

Review C1.5 Other useful substances from crude oil

<i>Can you...?</i>	😊	😐	😞
C1.5.1 Obtaining useful substances from crude oil			
Describe 'cracking' as thermal decomposition with heat and either a catalyst or steam			
Explain why hydrocarbons from crude oil are cracked in this way			
Identify the products of cracking, and recognise the general formula for alkenes as C _n H _{2n}			
Describe alkenes as unsaturated hydrocarbons			
Represent unsaturated hydrocarbons in the following forms: C ₃ H ₆	$ \begin{array}{c} \text{H} \quad \text{H} \quad \text{H} \\ \quad \quad \\ \text{H} - \text{C} - \text{C} = \text{C} \\ \quad \quad \\ \text{H} \quad \quad \text{H} \end{array} $		
Recognise that = represents a double bond in displayed structures			
Describe the colour change seen when alkenes react with bromine water			
State that some of the products of cracking are useful as fuels			
State that crude oil, which is a limited resource, is used to produce fuels and chemicals			
C1.5.2 Polymers			
Describe how monomer molecules can join together to form very large polymer molecules, and recognise the molecules involved in the following form:			
Describe some of the useful applications of polymers including: packaging materials, waterproof coatings for fabrics, dental polymers, wound dressings, hydrogels, and smart materials such as shape memory polymers			
State that many polymers are not biodegradable, and explain what this means			
State that biodegradable plastics made from cornstarch have been developed, and can be used to make plastic bags			
Evaluate the social and economic advantages and disadvantages of using products from crude oil as fuels or as raw materials for plastics and other chemicals			
Evaluate the social, economic and environmental impacts of the uses, disposal and recycling of polymers			
C1.5.3 Ethanol			
Describe how ethanol can be produced by hydration of ethene with a catalyst			
Describe how ethanol can be produced by fermentation of sugar by yeast, and represent the reaction in the following form: sugar → carbon dioxide + ethanol			
Evaluate the advantages and disadvantages of making ethanol from renewable and non-renewable resources. You should be able to compare the environmental impact of different ways of producing ethanol			