Edexcel International GCSE Biology 4BI1 Learning Plan

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| **Unit: 2. Animal Physiology** | | **Chapter: 5. Blood and Circulation** | | **Hours: 10** |
| Content coverage | Learning outcomes | Resources | Assessment | |
| **Section 2: Structures and functions in living organisms**  h) Transport | **2.51** understand why simple, unicellular organisms can rely on diffusion for movement of substances in and out of the cell  **2.52** understand the need for a transport system in multicellular organisms  **2.59** describe the composition of the blood: red blood cells, white blood cells, platelets and plasma  **2.60** understand the role of plasma in the transport of carbon dioxide, digested food, urea, hormones and heat energy  **2.61** understand how adaptations of red blood cells make them suitable for the transport of oxygen, including shape, the absence of a nucleus and the presence of haemoglobin.  **2.62** understand how the immune system responds to disease using white blood cells,  illustrated by phagocytes ingesting pathogens and lymphocytes releasing antibodies specific to the pathogen  **2.63B understand how vaccination results in the manufacture of memory cells, which enable future antibody production to the pathogen to occur sooner, faster and in greater quantity**  **2.64B understand how platelets are involved in blood clotting, which prevents blood loss and the entry of micro-organisms.**  **2.65** describe the structure of the heart and how it functions  **2.66** explain how the heart rate changes during exercise and under the influence of adrenaline.  **2.67** understand how factors may increase the risk of developing coronary heart disease.  **2.68** understand how the structure of arteries, veins and capillaries relate to their function  **2.69** understand the general structure of the circulation system, including the blood vessels to and from the heart and lungs, liver and kidneys. | Video: Biology Section 2 Lesson 5 – beginning to 02.55; 13.28 to end  Powerpoint: Biology Section 2 Lesson 5 – slides 5 to 13; slides 56 to 103  Textbook pages:  70 – The need for circulatory systems  71 – The circulatory systems of different animals  73 – The structure and function of the human heart  75 – Heart Rate  76 – Arteries, veins and capillaries  78 – Red blood cells  79 – White blood cells  80 - Platelets | Page 81 – 83 Qs. 1 to 11  Textbook Answers (PDF)  Chapter 5 - exam question - pdf  Chapter 5 - exam question mark scheme – pdf  Chapter 5 - Talking paper video | |

Videos – [www.igcsesciencecourses.com](http://www.igcsesciencecourses.com)

Textbook Ref: Edexcel International GCSE (9-1) Biology Student Book - Pearson (Bradfield and Potter)