



Year 10 AQA Food preparation and nutrition

Term 2

Year 10 term 2 Aims / Objective:

3.3 Food science

3.3.2.5 Raising agents

3.3.1 Cooking of food and heat transfer

3.3.1.2 Selecting appropriate cooking methods

3.3.2 Functional and chemical properties of food

3.3.2.1 Proteins

3.3.2.2 Carbohydrates

3.3.2.3 Fats and oils

3.5.3 Sensory evaluation

NEA 1 practice – Food investigation task

TITLE OF UNIT: Year 10	NC Attainment: Grades 1 to 9	Level(s): KS4
Term: Spring Term		

Literacy skills: Reading recipes, charts and tables.

Keywords:

Raising agents chemical (baking powder, bicarbonate of soda, self-raising flours which produce carbon dioxide) • mechanical (whisking, beating, folding, sieving, creaming and rubbing in – all incorporate air into the mixture) • steam is produced when the water in any moist mixture reaches boiling point • biological (yeast)

Food Science Protein denaturation protein coagulation gluten formation foam formation. Gluten, gliadin, gluten formation, mixing, kneading, proving, fermentation, knock back, shaping, baking coagulation

CHO: gelatinisation, dextrinisation, caramelisation.

Fat: shortening, aeration, plasticity, emulsification.

Cooking methods: Conduction, convection, radiation.

Moist cooking methods, cooking- boiling simmering, braising, stewing, poaching, steaming Dry cooking methods - baking, grilling, dry frying, toasting and cooking in oil - shallow frying, sautéing, stir frying, roasting deep fat frying.

Resources:

e book one line access by every student, laminated resources for vitamins,

Numeracy skills:

Working out weights and measures for ingredients. Doubling recipes and making them smaller.

Use of ICT:

Nutritional analysis, costing on excel, completing NEA on word,

<ul style="list-style-type: none"> • Students have their year 10 Mocks which will test the next unit of knowledge and previous knowledge • At the end of term they will be completing a practice NEA FIT <p>Assessment: practical or/both theory assessment every 3 weeks.</p> <p>NEA 1 practice will form part of the assessment year 10 end of year grade.</p>	<p>Links with other curriculum areas</p> <p>These issues underlie all design and manufacturing activities and will be specifically addressed in identifying needs, researching different areas, justifying choices and evaluating outcomes. All of these areas ensure that there is adequate scope for covering these aspects of the course.</p>			
<p>Specification Coverage</p> <p>(AQA 8585)</p>				
<p>Week 1: Lesson 1: Practical - Cake making</p> <p>Objectives:</p> <p>To learn about the different cake making methods.</p>	<p>Skill 1: General practical skills</p> <p>Skill 4: Use of the cooker</p> <p>Skill 5: Use of equipment hand held mixers, Kenwood.</p>	<p>Differentiation:</p> <p>Basic: Scone rubbing in method</p> <p>Medium: brownies</p>	<p>Homework:</p> <p>To complete the caking making worksheet and questions on</p>	<p>Resources:</p> <p>Trolleys, knives,</p> <p>Tea towels, dish clothes,</p>

<p>Key Word:</p> <p>Whisking, Rubbing in, Melting, Creaming</p>		<p>Complex: Victoria Sponge piped a filling</p>	<p>resources due in half term</p>	<p>oven gloves. Greaseproof Cake tins</p>
<p>Lesson 2: Theory Raising Agents</p> <p>Objectives:</p> <ul style="list-style-type: none"> the scientific principles underlying these processes when preparing and cooking food the working characteristics, functional and chemical properties of raising agents. <p>Key Words:</p> <p>Biological raising agents - yeast, chemical raising agents - bicarbonate of soda, baking powder Mechanical raising agents - Air, steam</p>	<p>3.3.2.5 Raising agents</p>	<p>Differentiation</p>	<p>Homework:</p> <p>To bring ingredients to make a cake that</p> <ul style="list-style-type: none"> melting method rubbing in Creaming 	<p>Resources:</p> <p>A3 note sheet in resources.</p>
<p>Week 2: Lesson 1: Practical: Choux Buns</p> <p>Objectives:</p> <ul style="list-style-type: none"> To learn how to make choux pastry. Use a strong flour talk about gluten formation <p>Key Words:</p>	<p>Skill 1: General practical skills</p> <p>Skill 4: Use of the cooker</p> <p>Skill 5: Use of equipment - microwave melt chocolate</p> <p>Skill 10: Dough choux pastry</p>	<p>Differentiation</p> <p>Basic: much help not risen uneven sizes</p> <p>Medium: little help good size even coating</p>	<p>Homework:</p> <p>Complete some of the raising agent worksheet.</p>	<p>Resources</p> <p>Trolleys, knives, Tea towels, dish clothes,</p>

