Year 3 Computing

Autumn 2: We Are Bug Fixers (Finding and correcting bugs)

Session	National. Curriculum Statement	WALT	Learning Outcomes (Success Criteria)	Resources	Vocabulary
Subject Cultural Capital = Using & Applying computing knowledge to solve problems **Differentiation = please see the differentiation for the EXC EM & SEND (Please see SEND pupils IEPs when planning)** **Minimum expectations to check for understanding during lessons = targeted questioning / mini whiteboards/ peer talk /thumb signs** **Long term memory skill development strategy = LAST, LAST, LAST linked to the WALT** **Literacy & Numeracy skills development = ICT vocabulary bank linked to the WALT & include numeracy skills where they are linked to the WALT in the weekly planning**					
On Line Safety: Pupils could consider the implications of bugs in software. Participating in the Scratch community would enable the pupils to help others with their projects as well as allowing them to receive help. If pupils participate in the Scratch community, they need to think about what information they can share and how to participate positively in an online community, as well as obtaining parental permission. If pupils upload screencasts of their solutions, make sure you take the usual precautions to protect their identity.					
1. Spotting and correcting off-by-one bugs	Debug programs that accomplish specific goals. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	To identify an error in a Scratch multiplication script and fix it	Children can write an algorithm for reciting the 3 times table. Children can edit script to fix a bug.	Scratch Laptops/Desktops	Algorithm Debugging Bugs Program variable

Session	National. Curriculum Statement	WALT	Learning Outcomes (Success Criteria)	Resources	Vocabulary
2. Spotting and correcting performance bugs	Debug programs that accomplish specific goals. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	To write an algorithm for drawing a circle and improve an existing script in Scratch	Children write an algorithm for drawing a circle.	Scratch Laptops/Desktops	Algorithm Debugging Bugs Program variable
3. Spotting and correcting multithread bugs	Debug programs that accomplish specific goals. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	To identify and correct a multithread bug in Scratch	Children can write an algorithm for tidying up the classroom at the end of the day. Children identify and correct bugs.	Scratch Laptops/Desktops	Algorithm Debugging Bugs Program variable
4. Spotting and correcting conceptual bugs	Debug programs that accomplish specific goals. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	To identify and correct a conceptual bug in Scratch	Children begin to understand that programs have bugs because the programmer has not fully understood what should happen. Children read a script and identify where the bug is contained and correct it.	Scratch Laptops/Desktops	Algorithm Debugging Bugs Program Variable code
5. Spotting and correcting arithmetical bugs	Debug programs that accomplish specific goals. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	To identify and correct an arithmetical bug in Scratch	Children can write method for solving a division as an algorithm. Children edit script and test programs.	Scratch Laptops/Desktops	Algorithm Debugging Bugs Program Variable Code Logical reasoning

Session	National. Curriculum Statement	WALT	Learning Outcomes (Success Criteria)	Resources	Vocabulary
6. Spotting and correcting resource bugs	Debug programs that accomplish specific goals. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	To identify and correct a resource bug in Scratch	Children understand that an algorithm is a set of rules. Children experiment with debugging a program.	Scratch Laptops/Desktops	Algorithm Debugging Bugs Program Variable Code events