

| Day | Lesson Plan | | |
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| Tuesday | <p>Topic: Cell Energy: Photosynthesis</p> <p>Period Taught: 3rd Block – 11th Grade Honors Biology</p> <p>Materials/Resources: Presentation, worksheets, Chromebooks, timer</p> <p>Objectives: The students will be able to <ul style="list-style-type: none"> Construct their own graphic organizers summing up the process of photosynthesis Identify the important reactants and products of photosynthesis Differentiate between the cellular energy processes of cellular respiration and photosynthesis </p> <p>Standards: SAS</p> <p>3.1.10.A2 Explain cell processes in terms of chemical reactions and energy changes.</p> <p>3.1.B.A2 Identify the initial reactants, final products, and general purposes of photosynthesis and cellular respiration.</p> <p>Explain the important role of ATP in cell metabolism.</p> <p>Describe the relationship between photosynthesis and cellular respiration in photosynthetic organisms.</p> <p>3.1.B.A5 Explain the role of water in cell metabolism.</p> <p>Procedure:</p> <ol style="list-style-type: none"> Students will start class by completing a graphic organizer to sum up what they learned about cellular respiration. <ol style="list-style-type: none"> They will be allotted 5-10 minutes to finish Then they will be asked to write out the equation for cellular respiration: in words and chemical notation After, they will be asked to write out the equation for photosynthesis Once the photosynthesis equation has been written, students will be broken up into three (3) smaller groups <ol style="list-style-type: none"> One group will be completing a photosynthesis animation on the Chromebooks <ol style="list-style-type: none"> This will be individual They will also be asked to compare and contrast cellular respiration and photosynthesis The second group will be working together as a group to learn about the Calvin cycle of photosynthesis <ol style="list-style-type: none"> They will be given various handouts, which they will have to read and teach each other The third will be with the instructor for direct instruction about the electron transport chain <ol style="list-style-type: none"> Each of the groups will be at each station for about 13-15 minutes (there will be a timer up on the screen) Once all groups have been to each station, the class will go back to their seats for a concept overview with the instructor Depending on timing, students will take a closure Google forms quiz on cellular respiration and Photosynthesis. If there is no time, they will take the quiz on Wednesday beginning of class. <p>Class Assignment: See above</p> <p>Differentiated Instruction:</p> <p>Individual learning Smaller groups - assigned Peer teaching In-class questioning Guided Instruction</p> <p>Essential Questions:</p> <ol style="list-style-type: none"> What is photosynthesis? What are the reactants and products of each stage? Overall? How is photosynthesis different from cellular respiration? <p>Assessment:</p> <p>Worksheet with guided questions Individual questioning Graphic organizer Exiting quiz</p> | | |

Reflections: