Strand: Pattern and algebraic reasoning
Exploring, analysing and modelling data

Band: Primary years
Standard: 2
Year Level: 4

Key Idea
Students identify, describe, construct, represent and predict patterns and relationships when working with data, measuring and calculating. They relate these patterns and relationships to their everyday lives. [F] [Id] [T] [KC1] [KC2] [KC6]

Students generate and analyse data from a diverse range of sources (including online) and perspectives to investigate situations drawn from their personal lives and the world around them. They use this data to explore patterns and relationships, and to inform their choices and actions. [Id] [T] [C] [KC1]

Students draw conclusions from data they collect from diverse sources and perspectives, using descriptions of the spread of the data and of relationships within it. They make predictions and informal inferences for larger populations or similar situations, and communicate their conclusions and predictions to a variety of audiences. [F] [Id] [T] [C] [KC1] [KC2] [KC6]

Outcome
2.1 Poses questions, explores patterns, and collects relevant data. They record and represent the data, and also use data presented by others. [T] [C] [KC1] [KC2]

2.11 Uses materials, data and informal graphs to represent change. [F] [C] [KC2]

Task/Activities
1. Collect data from vegetable growing experiment
2. Present data in table form.
3. Represent data from the table in a column or bar graph.
4. Interpret information to answer questions related to growth changes of plants over time.

Examples of evidence towards achievement of outcomes
Students:
- Collect data accurately.
- Present data in a table.
- Graph data using an appropriate graph.
- Use appropriate scale.
- Label axis and title.
- Accurately record tabled information to show change in growth.
- Interpret information from data and graph to answer questions.
An example of one student’s records & possible questions

Root Vegetables
Part of a “Garden/Growing plants” Unit.
Our class experimented with growing the tops of root vegetables. We measured and recorded the growth at the end of the first and second weeks.

<table>
<thead>
<tr>
<th>Vegetables</th>
<th>Week 1</th>
<th>Week 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrot</td>
<td>8mm</td>
<td>19mm</td>
</tr>
<tr>
<td>Beetroot</td>
<td>15mm</td>
<td>20mm</td>
</tr>
<tr>
<td>Radish</td>
<td>12mm</td>
<td>15mm</td>
</tr>
<tr>
<td>Turnip</td>
<td>15mm</td>
<td>17mm</td>
</tr>
<tr>
<td>Parsnip</td>
<td>14mm</td>
<td>17mm</td>
</tr>
</tbody>
</table>

Possible Questions
1. Which vegetable grew the most in the first week?
2. Which vegetable grew the most in the second week?
3. Which vegetables grew more in the First week than the second?
4. How far did radishes grow in the first week?
5. What was the total growth of radishes after the second week?