High Tunstall College of Science Curriculum Intent

Subject: Chemistry Year: 10

Thread 5—Organic chemistry and chemical detection

	Chemistry Thread 5	Progress		
Topic	**Key ideas**	**R**	**A**	**G**
Organic chemistry and chemical detection	I can recall how crude oil is formed, and what it is made of, giving properties of hydrocarbons			
	I can explain how crude oil is separated by the process of fractional distillation			
	I understand what an alkane is and can give the structure of the first 4 alkanes			
	I can explain how we can make long chain hydrocarbons useful using the process crack-			
	I can give the general formula of alkenes, and compare these to alkanes in terms of reactivity			
	I can explain the process of addition polymerisation			
	I can conduct chromatography and explain some of the applications of this			
	I can explain how we can use analytical tests to identify positive metal ions			
	I can explain how we can use analytical tests to identify anions			

Lesson	Learning Focus	Assessment	Key Words
1	What are hydrocarbons?	Completion of differentiated tasks	**Hydrocarbon,** crude oil, fossil fuel
2	How do we separate crude oil?	Completion of SOLO tasks linked to fractional distillation	**Fractional distillation**, hydrocarbon chain length, condense, evaporate
3	What are alkanes?	Self assessment of tasks	**Alkane**, homologous series
4	How can we make long chains useful?	Completion of practical work and conclusions made	**Cracking,** catalyst, bromine water
5	What are alkenes?	Completion and self assessment of tasks	Alkene, homologous series, double bond
6	How are polymers formed?	Self assessment of differentiated tasks, exam questions	**Polymer,** polymerisation, addition
7	What is chromatography?	Application task	Chromatography, Rf value, solvent front, **affinity**
8	RPA Chromatography		
9	How do we identify cations?	Completion of practical activities and conclusions made	**Cation,** flame test, metal hydroxide, precipitate
10	How do we identify anions?	Completion of practical activities and conclusions made	Anion, **precipitate**, halide, sulphate, carbonate
11	RPA Analytical chemistry		