SB6 Plant Structures and their Functions

SB6a Photosynthesis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
| D:\WD\Live Job\2016\Sep-16\regcsesciencewordformattingsb3sc13sp4andsp5\Required_Input\Required_Input\TTPP progression steps icons\Progression_icon_L7.jpg | Explain why photosynthetic organisms are producers of biomass. |  |  |  |
|  | Recall some substances produced from glucose and their roles in the plant. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L8.jpg | Summarise what happens in photosynthesis (including the use of a word equation). |  |  |  |
|  | Explain why photosynthesis is an endothermic reaction. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Explain how a leaf and its cells are adapted for photosynthesis. |  |  |  |

SB6b Factors that affect photosynthesis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L5.jpg | Recall what is meant by a rate of reaction. |  |  |  |
| D:\WD\Live Job\2016\Sep-16\regcsesciencewordformattingsb3sc13sp4andsp5\Required_Input\Required_Input\TTPP progression steps icons\Progression_icon_L7.jpg | Describe the effects of temperature, light intensity and carbon dioxide concentration on the rate of photosynthesis. |  |  |  |
|  | Explain the effects of limiting factors of photosynthesis. |  |  |  |
|  | H Explain the effects of more than one factor on the rate of photosynthesis. |  |  |  |
|  | H Describe how light intensity and rate of photosynthesis are related. |  |  |  |
|  | H Explain why the rate of photosynthesis is inversely proportional to the distance of a light source. |  |  |  |

SB6c Absorbing water and mineral ions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
|  | Explain how root hair cells are adapted to taking in water and mineral ions. |  |  |  |
|  | Recall that substances can be transported by diffusion, osmosis and active transport. |  |  |  |
|  | Describe what is meant by a concentration gradient. |  |  |  |
| D:\WD\Live Job\2016\Sep-16\regcsesciencewordformattingsb3sc13sp4andsp5\Required_Input\Required_Input\TTPP progression steps icons\Progression_icon_L7.jpg | Explain why active transport is needed to transport some molecules. |  |  |  |
|  | Explain how molecules move by osmosis. |  |  |  |

SB6d Transpiration and translocation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
|  | Explain how xylem tissue is adapted to its functions. |  |  |  |
|  | Explain how phloem tissue is adapted to its function. |  |  |  |
| D:\WD\Live Job\2016\Sep-16\regcsesciencewordformattingsb3sc13sp4andsp5\Required_Input\Required_Input\TTPP progression steps icons\Progression_icon_L7.jpg | Describe now transpiration occurs. |  |  |  |
| D:\WD\Live Job\2016\Sep-16\regcsesciencewordformattingsb3sc13sp4andsp5\Required_Input\Required_Input\TTPP progression steps icons\Progression_icon_L7.jpg | Describe how translocation occurs. |  |  |  |
| D:\WD\Live Job\2016\Sep-16\regcsesciencewordformattingsb3sc13sp4andsp5\Required_Input\Required_Input\TTPP progression steps icons\Progression_icon_L9.jpg | Explain the effects of environmental factors on the rate of transpiration (light intensity, air movement, temperature, humidity). |  |  |  |
| D:\WD\Live Job\2016\Sep-16\regcsesciencewordformattingsb3sc13sp4andsp5\Required_Input\Required_Input\TTPP progression steps icons\Progression_icon_L7.jpg | Describe how to measure the rate of transpiration. |  |  |  |

SB6e Plant adaptations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
|  | Identify the different tissues in a leaf. |  |  |  |
|  | Describe the functions of the different tissues in a leaf. |  |  |  |
|  | Describe some adaptations that plants have to living in extreme environments. |  |  |  |
| D:\WD\Live Job\2016\Sep-16\regcsesciencewordformattingsb3sc13sp4andsp5\Required_Input\Required_Input\TTPP progression steps icons\Progression_icon_L7.jpg | Explain how leaf structure is adapted for photosynthesis and gas exchange. |  |  |  |
|  | Explain some ways in which plants are adapted to reducing water loss in extreme environments. |  |  |  |

SB6f Plant hormones

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
|  | Recall the names of three types of plant hormone. |  |  |  |
|  | Define the term tropsim. |  |  |  |
| D:\WD\Live Job\2016\Sep-16\regcsesciencewordformattingsb3sc13sp4andsp5\Required_Input\Required_Input\TTPP progression steps icons\Progression_icon_L7.jpg | Identify negative and positive photo- and gravitropisms. |  |  |  |
|  | Explain how auxins cause phototropism in plant shoots and roots. |  |  |  |

SB6g Uses of plant hormones

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
|  | H Describe the uses of axuins by plant growers. |  |  |  |
|  | H Describe the uses of gibberellins by plant growers and fruit farmers. |  |  |  |
|  | H Describe how fruit is artificially ripened using plant hormones. |  |  |  |
|  | H Compare the advantages and disadvantages of using plant hormones in fruit farming. |  |  |  |