

Bellerive FCJ Catholic College
KS3 Scheme of Learning 2020
Reviewed DH/AMB

KS3 Unit Overview – Big Picture

Subject/Year group/Unit Title	Big picture	Pupils will focus particularly on the following statements from the programme of study:
<p>Biology/Year 8/8A Food and Energy</p> <p>Lessons:</p> <ol style="list-style-type: none"> 1. A Healthy Diet 2. Food tests – Carbohydrates 3. Food tests – Proteins and Fats 4. Energy in Food 5. Daily energy requirements 6. Poor diets 7. The digestive system 8. Process of digestion 9. Enzymes and digestion 10. The model gut 11. Absorption into the blood 12. Aerobic respiration 13. Anaerobic respiration 14. End of Unit Test 	<p>Over this unit the pupils will cover the following key points</p> <ol style="list-style-type: none"> 1 What is a healthy diet? 2. How to use food tests to identify the components of food (Part 1). 3. How to use food tests to identify the components of food (Part 2). 4. Investigate the energy content of different in foods. 5. Calculate the energy requirements of a healthy daily diet. 6. Learn about the consequences of imbalances in the diet, including obesity, starvation and deficiency diseases. 7. Identify the tissues and organs of the human digestive system, including adaptations to function. 8. Understand how the digestive system digests food and the role of enzymes as biological catalysts. 9. Carry out an investigation on enzymes using starch and amylase 10. Investigating the model gut. 11. Absorption into the blood. 12. Aerobic Respiration. 13. Anaerobic Respiration. 14. Revision and EoU test. 	<p>BSNu1: content of a healthy human diet: carbohydrates, fats, proteins, vitamins, minerals, dietary fibre and water, and why each is needed</p> <p>BSNu2: calculations of energy requirements in a healthy daily diet</p> <p>BSNu3: the consequences of imbalances in the diet, including obesity, starvation and deficiency diseases</p> <p>BSNu4: the tissues and organs of the human digestive system, including adaptations to function and how the digestive system digests food (enzymes simply as biological catalysts)</p> <p>BSNu5: the importance of bacteria in the human digestive system</p> <p>BMC1: aerobic and anaerobic respiration in living organisms, including the breakdown of organic molecules to enable all the other chemical processes necessary for life</p> <p>BMC2: a word summary for aerobic respiration</p> <p>BMC3: the process of anaerobic respiration in humans and micro-organisms, including fermentation, and the word summary for anaerobic respiration</p> <p>BMC4: the differences between aerobic and anaerobic respiration in terms of the reactants, the products formed and the implications for the organism</p>

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Assessment tasks	As FCJ educators, we will focus on the FCJ values by:	We will ensure students skills in reading, writing, communication and mathematics are enhanced by:
<p>Formative Assessment “The Journey of the Cheese sandwich”</p> <p>Summative progress test 8A Food and Energy</p>	<ul style="list-style-type: none"> • Companionship – team work in practical lessons and paired work. • Dignity – in their work on starvation • Excellence – progress towards targets • Justice – all pupils engaged. • Gentleness – behaviour with pupils and teacher. • Hope – consideration of food poverty and ways to address this. 	<p>Extended writing opportunity – the journey of a cheese sandwich...</p> <p>Calculating energy values of food and work with food labels</p>
We are supporting progression from KS2 in this unit by:	We are supporting progression to KS4 in this unit by:	Misconceptions and how they will be addressed:
<p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function and describe the ways in which nutrients and water are transported within animals, including humans.</p>	<p>Preparing our pupils for the work on cell metabolism in KS4 when they are required to compare the processes of aerobic and anaerobic respiration.</p>	<p>Staff to be aware of areas that present challenge e.g. respiration definition.</p> <p>Precise use of vocabulary by teacher and pupils on scientific terms.</p> <p>Review of tests/assessments in class and corrections made by teacher/pupils.</p>