Unit 6B

Spreadsheet Modelling

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This unit allows children to use a spreadsheet to explore a mathematical model, answering what if questions, and exploring how changes in a spreadsheet affects results and identify simple rules.

Vocabulary

Spreadsheet  Cell
Formula  Calculate
Data  Model

Resources

Excel

Assessment

All children will be able to use a spreadsheet to calculate totals. Most children will be able to explore the effects of changing data in a spreadsheet. Some children will be able to explore the effects of changing data in a spreadsheet; make predictions and test them.
Unit 6B

Lesson 1

Teacher Task
Skill 1

Open excel and remind class how to enter information and calculate figures.

Explain that they are going to use the spreadsheet to explore a mathematical problem.

Remind them how to enter formula I.e. =C2 / C3

Talk about working on the area of a rectangle and how you would enter that formula (length x base).

Open cells and (demonstrate on white board for those in difficulty). What to name cells A B C A = Length B = Base C = Area of rectangle. So they click on cell C1, enter formula = SUM (A1*B1).

Then fill in cells A, and B, repeat.

Can they see a mathematical pattern forming as they alter the values of A and B?

Pupil Task

As above.

Learning Outcome

Children can identify and enter the correct formulae into cells, modify the data, and make predictions of changes and check them.

Lesson 2

As above, for completion of task.
Lesson 3

Teacher Task

Skill 2

Demonstrate how to copy formulae from one cell to another.
On white board draw out:
Task: Multiplication table.

<table>
<thead>
<tr>
<th>Number A</th>
<th>Number B</th>
<th>Number A x Number B</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

Extend Number B to 12

Pupil Task

Create table (save spreadsheet onto floppy A).
Investigate changing number in A.

Learning Outcome

Children can use formulae to create tables of results.

Lesson 4

As above, for completion of task.

Lesson 5

Show the class how to create graphs using the spreadsheet.
Look at the formula. Y = X^2
Create graphs from these formula. You need to Y = 2X
create the cells first.

Learning Outcome

To create a graph from a specified formula