
Food Provenance	To develop an understanding of food sources and types and how: cereals, sugars, fruits & vegetables are grown.	To be able to identify origins of a range of products within this challenge e.g. Variations in rice.	Sources-of-Food-pupil-workbook.doc› sources-of-food-unit-02.pptx
Starchy Foods	Planning for practical using a starchy food as a thickening agent – students to plan for a practical to demonstrate thickening using one or more ingredients.	Students will plan for an investigation – to compare the thickening properties of 2 or more ingredients in the different batches.	Sources-of-Food-pupil-workbook.doc› sources-of-food-unit-02.pptx Use time plans/ plan for an investigation to incorporate viscosity charts. Teacher led: how to plan for an investigation. Use previous examples.
Practical / Food Security (alternate / split lessons due to COVID restrictions)	Carryout practical based on own planning. Key words to be used – gelatinisation/ volume/ viscosity. Visual testing, self-taste testing	Using measurements, viscosity charts, pipettes & test tubes to test thickness – ratings test could be introduced.	Worksheet - Food Security - Food Mile Food Security.ppt
Food security / Practical	Food Security – Use of ppt to explore understanding of Food Security. Work independently to complete work sheet Broccoli & one other product of choice.	Identify with key words, develop glossary & flash cards. Integrate world map to identify locations.	Food Provenance 1.ppt
Practical / Food Security (alternate / split lessons due to COVID restrictions)	Carryout practical based on own planning. Key words to be used – gelatinisation/ volume/ viscosity. Visual testing, self-taste testing	Using measurements, viscosity charts, pipettes & test tubes to test thickness – ratings test could be introduced.	Worksheet - Food Security - Food Mile Food Security.ppt
Let's get Blogging!	Students create a method of presentation to help families consider reducing waste at home, particularly food waste.	Terminology used with demonstrate knowledge, understanding and application. Such as carbon Offsetting, may bring in prior Geography learning.	Work in pairs (same forms where possible)
Practical 'Food Remnants'	Students will produce a dish that is familiar to them to demonstrate the use of left-over food.	Students will demonstrate a more inquisitive approach, using new or original recipes. Will use Food P6 to access the nutritional value	½ group practical to demonstrate the use of left over foods. ½ group to continue with presentation task.
Practical 'Food Remnants'	Students will produce a dish that is familiar to them to demonstrate the use of leftover food.	Students will demonstrate a more inquisitive approach, using new or original recipes. Will use Food P6 to access the nutritional value	½ group practical to demonstrate the use of left over foods. ½ group to continue with presentation task.
Consolidation of Learning	Students will be able to recall key points and key words with some examples of use.	Students will be able to recall and apply prior knowledge in a variety of examples	Supermarket shopping activity (use of own pens), groups mixed ability.
Fortification!	To develop understanding of reasons for fortification. When & why it started.	Be able to identify nutritional deficiencies without this, categories of people who.	Technological developments to ma **https://www.youtube.com/watch?v=o9wNJ78S2GY** Research activity- the impact of war on our food supplies. Working in small groups to produce posters / information sheets.
Fortification!	To develop understanding of reasons for fortification. When & why it started.	Be able to identify nutritional deficiencies without this, categories of people who.	Technological developments to ma

