1 Investigating plant growth

What learners will practise and reinforce

The activities in this Skills Builder unit give learners further practice in the following topics in the Learner’s Book and Activity Book:

<table>
<thead>
<tr>
<th>Topic</th>
<th>In this topic, learners will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3 Investigating germination</td>
<td>draw a bar chart to show the results of an investigation into seed germination</td>
</tr>
<tr>
<td>1.4 What do plants need to grow?</td>
<td>identify the factors that plants need for growth</td>
</tr>
<tr>
<td>1.5 Plants and light</td>
<td>see Challenge, Section 1.5</td>
</tr>
</tbody>
</table>

Help your learner

In this unit, learners will practise presenting results in a bar chart and recognising patterns in data (Section 1.3). To help them:

1. Ask learners to look carefully at the data in the table in Section 1.3 before drawing the bar chart. They will need to draw a bar for each type of seed after five days and after ten days.

2. Germinate a few seeds and let learners observe the stages of germination to reinforce what they have learnt in class. Smaller seeds such as radishes and chillies usually germinate more quickly, but if you germinate seeds such as lentils, you can eat the sprouts.

TEACHING TIP

Remind learners to look at the information provided about the investigation in Section 1.3. Were the seeds different in any way? Can they see a pattern in the results related to this?
1.3 Investigating germination

Draw a chart of seed germination

Ella and her friends planted some seeds in pots of soil to germinate. They put the pots in a warm place and watered them every day. They noted the results after five days and ten days. These are their results:

<table>
<thead>
<tr>
<th>Type of seed</th>
<th>Number of seeds germinated after five days</th>
<th>Number of seeds germinated after ten days</th>
</tr>
</thead>
<tbody>
<tr>
<td>bean</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>chilli</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>sunflower</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

1. Draw a bar chart of the results shown in the table.

Remember:
In a bar chart, the bars must be separate because each bar shows a different group or object – for example the type of seed.
2. a. Do seeds need light to germinate? Explain the evidence for your answer from Ella’s investigation.

b. Name two things that Ella and her friends did to make sure that the seeds germinated.

3. Which seeds germinated fastest?

4. Which seeds germinated slowest?

5. What pattern can you see in the results?

CHECK YOUR LEARNING

☐ I can draw a bar chart and find patterns in the results.
☐ I can identify factors that seeds need to germinate.
1.4 What do plants need to grow?

Identify the things that plants need to grow

1. Look at these sentences about the things that plants need to grow. Fill in the gaps using words from the box.

   light  water  air  warmth  factors

   a. We call the things that plants need to grow ____________________.

   b. Plants need ____________________ so they can make food to help them grow.

   c. Plants need ____________________ to give them strong stems and firm leaves.

   d. Plants need ____________________, but they grow best when it is not too cold or too hot.

   e. Plants need ____________________ because they are living things.

2. Think about it!

   Why do plants need light to grow, but seeds do not need light to germinate?

   ______________________________________________________________
   __________________________

CHECK YOUR LEARNING

☐ I can identify the things that plants need to grow.