IGCSE Biology (9-1) Specification 2(h)

(h) Transport

Students should:

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

Flowering plants

2.53 describe the role of phloem in transporting sucrose and amino acids between the leaves and other parts of the plant

2.54 describe the role of xylem in transporting water and mineral ions from the roots to other parts of the plant

2.55B understand how water is absorbed by root hair cells

2.56B understand that transpiration is the evaporation of water from the surface of a plant

2.57B understand how the rate of transpiration is affected by changes in humidity, wind speed, temperature and light intensity

2.58B practical: investigate the role of environmental factors in determining the rate of transpiration from a leafy shoot

Humans

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

Dr. James Peros (PhD, BS, BS, BA, AS, CEd)

Contact: James@YourEducationPlus.com Site: www.YourEducationPlus.com
Facebook: https://www.facebook.com/YourEducationPlus/

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