|  |  |  |  |
| --- | --- | --- | --- |
| ***Can you…?*** | ☺ | 😐 | ☹ |
| 2.1 Principles of organisation |
| Explain organisational hierarchy |  |  |  |
| Define a cell, tissue, organ and organism |  |  |  |
| 2.2 Animal tissues, organs and organ systems  |
| Know that digestive system is an example of an organ system in which several organs work together to digest and absorb food.  |  |  |  |
| Relate knowledge of enzymes to Metabolism |  |  |  |
| Describe the structure function and optimum conditions for enzymes |  |  |  |
| Define denaturation |  |  |  |
| Recall the sites of production and the action of amylase, proteases and lipases. |  |  |  |
| Know that digestive enzymes convert food into small soluble molecules that can be absorbed into the bloodstream.  |  |  |  |
| State that the products of digestion are used to build new carbohydrates, lipids and proteins. Some glucose is used in respiration. |  |  |  |
| Recall where bile is made and stored and its pH and function |  |  |  |
| State conditions that increase the rate of fat breakdown by lipase. |  |  |  |
| Recall the structure and functioning of the human heart and lungs, including how lungs are adapted for gaseous exchange.  |  |  |  |
| Recall that the heart is an organ that blood around the body in a double circulatory system. The right ventricle pumps blood to the lungs where gas exchange takes place. The left ventricle pumps blood around the rest of the body.  |  |  |  |
| Name the major blood vessels |  |  |  |
| Describe the structure of the lungs |  |  |  |
| Explain natural and artificial pacemakers  |  |  |  |
| Name the three different types of blood vessel and explain how the structure of these vessels relates to their functions. |  |  |  |
| Describe the components of blood and how they are adapted to function |  |  |  |
| Describe coronary heart disease: a non-communicable disease |  |  |  |
| State that health is the state of physical and mental wellbeing.  |  |  |  |
| Know that defects in the immune system mean that an individual is more likely to suffer from infectious diseases. |  |  |  |
| Recall that immune reactions initially caused by a pathogen can trigger allergies such as skin rashes and asthma. |  |  |  |
| Know that severe physical ill health can lead to depression and other mental illness. |  |  |  |
| Explain the effect of lifestyle on some non-communicable diseases and that they can be caused by and their increased by the interaction of a number of factors,  |  |  |  |
| Recall that benign tumours and malignant tumours result from uncontrolled cell division. Malignant tumour cells are cancers.  |  |  |  |
| Know lifestyle risk factors for various types of cancer including smoking, obesity, common viruses and UV exposure. There are also genetic risk factors for some cancers. |  |  |  |
| 2.3 Plant tissues, organs and systems |
| Know the function of epidermal tissues palisade mesophyll, spongy mesophyll, xylem and phloem and meristem tissue  |  |  |  |
| Describe the structures of tissues in the leaf and relate to their functions |  |  |  |
| Explain how root hair cells are adapted for the efficient uptake of water and mineral ions |  |  |  |
| Know the structure and function of xylem tissue. |  |  |  |
| Define factors which affect the rate of transpiration |  |  |  |
| Explain the role of stomata and guard cells |  |  |  |
| Explain the role of phloem tissue and name this process |  |  |  |