|  |  |  |
| --- | --- | --- |
| **What will we be learning?**  **Year 12 Animal Transport** | **Why this? Why now?**  Previous Learning  Year 11 -Organisation  Future Learning  Material from this unit will be developed in Year 13 units of ‘Respiration’ and ‘Nerves and Muscle’  Enquiry Processes  Analyse Patterns, Draw conclusions, Present data, Justify opinions, Collect data, Present data, Plan variables | **Key Words:**  **Aorta**  **Apex**  **Artery**  **Atrial systole**  **Atrioventricular node (AVN**  **Atrioventricular valves**  **Atrium/atria**  **Bundle of His**  **Capillary**  **Cardiac cycle**  **Cardiac output**  **Coronary arteries**  **Diastole**  **Elastic tissue**  **Endothelium**  **Hydrostatic pressure**  **Lymph**  **Lymphatic system**  **Myogenic**  **Pulmonary artery**  **Pulmonary vein**  **Semi-lunar valve**  **Septum**  **Sinoatrial node (SAN** )  **Smooth muscle tissue**  **Stroke volume**  **Tissue fluid**  **Ultrafiltration**  **Vein**  **Vena cava (inferior and superior)**  **Ventricles**  **Ventricular systole**  **Wave of depolarisation** |
| **What will we learn?**   * The need for transport systems in multicellular animals * The different types of circulatory systems * The structure and functions of arteries, arterioles, capillaries, venules and veins * The formation of tissue fluid from plasma * The external and internal structure of the mammalian heart * How to dissect, examine and draw the external and internal structure of the mammalian heart * The cardiac cycle * How heart action is initiated and coordinated * The use and interpretation of electrocardiogram (ECG) traces * The role of haemoglobin in transporting oxygen and carbon dioxide * The oxygen dissociation curve for fetal and adult human haemoglobin.   **Misconceptions in this topic**  Red blood cells DO NOT transport ‘oxygen’! Oxygen is transported as oxyhaemoglobin within red blood cells | |
| **What opportunities are there for wider study?**  Careers  Brewing Dietetics Biochemistry Sports Science Fisheries Work Occupational Therapy Nursing Medicine Agriculture Marine Biology Laboratory Work Prosthetics and Orthotics Teaching Radiography Pharmacology Physiotherapy Biotechnology Veterinary Work Paramedical Science Environmental science Zoology  STE(A)M  https://highcliffe.sharepoint.com/sites/LearnSTEM | |
| **How will I be assessed?**  End of topic assessment  PAG 2.1 | |