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| **What will we be learning?****Year 12 Biomolecules** | **Why this? Why now?**Previous Learning Year 10 cellsYear 10 OrganisationYear 10 bioenergeticsFuture Learning Concepts from this unit will need to be confidently understood for most other units in the subject. Especially:Plant transportRespirationPhotosynthesisHomeostasis and excretionEnquiry ProcessesAnalyse 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?**CareersBrewing Dietetics Forensics Biochemistry Sports Science Nursing Medicine Food Science Laboratory Work Teaching Dentistry Pharmacology Biotechnology Veterinary Work Paramedical ScienceSTE(A)M https://highcliffe.sharepoint.com/sites/LearnSTEM |
| **How will I be assessed?**End of topic assessment PAG 9.2 PAG 9.3 |