Carbon (OE5) – Revision Checklist

I can…	Lesson	Revised
Define the term ‘finite resource’	OE5 LE5	
Describe the formation of crude oil from ancient biomass	OE5 LE5	
Describe crude oil as a mixture and list the hydrocarbons that are its main components	OE5 LE5	
Define the term ‘hydrocarbon’	OE5 LE5	
Define the term ‘homologous series’	OE5 LE5	
State the general formula for the homologous series of alkanes.	OE5 LE5	
Recall the names of the first four alkanes.	OE5 LE5	
Recognise and interpret different representations of alkane molecules.	OE5 LE5	
Identify substances as alkanes from their molecular or displayed formulae.	OE5 LE5	
Describe how crude oil is separated into fractions by fractional distillation.	OE5 LE6	
Explain how fractions from crude oil are processed to produce fuels and feedstock.	OE5 LE6	
Identify fuels produced from crude oil.	OE5 LE6	
Identify materials produced by the petrochemical industry.	OE5 LE6	
Explain why carbon forms a vast number of natural and synthetic compounds.	OE5 LE6	
Explain how fractional distillation works in terms of evaporation and condensation.	OE5 LE6	
Describe the complete combustion of a hydrocarbon.	OE5 LE7	
Write balanced equations for the complete combustion of hydrocarbons.	OE5 LE7	
Describe the trends in boiling point across hydrocarbons.	OE5 LE7	
Describe the trends in viscosity across hydrocarbons.	OE5 LE7	
Describe the trends in flammability across hydrocarbons.	OE5 LE7	
Explain how the trends in properties depend on molecular size.	OE5 LE7	
Describe cracking of hydrocarbons	OE5 LE8	
Describe the conditions used for catalytic cracking.	OE5 LE8	
Describe the conditions used for steam cracking.	OE5 LE8	
Identify the products formed during cracking.	OE5 LE8	
Compare the properties of alkanes and alkenes.	OE5 LE8	
Describe the test for alkenes using bromine water.	OE5 LE8	
Recall the observation when bromine water reacts with an alkene.	OE5 LE8	
Explain why cracking is important for meeting demand for fuels.	OE5 LE8	
Describe how alkenes are used to produce polymers.	OE5 LE8	
Describe how alkenes are used as starting materials for other chemicals.	OE5 LE8	
Balance symbol equations for cracking reactions.	OE5 LE8	
Give examples of the usefulness of cracking.	OE5 LE8	
Explain how modern life depends on hydrocarbons.	OE5 LE8	
State the proportions of gases in the Earth’s current atmosphere.	OE5 LE2	
Describe how theories about the Earth’s early atmosphere have developed over time.	OE5 LE2	
Explain why evidence for the early atmosphere is limited.	OE5 LE2	
Describe the theory that volcanic activity formed the early atmosphere.	OE5 LE2	
Compare the early Earth’s atmosphere with the atmospheres of Mars and Venus.	OE5 LE2	
Describe how nitrogen accumulated in the atmosphere.	OE5 LE2	
Describe how carbon dioxide levels were reduced by the formation of oceans and sediments.	OE5 LE3	
Interpret evidence used to support theories about the early atmosphere.	OE5 LE2	

Evaluate different theories about the Earth's early atmosphere.	OE5 LE2	
State the word equation for photosynthesis.	OE5 LE3	
State the balanced symbol equation for photosynthesis.	OE5 LE3	
Describe how photosynthesis increased oxygen levels in the atmosphere.	OE5 LE3	
Explain how photosynthesis reduced carbon dioxide levels.	OE5 LE3	
Describe how the formation of sedimentary rocks reduced atmospheric carbon dioxide.	OE5 LE3	
Describe how the formation of fossil fuels reduced atmospheric carbon dioxide.	OE5 LE3	
Describe the main changes in the Earth's atmosphere over time.	OE5 LE3	
Explain the likely causes of changes in the Earth's atmosphere over time.	OE5 LE3	
Describe the formation of limestone deposits.	OE5 LE3	
Describe the formation of coal deposits.	OE5 LE3	
Describe the formation of crude oil deposits.	OE5 LE3	
Describe the formation of natural gas deposits.	OE5 LE3	
Identify the main greenhouse gases.	OE5 LE4	
Describe the greenhouse effect in terms of short and long wavelength radiation.	OE5 LE4	
Explain why greenhouse gases are necessary to maintain temperatures suitable for life.	OE5 LE4	