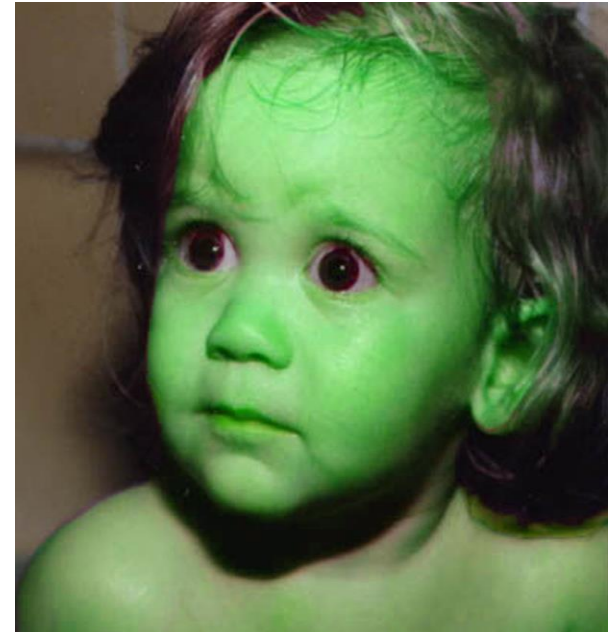


<b>Topic</b>	Photosynthesis and respiration	<b>Level</b>	Key Stage 3 (or any course for students aged 11-16)
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• To know that photosynthesis is a process by which plants make food during the day using carbon dioxide and water in the presence of light and chlorophyll</li> <li>• To understand the relationship between respiration and photosynthesis</li> <li>• To understand that plants respire all the time but only photosynthesise during the day</li> <li>• To know that the products of photosynthesis are the reactants for respiration</li> </ul>		
<b>Information for teachers</b>	<p>This written task should only be used once you feel that your students have a secure understanding of photosynthesis and respiration. The purpose of this task is to probe students' understanding, to make sure that they don't carry any misconceptions about photosynthesis i.e. plants photosynthesise but they don't respire. There is a risk that this activity could introduce misconceptions if enough time is not spent outlining the differences between the Green Child and a real child, but its fantastical context (hopefully) makes this less likely!</p>		
<b>Other resources</b>	<p>Other resources on photosynthesis are here:  <a href="http://thescienceteacher.co.uk/photosynthesis/">http://thescienceteacher.co.uk/photosynthesis/</a></p>		

**O**nce upon a time, a human zygote became infected with a photosynthetic bacterium. As the embryo divided, the bacteria became incorporated into each new cell, making a baby that could photosynthesise. This 'Green Child' was very special because.....



**Continue the story about the Green Child. Make sure it contains answers to the questions below and is scientifically accurate.**

- What process could this child do that other human children could not?
- Why did the Green Child only feel hungry at night time?
- Describe how the Green Child would behave differently to other human children.
- Include a labelled diagram of the Green Child's cells in your story. How are these cells different to typical plant cells and typical animal cells?
- Do you think every cell in the Green Child could photosynthesise? Explain your answer.
- Would you expect the Green Child's cells to contain mitochondria? Explain your answer.
- Would the Green Child still need to use their lungs? Explain your answer.