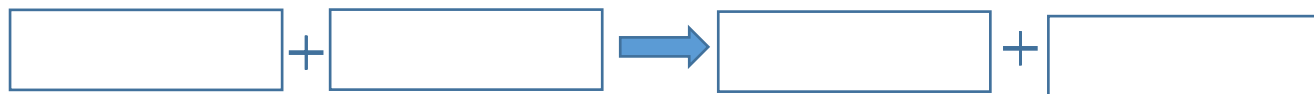


## Photosynthesis SL

1. Define photosynthesis.
2. Complete the word equation for photosynthesis by filling in the boxes.

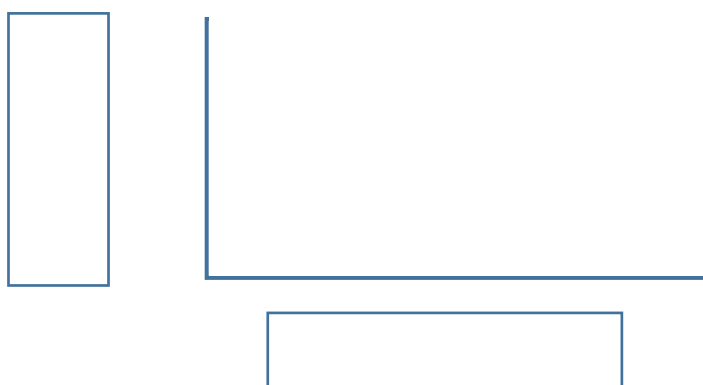


3. Light energy is crucial for \_\_\_\_\_, which is the splitting of a \_\_\_\_\_ molecule into \_\_\_\_\_ gas which is released as waste and \_\_\_\_\_ ions which are used in subsequent reactions where carbon \_\_\_\_\_ occurs. Energy in the form of \_\_\_\_\_ is required to create \_\_\_\_\_, such as glucose. This energy is obtained from sunlight.
4. The main photosynthetic pigment is called \_\_\_\_\_. Complete the \_\_\_\_\_ spectra for the two most common forms of this pigment, adding a scale to each axis and completing the key.



As we can see, \_\_\_\_\_ absorbs \_\_\_\_\_ and \_\_\_\_\_ light to the greatest extent. It is mostly \_\_\_\_\_ light that is \_\_\_\_\_, which is why plants appear to be this colour.

5. The efficiency of photosynthesis is not the same for all wavelengths. Complete the \_\_\_\_\_ spectra of photosynthesis. The range is quite large, due to the presence of several \_\_\_\_\_ pigments.

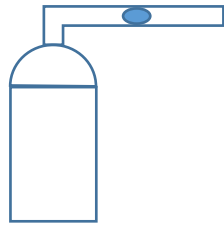


6. We know when photosynthesis evolved in organisms on Earth. This is because \_\_\_\_\_, produced as waste, reacted with \_\_\_\_\_ in the sea.. This effectively forms rust. We call these rock formations \_\_\_\_\_.

7. The rate of photosynthesis can be impacted by several factors. List them:

8. The rate of photosynthesis can be measured experimentally. Explain, using pond weed, how you could measure the impact of one of the above factors.

Apparatus (label):



Independent Variable:

Dependent Variable:

Controlled Variables:

Method(brief)

9. \_\_\_\_\_ is the process of extracting the \_\_\_\_\_ from a sample. To carry this out, you must first \_\_\_\_\_ up pieces of a leaf with \_\_\_\_\_. Then the sample must be dried, and more \_\_\_\_\_ added to redissolve the \_\_\_\_\_. Using a \_\_\_\_\_, put a sample of the solution 10 mm from the end of a strip of paper. Put the sample into running solvent. The \_\_\_\_\_ will move up the paper, carrying the \_\_\_\_\_ with it. The \_\_\_\_\_ will not move the same distance, due to their variable \_\_\_\_\_.

To determine which is which, you must use the formula:

