

|                                    | Monday   | Tuesday | Thursday |
|------------------------------------|--|---------|----------|
| <b>Unit/ Lesson Big Ideas</b>      | <b>Unit B: Biochemistry</b>  |         |          |
| <b>Overall Expectations</b>        | <p><b>B1.</b> analyse technological applications of enzymes in some industrial processes, and evaluate technological advances in the field of cellular biology;</p> <p><b>B2.</b> investigate the chemical structures, functions, and chemical properties of biological molecules involved in some common cellular processes and biochemical reactions;</p> <p><b>B3.</b> demonstrate an understanding of the structures and functions of biological molecules, and the biochemical reactions required to maintain normal cellular function.</p>   |         |          |
| <b>Specific Expectations</b>       | <p><b>B2.1</b> use appropriate terminology related to biochemistry, including, but not limited to: active and passive transport, covalent and ionic bond, allosteric site, substrate, substrate-enzyme complex, and inhibition [C]</p> <p><b>B3.5</b> identify and describe the four main types of biochemical reactions (oxidation-reduction [redox], hydrolysis, condensation, and neutralization)</p> <p><b>B3.2</b> describe the structure of important biochemical compounds, including carbohydrates, proteins, lipids, and nucleic acids, and explain their function within cells</p> <p><b>B2.3</b> construct and draw three-dimensional molecular models of important biochemical compounds, including carbohydrates, proteins, lipids, and nucleic acids [PR, C]</p> |         |          |
| <b>Learning Goals</b>              | <p>Students are able to understand and explain and draw the structures of the concepts of:</p> <ul style="list-style-type: none"> <li>- Different bonds,</li> <li>- The four types of chemical reactions</li> <li>- Biologically important molecules</li> </ul>  |         |          |
| <b>Success Criteria</b>            | <ul style="list-style-type: none"> <li>-Atoms and elements (Subatomic particles, Radioactive isotopes, Ionic and covalent bonds, electronegativity and its effects)</li> <li>- Biochemical reactions (Condensation, hydrolysis, Neutralization, Oxidation and reduction)</li> <li>- Macromolecules</li> <li>- Structure, function and formation of carbohydrates, lipids</li> </ul>  |         |          |
| <b>Instructional Strategies</b>    | Explanation using diagrams and videos  |         |          |
| <b>Assessment &amp; Evaluation</b> | Knowledge and Understanding<br>Communication   |         |          |
| <b>Homework / Class Work</b>       | Text book page 18, Question 12 & 13  |         |          |

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