

Plants and Photosynthesis

	<u>Working towards Mastery (W)</u>	<u>Meeting Mastery (M)</u>	<u>Beyond Mastery (B)</u>
Photosynthesis	- Plants and algae do not eat, but use energy from light, together with carbon dioxide and water to make glucose (food) through photosynthesis. They either use the glucose as an energy source, to build new tissue, or store it for later use. - Plants have specially-adapted organs that allow them to obtain resources needed for photosynthesis.	- Describe ways in which plants obtain resources for photosynthesis. - Explain why other organisms are dependent on photosynthesis. - Sketch a line graph to show how the rate of photosynthesis is affected by changing conditions. - Use a word equation to describe photosynthesis in plants and algae.	- Suggest how particular conditions could affect plant growth. - Suggest reasons for particular adaptations of leaves, roots and stems. - Compare the movement of carbon dioxide and oxygen through stomata at different times of day
Plant Reproduction	- Plants have adaptations to disperse seeds using wind, water or animals. - Plants reproduce sexually to produce seeds, which are formed following fertilisation in the ovary.	- Describe the main steps that take place when a plant reproduces successfully. - Identify parts of the flower and link their structure to their function. - Suggest how a plant carried out seed dispersal based on the features of its fruit or seed. - Explain why seed dispersal is important to survival of the parent plant and its offspring.	- Describe similarities and differences between the structures of wind pollinated and insect pollinated plants. - Suggest how plant breeders use knowledge of pollination to carry out selective breeding. - Develop an argument why a particular plant structure increases the likelihood of successful production of offspring.