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| **What will we be learning?**  **Year 13 Excretion** | **Why this? Why now?**  Previous Learning  Year 12 cell structure, membrane structure, biomolecules, proteins and enzymes there are also links with immunity and biotechnology  Enquiry Processes  Analyse Patterns, Draw conclusions, Present data, Justify opinions, Collect data, Present data, Plan variables | **Key Words:**  **Afferent arterioles**  **Antidiuretic hormone (ADH)**  **Basement membrane**  **Bowman’s capsule**  **Cortex**  **Dialysis**  **Distal convoluted tubule**  **Efferent arteriole**  **Glomerular filtrate**  **Glomerulus**  **Hypothalamus**  **Loop of Henle**  **Medulla**  **Nephron**  **Pituitary gland**  **Proximal convoluted tubule**  **Selective reabsorption**  **Ultrafiltration**  **Urea** |
| **What will we learn?**   * The structure and functions of the mammalian liver and examination and drawing of stained sections to show the histology of liver tissue * The structure, mechanisms of action and functions of the mammalian kidney including the dissection, examination and drawing of the external and internal structure of the kidney. The examination and drawing of stained sections to show the histology of nephrons * The control of the water potential of the blood including the role of osmoreceptors in the hypothalamus, the posterior pituitary gland, ADH and its effect on the walls of the collecting ducts * The effects of kidney failure and its potential treatments * How excretory products can be used in medical diagnosis   **Misconceptions in this topic**   * This topic contains a lot of new nomenclature – students must be confident that they use technical terms correctly * Transport process take place in the Loop of Henle simultaneously in the descending and ascending loops. Misunderstanding of this can lead to confusion with mechanism of counter-current multiplier systems | |
| **What opportunities are there for wider study?**  Careers  Biochemistry Biotechnology Forensics Laboratory Work Medicine Nursing Occupational Therapy Paramedical Science Pharmacology Radiography Sports Science Teaching Veterinary Work Zoology  STE(A)M  https://highcliffe.sharepoint.com/sites/LearnSTEM | |
| **How will I be assessed?**  End of topic assessment | |