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**LANGDON PARK SIXTH FORM**

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| **Subject: A2 Chemistry** | **Year: Y13** | **Topic: 3.3.7 Optical Isomerism** |

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| ***What does the topic contain and why study the contents***?Compounds that contain an asymmetric carbon atom form stereoisomer that differ in their effect on plane polarised light. This type of isomerism is called optical isomerism. In this unit teaching and learning will be focused on understanding and recognizing the structure of chiral molecules and their stereoisomeric properties which determine the synthesis and their positive and negative effect on applications as drugs. We will also learn how a polarimeter works to study the natural and synthetic drugs and their racemates.  |

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| **Key terms**StereoisomerismOptical isomersAsymmetric carbonChiralityOptical activity  | Polarised lightPolarimeterenantiomersracemates  |  |  |

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| **Success criteria** | **Pre-reading** | **Application and Assessment (date)** | **Independent learning**  | **Extension – Cultural Capital and Reading** |
| * **3.3.7 Optical isomerism**
* I can explain the cause of optical isomerism
* identify molecules that exhibit optical isomerism/that are optically active.
* draw pairs of optical isomers in 3D
* describe how enantiomers affect plane polarised light
* explain what a racemic mixture is, how they can be formed, and their effect on plane polarised light.
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 | AQA Chemistry 2nd Edition – Oxford University press: Nomenclature and isomerismOptical isomerism*Review* article: Looking in the mirror (Volume 10, edition 3) | Fortnightly mini-mock Complete all set home work* January 2005 Unit 4 Question 3d (QW05.4.03)
* June 2002 Unit 4 Question 5 (QW02.4.05)
 | Attempt chapter end summery questionsPracticing past exam questionsMolymod models*Chemistry Review* article: Looking in the mirror (Volume 10, edition 3) | ***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 |