Topic 2 Organisation

Human Transport

I can define the following terms….

1. Enzyme in terms of what it’s made from and its role in biological reactions
2. Denatured enzyme
3. Optimum (in relation to enzymes and pH/temperature)
4. Pacemaker in the heart
5. Causal link
6. Cancer
7. Benign and malignant tumours

I can identify…...

1. The sites of production and the action of amylase, proteases and lipases.
2. Where bile is made
3. The main structures in the human heart and lungs
4. The four main components of blood
5. Different types of blood cells in a photograph or diagram
6. The risks related to use of blood products
7. Risk factors that have an affect on non-communicable diseases
8. Examples of causal links between a risk factor and a non-communicable disease

I can describe…..

1. The role of the relationship between cells, tissues, organs, organ systems and organisms
2. The role of the digestive system
3. The role of Carbohydrases, Proteases and Lipases in the digestive system
4. The pathway that blood takes through the heart and lungs from the vena cava to the reach the aorta
5. The role of artificial pacemakers
6. The role of a stent in treating CHD

I can explain….

1. How an enzyme functions using the ‘lock and key theory’ model of action
2. Why an enzyme does not function at high temperature and extremes of pH
3. The role of the products of digestion
4. The role of bile in the digestive system
5. How the lungs are adapted for gaseous exchange
6. How the structures that make up Arteries, Veins and Capillaries relate to their functions
7. The role of the four main components of blood: Plasma, Red blood cells, White blood cells and Platelets
8. How white blood cells and red blood cells are adapted for their function.
9. What the cause and effect is of coronary heart disease
10. The advantages and disadvantages of treating cardiovascular diseases by drugs, mechanical devices or transplant.

I can…

1. **describe how to investigate how to use quantitative reagents to test for a range of carbohydrates, lipids and proteins, including Benedict’s test for sugars; iodine test for starch; and Biuret reagent for protein.**
2. **describe how to investigate the effect of pH on the rate of reaction of amylase.**
3. **carry out rate calculation *for blood flow*.**
4. **observe and draw blood cells seen under a microscope**

Plant transport

I can define the following terms….

1. Transpiration in xylem
2. Translocation in phloem

I can describe…..

1. the role of epidermal tissue, palisade mesophyll, spongy mesophyll, meristem tissue, xylem and phloem and guard cells
2. the process of transpiration and translocation, including the structure and function of the stomata

I can explain….

1. how a leaf is adapted for its function
2. how the structure of root hair cells, xylem and phloem are adapted to their functions.
3. the effect of changing temperature, humidity, air flow and light intensity on the rate of transpiration
4. how root hair cells are adapted for the efficient uptake of water by osmosis and mineral ions by active transport.

I can…

1. recognise, label and draw of a transverse section of leaf.
2. measure the rate of transpiration by the uptake of water.