**Topic Overview: Plant Reproduction and Photosynthesis**

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|  | Ref | Outcome | Achieved | ☺ |
| Emerging | E8SbPr1.1 | Pollen can be carried by the wind, pollinating insects or other animals |  |  |
| E8SbPr1.2 | Flowers contain the plant's reproductive organs. |  |  |
| E8SbPr1.3 | Know plants make their own food |  |  |
| E8SbPr2.1 | Describe how the pollen is carried by insects and animals |  |  |
| E8SbPr2.2 | Know the male and female parts of the plant |  |  |
| E8SbPr2.3 | Know that plants make their own food and store it as starch |  |  |
| Developing | D8SbPr3.1 | Plants have adaptations to disperse seeds using wind, water or animals. |  |  |
| D8SbPr3.2 | Identify parts of the flower and link their structure to their function. |  |  |
| D8SbPr3.3 | Iodine is used to test for the presence of starch. |  |  |
| D8SbPr4.1 | Suggest how a plant carries out seed dispersal based on the features of its fruit or seed. |  |  |
| D8SbPr4.2 | Plants reproduce sexually to produce seeds, which are formed following fertilisation in the ovary. |  |  |
| D8SbPr4.3 | Plants have specially-adapted organs that allow them to obtain resources needed for photosynthesis |  |  |
| Securing | S8SbPr5.1 | Discuss why pollination is important for plants |  |  |
| S8SbPr5.2 | Describe the main steps that take place when a plant reproduces successfully. |  |  |
| S8SbPr5.3 | Use a word equation to describe photosynthesis in plants and algae. |  |  |
| S8SbPr6.1 | Explain why seed dispersal is important to survival of the parent plant and its offspring. |  |  |
| S8SbPr6.2 | Explain why there are a large variety of plants and some the same |  |  |
| S8SbPr6.3 | Describe ways in which plants obtain resources for photosynthesis |  |  |
| Mastering | M8SbPr7.1 | Suggest what will happen if there were no bees on earth |  |  |
| M8SbPr7.2 | Suggest reasons for particular adaptations of leaves, roots and stems. |  |  |
| M8SbPr7.3 | Compare the movement of carbon dioxide and oxygen through stomata at different times of day. |  |  |
| M8SbPr8.1 | Describe similarities and differences between the structures of wind pollinated and insect pollinated plants. |  |  |
| M8SbPr8.2 | Suggest how particular conditions could affect plant growth. |  |  |
| M8SbPr8.3 | Sketch a line graph to show how the rate of photosynthesis is affected by changing conditions. |  |  |
| M8SbPr9.1 | Suggest how plant breeders use knowledge of pollination to carry out selective breeding. |  |  |
| M8SbPr9.2 | Develop an argument why a particular plant structure increases the likelihood of successful production of offspring. |  |  |
| M8SbPr9.3 | Explain why other organisms are dependent on photosynthesis. |  |  |

**Keywords**

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| **Pollen:** Contains the plant male sex cells found on the stamens. |
| **Ovules:** Female sex cells in plants found in the ovary. |
| **Pollination:** Transfer of pollen from the male part of the flower to the female part of the flower on the same or another plant. |
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| **Fertilisation:** Joining of a nucleus from a male and female sex cell. |
| **Seed:** Structure that contains the embryo of a new plant. |
| **Fruit:** Structure that the ovary becomes after fertilisation, which contains seeds. |
| **Carpel:** The female part of the flower, made up of the stigma where the Pollen lands, style and ovary. |
| **Fertilisers:** Chemicals containing minerals that plants need to build new tissues. |
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| **Photosynthesis:** A process where plants and algae turn carbon dioxide and water into glucose and release oxygen. |
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| **Chlorophyll:** Green pigment in plants and algae which absorbs light energy. |
| **Stomata** Pores in the bottom of a leaf which open and close to let gases in and out. |
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