

IB Biology		Per 1(3)		10/28-11/1		
Unit/Theme		Objectives	Activities	Homework	Closure/Review	Assessment
M O N	2.9 Photosynthesis (2x83min)	<ul style="list-style-type: none"> <li>• Photosynthesis is the production of carbon compounds in cells using light energy.</li> <li>• Visible light has a range of wavelengths with violet the shortest wavelength and red the longest.</li> <li>• Chlorophyll absorbs red and blue light most effectively and reflects green light more than other colors.</li> <li>• Oxygen is produced in photosynthesis from the photolysis of water.</li> <li>• Energy is needed to produce carbohydrates and other carbon compounds from carbon dioxide.</li> <li>• Temperature, light intensity and carbon dioxide concentration are possible limiting factors on the rate of photosynthesis.</li> <li>• Application: Changes to the Earth's atmosphere, oceans and rock deposition due to photosynthesis.</li> <li>• Skill: Drawing an absorption spectrum for chlorophyll and an action spectrum for photosynthesis.</li> <li>• Skill: Design of experiments to investigate the effect of limiting factors on photosynthesis.</li> <li>• Skill: Separation of photosynthetic pigments by chromatograph. (Practical 4)</li> </ul>	<ul style="list-style-type: none"> <li>• Turn in DBQ 134</li> <li>• Lab: Photosynthesis</li> <li>• *Run Guided Lab</li> <li>• *Analyze Data</li> </ul>	<ul style="list-style-type: none"> <li>• Read 2.9</li> <li>• Design an experiment to investigate the effect of limiting factors on photosynthesis (see S68 for ideas)</li> <li>• Bring in items needed for lab</li> <li>• Finish Photosynthesis Guided Lab</li> </ul>	<ul style="list-style-type: none"> <li>• Experimental Design Variables and controls</li> </ul>	<ul style="list-style-type: none"> <li>• Photosynthesis Lab</li> </ul>
	No Class	No Class	No Class	No Class	No Class	No Class
W E D	2.9 Photosynthesis (83min)	<ul style="list-style-type: none"> <li>• Photosynthesis is the production of carbon compounds in cells using light energy.</li> <li>• Visible light has a range of wavelengths with violet the shortest wavelength and red the longest.</li> <li>• Chlorophyll absorbs red and blue light most effectively and reflects green light more than other colors.</li> <li>• Oxygen is produced in photosynthesis from the photolysis of water.</li> <li>• Energy is needed to produce carbohydrates and other carbon compounds from carbon dioxide.</li> <li>• Temperature, light intensity and carbon dioxide concentration are possible limiting factors on the rate of photosynthesis.</li> <li>• Application: Changes to the Earth's atmosphere, oceans and rock deposition due to photosynthesis.</li> <li>• Skill: Drawing an absorption spectrum for chlorophyll and an action spectrum for photosynthesis.</li> <li>• Skill: Design of experiments to investigate the effect of limiting factors on photosynthesis.</li> <li>• Skill: Separation of photosynthetic pigments by chromatograph. (Practical 4)</li> </ul>	<ul style="list-style-type: none"> <li>• Turn in Photosynthesis Guided Lab Analysis</li> <li>• Lab: Photosynthesis Inquiry</li> <li>• *set up</li> <li>• *collect data</li> <li>• *analyze data</li> </ul>	<ul style="list-style-type: none"> <li>• Read 2.9</li> <li>• Use presentation criteria to create a slide presentation to disseminate your experiment. Have printed version for portfolio</li> <li>• Print Practical 1 Lab Mag, size, scale</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation Criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Chromatoraphy Lab</li> </ul>
	No Class	No Class	No Class	No Class	No Class	No Class
T H U R S	No Class	No Class	No Class	No Class	No Class	No Class
	Cell Respiration and Photosynthesis (2x83min)	<ul style="list-style-type: none"> <li>• According to the cell theory, living organisms are composed of cells.</li> <li>• Organisms consisting of only one cell carry out all functions of life in that cell.</li> <li>• Surface area to volume ratio is important in the limitation of cell size.</li> <li>• Multicellular organisms have properties that emerge from the interaction of their cellular components</li> <li>• Specialized tissues can develop by cell differentiation in multicellular organisms.</li> <li>• Differentiation involves the expression of some genes and not others in a cell's genome.</li> <li>• The capacity of stem cells to divide and differentiate along different pathways is necessary in embryonic development and also makes stem cells suitable for therapeutic uses.</li> </ul>	<ul style="list-style-type: none"> <li>• Review Photosynthesis</li> <li>• Lab: Photosynthesis Inquiry</li> <li>• *set up</li> <li>• *collect data</li> <li>• *analyze data</li> </ul>	<ul style="list-style-type: none"> <li>• Use presentation criteria to create a slide presentation to disseminate your experiment. Have printed version for portfolio</li> <li>• Study for Cell Respiration and Photosynthesis Test</li> <li>• Print Practical 1 Lab Mag, size, scale</li> </ul>	<ul style="list-style-type: none"> <li>• Measuring Photosynthesis</li> </ul>	<ul style="list-style-type: none"> <li>• Cell Respiration and Photosynthesis Test</li> </ul>