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| **What will we be learning?**  **Year 12 Biomolecules** | **Why this? Why now?**  Previous Learning  Year 10 cells  Year 10 Organisation  Year 10 bioenergetics  Future Learning  Concepts from this unit will need to be confidently understood for most other units in the subject. Especially:  Plant transport  Respiration  Photosynthesis  Homeostasis and excretion  Enquiry Processes  Analyse Patterns, Draw conclusions, Present data, Justify opinions, Collect data, Present data, Plan variables | **Key Words:**  **Adhesion**  **Amylopectin**  **Amylose**  **Benedict’s test**  **Cellulose**  **Cohesion**  **Condensation**  **Covalent bond**  **Disaccharide**  **Electron**  **Emulsion test**  **Ester bond**  **Fructose**  **Galactose**  **Glucose**  **Glycerol**  **Glycogen**  **Glycosidic bond**  **Hexose sugar**  **Hydrogen bond**  **Hydrolysis**  **Hydrophilic**  **Hydrophobic**  **Iodine**  **Ion**  **Ionic bond**  **Isotope**  **Lactose**  **Latent heat of vaporisation**  **Maltose**  **Monomer**  **Monosaccharide**  **Mono-unsaturated fatty acid**  **Pentose sugar**  **Phosphate group**  **Phospholipid**  **Polar molecule**  **Polymer**  **Polysaccharide**  **Polyunsaturated fatty acid**  **Saturated fatty acid**  **Specific heat capacity**  **Starch**  **Sucrose**  **Triglyceride**  **Unsaturated fatty acid**. |
| **What will we learn?**   * Properties of water molecules * The importance of condensation and hydrolysis reactions * The chemical elements that make up biological molecules * The properties of glucose as an example of a hexose monosaccharide and the structure of ribose * The synthesis and breakdown of a disaccharide and polysaccharide by the formation and breakage of glycosidic bonds * How the properties of triglyceride, phospholipid and cholesterol molecules relate to their functions in living organisms   **Misconceptions in this topic**  Make sure the structures for carbohydrates are not confused with hierarchy of protein structure | |
| **What opportunities are there for wider study?**  Careers  Brewing Dietetics Forensics Biochemistry Sports Science Nursing Medicine Food Science Laboratory Work Teaching Dentistry Pharmacology Biotechnology Veterinary Work Paramedical Science  STE(A)M  https://highcliffe.sharepoint.com/sites/LearnSTEM | |
| **How will I be assessed?**  End of topic assessment  PAG 9.2 PAG 9.3 | |