

Room for growth

Outstanding Science Year 3 - Plants - OS3A003



Learning Objective

I can investigate how competition for resources affects plant growth.

Me:   

Teacher:   

Real-life scenario

Colin the farmer has a problem. He wants to grow onions in a container.

He needs to grow as many onions as he can in the space available, so he can sell them and make money.

However, he's not sure how much space they need to grow well.



Scientific question

How does the amount of space available affect the growth of onion sets over a 4-week period?

You will need:

- 4 square plant pots (about 10cm x 10cm)
- Compost
- 30 onion sets
- A sunny outdoor place to put your plant pots
- A measuring jug
- A watering can
- A ruler

National Curriculum Statutory Requirements

3A2 - explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant; **LKS2W2** - setting up simple practical enquiries, comparative and fair tests; **LKS2W3** - making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers; **LKS2W5** - recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

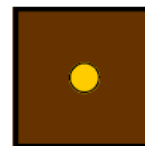
Method

Fill the containers with compost. Make sure that there is the same amount in each plant pot.

Place the onion sets in the plant pot as shown (see fig. 1).

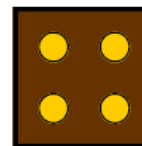
The onion sets will have different amounts of space in each plant pot. Make sure that you put the onion sets in the right way up.

Figure 1: How to set up the experiment



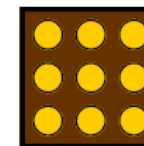
Pot A

1 onion set



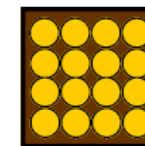
Pot B

4 onion sets



Pot C

9 onion sets



Pot D

16 onion sets

Place your plant pots outside. Make sure that you place them together so that they receive the same amount of sunlight and rain.

Decide how much water you are going to add to each plant pot and how often (e.g. 100ml every day). Use the measuring jug and plant pot to do this.

At the start of the experiment, and every week for the next 4 weeks, measure the height of the tallest plant and draw what you observe.