



<p><b>This unit I will be learning about photosynthesis and cycles.</b></p>	<p><b>The key words I will learn this unit are...</b></p>	
<p><b>This unit I am learning:</b></p> <ul style="list-style-type: none"> <li>The importance of photosynthesis in plants</li> <li>How substances are transported through plants</li> <li>How water, nitrogen and carbon are cycled</li> </ul> <p><b>By the end of this unit I will be able to:</b></p> <ul style="list-style-type: none"> <li>State the equation for photosynthesis</li> <li>Explain the factors that affect the rate of photosynthesis</li> <li>Describe the structure of a root hair cell</li> <li>Describe how water is moved by transpiration</li> <li>Discuss factors that affect the rate of transpiration</li> <li>Describe translocation</li> <li>Describe the stages in the water, nitrogen and carbon cycle.</li> </ul>	<p>Photosynthesis Glucose Stomata Palisade Chlorophyll Chloroplasts Xylem Phloem Transpiration Translocation Root hair Lignin Sieve Sucrose</p>	<p>Carbon Respiration Decomposers Nitrogen Nitrates Water Precipitation microorganisms</p>

Week's Learning	Literacy Links	100% Sheet Homework
<p><b>Week 1</b></p> <ul style="list-style-type: none"> <li>State the word and symbol equation for photosynthesis</li> <li>Describe where photosynthesis occurs</li> <li>Explain the factors that affect the rate of photosynthesis</li> <li>Analyse graphs to show the factors affecting the rate of photosynthesis to include temperature, light intensity and carbon dioxide concentration</li> <li>Describe the structure, function and adaptations of root hair cells</li> <li>Describe the process of transpiration and the structure of the xylem.</li> <li>Discuss the factors that affect the rate of transpiration</li> <li>Calculate the rate of transpiration</li> </ul>	<p><b>I will use these literacy skills...</b></p> <p>Discuss the factors that affect the rate of photosynthesis</p>	<p><b>I will complete this home learning...</b></p> <p>Spelling Test</p>
<p><b>Week 2</b></p> <ul style="list-style-type: none"> <li>Describe the role of the stomata</li> <li>Explain how environmental factors affect the rate of water uptake by a plant</li> <li>Describe the process of translocation</li> <li>Describe the structure and function of the phloem</li> <li>Compare the process of translocation to transpiration</li> <li>Diagnose my strengths and weaknesses in this unit so far</li> </ul>	<p>Compare transpiration to translocation</p>	<p>MCQs</p>
<p><b>Week 3</b></p> <p>Investigate the effect of light intensity on the rate of photosynthesis</p> <ul style="list-style-type: none"> <li>Calculate the rate of photosynthesis using the inverse square law calculation</li> <li>To identify and describe stages in the water cycle</li> <li>Explain the importance of the water cycle, including the processes involved and the production of potable water in areas of drought including desalination</li> <li>To describe the processes in the carbon cycle</li> <li>Explain the importance of the carbon cycle, including the processes involved and the role of microorganisms as decomposers</li> </ul>	<p>Practical write up for investigating rate of photosynthesis – constructing a method and conclusion.</p> <p>Explaining the carbon and water cycles</p>	<p>Exam Q</p>
<p><b>Week 4</b></p> <ul style="list-style-type: none"> <li>To describe the processes in the nitrogen cycle</li> <li>Explain how nitrates are made available for plant uptake, including the use of fertilisers, crop rotation and the role of bacteria in the nitrogen cycle</li> <li>Revision</li> <li>End of Unit assessment</li> </ul>	<p>Explaining the Nitrogen Cycle</p>	

**Resources to support:**  
[www.bbc.co.uk/bitesize](http://www.bbc.co.uk/bitesize). [www.getrevising.com](http://www.getrevising.com)  
[Tassomai](#)

**Social, Moral, Spiritual, Cultural and British Values linked to this learning programme:**

**Students will** explain the importance of the water cycle, including the processes involved and the production of potable water in areas of drought in third world countries including desalination

**Assessment:**  
 Students will complete one diagnostically marked piece of work per unit and complete an end of unit assessment

