Edexcel iGCSE Chemistry 4CH0 Learning Plan

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| **Section D20: Useful Products from Crude Oil** | | |
| Specification | Resources | Assessment |
| 5.6 understand that crude oil is a mixture of hydrocarbons  5.7 describe and explain how the industrial process of fractional distillation separates crude oil into fractions  5.8 recall the names and uses of the main fractions obtained from crude oil: refinery gases, gasoline, kerosene, diesel, fuel oil and bitumen  5.9 describe the trend in boiling point and viscosity of the main fractions  5.10 understand that incomplete combustion of fuels may produce carbon monoxide and explain that carbon monoxide is poisonous because it reduces the capacity of the blood to carry oxygen  5.11 understand that, in car engines, the temperature reached is high enough to allow nitrogen and oxygen from air to react, forming nitrogen oxides  5.12 understand that nitrogen oxides and sulfur dioxide are pollutant gases which contribute to acid rain, and describe the problems caused by acid rain  5.13 understand that fractional distillation of crude oil produces more long-chain hydrocarbons than can be used directly and fewer short-chain hydrocarbons than required and explain why this makes cracking necessary  5.14 describe how long-chain alkanes are converted to alkenes and shorter-chain alkanes by catalytic cracking, using silica or alumina as the catalyst and a temperature in the range of 600–700C. | Video: Chemistry Section 5 Lesson 2 – Industrial Chemistry – Crude oil.  Powerpoint: Section 5 Lesson 2  Textbook: Ch.20 – Useful Products from Crude Oil  Page 163 – What is crude oil (petroleum)?  Page 164 – Separating crude oil  Page 166 - Cracking  Page 168 – End of Chapter Check List  Edexcel iGCSE Chemistry Student Checklist Section D20.doc | Textbook  Page 168 – Questions 1 to 4  Chapter 20 Textbook Answers . pdf  Talking paper – Edexcel Chemistry Section D20 – Useful Products from Crude Oil  Section D20 Exam Question –. (pdf)  Section D20 Exam Question – mark scheme. (pdf) |

**Jim Clark video clips:** [**http://www.chemguide.co.uk/igcse/chapters/chapter20.html**](http://www.chemguide.co.uk/igcse/chapters/chapter20.html)

Videos – www.igcsesciencecourses.com

Textbook Ref: Edexcel International GCSE Chemistry Student Book - Clark

DVD Video Clips – see resource DVD in textbook.