**Academic Notes**

**TOPIC:** Photosynthesis and Melvin Calvin

<table>
<thead>
<tr>
<th>DEFINE</th>
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<tbody>
<tr>
<td>Base your definition on:</td>
</tr>
<tr>
<td>• what it does</td>
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<tr>
<td>• what it is</td>
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<tr>
<td>• what it's made from</td>
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<tr>
<td>• what it means</td>
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<tr>
<td>Photosynthesis is the process by which plants create carbohydrates and oxygen from carbon dioxide and water, using the energy of sunlight.</td>
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<table>
<thead>
<tr>
<th>SUMMARIZE</th>
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<tbody>
<tr>
<td>Be sure that you:</td>
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<tr>
<td>• synthesize different events and information</td>
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<tr>
<td>• include only essential events, ideas, or info</td>
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<td>The conditions necessary for photosynthesis to take place had been known for nearly two centuries, as had the end products of the process. But the intermediate processes were a mystery. Calvin discovered and explained those processes.</td>
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<table>
<thead>
<tr>
<th>SERIALIZE</th>
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<tr>
<td>Be sure to:</td>
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<tr>
<td>• include key events or moments in the sequence</td>
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<tr>
<td>• organize events or data to show how one event or action leads to another</td>
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<th>CLASSIFY</th>
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<tr>
<td>Be sure to:</td>
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<tr>
<td>• create useful categories into which all info can be organized</td>
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<td>• establish criteria to use when evaluating and organizing information</td>
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<td>Photosynthesis research, science history, scientific research, important figures in science.</td>
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<th>COMPARE</th>
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<tr>
<td>Be sure to:</td>
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<tr>
<td>• identify and assess key similarities and differences based on:</td>
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<tr>
<td>• importance</td>
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<td>• behavior</td>
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<td>• quality</td>
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<tr>
<td>• function</td>
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<td>The discovery of the photosynthesis process reminds me of the process the Curie’s used in the discovery of radiation.</td>
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<th>ANALYZE</th>
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<tr>
<td>Be sure to:</td>
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<tr>
<td>• consider what the text/results mean based on critical reading or observation</td>
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<td>• interpret from multiple perspectives</td>
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<tr>
<td>Calvin was able to discover the intermediate processes by introducing carbon-14 (a good tracer) into a flask containing green algae in suspension. He then used a second technique, paper chromatography, to identify the radioactive tracers. In this technique, a mixture is spread by solvents along a sheet of filter paper.</td>
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