CC16 Fuels

Topic Progression Checklist

I know this → colour green	I'm not sure → colour yellow	I don't know this → colour red

Subtopics and Learning Objectives	Start	End
CC16a Hydrocarbons in Crude Oil and Natural Gas		
Recall the meaning of the term hydrocarbon.		
Describe the compounds found in crude oil.		
Describe the importance of crude oil for the petrochemical industry.		
Explain why crude oil is a finite resource.		
Recall the names of some common fossil fuels.		
CC16b Fractional Distillation of Crude Oil		
Describe how crude oil is separated by fractional distillation.		
Explain how fractional distillation of crude oil works.		
Recall the names and uses of fractions from crude oil.		
Describe how fractions differ from each other.		
Explain why the properties of different fractions differ.		
CC16c The Alkane Homologous Series		
Describe that oil fractions mostly contain alkanes.		
Describe the main features of an homologous series.		
Explain why alkanes form an homologous series.		
CC16d Complete and Incomplete Combustion		
Describe the complete combustion of hydrocarbon fuels.		
Explain the production of harmful products during the incomplete combustion of hydrocarbon fuels.		
Explain why carbon monoxide is toxic.		
Describe the problems caused by incomplete combustion.		
CC16e Combustible Fuels and Pollution		
Explain how some hydrocarbon fuels produce sulfur dioxide in use.		
Recall the names of the pollutants responsible for acid rain.		
Describe some effects of acid rain.		
Explain why oxides of nitrogen are produced when fuels are burned in engines.		

CC16f Breaking Down Hydrocarbons		
Evaluate hydrogen as an alternative fuel to petrol for cars.		
Describe what happens during cracking.		
Explain why alkanes are saturated and alkenes are unsaturated.		
Explain why cracking is necessary.		