Bain maire, microwave,	Skill 11: Raising agents - steam	of chocolate. Complex: Even size good coating of chocolate and filling.		oven gloves.
Lesson 2: Theory Food Science: Protein Objectives: <ul style="list-style-type: none"> the scientific principles underlying these processes when preparing and cooking food the working characteristics, functional and chemical properties of proteins. Demonstrate how to use the Kenwood when whisking eggs Learn the functions of eggs in cooking Key Words: Denaturation, protein coagulation, foam formation.	3.3.2.1 Proteins	Differentiation	Homework: Bring ingredients: To make choux buns Complete brainstorm of protein food science	Resources Print out starter questions Food: Eggs
Week 3: Lesson 2 Practical: Chilled lemon Tart Objectives:	Skill 1: General practical skills Skill 3: Preparing fruit zesting and juicing. Skill 5: Use of equipment hand	Differentiation Basic: Layers in the pudding are not even	Homework: Complete worksheet on	Resources Trolleys,

<ul style="list-style-type: none"> Students making a chilled lemon tart to demonstrate, denaturation of protein with an acid and agitation and sweetening by sugar <p>Key Words:</p> <p>Complex carbohydrate, NSP Fibre</p>	<p>held blender, kenwood</p> <p>Skill 9: Acids denature protein</p> <p>Skill 12: Setting mixtures</p>	<p>too much biscuit. No decoration</p> <p>Medium:</p> <p>Complex: Even layers, piped cream on top and good decoration</p>	<p>raising agents.</p>	<p>knives,</p> <p>Tea towels, dish clothes, oven gloves.</p>
<p>Lesson 2: Theory Protein Science Gluten</p> <p>Objectives:</p> <ul style="list-style-type: none"> Teach students how to make bread using the kenwood, proving in top oven Go through technical words. Students to complete worksheet. <p>Key Words:</p> <p>Glutenin, gliadin, gluten formation, mixing, kneading, proving, fermentation, knock back, shaping, baking coagulation</p> <p>Assessment: practical</p> <p>Personal hygiene, work space organization. Kneading skills and science behind yeast and fermentation</p>	<p>3.3.2.1 Proteins</p>	<p>Differentiation</p>	<p>Homework:</p> <p>Bring ingredients to make a complex bread product as they have made bread in KS3</p>	<p>Resources</p> <p>Bread ingredients</p> <p>Making bread worksheet</p>

<p>Week 4: Lesson 1: Practical Bread</p> <p>Objectives:</p> <ul style="list-style-type: none"> To make a shaped and flavoured bread product. Star bread, plaited, <p>Key Words:</p> <p>Mixing, kneading, proving, shaping,</p>	<p>Skill 1: General practical skills</p> <p>Skill 4: Use of the cooker</p> <p>Skill 5: Use of equipment</p> <p>Skill 7: Prepare, combine and shape</p> <p>Skill 10: Dough bread</p> <p>Skill 11: Raising agents yeast</p>	<p>Differentiation</p> <p>Ideas star bread</p> <p>Plaited</p>	<p>Homework:</p>	<p>Resources</p> <p>Trolleys, knives,</p> <p>Tea towels, dish clothes, oven gloves.</p>
<p>Lesson 2: Theory Food Science Carbohydrates.</p> <p>Objectives:</p> <ul style="list-style-type: none"> the scientific principles underlying these processes when preparing and cooking food the working characteristics, functional and chemical properties of carbohydrates. I demonstrate gelatinization using flour and water. Go though other functions of starch and sugar. <p>Key Words:</p> <p>gelatinisation, dextrinisation, caramelisation.</p> <p>Memory Technique: Get Dees Car</p>	<p>3.3.2.2 Carbohydrates</p>	<p>Differentiation</p>	<p>Homework:</p> <p>Complete brainstorm of CHO science</p> <p>Bring ingredient to make palmiers</p> <p>.</p>	<p>Resources</p> <p>Print out starter questions</p> <p>Worksheet on gelatinization.</p> <p>Demonstration for gelatinization I use flour and water.</p>

