Edexcel iGCSE Chemistry 4CH0 Learning Plan

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| **Section D19: Alkanes, Alkenes and Alcohols** | | |
| Specification | Resources | Assessment |
| 3.2 recall that alkanes have the general formula CnH2n+2  3.3 draw displayed formulae for alkanes with up to five carbon atoms in a molecule, and name the straight-chain isomers  3.4 recall the products of the complete and incomplete combustion of alkanes  3.5 describe the substitution reaction of methane with bromine to form bromomethane in the presence of UV light.  3.6 recall that alkenes have the general formula CnH2n  3.7 draw displayed formulae for alkenes with up to four carbon atoms in a molecule, and name the straight-chain isomers (knowledge of cis- and transisomers is not required)  3.8 describe the addition reaction of alkenes with bromine, including the decolourising of bromine water as a test for alkenes.  **3.9 describe the manufacture of ethanol by passing ethene and steam over a phosphoric acid catalyst at a temperature of about 300°C and a pressure of about 60–70 atm**  **3.10 describe the manufacture of ethanol by the fermentation of sugars, for example glucose, at a temperature of about 30°C**  **3.11 evaluate the factors relevant to the choice of method used in the manufacture of ethanol, for example the relative availability of sugar cane and crude oil**  **3.12 describe the dehydration of ethanol to ethene, using aluminium oxide** | Video: Section 3 – Lesson 1 – Organic Chemistry, The Alkanes. Timeline 10.01 to end.  Section 3 – Lesson 2 – The Alkenes, Ethanol  Powerpoint: Chemistry - Section 3 – Lesson 1 – Slides 32 to end.  Chemistry - Section 3 – Lesson 2  Textbook: Ch.19 – Alkanes, Alkenes and Alcohols  Page 156 – The Alkanes  Page 158 – The Alkenes  Page 159 – Alcohols  Page 162 - End of Chapter Checklist  Edexcel iGCSE Chemistry Student Checklist Section D19.doc | Textbook  Page 162 – Questions 1 to 5  Ch 19 Textbook Answers .pdf  Talking paper – Edexcel Chemistry Section D19 – Alkanes, Alkenes and Alcohols  Section D19 – Exam Question. (pdf)  Section D19 – Exam Question – mark scheme. (pdf) |

**Jim Clark video clips:** [**http://www.chemguide.co.uk/igcse/chapters/chapter19.html**](http://www.chemguide.co.uk/igcse/chapters/chapter19.html)

Videos – www.igcsesciencecourses.com

Textbook Ref: Edexcel International GCSE Chemistry Student Book - Clark

DVD Video Clips – see resource DVD in textbook.