**UNIT OVERVIEW:** Biological Membranes

**ENQUIRY:** How do cells communicate with each other?

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| **Unit intention:** Membranes are fundamental to the cell theory. The structure of the plasma membrane allows cells to communicate with each other. Understanding this ability to communicate is important as scientists increasingly make use of membrane-bound receptors as sites for the action of medicinal drugs. Understanding how different substances enter cells is also crucial to the development of mechanisms for the administration of drugs.” | | | |
| **Success criteria:** | | 🗸 | X |
| **2.1.5 Biological membranes**   |  | | --- | | I can describe the roles of membranes within cells and at the surface of cells | | I can describe the fluid mosaic model of membrane structure and the roles of its components. | | I can explain the factors affecting membrane structure and permeability  *To include the effects of temperature and solvents.*  practical investigations into factors affecting membrane structure and permeability | | I can compare and contrast the movement of molecules across membranes | | I can explain the movement of water across membranes by osmosis and analyse and evaluate the effects that solutions of different water potential can have on plant and animal cells.  practical investigations into the effects of solutions of different water potential on plant and animal cells. | | |  |  |
| **Unit summative and formative assessment details:**  Weekly Seneca, factual re-call  Extended writing  Practical Research  End of unit test | | | |
| **Home Learning (What and how often):**  **Home Learning (What and how often):**  Homework once a week (flip learning and Seneca)  Revisit class content (make notes)  Research activities for practical | | | |
| **Topic Sequence**   1. Role of membranes within cells 2. Fluid Mosaic Model 3. Factors affecting Membrane permeability 4. Movement of molecules across membranes 5. Movement of water 6. Membrane permeability practical 7. Osmosis practical | **Recommended reading:**  HPA Recommended biological dictionary  <https://alevelnotes.com/notes/biology/biological-molecules/biological-molecules>  <http://brilliantbiologystudent.weebly.com/biuret-test-for-protein.html>  <https://jcp.bmj.com/content/jclinpath/25/10/892.full.pdf>  **Places to visit:**  Centre of the cell | | |

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| **Success criteria** – Have you met them? Show your evidence in the boxes below. |
| **1.** |
| **2.** |
| **3.** |
| **4.** |
| **5.** |
| **6.** |
| **How will you improve your work?** |

**End of Unit EVALUATION**