Computing Curriculum – 2 Year Cycle Years 5 & 6

Intent

Learning is a change to long term memory. Our aims are to ensure that our students experience a wide breadth of study based on the national curriculum and have, by the end of each key stage, long-term memory of curriculum knowledge.

We aim to equip pupils to use computational thinking and creativity to understand and change the world. Teaching will ensure that children become digitally literate. It will build on their computer science knowledge and equip them to use information technology to create programs, systems and a range of content.

Through the continued development of oracy skills, we will expand pupil's computational vocabulary which will deepen as they progress though school. Through our computing curriculum, we intend to enable pupils to become safe, active participants in a digital world.

Implementation

Computing is taught through the 'Threshold Concepts' of computer science, information technology and digital literacy. Each threshold concept is split into knowledge categories that teachers will explore with the children. Deliberate practise of these, whereby knowledge will be revisited, will enable a gradual deepening of their understanding. Teachers utilise the National Centre For Computing Education (NCCE) Teach Computing' curriculum, which covers all areas of the computing curriculum and concepts are revisited each year, to ensure a deepening of understanding.

Impact

Because learning is a change to long term memory it is impossible to see impact in the short term. However, we do use probabilistic assessment based on deliberate practise. This means that we look at the practices taking place to determine whether they are appropriate, related to our end of key stage goals. We use comparative judgements against Milestone statements, in the tasks we set (POP tasks) and in tracking students' work overtime. We use lesson observations to see if the pedagogical style matches our depth expectations.

Impact is also measured through key questioning skills built into lessons, child-led assessment against the objective (WAGBA), and summative assessments aimed at targeting next steps in learning.

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Year Group	Cycle	Autumn	Spring	Summer
5/6	A	**Computing Systems & Networks** Systems & Searching **Data & Information** Flat-File Databases	**Creating Media** Video Production **Programming** Selection in Physical Computing	**Creating Media** Introduction to Vector Graphics **Programming** Selection in Quizzes
	B	**Computing Systems & Networks** Communication & Collaboration **Data & Information** Introduction to Spreadsheets	**Creating Media** Website Creation **Programming** Variables in Games	**Creating Media** 3D Modelling **Programming** Sensing Movement

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BROMLEY HILLS *It's time to shine!*

	Teaching Sequence for Y5/6 (Milestone 3) CYCLE A		
Weeks	**Autumn Term**	**Spring Term**	**Summer Term**
Topic Title:	**Computing Systems & Networks** - Systems & Searching **Data & Information** - Flat-File Databases	**Creating Media** - Video Production **Programming** - Selection in Physical Computing	**Creating Media** - Introduction to Vector Graphics **Programming** - Selection in Quizzes
1	Systems	What is video?	The drawing tools
2	Computer systems and us	Filming techniques	Creating images
3	Searching the web	Using a storyboard	Making effective drawings
4	Selecting search results	Planning a video	Layers and objects
5	How search results are ranked	Importing and editing a video	Manipulating objects
6	How are searches influenced?	Video evaluation	Create a vector drawing
7	Creating a paper-based database	Connecting Crumbles	Exploring conditions
8	Computer databases	Combining output components	Selecting outcomes
9	Using a database	Controlling with conditions	Asking questions
10	Using search tools	Starting with selection	Planning a quiz
11	Comparing data visually	Drawing designs	Testing & evaluating a quiz
12	POP TASK	POP TASK	POP TASK

Computing Curriculum – 2 Year Cycle Years 5 & 6

Weeks	Autumn Term	Spring Term	Summer Term
	Teaching Sequence for Y5/6 (Milestone 3) CYCLE B		
Topic Title:	**Computing Systems & Networks -** Communication & Collaboration **Data & Information -** Introduction to Spreadsheets	**Creating Media -** Website Creation **Programming -** Variables in Games	**Creating Media -** 3D Modelling **Programming -** Sensing Movement
1	**Internet Addresses**	**What makes a good website?**	**Introduction to 3D modelling**
2	**Data packets**	**How would you layout your website?**	**Modifying 3D objects**
3	**Working together**	**Copyright or copyWRONG?**	**Make your own name badge**
4	**Shared working**	**How does it look?**	**Making a desk tidy**
5	**How we communicate**	**Follow the breadcrumbs**	**Planning a 3D model**
6	**Communicating responsibly**	**Think before you link!**	**Make your own 3D model**
7	**Collecting data**	**Introducing variables**	**The microbit**
8	**Formatting a spreadsheet**	**Variables in programming**	**Go with the flow**
9	**What is a formula?**	**Improving a game**	**Sensing inputs**
10	**Calculate and duplicate**	**Designing a game**	**Finding your way**
11	**Event planning and presenting data**	**Design to code**	**Designing & making a step counter**
12	**POP TASK**	**POP TASK**	**POP TASK**