<p>Week 5: Practical - Palmiers</p> <p>Objective:</p> <ul style="list-style-type: none"> Learn how to make rough puff pastry. Make them into palmiers <p>Key Words:</p> <p>Palmiers, rubbing in, folding and shaping</p>	<p>Skill 1: General practical skills</p> <p>Skill 4: Use of the cooker</p> <p>Skill 7: Prepare, combine and shape</p> <p>Skill 10: Dough rough puff pastry</p>	<p>Differentiation</p>	<p>Homework:</p> <p>Complete work on raising agents.</p>	<p>Resources</p> <p>Trolleys, knives,</p> <p>Tea towels, dish clothes, oven gloves.</p> <p>Baking trays</p>
<p>Lesson 2: Theory Food Science Fats</p> <p>Objectives:</p> <ul style="list-style-type: none"> the scientific principles underlying these processes when preparing and cooking food the working characteristics, functional and chemical properties of fats and oils. Go through the other functions of fat in cooking <p>Key Words:</p> <p>aeration, plasticity, shortening, emulsification.</p> <p>Memory Technique: Army please short emails</p>	<p>3.3.2.3 Fats and oils</p>	<p>Differentiation</p>	<p>Homework:</p> <p>Students must complete the raising agent booklet to hand in next lesson.</p> <p>Bring ingredients for Lemon meringue pie</p>	<p>Resources</p> <p>Print out starter questions</p>
<p>Week 6: Lesson 1: Practical Lemon Meringue pie</p>	<p>Skill 1: General practical skills</p>	<p>Differentiation</p>	<p>Homework:</p>	<p>Resources</p>

<p>Objectives:</p> <ul style="list-style-type: none"> • Learn how to make lemon meringue pie. • Blind bake. • Look at the science behind the ingredients of making lemon meringue pie. <p>Key Words:</p> <p>Shortening, blind baking, Denaturization, coagulation, foam,</p>	<p>Skill 4: Use of the cooker</p> <p>Skill 5: Use of equipment hand held mixer</p> <p>Skill 7: Prepare, combine and shape</p> <p>Skill 8: Sauce making - curd</p> <p>Skill 12: Setting mixtures curd</p>	<p>Basic: Will buy a pasty base. Sauce too runny or too thick</p> <p>Medium: Make pastry at home and blind bake at home</p> <p>Complex: Make pastry at home and blind bake at school</p>		<p>Trolleys, knives,</p> <p>Tea towels, dish clothes, oven gloves.</p>
<p>Lesson 2: Theory Cooking Methods</p> <p>Objectives:</p> <ul style="list-style-type: none"> • the reasons why food is cooked • the different methods of heat transfer. • students to look at how preparation and cooking affect the appearance, colour, flavour, texture, smell and overall palatability of food. <p>Key Words:</p> <p>Conduction, convection, radiation. Moist cooking methods, cooking-boiling simmering, braising, stewing, poaching, steaming Dry cooking methods - baking, grilling, dry frying, toasting and cooking in oil - shallow frying, sautéing, stir frying, roasting deep fat frying.</p>	<p>3.3.1 Cooking of food and heat transfer</p> <p>3.3.1.1 Why food is cooked and how heat is transferred to food</p> <p>3.3.1.2 Selecting appropriate cooking methods</p>	<p>Differentiation</p>	<p>Homework:</p> <p>Divide class into 2</p> <p>Bring ingredients to make</p> <p>1. A rough puff pastry dish sausage rolls sausage plait or jalousie</p> <p>2. Pasta</p>	<p>Resources</p> <p>Print out cooking methods worksheet</p> <p>Food cooking task in resource blow these up to A3</p>

<p>Assessment: cooking methods theory and practical cooking methods and heat transfer</p>				
<p>Week 7: Lesson 1: Practical</p> <p>Objectives:</p> <ul style="list-style-type: none"> • Learn how to use a pasta machine and make pasta • Learn how to make different pasta shapes. • Learn how to fresh cook pasta <p>Key Words:</p>	<p>Skill 1: General practical skills</p> <p>Skill 5: Use of equipment pasta machine</p> <p>Skill 6: Cooking methods</p> <p>Skill 7: Prepare, combine and shape pasta</p> <p>Skill 10: Dough pasta</p>	<p>Differentiation</p> <p>Puff pastry group</p> <p>Basic- brought pastry Made pastry sausage rolls.</p> <p>Medium: Sausage plait nothing added to the sausage meat.</p> <p>Complex: Made pastry and produced a dish that shows skill</p>	<p>Homework:</p> <p>Revision</p>	<p>Resources</p> <p>Trolleys, knives,</p> <p>Tea towels, dish clothes, oven gloves.</p> <p>Pasta machines</p>
<p>Lesson 2 Theory Revision</p> <p>Objectives:</p> <ul style="list-style-type: none"> • Go through memory techniques to remember the different words for protein, fats and CHO. • Students to fill in revision knowledge sheet. • Complete a practice question. 		<p>Differentiation</p>	<p>Homework:</p> <p>Revision</p>	<p>Resources</p> <p>Blow revision of food science work up to A3</p>

