

# ACET Junior Academies

## Scheme of Work for Computing Excel KS2



### About this unit:

This scheme is designed to develop and build upon skills needed to effectively use Microsoft Excel.

Assessment note: it is worth printing and annotating computing work to show understanding of programmes and how goals have been accomplished.

Teaching note: it is worth recapping previous learning / pre-requisite skills as a warmup task before teaching a new skill

### Unit structure

Unit 1 – Entering data and colour coding cells

Units 2 – Making a graph

Unit 3 – Calculating using formulae

### Links to previous and future National Curriculum units

use sequence, selection, and repetition in programs; work with variables and various forms of input and output (KS2)

select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information (KS2)

**Unit 1 – Entering data and formatting data**

Links to previous learning	Knowledge and concepts	Computing skills:	Assessment criteria:	Curricular links:
<p>Children should be aware of how to open a programme</p> <p>Children should have used another office package (Word) and understand menu operations</p>	<p>Develop an understanding of how data is stored and referenced</p> <p>Develop skills in entry and selection</p>	<p>Inputting data</p> <p>Selecting data</p> <p>Changing how data appears to the user</p>	<p>I can navigate a spreadsheet</p> <p>I can enter data</p> <p>I can format data for a user</p>	<p>Session should be linked to topic as closely as possible.</p> <p>Session lends itself easily to science investigation data entry and presentation.</p>
<b>Suggested activities:</b>		<b>Resources:</b>	<b>Useful links:</b>	
<p>Enter data into a spreadsheet using 2 or 3 columns. Explain that data is stored in cells which use the reference system (A3) – practice finding certain cells. Use gathered or given data to input into a sheet for example, names of woodland animals and their mean height (topic linked).</p> <p>Discussion of how data can appear more user friendly (bold titles, larger font). This is a perfect time to introduce conditional formatting to automatically colour code data based on values (larger animals = green, smaller animals = red). Many activities and discussions can take place from this.</p> <p>Main teaching points:</p> <ul style="list-style-type: none"> <li>• Cells are the rectangles that make up a spreadsheet</li> <li>• Cells have a reference system</li> <li>• Selecting cells lets them be edited</li> <li>• How to colour code cells (conditional formatting)</li> </ul>		<p>Laptop</p> <p>Microsoft Excel (licence) or Google Sheets (free)</p>	<p><a href="https://www.excel-easy.com/data-analysis/conditional-formatting.html">https://www.excel-easy.com/data-analysis/conditional-formatting.html</a> - CPD for conditional formatting</p>	

**Unit 2 - Using data to make a graph**

Links to previous learning	Knowledge and concepts	Skills and concepts:	Assessment criteria:	Curricular links:
<p>Children should understand how to input data into a spreadsheet</p> <p>Children should understand how to select and format data</p>	<p>Be aware that data in excel can be used to create a graph to present a data set visually</p>	<p>Inputting data</p> <p>Selecting data</p> <p>Presenting data</p>	<p>I can navigate a spreadsheet</p> <p>I can enter data</p> <p>I can format data</p> <p>I can present data visually</p>	<p>This unit links easily with a science investigation for presenting their findings during a write up or as a part of data unit in mathematics.</p>
<b>Suggested activities:</b>		<b>Resources:</b>	<b>Useful links:</b>	
<p>Children could use a data set to create a visual representation in a graph form. Using their data set from Unit 1 they could create a graph and learn how to edit the appearance of the graph including axes, colours, scales and consider how that data will be interpreted by the user.</p> <p>Make reference to data input (the numbers you put in) and output (how you present the data to somebody i.e. graph form) – how can you make it as clear to the user as possible?</p>		<p>Laptop</p> <p>Microsoft Excel (licence) or Google Sheets (free)</p>	<p><a href="https://support.office.com/en-gb/article/create-a-chart-from-start-to-finish-0baf399e-dd61-4e18-8a73-b3fd5d5680c2">https://support.office.com/en-gb/article/create-a-chart-from-start-to-finish-0baf399e-dd61-4e18-8a73-b3fd5d5680c2</a> - how to make a chart CPD basics</p> <p><a href="https://www.excel-easy.com/data-analysis/charts.html">https://www.excel-easy.com/data-analysis/charts.html</a> - CPD advanced</p>	

**Unit 3: Calculating using formulae**

Links to previous learning	Knowledge and concepts	Skills and concepts	Assessment criteria:	Curricular links:
<p>Children should be aware of how to navigate Excel</p> <p>Children should be aware of how to input data into excel and select/format cells</p>	<p>Understand how a computer programme can process inputs into outputs</p> <p>Understand that a formula is a form of algorithm – instructions to tell a programme what to do</p>	<p>Inputting data</p> <p>Selecting data</p> <p>Presenting data</p> <p>Processing data</p>	<p>I can input data</p> <p>I can develop a logical formula to process data</p> <p>I can evaluate and debug outcome</p>	
<b>Suggested activities:</b>		<b>Resources:</b>		
<p>You could provide the children with a relevant data set based on their current topic to process using a formula. They should be aware of time saving shortcuts programmes allow such as dragging a formula to duplicate it.</p> <p>An example of this would be data for orbit distance of a planet. If the data was given in years, they could be guided to develop a simple formula (division) to find the distance per day.</p> <ul style="list-style-type: none"> <li>• Speed of an animal</li> <li>• Distance of trade routes</li> <li>• Speed of a Viking ship (distance/time)</li> </ul> <p>This could then tie in prior learning to format, colour code and graph this data appropriately.</p>		<p>Laptop</p> <p>Microsoft Excel (licence) or Google Sheets (free)</p>		<p><a href="https://www.excel-easy.com/introduction/formulas-functions.html">https://www.excel-easy.com/introduction/formulas-functions.html</a> - easy formula check for CPD (links for possible formulae needed in the sidebar)</p> <p><a href="https://corporatfinanceinstitute.com/resources/excel/study/basic-excel-formulas-beginners/">https://corporatfinanceinstitute.com/resources/excel/study/basic-excel-formulas-beginners/</a> - simple introduction to formulae for CPD</p> <p><a href="https://www.teachwire.net/news/spreadsheet-sweet-shop-forget-data-input-excel-is-an-easy-way-to-introduce-">https://www.teachwire.net/news/spreadsheet-sweet-shop-forget-data-input-excel-is-an-easy-way-to-introduce-</a> - ideas for formulae based work</p>