

## B2 – Photosynthesis Quiz

1. What is the equation for photosynthesis?

Carbon dioxide + water → glucose + oxygen

2. List the limiting factors that affect photosynthesis

Light intensity, carbon dioxide levels, temperature (when either of these is in short supply, the rate of photosynthesis is low)

3. What is the glucose produced during photosynthesis used for?

Respiration, starch, seeds, amino acid and protein synthesis, fat production, cellulose production

4. Why do plants use oxygen in the dark?

No light available for photosynthesis. Oxygen used for respiration

5. What is the effect of temperature on oxygen production in the light?

The rate increases up to 40°C where it reaches its maximum; after that the rate falls as the enzymes are denatured

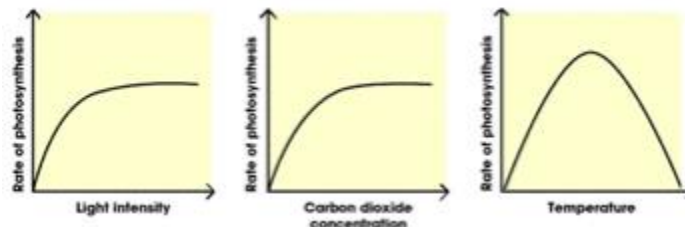
6. Over a 24-hour period, more carbon dioxide is taken in by a young plant than given out. Why is this important?

More photosynthesis than respiration is carried out so more biomass accumulates which allows the plant to grow

7. How do you make temperature a control variable in a photosynthesis investigation?

Use a heat shield or place the test tube, which contains the plant, into a beaker of water

8. Draw the limiting factor graphs.



9. How do gardeners increase the rate of photosynthesis?

Use greenhouses or poly tunnels where the temperature, light intensity and carbon dioxide levels are controlled. Hydroponics is used (plants are grown in the perfect water/ mineral solution)