				Print out revision guide
<p>Week 8: Lesson 1: Practical</p> <p>Objectives:</p> <ul style="list-style-type: none"> Learn how to use a pasta machine and make pasta Learn how to make different pasta shapes. Learn how to fresh cook pasta <p>Key Words:</p>	<p>Skill 1: General practical skills</p> <p>Skill 5: Use of equipment pasta machine</p> <p>Skill 6: Cooking methods</p> <p>Skill 7: Prepare, combine and shape pasta</p> <p>Skill 10: Dough pasta</p>	<p>Differentiation</p> <p>Puff pastry group</p> <p>Basic- brought pastry Made pastry sausage rolls.</p> <p>Medium: Sausage plait nothing added to the sausage meat.</p> <p>Complex: Made pastry and produced a dish that shows skill</p>	<p>Homework:</p> <p>Revision</p>	<p>Resources</p> <p>Trolleys, knives,</p> <p>Tea towels, dish clothes, oven gloves.</p> <p>Pasta machines</p>
<p>Lesson 2 Theory Revision</p> <p>Objectives:</p> <ul style="list-style-type: none"> Go through the layout of the paper Go through how to answer a long answer question Go through how to answer data question. 		<p>Differentiation</p>	<p>Homework:</p> <p>Revision</p>	<p>Resources</p> <p>Print out questions.</p>

<p>Week 10: Lesson 1:</p> <p>Book a computer room</p> <p>Objective:</p> <ul style="list-style-type: none"> To introduce NEA FIT (food investigation task) Go through the structure of task analysis and research. Practice the beginning structure of FIT. What the food science top is prior knowledge and what you would research. <p>Key Words: NEA FIT, task, task analysis, research</p>	<p>4.2 Assessment objectives</p> <p>4.3.1 Setting the tasks</p>	<p>Differentiation:</p> <p>Writing frame.</p> <p>Sentence stems</p>	<p>Homework:</p> <p>To write their task analysis and research up for a given FIT</p>	<p>Resources</p>
<p>Lesson 2: Practical - Experimental Work</p> <p>Objective:</p> <ul style="list-style-type: none"> Students to work in small groups to complete a class experiment. <p>Key Words: Hypothesis, sensory,</p>	<p>3.3.1.2 Selecting appropriate cooking methods</p> <p>3.5.3 Sensory evaluation</p>	<p>Differentiation:</p> <p>Writing frames.</p>	<p>Homework:</p>	<p>Resources:</p> <p>Trolleys, knives,</p> <p>Tea towels, dish clothes, oven gloves.</p>
<p>Week 11: Lesson 1</p> <p>Book a computer room</p>	<p>3.5.3 Sensory evaluation</p>	<p>Differentiation:</p>	<p>Homework</p>	<p>Resources:</p>

<p>Objective:</p> <ul style="list-style-type: none"> • To write up their results for their experiment and conclusion. • To plan their own experiment <p>Key Words:</p>				
<p>Lesson 2: Practical</p> <p>Objective:</p> <ul style="list-style-type: none"> • To complete their own practical in small groups. • To complete their sensory evaluation. 	<p>3.3.1.2 Selecting appropriate cooking methods</p> <p>3.5.3 Sensory evaluation</p>	<p>Differentiation:</p>	<p>Homework</p>	<p>Resources</p> <p>Trolleys, knives,</p> <p>Tea towels, dish clothes, oven gloves.</p>
<p>Week 12:</p> <p><i>Book a computer room</i></p> <p>Objective:</p> <ul style="list-style-type: none"> • To complete their practical evaluation write up Submission of NEA 1 practise 	<p>3.5.3 Sensory evaluation</p>	<p>Differentiation</p>	<p>Homework</p> <p>.To complete their FIT to hand in after Easter.</p>	
<p>Lesson 2: Free practical</p>		<p>Differentiation</p>	<p>Homework</p>	<p>Resources</p>

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