

Practical- do plants need chlorophyll?

STARTER

What do you notice about the position of these leaves? What is the benefit of this for photosynthesis in plants?

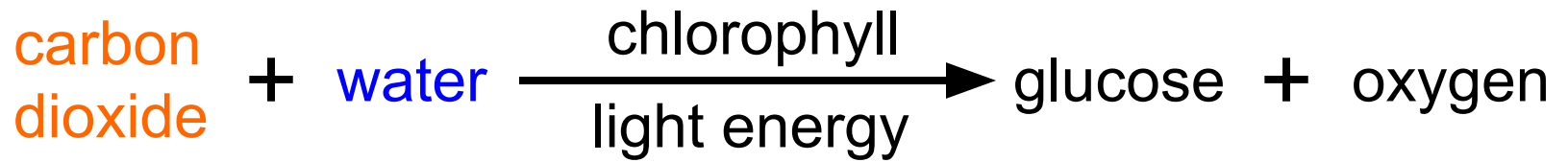


Lesson objectives

- investigate the necessity for chlorophyll for photosynthesis

Photosynthesis word equation

Can you write it down?

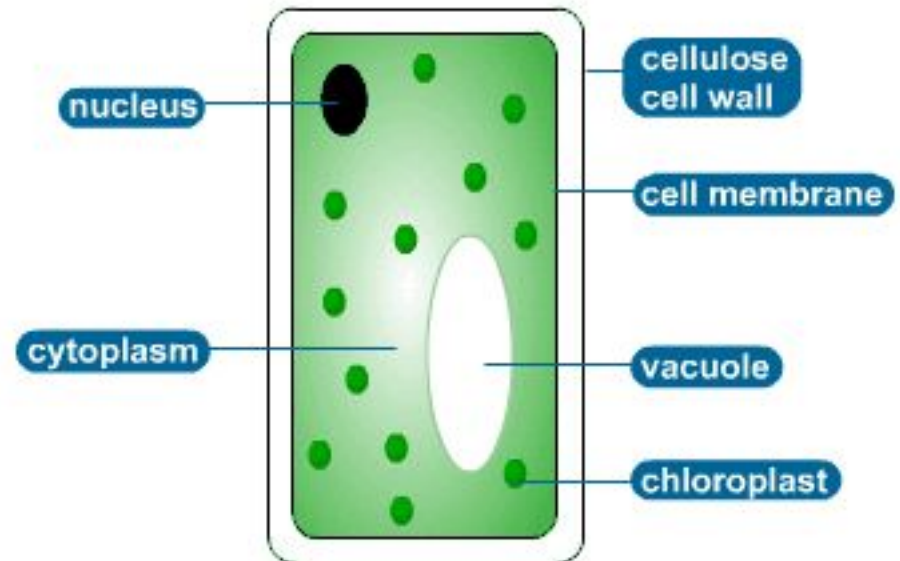


Chlorophyll

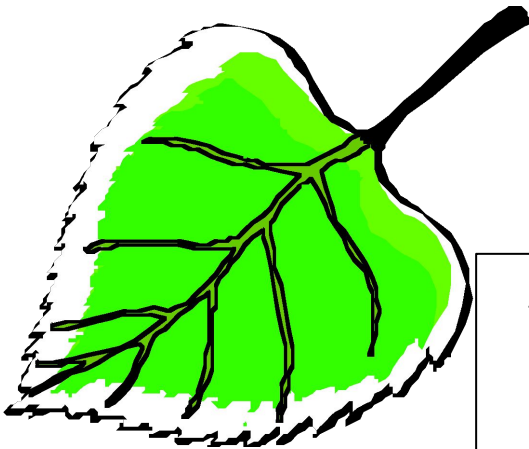
Chlorophyll is a **green** coloured chemical

It is present in the leaves of **green** plants

The **chlorophyll** in the cells is packaged into tiny structures called **chloroplasts**



Variegated leaves



- Some leaves have got white parts where there is no chlorophyll
- These are called variegated leaves
- We can use these in an experiment to prove chlorophyll is needed for photosynthesis

Aim- do plants need chlorophyll for photosynthesis?

5 minute TASK

- What is the independent (what is being changed) variable?
- List 3 control (things you keep the same) variables

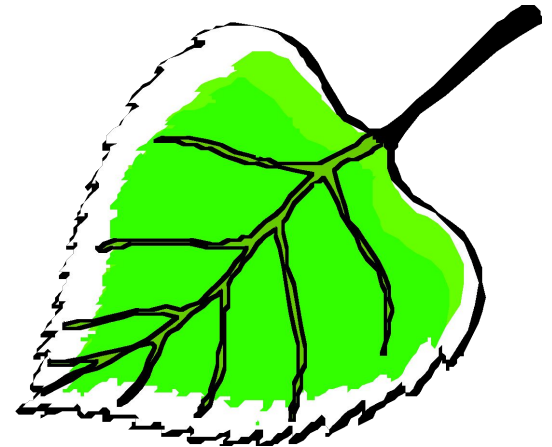
Question time

1. Refer to the photosynthesis equation- what are the products of photosynthesis?

2. What do plants do with these products? Name a molecule one of the products is converted to by the plant for storage?

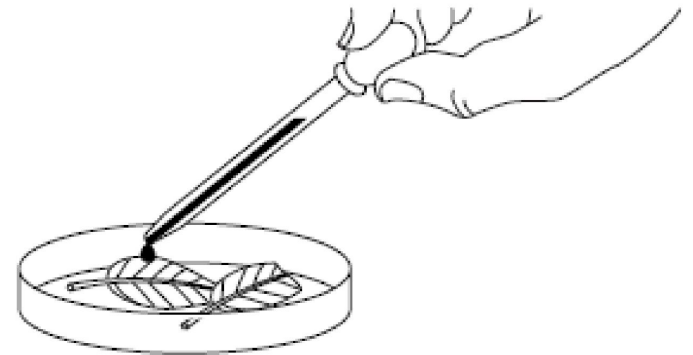
3. How can we test for starch using a food test ?

4. What results would you expect when you test for starch using iodine? (these colours are your dependent variables today- what you are measuring)



The experiment-20 minutes

- Follow teacher instructions and the method on the sheet
- Answer the questions on the sheet and complete the results table



PLENARY- Conclusion

1. The **WHITE PART** of the leaf went _____ when the iodine was added. This is a positive/negative test for starch.
2. The **GREEN PART** of the leaf went _____ when the iodine was added. This is a positive/negative test for starch.
3. This proves _____ because _____