

<p>Class Notes</p> <p><u>Photosynthesis</u></p> <p>Questions/Main Idea:</p>	<p>Name: _____</p> <p>Period: _____</p> <p>Date: _____</p> <p style="text-align: center;">Notes:</p>
<p>What is the definition of photosynthesis?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Process by which autotrophs convert sunlight into sugars. <ul style="list-style-type: none"> <input type="checkbox"/> auto = self <input type="checkbox"/> troph = feed
<p>Why do we depend on plants?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> They make food! <input type="checkbox"/> We CANNOT make our own food ☹ <input type="checkbox"/> Thankfully, plants produce glucose -- a food source for all heterotrophs! <ul style="list-style-type: none"> ▪ hetero = different, other ▪ troph = feed
<p>How do we see color?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Sunlight is made up of ALL colors together (wavelengths). <input type="checkbox"/> Pigments reflect the wavelength of color that we see and absorb the other colors.
<p>Why are plants green?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Chlorophyll is a pigment found in the chloroplasts of plant cells. <input type="checkbox"/> Chlorophyll A is the most important pigment in plants – responsible for the green color. <input type="checkbox"/> It reflects green and absorbs other wavelengths. <input type="checkbox"/> That means chlorophyll absorbs a lot more light than it reflects.
<p>Why do leaves change color in the fall?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Why use just one wavelength of light when you can have more? <input type="checkbox"/> Accessory pigments absorb green and reflect other colors (e.g., red, yellow, or orange) <input type="checkbox"/> In autumn, leaves stop producing new chlorophyll A, which lets the accessory pigments show through
<p>What happens in photosynthesis and where does it take place?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Photosynthesis harnesses the sun's energy and stores it as chemical energy in carbohydrates. <input type="checkbox"/> Takes place in chloroplasts. <input type="checkbox"/> Light energy (wavelengths) are absorbed by the pigment chlorophyll.
<p>Which organisms can photosynthesize?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Plants <input type="checkbox"/> Algae <input type="checkbox"/> Some protists <input type="checkbox"/> Some bacteria
<p>Photosynthesis Equation</p>	<p>Energy + 6H₂O + 6CO₂ → C₆H₁₂O₆ + 6O₂</p> <p>Sunlight + Water + Carbon Dioxide → Glucose + Oxygen</p>
<p>How do plants store energy?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> When chlorophyll absorbs light, it splits water into H₂ and O₂, and puts electrons into an excited state (they have extra energy) <input type="checkbox"/> As the electrons leave the excited state, release energy and heat <input type="checkbox"/> The cell converts the energy into ATP and NADPH for storage
<p>Summary:</p> <p> </p> <p> </p>	