Upton Infant School	We Are Brilliant Computer Scientists!	Progression Map: Coding

Upton Infant School's Computer Science Curriculum Rationale	
Brilliant computer scientists…	• can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation • can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems • can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems • are responsible, competent, confident and creative users of information and communication technology

Computer Science Curriculum – Coding		
Reception	Year One	Year Two
Intent		
Brilliant Computer Scientists in Reception will learn to explore a range of digital resources and understand how to achieve effects such as sound and movement.	Brilliant Computer Scientists in Year One will learn to explore coding software and understand how to make simple predictions to decode programmes and begin to create their own.	Brilliant Computer Scientists in Year Two will know how to understand and use algorithms to debug and create simple programs.
Planning considerations for teachers		
• Is everything charged / working for planned lessons? • Do children understand directional and positional language? (forwards, backwards and turn)	• Is the planning for coding taught in the Summer term? • Is everything charged / working for planned lessons? • Do children understand directional and positional language? (forwards, backwards, quarter turns, half turns) • Is the coding equipment selected of good quality and purposeful? (Purplemash, Espresso coding)	• Is the planning or coding taught in the Summer Term? • Is everything charged / working for planned lessons? • Do children understand the purpose of algorithms? • Do children have the opportunity to follow, plan and evaluate algorithms?
Skills and Knowledge		
Brilliant computer scientists… • Can switch a Beebot on and off. • Can make a Beebot move in an intended direction. • Can use the 'restart' button at the beginning of any programming. • Can use a range of directional and positional language. • Know how to switch a Beebot on and off. • Know that steps to direct a Beebot have to start at the beginning. • Know a range of directional and positional language. *This will be a particular focus in the 'Let's Explore' topic.*	Brilliant computer scientists… • Can understand and create a simple sequence of verbal instructions using directional language. • Can manually follow a set of simple instructions to follow out a given task. • Can manually debug simple sequences of code using directional language • Know that instructions have a planned outcome. • Know that any errors identified can be solved.	Brilliant computer scientists… • Can create, improve and change a sequence of commands using Purple Mash – 2Code • Can follow a set of algorithms to achieve a planned outcome using Purple Mash – 2Code. • Can debug more complex sequences of code. • Know that instructions have a planned outcome and must be followed in the correct order. • Know that any errors identified can be solved. (Purple Mash – 2code - Air Traffic Control algorithms) Next steps: •Know how to create their own algorithms for target audience / purpose
Our promise to make computing brilliant		
Every child in Reception will share their learning in 'Recall Time'.	Purple Mash Password – to access at school and home.	Purple Mash Password – to access at school and home.

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