KESTEVEN AND SLEAFORD HIGH SCHOOL

			https://www.youtube.com/watch?v=o9wNJ78S2GY Research activity- the impact of war on our food supplies. Working in small groups to produce posters / information sheets. Fortified Foods worksheets.docx
Enrichment through the use of sauces.	Students will be able to identify the different methods of sauce making. Can use the correct terminology to categorise.	Will be able to relate to proportions and scale up & down in quantities for a particular dish	Teacher led demonstration of sauce making – Roux / All in One / Blended. Class to prepare own time plan to use sauce in a dish as a form of enrichment
Practical to 'Enrich a Dish'	Students select a dish based upon preference & time rather than skill level, produce a good quality outcome	High skilled dish, produced with excellent focus to finishing techniques. Evaluates dish with the use of correct terminology and clear areas for improvement which are justified	½ group working on practical in line with time plans
'Additives'	Students work independently to demonstrate effective research skills under the guidance of teacher headings – preservatives, antioxidants/ colours/ flavourings / flavour enhancers/ sweeteners/ emulsifiers	Students demonstrate the ability to relate to food products that contain these additives, with clear explanations as to the advantages and disadvantages of each.	Independent student activity, use of text book as initial source of information pg 131-137
Practical to 'Enrich a Dish'	Students select a dish based upon preference & time rather than skill level, produce a good quality outcome	High skilled dish, produced with excellent focus to finishing techniques. Evaluates dish with the use of correct terminology and clear areas for improvement which are justified	½ group working on practical in line with time plans
'Additives'	Students work independently to demonstrate effective research skills under the guidance of teacher headings – preservatives, antioxidants/ colours/ flavourings / flavour enhancers/ sweeteners/ emulsifiers	Students demonstrate the ability to relate to food products that contain these additives, with clear explanations as to the advantages and disadvantages of each.	Independent student activity, use of text book as initial source of information pg 131-137
Catch up & Consolidation	Students to revisit outstanding work, identify gaps in learning. Complete where necessary	Students complete outstanding work, and take on extension tasks/ further reading. Prepare revision material	Work independently with checklist to fill gaps.
Jamming!	Students are able to understand and explain the process of jam making. Clearly identifying the function of sugar as a preservative.	Students an explain scientifically the process of osmosis and the changing pH in a high presence of sugar.	Teacher led demonstration. Focus on the importance of sterilisation of all equipment before hand and sealing of jars to reduce bacterial growth. **https://www.youtube.com/watch?v=F5LhDkAfxA8**
Home Made Jam – practical ½ group	Students work independently to produce a small batch of jam. Can identify temperatures and setting points through testing.	Students can explain scientifically the process of jam making, with a focus on the presence of Pectin, the needs of acid as setting agents.	½ class making small independent batch of jam, based on fruits of own choice & availability During stages of making, record observations and take photos to upload.
Cooking Methods – ½ group	Students can identify when & where conduction; convection & radiation are applied.	Students can scientifically explain the process of heat transference in a range of recipes.	Text book pg167-178 Independent work, notes, diagrams, complete 'Test Yourself questions'
	Students work independently to produce a small batch of jam. Can identify temperatures and setting points through testing.	Students can explain scientifically the process of jam making, with a focus on the presence of Pectin, the needs of acid as setting agents.	½ class making small independent batch of jam, based on fruits of own choice & availability

KESTEVEN AND SLEAFORD HIGH SCHOOL

			During stages of making, record observations and take photos to upload.
Cooking Methods – ½ group	Students can identify when & where conduction; convection & radiation are applied.	Students can scientifically explain the process of heat transference in a range of recipes.	Text book pg167-178 Independent work, notes, diagrams, complete 'Test Yourself questions'
Completion of cooking methods and impact of Foods	Students can recall key methods of heat transference and identify recipes and skills that can be used.	Students will demonstrate scientific understanding of the impact on nutrients	Cooking Methods.ppt Cooking Methods - nutrients & sensory.
Planning to demonstrate 'Heat Transference'	Students can select medium/ high skilled dish to meet time constraints. Justify reasons for choice linked to end consumer	Student will justify selection of dishes with scientific explanation of how heat is to be transferred. There will be a focus on high skill dish.	½ group practical
Why is Food Cooked?			Why is food cooked & heat trans Worksheet - Bacteria.docx
Planning an investigation – 'Cooking of Potatoes'	Will work in pairs to plan together, sharing knowledge of ingredients and how to plan an investigation	Will use prior knowledge to confidently and independently plan an investigation using the information provided.	Investigation into cooking methods or
Practical Investigation ½ Group	Work in pairs to execute an effective investigation. Will photograph outcomes and record. Some key descriptive words will be used. Results explained	Will use results to scientifically explain the outcomes. High level use of descriptive words used. Results explained in detail with developments clear.	Independent / paired investigation into the cooking methods on potatoes.
½ group préparation of Révision Materials	Students revisit prior learning form this term and produce flash cards and questions / answers on weaker areas understanding.	Will extend notes with further reading and investigation to develop detailed revision materials	Students work independently to produce revision materials. Can question and answer each other. Try to develop longer response questions of their own.
Practical Investigation ½ Group	Work in pairs to execute an effective investigation. Will photograph outcomes and record. Some key descriptive words will be used. Results explained	Will use results to scientifically explain the outcomes. High level use of descriptive words used. Results explained in detail with developments clear.	Independent / paired investigation into the cooking methods on potatoes.
½ group préparation of Révision Materials	Students revisit prior learning form this term and produce flash cards and questions / answers on weaker areas understanding.	Will extend notes with further reading and investigation to develop detailed revision materials	Students work independently to produce revision materials. Can question and answer each other. Try to develop longer response questions of their own.
End of Unit Quiz!	Students respond to most questions with some use of correct terminology.	Respond to all questions with higher level structure, accurate use of terminology and good scientific explanation.	End of Unit assessment