

## Emerald Year 6 – Computing Medium Term Planning

### (Upper KS2 Curriculum – Year B)

**Differentiation by input** see the weekly planning sheet/

-Key vocab for each learning objective is in red font /

**-Resources -see the weekly planning /**

-Minimum Assessment for Learning strategies for all topics = Peer Talk; targeted questioning; mini white boards; and self and peer marking

- Long term memory development strategies= Recapping previous learning at the start of each new topic / Long term memory strategy linked to the objectives on this sheet for each week

- **Computing** Cultural Capital = can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation

[illegible]

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[illegible]

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[illegible]

# Emerald Year 6 – Computing Medium Term Planning

## (Upper KS2 Curriculum – Year B)

	<u>Week 1</u>	<u>Week 2</u>	<u>Week 3</u>	<u>Week 4</u>	<u>Week 5</u>	<u>Week 6</u>	<u>Week 7</u>
<b>Spring second half</b>  <b>Data and Information – Spreadsheets</b>	<b>What is a spreadsheet?</b>  <u>Learning Objective</u> - To identify questions which can be answered using data  <u>Success Criteria</u> - I can answer questions from an existing data set - I can ask simple relevant questions which can be answered using data - I can explain the relevance of data headings	<b>Modifying spreadsheets</b>  <u>Learning Objective</u> - To explain that objects can be described using data  <u>Success Criteria</u> - I can apply an appropriate number format to a cell - I can build a data set in a spreadsheet application - I can explain what an item of data is	<b>What's the formula?</b>  <u>Learning Objective</u> - To explain that formulas can be used to produce calculated data  <u>Success Criteria</u> - I can construct a formula in a spreadsheet - I can explain the relevance of a cell's data type - I can identify that changing inputs changes outputs	<b>Calculate and duplicate</b>  <u>Learning Objective</u> - To apply formulas to data, including duplicating  <u>Success Criteria</u> - I can apply a formula to multiple cells by duplicating it - I can create a formula which includes a range of cells - I can recognise that data can be calculated using different operations	<b>Event planning</b>  <u>Learning Objective</u> - To create a spreadsheet to plan an event  <u>Success Criteria</u> - I can apply a formula to calculate the data I need to answer questions - I can explain why data should be organised - I can use a spreadsheet to answer questions	<b>Presenting data</b>  <u>Learning Objective</u> - To choose suitable ways to present data  <u>Success Criteria</u> - I can produce a graph - I can suggest when to use a table or graph - I can use a graph to show the answer to questions	Assessment, Consolidation and Review
<b>Key Vocabulary</b>	Variable, change, name, value	Variable, name, value, set, change	Formula, calculation, data, spreadsheet, input, output. cells, cell reference	Data, calculate, operation, formula, cell, range, duplicate, sigma	Propose, question, data set, data, organised, formula	Graph, chart, evaluate, results, comparison, questions, software, tools, data	
<b>KS2 Computing NC Links</b>	2.6	2.6	2.6	2.6	2.6	2.6	
<b>Computing Strand</b>	DI	DI	DI, ET, PG	DI, ET, PG	DI, ET	CM, DI, ET	
<b>Education for a Connected World</b>							

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[illegible]

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## (Upper KS2 Curriculum – Year B)

	<u>Week 1</u>	<u>Week 2</u>	<u>Week 3</u>	<u>Week 4</u>	<u>Week 5</u>	<u>Week 6</u>	<u>Week 7</u>
<b>Summer second half</b>  <b>Programming B – Sensing</b>	<b>The micro:bit</b>  <u>Learning Objective</u> <ul style="list-style-type: none"> <li>- To create a program to run on a controllable device</li> </ul> <u>Success Criteria</u> <ul style="list-style-type: none"> <li>- I can apply my knowledge of programming to a new environment</li> <li>- I can test my program on an emulator</li> <li>- I can transfer my program to a controllable device</li> </ul>	<b>Go with the flow</b>  <u>Learning Objective</u> <ul style="list-style-type: none"> <li>- To explain that selection can control the flow of a program</li> </ul> <u>Success Criteria</u> <ul style="list-style-type: none"> <li>- I can determine the flow of a program using selection</li> <li>- I can identify examples of conditions in the real world</li> <li>- I can use a variable in an if... then... else... statement to select the flow of a program</li> </ul>	<b>Sensing inputs</b>  <u>Learning Objective</u> <ul style="list-style-type: none"> <li>- To update a variable with a user input</li> </ul> <u>Success Criteria</u> <ul style="list-style-type: none"> <li>- I can experiment with different physical inputs</li> <li>- I can explain that if you read a variable, the value remains</li> <li>- I can use a condition to change a variable</li> </ul>	<b>Finding your way</b>  <u>Learning Objective</u> <ul style="list-style-type: none"> <li>- To use a conditional statement to compare a variable to a value</li> </ul> <u>Success Criteria</u> <ul style="list-style-type: none"> <li>- I can explain the importance of the order of conditions in else/if statements</li> <li>- I can modify a program to achieve a different outcome</li> <li>- I can use an operand (e.g. &lt;&gt;=) in an if... then... statement</li> </ul>	<b>Designing a step counter</b>  <u>Learning Objective</u> <ul style="list-style-type: none"> <li>- To design a project that uses inputs and outputs on a controllable device</li> </ul> <u>Success Criteria</u> <ul style="list-style-type: none"> <li>- I can decide what variables to include in a project</li> <li>- I can design the algorithm for my project</li> <li>- I can design the program flow for my project</li> </ul>	<b>Making a step counter</b>  <u>Learning Objective</u> <ul style="list-style-type: none"> <li>- To develop a program to use inputs and outputs on a controllable device</li> </ul> <u>Success Criteria</u> <ul style="list-style-type: none"> <li>- I can create a program based on my design</li> <li>- I can test my program against my design</li> <li>- I can use a range of approaches to find and fix bugs</li> </ul>	Assessment, Consolidation and Review
<b>Key Vocabulary</b>	Micro:bit, MakeCode, input, process, output, flashing, USB	Selection, condition, if then else, variable, random	Input, selection, condition, variable, sensing, accelerometer	Compass, direction, variable, navigation	Micro:bit, design, task, algorithm, variable, step counter	Plan, create, code, test, debug	
<b>KS2 Computing NC Links</b>	2.1, 2.2, 2.3, 2.6	2.1, 2.2, 2.3, 2.6	2.1, 2.2, 2.3, 2.6	2.1, 2.2, 2.3, 2.6	2.1, 2.2, 2.3, 2.6	2.1, 2.2, 2.3, 2.6	
<b>Computing Strand</b>	CS PG	CS PG	CS PG	CS PG	CS, DD, PG	CS, DD, PG	
<b>Education for a Connected World</b>							