

Year 9: ASK Yourself!

Subject: Biology

Unit: 3 – Moving and changing materials

	Launching 1-2	Developing 3-4	Progressing 5-6	Mastering 7-9
S kills				
	To be able to observe and draw blood cells seen under a microscope. Use qualitative reagents to test for a range of carbohydrates, lipids and proteins.	Be able to develop an understanding of size and scale in relation to cells, tissues, organs and systems. Interpret data about risk factors for specified diseases.	To be able to use models to explain analogies to develop explanations about enzyme action. To be able to use a continuous sampling technique to determine the complete digestion of starch at a range of pH values. Evaluate methods of treating coronary heart disease. Be able to measure the rate of transpiration by the uptake of water.	Critically evaluate models to identify features of organs which are effectively represented and those which are not. Process data from investigations involving stomata and transpiration rates to find arithmetic means, understand the principles of sampling and calculate surface areas and volumes. Calculate stomatal density.
K nowledge				
	To know the functions of the organs in the digestive system. Describe and label the heart. Label the main organs of a plant and describe their functions. Define the term 'active transport'.	Be able to describe the 3 types of digestive enzymes and where they are produced. Describe the function of the heart and circulatory system. Describe the effects of factors on health. Describe & explain the role of stomata and guard cells. Describe where active transport occurs in humans and plants.	Be able to explain the importance of the small intestines and how it is adapted for its function. Explain why enzymes are specific and can be denatured. Explain how the heart is adapted for its function. Explain why active transport requires energy.	To be able to explain enzyme action using the lock and key theory and collision theory. Evaluate the use of drugs and transplants to treat heart problems. Explain the relationship between active transport and oxygen supply and numbers of mitochondria in cells.