

# WJEC England Biology

## A-level

### SP C1 02b - Photosynthesis

### Flashcards

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# Which factors affect the rate of photosynthesis?



# Which factors affect the rate of photosynthesis?

Light intensity

Wavelength of light

Temperature

Carbon dioxide concentration



What are the types of pigments found in chloroplasts?



What are the types of pigments found in chloroplasts?

Primary pigment and accessory pigments.



What is the purpose of having different accessory pigments?



What is the purpose of having different accessory pigments?

To absorb a wider range of wavelengths of light.



# Why is sodium hydrogen carbonate added?





Why is sodium hydrogen carbonate added?

To supply carbon dioxide for photosynthesis.



What does the volume of gas produced indicate?



What does the volume of gas produced indicate?

It is assumed to be oxygen, so the volume of gas is proportional to the rate of photosynthesis.



# How is light intensity controlled?



## How is light intensity controlled?

By adjusting the distance between the light source and the beaker.



# How is the wavelength of light controlled?



# How is the wavelength of light controlled?

By using different coloured filters to cover the beaker.



# How is temperature controlled?





## How is temperature controlled?

By immersing the beaker in thermostatically-controlled water baths of a range of temperatures.



# How is carbon dioxide concentration controlled?



How is carbon dioxide concentration controlled?

By using different concentrations of sodium hydrogen carbonate solutions.



# How is the rate of photosynthesis measured?



How is the rate of photosynthesis measured?

Measure the volume of gas produced within a fixed time.

