

Computing Year 5 medium term plan Autumn 1

Lesson	Aims	Success Criteria
<u>1</u>	<p>To explain what coding is.</p> <p>Introduction to the 2Code interface including the possible actions of character objects.</p>	<ul style="list-style-type: none"> • Pupils can explain that coding is how computer programs are created. • Pupils can navigate around the 2Code interface, dragging and dropping code blocks and running code.
<u>2</u>	<p>To create a program with an object that repeats actions indefinitely.</p> <p>To use a timer to make characters repeat actions.</p> <p>To explore the use of the repeat command and how this differs from the timer.</p>	<ul style="list-style-type: none"> • Pupils can show how their character repeats an action and explain how they caused it to do so. • Pupils are beginning to understand how the use of the timer differs from the repeat command and can experiment with the different methods of repeating blocks of code. • Pupils can explain how they made objects repeat actions.
<u>3</u>	<p>To create a program that responds to the 'if' command or the 'if/else' command</p> <p>To use selection within a program.</p>	<ul style="list-style-type: none"> • Pupils can create an 'if' statement in their program. • Pupils can create an 'if/else' statement in their program. • Pupils can use a timer and 'if' statement to respond to the actions of a character and change their actions.
<u>4</u>	<p>To understand what a variable is in programming.</p> <p>To use a variable to create a visual timer.</p> <p>To explore number and string variables.</p>	<ul style="list-style-type: none"> • Pupils can explain what a variable is in programming. • Pupils can explain why variables need to be named. • Pupils can create a variable in a program. • Pupils can set/change the variable values appropriately
<u>5 & 6</u>	<p>To go through the design, code, execute, refine process.</p> <p>To use the coding skills that they have encountered creatively in their own program.</p> <p>To create a program that controls or simulates a physical system, i.e. changing the speed and angle of moving objects.</p>	<ul style="list-style-type: none"> • Pupils have an idea about the design process and its benefits. • Pupils have turned a design into a functioning program. • Pupils can explain how their program simulates a physical system, i.e. objects move at different speeds and angles, what they did to make their vehicle change angle, show that their vehicles move at different speeds.

Computing Year 5 medium term plan Autumn 2

Medium Term Plan

Lesson	Title	Success Criteria
<u>1</u>	Setting the scene.	<ul style="list-style-type: none">• Children can review and analyse a computer game.• Children can describe some of the elements that make a successful game.• Children can begin the process of designing their own game.
<u>2</u>	Creating the Game Environment	<ul style="list-style-type: none">• Children can design the setting for their game so that it fits with the selected theme.• Children can upload images or use the drawing tools to create the walls, floor, and roof.
<u>3</u>	The Game Quest	<ul style="list-style-type: none">• Children can design characters for their game.• Children can decide upon, and change, the animations and sounds that the characters make.
<u>4</u>	Finishing and Sharing	<ul style="list-style-type: none">• Children can make their game more unique by selecting the appropriate options to maximise the playability.• Children can write informative instructions for their game so that other people can play it.
<u>5</u>	Evaluation	<ul style="list-style-type: none">• Children can evaluate my their own and peers' games to help improve their design for the future.

Computing Year 5 medium term plan Spring 1

Lesson	Title	Success Criteria
<u>1</u>	Responsibilities and Support when Online	<ul style="list-style-type: none"> • Children critically about the information that they share online both about themselves and others. • Children know who to tell if they are upset by something that happens online. • Children can use the SMART rules as a source of guidance when online.
<u>2</u>	Protecting Privacy	<ul style="list-style-type: none"> • Children think critically about what they share online, even when asked by a usually reliable person to share something. • Children have clear ideas about good passwords. • Children can see how they can use images and digital technology to create effects not possible without technology. • Children have experienced how image manipulation could be used to upset them or others even using simple, freely available tools and little specialist knowledge.
<u>3</u>	Citing Sources	<ul style="list-style-type: none"> • Children can cite all sources when researching and explain the importance of this. • Children select keywords and search techniques to find relevant information and increase reliability.
<u>4</u>	Reliability	<ul style="list-style-type: none"> • Children show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each.

Computing Year 5 medium term plan Spring 2

Lesson	Title	Success Criteria
<u>1</u>	Conversions of Measurements	<ul style="list-style-type: none">• Children can create a formula in a spreadsheet to convert m to cm.• Children can apply this to creating a spreadsheet that converts miles to km and vice versa.
<u>2</u>	The Count Tool	<ul style="list-style-type: none">• Children can use a spreadsheet to work out which letters appear most often.• Children can use the 'how many' tool.
<u>3</u>	Formulae Including the Advanced Mode	<ul style="list-style-type: none">• Children can use a spreadsheet to work out the area and perimeter of rectangles.• Children can use these calculations to solve a real-life problem.
<u>4</u>	Using Text Variables to Perform Calculations	<ul style="list-style-type: none">• Children can create simple formulae that use different variables.• Children can create a formula that will work out how many days there are in x number of weeks or years.
<u>5</u>	Event Planning with a Spreadsheet	<ul style="list-style-type: none">• Children can use a spreadsheet to model a real-life situation and come up with solutions that can be practically applied.

Computing Year 5 medium term plan Summer 1

Lesson	Title	Success Criteria
<u>1</u>	Searching a Database	<ul style="list-style-type: none">• Children understand the different ways to search a database.• Children can search a database to answer questions correctly.
<u>2</u>	Creating a Class Database	<ul style="list-style-type: none">• Children can design an avatar for a class database.• Children can successfully enter information into a class database.
<u>3 & 4</u>	Creating a Topic Database	<ul style="list-style-type: none">• Children can create their own database on a chosen topic.• Children can add records to their database.• Children know what a database field is and can correctly add field information.• Children understand how to word questions so that they can be effectively answered using a search of their database.

Computing Year 5 medium term plan Summer 2

Lesson	Title	Aims (Objectives)	Success Criteria
<u>1</u>	Introducing 2Design and Make	<ul style="list-style-type: none"> To be introduced to the 2Design and Make tool. 	<ul style="list-style-type: none"> Children know what the 2Design and Make tool is for. Children can explore the different viewpoints in 2Design and Make whilst designing a building.
<u>2</u>	Moving Points	<ul style="list-style-type: none"> To explore the effect of moving points when designing. 	<ul style="list-style-type: none"> Children can adapt one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form.
<u>3</u>	Designing for a Purpose	<ul style="list-style-type: none"> To design a 3D model to fit certain criteria. 	<ul style="list-style-type: none"> Children can explore how to edit the polygon 3D models to design a 3D model for a purpose.
<u>4</u>	Printing and Making	<ul style="list-style-type: none"> To refine and print a model. 	<ul style="list-style-type: none"> Children can refine one of their designs to prepare it for printing.
			<ul style="list-style-type: none"> Children can print their design as a 2D net and then created a 3D model. Children can explore the possibilities of 3D printing.