

Name: _____

Target level _____

Organisms HSW HW2

What affect does light intensity have on the rate of photosynthesis?

The following experiment was set up:

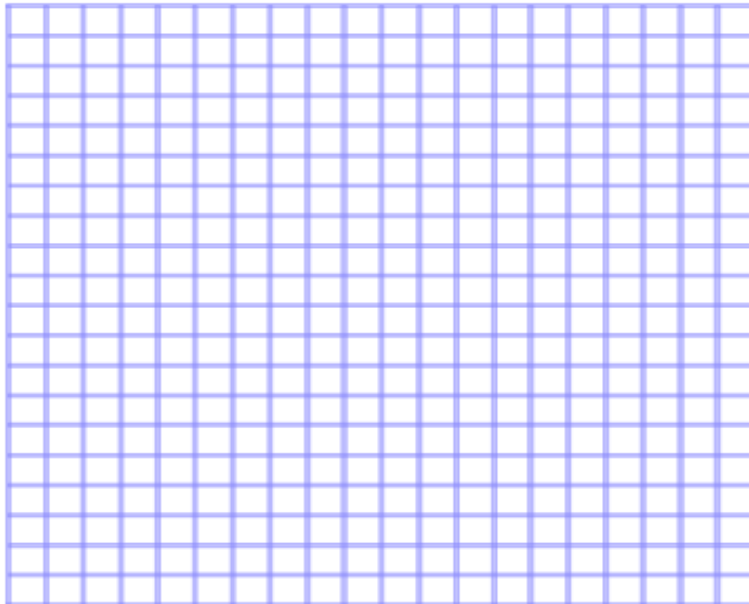
- A lamp was placed at different distances from the water plant.
- A piece of thick glass was placed between the lamp and the plant.
- The number of bubbles released by the plant, per minute was recorded:

Results:

| Distance from lamp (cm) | Number of bubbles per minute (attempt 1) | Number of bubbles per minute (attempt 2) | Number of bubbles per minute (attempt 3) | Number of bubbles per minute (attempt 4) | Mean number of bubbles per minute |
|-------------------------|--|--|--|--|-----------------------------------|
| 20 | 25 | 26 | 25 | 24 | |
| 30 | 24 | 24 | 23 | 24 | |
| 40 | 18 | 19 | 24 | 18 | |
| 60 | 10 | 9 | 11 | 11 | |
| 100 | 6 | 5 | 12 | 6 | |

Tasks;

1. Calculate the mean number of bubbles, per minute, for each distance.(5 marks)
2. Draw a graph, comparing distance from lamp and mean number of bubbles released.(5 marks)



Name: _____

Target level _____

Questions:

1. What happens to the number of bubbles as the lamp is moved to a greater distance? (1 mark)

2. Suggest reasons for this happening? (2 marks)

3. Why is the experiment repeated 4 times? (2 mark)

4. How could you improve the results? (2 marks)

5. What gas is produced, as the bubbles? (1 mark)

6. Write out, in full, the word equation for the reaction? (2 marks)

| Mark | Level |
|-------|-------|
| 0-4 | N |
| 5-9 | 3 |
| 10-13 | 4 |
| 14-16 | 5 |
| 17-20 | 6 |

Mark = /20

Level =