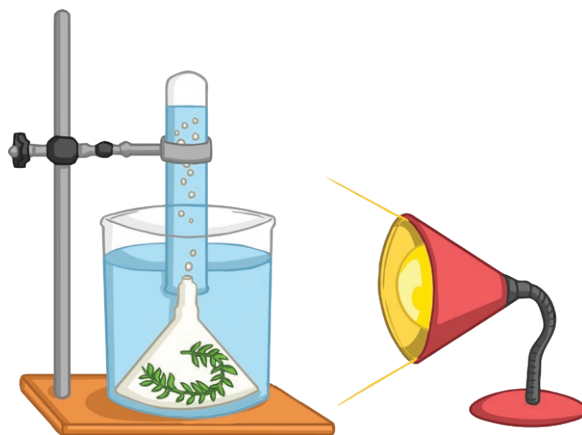


## Exam-Style Questions 2

1. Pupils decided to investigate the effect of light intensity on the rate of photosynthesis. They set up the equipment as shown below.

The results of this experiment were recorded as follows:



Distance between pondweed and light source (cm)	Number of bubbles produced per minute
10	20
20	12
30	7
40	3
50	0

Use this data to plot a graph to show the effect of light intensity on the rate of photosynthesis.

In the experiment, what was the:

Independent variable: \_\_\_\_\_

Dependent variable: \_\_\_\_\_

Control variable(s): \_\_\_\_\_

Using the graph you have just drawn, describe the effect of light intensity on the rate of photosynthesis.

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## Exam-Style Questions 2 Answers

1. Pupils decided to investigate the effect of light intensity on the rate of photosynthesis. They set up the equipment as shown below.

The results of this experiment were recorded as follows:

Use this data to plot a graph to show the effect of light intensity on the rate of photosynthesis.

Distance between pondweed and light source (cm)	Number of bubbles produced per minute
10	20
20	12
30	7
40	3
50	0

**Graph Mark Scheme:**

- Axis both labelled to include units (distance on x axis, number of bubbles on y axis)
- Suitable scale chosen
- All 5 points correctly plotted
- Line of best fit included

In the experiment, what was the:

Independent variable: **Light intensity (accept distance of lamp from pondweed)**

Dependent variable: **Number of bubbles produced (accept amount of oxygen produced)**

Control variable(s): **Same amount of time, same amount of pondweed, same power of lamp**

Using the graph, describe the effect of light intensity on the rate of photosynthesis.

**As the light intensity initially increases, so does the rate of photosynthesis. Having reached a maximum, the rate of photosynthesis levels off and then stays constant regardless of the increasing light intensity.**

