

**Year 10: Food Preparation and nutrition Unit 2 Overview – The Science of Cooking**

**Target Grade:**

**You will learn about:**

Throughout this unit, you will explore the functional properties of ingredients within recipes. You will identify reactions taking place within key techniques and analyse the use of different cooking and heat transfer methods. Through practical experience you will learn to identify these reactions and explore the changes that take place within ingredients.

You will evaluate a range of raising agents and identify their uses when cooking a recipes. Through practical experience, you will apply these to different recipe and explain how each method works effectively.

Within this unit, you will also take a more detailed look at the complex make-up of our food and explore in more depth, how we use food within the human body.

**You will know and understand:**

- Methods of heat transfer
- Advantages and disadvantages of different cooking methods
- Raising agents in food production
- Protein foods in cooking
- Carbohydrates in cooking
- What happens during cooking processes e.g. emulsification, coagulation, denaturation, dextrinisation
- Monosaccharides and Polysaccharides
- Protein complementation, amino acids and alternative protein foods.

<p><b>Lesson Overview:</b></p> <ol style="list-style-type: none"> <li>1. Heat Transfer and Cooking Methods.</li> <li>2. Heat Transfer Practical.</li> <li>3. Raising Agents in food production.</li> <li>4. Cake making methods.</li> <li>5. Cake making practical.</li> <li>6. The use of eggs.</li> <li>7. Egg practical.</li> <li>8. Cooking processes and reactions. Emulsification group practical.</li> <li>9. Protein Practical.</li> <li>10. Carbohydrate Practical</li> <li>11. Protein complementation and meat alternatives.</li> <li>12. End of unit test.</li> </ol>		<p><b>Key Words:</b></p> <p>Radiation Convection Conduction Transfer Reaction Release Technique Emulsify Coagulate Dextrinise Denature Gelatinisation Complementation Monosaccharide Polysaccharide</p>				
<p><b>Suggested reading or support available:</b> See important resources, feedback and information about lessons in your Showbie Class folder.</p> <p><a href="http://www.foodafactoflife.org.uk/site.aspx?siteId=19&amp;t=3">http://www.foodafactoflife.org.uk/site.aspx?siteId=19&amp;t=3</a>  <a href="https://www.bbcgoodfood.com/">https://www.bbcgoodfood.com/</a>  <a href="https://www.bbc.com/food/techniques">https://www.bbc.com/food/techniques</a>  <a href="https://www.vegsoc.org/">https://www.vegsoc.org/</a>  <a href="https://www.bbc.com/bitesize/subjects/zb8jimp3">https://www.bbc.com/bitesize/subjects/zb8jimp3</a>  <a href="http://www.technologystudent.com">www.technologystudent.com</a></p> <p>Illuminate publishing-AQA Food preparation and nutrition                  Hodder Education-Food prep and nutrition</p>		<p><b>Cross curricular</b></p> <p><b>P.E</b> - Nutrient functions including the importance of protein and protein complementation.</p> <p><b>Science</b> - Chemical and functional properties of ingredients such as eggs. Heat transfer including radiation, convection and conduction. Reactions when using raising agents. Changes taking place during cooking processes.</p> <p><b>SMSC</b></p> <p><b>Literacy</b> - writing to explain and justify. Key words relating to cooking processes.</p> <p><b>Numeracy</b> - Calculating amounts of raising agents required. Recipe measurements. Temperatures and timings within recipes.</p>				
Research	Note-making	Group work & discussion	Memorisation	Precision & accuracy	Independence	Reflection

