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**LANGDON PARK SIXTH FORM**

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| **Subject: Chemistry** | **Year: Y13** | **Topic: 3.3.5 Aromatic Chemistry** |

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| ***What does the topic contain and why study the contents***?Benzene is the first and the fundamental molecule of the aromatic chemistry. In this unit the structure of benzene ring and it’s specific properties will be studies in some details. Also, the reactions of benzene and the underlying reaction mechanism such as the electrophilic substitution will be investigated by comparing and contrasting with the nucleophilic substitution of haloalkanes and electrophilic addition reaction of alkenes. |

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| **Key terms**AromaticIUPAC nomenclature Kekule structuredelocalisationResonance hybridThermochemical evidence  | Electrophilic substitutionElimination reactionsnitrationnitronium ionnitryl cationFreidel Crafts acylation |  |  |

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| **Success criteria** | **Pre-reading** | **Application and Assessment (date)** | **Independent learning**  | **Extension – Cultural Capital and Reading** |
| * **3.3.10.1 Bonding in Benzene ring**
* I can describe the structure of benzene
* I can explain how delocalisation makes benzene more stable than the theoretical cyclohexa-1,3,5-triene
* I can use thermochemical evidence from enthalpies of hydrogenation to account for this extra stability
* I can explain why benzene undergoes substitution reactions in preference to addition reactions.

3.3.10.2 Electrophilic substitution* I can write equations and outline mechanisms for nitration and Friedel-Crafts acylation reactions of aromatic compounds. (including equations for the formation of electrophiles)
* I can show my understanding of the usefulness of nitration and Friedel-Crafts acylation reactions
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 | AQA Chemistry 2nd Edition – Oxford University press: Aromatic chemistry.Study the Chem Sheets information*Chemistry Review* article: The structure of benzene (Volume 1, edition 1)*Chemistry Review* article: Who discovered the structure of benzene (Volume 5, edition 1)*Chemistry review* article: Probably the most important reactions in the world (Volume 15, edition 2) | Using molecular models to make Kekule isomers of benzeneFortnightly mini-mock Complete all set home work | Attempt chapter end summery questionsPracticing past exam questions | ***Chemistry Review*** |

**Pre-assessment content review**

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| I feel secure in | I need to focus on | My action plan |

**Pre-assessment skills review**

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| I feel secure in | I need to focus on | My action plan |

**Post-assessment review**

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| Weaknesses in content knowledge | Skills I need to focus on | My action plan |
| Retest / review – teacher and student comment |