Computing 24-25

Year 1 – Programming Beebots

Remember when:		Key vocabulary
By the end of the unit children must: - move the Beebot forwards, backwards and turn. - be able to move a Beebot to a given area.		backwards algorithms clear debug forwards program go directions ipad turn

National curriculum:
- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
- Create and debug simple programs.
- Use logical reasoning to predict the behaviour of simple programs.

Software

beebots
beebot app
blubot app

Title / Focus	Lesson outline
Lesson 1- Buttons LO- To explain what a given command will do SK- - Move the Beebot forwards, backwards and turn. - Be able to move a Beebot to a given area.	Learners will be introduced to floor robots. They will talk about what the buttons on a floor robot might do and then try the buttons out. They will spend time linking an outcome to a button press. Learners will consider the direction command buttons, as well as the 'clear memory' and 'run program' buttons. Discuss with children that Beebots follow a range of directions. Speak about directions which you could go, left, right, forwards, backwards. Children to go onto the playground/hall and work in pairs to play Simon Says following the directions forwards and backwards and how many paces. Once this is mastered move onto left and right.
Lesson 2 Directions **LO-** To act out a given word SK- - Move the Beebot forwards, backwards and turn. - Be able to move a Beebot to a given area.	Learners will think about the language used to give directions and how precise it needs to be. They will also work with a partner to give and follow instructions. These real-world activities should, at suitable points during this lesson, be related to the floor robot Children to understand that an algorithm is a set of instructions. Children to have a route set on a grid and they must select the correct instructions for the Beebot to reach its destination.
Lesson 3- Routes LO- To create a route for the beebot Make map for Beebot SK- - Move the Beebot forwards, backwards and turn. - Be able to move a Beebot to a given area.	Learners will be encouraged to plan routes around a mat before they start to write programs for those routes. The activities in this lesson also introduce the concept of there being more than one way to solve a problem. This concept is valid for a lot of programming activities: the same outcome can be achieved through a number of different approaches, and there is not necessarily a 'right' approach. The lesson also introduces the idea of program design, where learners need to plan what they want their program to achieve before they start programming. Children to make a mat on squared paper for a Beebot to travel and write a set of instructions.
Lesson 4- Ipads LO- To use the Beebots and the Beebot program on the iPad SK- - Move the Beebot forwards, backwards and turn. - Be able to move a Beebot to a given area.	Children to program the Beebots to follow their instructions. Children to use the Beebot program.

Working towards	End of Unit Assessment Working at Age related expectations	Working at a greater depth