

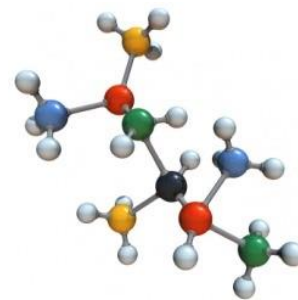
## Triple Unit Overview – C7 Organic chemistry

### You will learn about:

- What crude oil is made of and how it can be separated.
- How we use crude oil products in our everyday lives.

### You will be able to:

- Visualise 3D models of hydrocarbons.



### Key Words

alkanes  
alkenes  
cracking  
hydrocarbon  
monomer  
petrol  
polymers  
saturated  
unsaturated  
Bonds  
Fractional distillation  
Evaporation  
Condensation  
Mixture

### Key learning points

Crude oil

Alkanes

Fractional distillation

Properties of hydrocarbons

Cracking

Alkenes

Alcohols

Carboxylic acids

Addition and condensation polymerisation

Amino acids and DNA

### Links to other subjects:

**SMSC:** Suggest the impact on fuels, feedstocks and petrochemicals of depleting stocks of crude oil. Look at the cultural and environmental impact of the oil industry around the world. Research the discovery of the structure of DNA including the contributions of Francis Crick, James Watson, Maurice Wilkins and Rosalind Franklyn.

**Literacy:** Describe the formation and composition of crude oil, define a hydrocarbon, Explain what is meant by the formula  $C_nH_{2n+2}$ , and the formula  $C_2H_{2n}$ , describe the process of fractional distillation and explain in terms of intermolecular forces of attraction. Describe a life without oil or oil derived products. Explain the properties of hydrocarbons in relation to intermolecular forces, describe and explain the process of cracking, describe balanced symbol equations, describe what happens during the reactions of alcohols and carboxylic acids and describe the process of polymerisation.

**Numeracy:** Plot boiling points of alkanes against number of carbons and make predictions, balance equations, interpret homologous series.