

Your teacher may watch to see if you can:

- use apparatus appropriately
- think about control variables as you set up your tubes.

Aim

To find out if cress seeds need light, water, warmth or oxygen to germinate.

Prediction

1 Which of the resources listed above do you think cress seeds need to germinate?

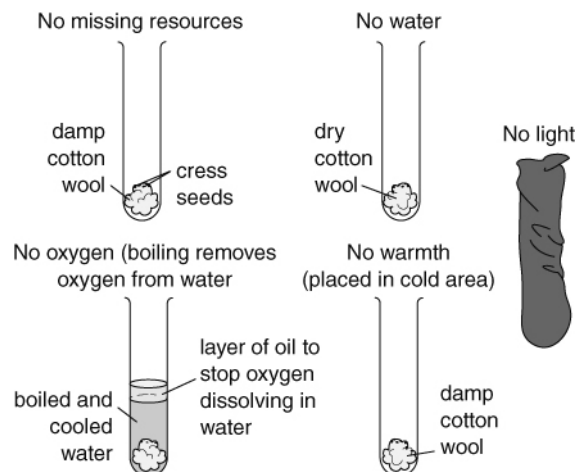
Method

Apparatus

- | | | |
|----------------------|---------------------|----------------|
| • 5 boiling tubes | • boiling tube rack | • kitchen foil |
| • cold, boiled water | • cotton wool | • cress seeds |
| • forceps | • labels | • oil |
| • pipette | • forceps | |

! Wash your hands well after handling seeds.

- Take 5 pieces of cotton wool and use the forceps to push them into the bottoms of 5 boiling tubes, so that there is about a 1 cm depth of cotton wool in each.
- Now set up the tubes as shown in the drawings.
- Label each tube.
- Add 10 cress seeds to each tube.
- Put the 'cold' tube in a fridge and put all the others on a warm windowsill.



Recording your results

2 Draw a table to record your results.

Considering your results/conclusions

- Do your results match your prediction? If not, how do they differ?
- Why do you think you got the results you did? Use scientific reasons to explain them.

Evaluation

- Was your experiment a fair test? Explain your reasoning. Think carefully about all the variables.
- If you could do this experiment again, how would you change what you did?
 - Explain why these changes would make the experiment better.

I can...

- use control variables to evaluate an experiment
- recall the resources needed for germination
- explain the need for the different resources by a seed as it germinates.