



## General Information for the case study:

WRL reference	M01 D01	
Module	M01 Ecosystems – Coral Reefs	
Data set	D01 The effect of light on coral morphology in the Caribbean	
Research questions	<ol style="list-style-type: none"> <li>1. How does the common Caribbean coral <i>Montastrea cavernosa</i> modify its morphology in response to different light conditions?</li> <li>2. Can we use corallite density data to predict a maximum depth at which <i>Montastrea cavernosa</i> would be expected to be found on this coral reef?</li> </ol>	
Keywords	<b>Abiotic</b> ; adaptation; autotroph; <b>biome</b> ; <b>biotic</b> ; <b>coral</b> ; <b>ecosystem</b> ; heterotroph; <b>limiting factor</b> : mutualistic; photosynthesis; population; quadrat; sampling; symbiosis	
Potential Biology Curriculum links (UK)	<b>AQA</b>	3.2.1; 3.4.1; 3.6.1; 3.6.2; 3.4.3
	<b>edexcel</b>	Topic 5 – 10, 11
	<b>IB</b>	5.1.1; 5.1.2; F.5.2; G.1.3; G.1.4; G.1.6;
	<b>Camb. Pre-U</b>	5.2
	<b>OCR</b>	4.3.1; 5.3.1; 5.3.2
	<b>WJEC</b>	2.5; 5.8
	<b>SQA</b>	Case studies: FH2H (2); FH2J (2); HOAL; HOAM
<b>CCEA</b>	2.2; 2.3; 4.4; Maths and Stats knowledge	
Summary	<p>This task looks at the effect of light/depth on the morphology of a named coral species. Analysis is via photographs (it could be an individual or group activity) and the data is plotted and analyzed using a spreadsheet – full instructions are provided. The statistics can be approached at a number of levels, from plotting graphs to an introduction to regression analysis. The task is supported by a number of powerpoint presentations etc.</p> <p><b>Difficulty:</b>  <b>Research Q1 - 5/10</b>  <b>Research Q2 - 8/10 for advanced statistics</b></p>	

