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| **What will we be learning?**  Digestion | **Why this? Why now?**  Previous Learning  In Key Stage 2 (year 6) you learned to recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function  Future Learning  In Key Stage four you will extend this learning and be able to explain how different enzymes are involved in the digestion of the different food groups. You will also, apply concepts of diet, exercise and lifestyle to the non-communicable diseases that can affect health, such as type 2 diabetes, cardiovascular disease and stroke.  Enquiry Processes  Within this topic you will have the opportunity to use indicator reagents to investigate the types of food molecules within common foodstuffs. This will involve key scientific skills, to safely conduct the experiment, and record your data. | **Key Words:**  Respiration  Energy  Carbohydrate  Glucose  Starch  Lipid  Protein  Vitamins  Minerals  Benedict’s  Reagent  Iodine  Biuret  Oesophagus  Stomach  Intestine  Liver  Pancreas  Gall bladder  Bile  Anus  Deficiency  Anaemia  Rickets  Scurvy  Repeatable  Reliable  Valid |
| **What will we learn?**  Why animals need to eat and relate this to the process of respiration. What a balanced diet is, and why the body needs carbohydrates, fats, protein, vitamins and minerals, and fibre and water. You will learn why the body requires these different food groups.  To use the food test reagents to correctly identify the food groups present in a wide range of food samples, obtaining (and recording) repeatable, valid data safely.  Identify the organs of the digestive system, providing explanations of how their function works to digest the food that we eat.  Provide examples of deficiency diseases and identify what causes them.  Analyse a person’s diet, assessing the nutritional quality and deficiencies of that diet, and then justifying improvements that would restore balance and ensure good health.  **Misconceptions in this topic**   * **Food is moved along the digestive system by gravity (falling). WRONG!**   *Food is moved by the action of smooth muscle that lines the digestive system. This is called peristalsis, and food is* ***squeezed in waves of muscular contraction along the digestive system.***   * **Stomach acid breaks down food. WRONG!**   *The* acid in the stomach kills any pathogens such as bacteria *that enter our bodies when we eat. It also creates the correct pH for the enzymes in the stomach to work. It is the enzymes that break down the food!* | |
| **What opportunities are there for wider study?**  **Careers:**  Nutritionist/Dietician  Gastroenterologist  Health Coach  General Practitioner (GP)  **Extracurricular opportunities and Visits:**  Science Technology, Engineering (And) Maths: The Schools **STE(A)M** group provides information about trips, visits and opportunities, check them out on the school’s SharePoint pages. | |
| **How will I be assessed?**  **(informal)**   * Printed PLCs – ticked off throughout unit   **(Formal)**  As part of the key stage 3 combined testing system. This topic will be assessed, alongside 2 other topics, as part of Highcliffe Science Department assessment policy. | |