

Organic Chemistry.

Content	RAG
State what crude oil contains and how it was formed.	
State what a hydrocarbon is and what it means to be saturated	
State the general formula for an alkane and identify them from their name, formula or structure.	
State the names of the first four members of the homologous series of alkanes and represent their structure as molecular or displayed formula. Explain what a homologous series is	
Explain the process of fractional distillation of crude oil in terms of evaporation and condensation.	
Describe what a fraction is, state some common fuels and state the uses of fractions.	
Explain how the size of hydrocarbon molecules affect their boiling point, viscosity and flammability.	
Explain how the properties of a hydrocarbon affects its use as a fuel.	
Describe what happens during the combustion of a hydrocarbon and write balanced equations	
Describe cracking in general terms as an example of thermal decomposition.	
Describe in general terms the conditions for steam and catalytic cracking identifying the products completing equations	
Explain how to test for an alkene.	
Explain why cracking is used and give examples of alkenes to illustrate its usefulness.	
State the general formula for an alkene and identify them from their name, formula or structure. Relate to saturation	
State the names of the first four members of the homologous series of alkenes and represent their structure as molecular or displayed formulae	
Explain what a functional group is and why It is important. Give alkene functional groups	
Describe how alkenes react with oxygen and how this differs from how alkanes react.	
Describe in general terms the addition reactions of alkenes. For addition of H ₂ , H ₂ O, and the halogens	
Draw the displayed structure and formulae of the first four alkenes and the products of their addition reactions with hydrogen, water, chlorine, bromine and iodine.	
Identify an alcohol from their name, formula or structure, state the functional group & state the main uses of alcohols. .	
State the names of the first four members of the homologous series of alcohols and represent their structure.	
Describe what happens when any of the first four alcohols react with sodium, air, water or an oxidising agent.	

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Describe how ethanol is produced using fermentation, including the conditions for the reaction.	
Write balanced chemical equations for the combustion reactions of alcohols.	
State the functional group of a carboxylic acid and Identify one from their name, formula or structure.	
State the names of the first four carboxylic acids and represent their structure as molecular or displayed formulae	
Describe what happens when any of the first four carboxylic acids react with carbonates, alcohols and dissolve in water.	
Explain why carboxylic acids are weak acids in terms of ionisation and pH.	
State the name of the ester made when ethanoic acids reacts with ethanol.	
Describe polymerisation reactions in general terms by reference to monomers.	
Describe addition polymerisation reactions of alkenes and recognise the molecules involved.	
Recognise addition polymers and monomers from diagrams.	
Draw diagrams to represent the formation of a polymer from a given alkene monomer.	
Describe condensation polymerisation reactions HT	
State what the simplest examples of condensation polymers are made from. HT	
State the monomers used to make a polyester. HT	
Explain the basic principles of condensation polymerisation. HT	
State the main features of an amino acid. HT	
Describe the condensation polymerisation of amino acids using the example of Glycine HT	
State how amino acids can be used to make proteins. HT	
Describe the function of DNA.	
Describe the basic structure of DNA by reference to the monomers, the polymer chains and the shape.	
Name the naturally occurring polymers important for life and name the types of monomers from which these are made.	