Edexcel iGCSE Biology 4BI0 Learning Plan

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| **Section C10: Plants and Food** | | |
| Specification | Resources | Assessment |
| 2.17 describe the process of photosynthesis and understand its importance in the conversion of light energy to chemical energy  2.18 write the word equation and the balanced chemical symbol equation for photosynthesis  2.19 understand how varying carbon dioxide concentration, light intensity and temperature affect the rate of photosynthesis  2.20 describe the structure of the leaf and explain how it is adapted for photosynthesis  2.21 understand that plants require mineral ions for growth and that magnesium ions are needed for chlorophyll and nitrate ions are needed for amino acids  2.22 describe experiments to investigate photosynthesis, showing the evolution of oxygen from a water plant, the production of starch and the requirements of light, carbon dioxide and chlorophyll  2.39 understand gas exchange (of carbon dioxide and oxygen) in relation to respiration and photosynthesis  2.40 understand that respiration continues during the day and night, but that the net exchange of carbon dioxide and oxygen depends on the intensity of light  2.41 explain how the structure of the leaf is adapted for gas exchange  2.42 describe the role of stomata in gas exchange  2.43 describe experiments to investigate the effect of light on net gas exchange from a leaf, using hydrogen-carbonate indicator | Video: Biology – Section 2 – Lesson 2 – Nutrition – Flowering Plants  Biology – Section 2 – Lesson 4 Respiration and Gaseous Exchange; 15.52 to end  Powerpoint: Biology Section 2 Lesson 2 Biology Section 2 Lesson 4 – Slide 59 to end  Textbook: Ch.10 – Plants and Food  Page 109 – Plants make starch  Page 111 – Where does starch come from?  Page 112 – Photosynthesis  Page 114 – Photosynthesis and Respiration  Page 115 – Investigating the effect of light on gas exchange by a leaf  Page 116 – Factors affecting the rate of photosynthesis  Page 117 – The Plant’s uses for glucose  Page 118 – Mineral nutrition  Page 120 – End of Chapter Check List  Chapter 10 Plants and Food - Student checklist.doc  DVD Revision check list  <http://biology-igcse.weebly.com/summary2.html>  <http://biology-igcse.weebly.com/the-equation-for-photosynthesis.html>  <http://biology-igcse.weebly.com/photosynthesis-investigations---principles-and-starch-test.html>  <http://biology-igcse.weebly.com/effect-of-light-intensity-on-the-rate-of-photosynthesis.html>  <http://biology-igcse.weebly.com/effect-of-temperature-on-the-rate-of-photosynthesis.html>  <http://biology-igcse.weebly.com/effect-of-carbon-dioxide-on-the-rate-of-photosynthesis.html>  <http://biology-igcse.weebly.com/limiting-factors-in-photosynthesis.html>  <http://biology-igcse.weebly.com/leaf-structure.html>  <http://biology-igcse.weebly.com/plants-mineral-requirements-and-fertilisers.html> | Textbook  Page 120 – 121 Questions 1 to 7  Textbook Answers (PDF)  DVD Multiple choice test  Section C10 - exam question - pdf  Section C10 - exam question mark scheme – pdf  Talking paper video – Section C10 Plants and Food |

Videos – www.igcsesciencecourses.com

Textbook Ref: Edexcel International GCSE Biology Student Book - Pearson (Bradfield and Potter)

DVD Video Clips – see resource DVD in textbook.