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| ***Can you…?*** | ☺ | 😐 | ☹ |
| 4.1 Photosynthesis | | | |
| State the word equation for photosynthesis |  |  |  |
| Recognise a balanced symbol equation for photosynthesis |  |  |  |
| Explain where the energy for photosynthesis comes from |  |  |  |
| State the factors that affect the rate of photosynthesis |  |  |  |
| State the limiting factors of photosynthesis |  |  |  |
| Explain graphs of photosynthesis rate involving two or three factors and decide which is the limiting factor **(HT only)** |  |  |  |
| Understand and use inverse proportion – the inverse square law and light intensity in the context of photosynthesis. **(HT only)** |  |  |  |
| Explain how limiting factors are important in the economics of enhancing the conditions in greenhouses to gain the maximum rate of photosynthesis while still maintaining profit **(HT only)** |  |  |  |
| State some uses of glucose by plants |  |  |  |
| Know how plant use nitrate ions that are absorbed from the soil. |  |  |  |
| 4.4.2 Respiration | | | |
| Compare the processes of aerobic and anaerobic respiration with regard to the need for oxygen, the differing products and the relative amounts of energy transferred. |  |  |  |
| Define aerobic and anaerobic respiration |  |  |  |
| State that reactions which transfer energy to the environment are exothermic reactions |  |  |  |
| Name three things organisms need energy for |  |  |  |
| State the word equation for aerobic respiration |  |  |  |
| Recognise a balanced symbol equation for aerobic respiration |  |  |  |
| State the word equation for anaerobic respiration in muscles |  |  |  |
| The energy transferred supplies all the energy needed for living processes. |  |  |  |
| State the word equation for anaerobic respiration in plant and yeast cells |  |  |  |
| State that anaerobic respiration in yeast cells is called fermentation and has economic importance in the manufacture of bread and alcoholic drinks |  |  |  |
| Explain why anaerobic respiration takes place in muscles during exercise |  |  |  |
| Explain muscle fatigue and oxygen debt |  |  |  |
| Define the role of the liver in the removal of lactic acid **(HT only)** |  |  |  |
| Define metabolism |  |  |  |
| The energy transferred by respiration in cells is used by the organism for the continual enzyme controlled processes of metabolism that synthesise new molecules. |  |  |  |
| State some metabolic processes |  |  |  |