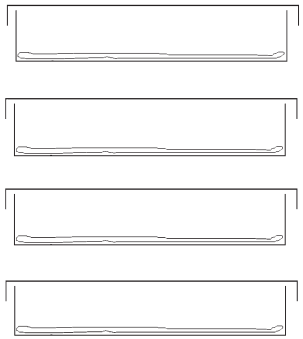
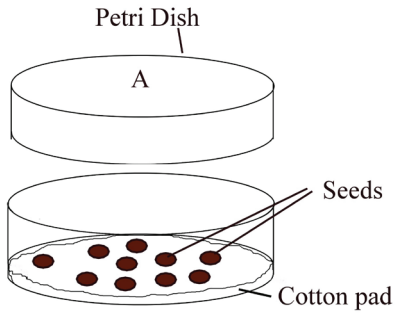
4.15 To investigate the effect of water, oxygen and temperature on germination

1



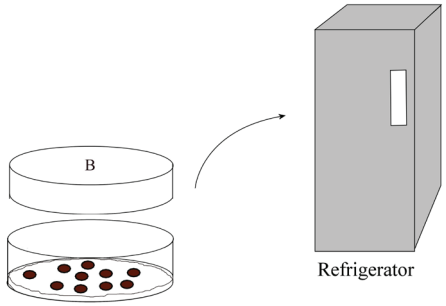
Label 4 petri dishes A, B, C and D.
Place cotton wool in the base of each dish.

2



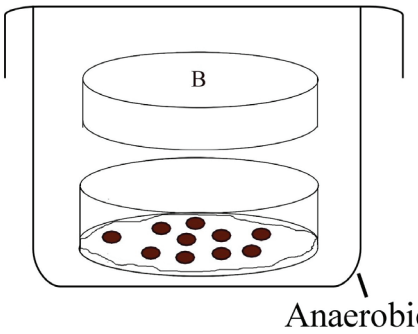
In dish A place 10 seeds. Leave the cotton wool dry – this dish lacks water.

3



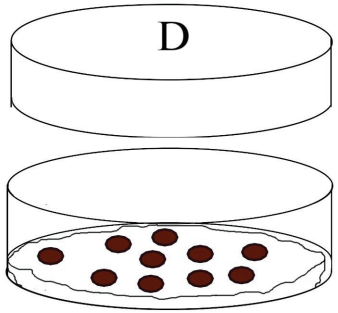
Wet the cotton wool in dish B.
Place 10 seeds on the cotton wool.
Put the dish in the refrigerator –
this dish lacks a suitable temperature.

4



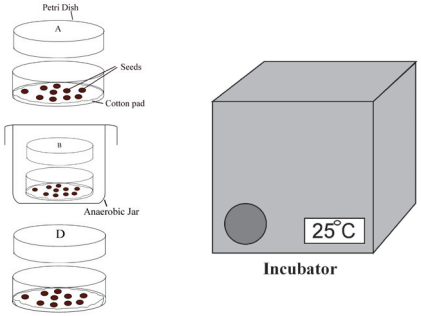
In dish C place 10 seeds and wet the cotton wool.
Put in an anaerobic jar – this lacks oxygen.

5



Place 10 seeds in dish D and wet the cotton wool. This dish has all of the ideal conditions and acts as the control.

6



Place dishes A, C (in anaerobic jar) and D into an incubator at 25°C. Check the dishes for 2-3 days and record results.

Always remember – Leave time to tidy up

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7

The seeds in dish D will germinate while the seeds in dishes A, B and C will not germinate

Result

Dish	Germination
A – with oxygen and suitable temperature (no water)	
B – with water and oxygen (unsuitable temperature)	
C – with water and suitable temperature (no oxygen)	
D – with water, oxygen, and a suitable temperature	

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