St James' Church of England Primary School
Computing Overview Sheet

Year 2 – 2.1 Coding

Prior and Future Learning Links:
Year 3 – **Coding -** Code, test, debug process **Branching Databases -** Modelling selection on a binary model
Year 4 – **Coding -** Repeat Until and IF/ ELSE Statements **Logo -** Utilize understanding of coding structures **Animation -** Sequencing and animation in logical steps.
Year 1 – **Coding -** Events (Click event, sound output) **Lego Builders** - Sequencing instructions **Maze Explorers** - Visual use of the Logo programming language

Learning Objectives:
· To understand what an algorithm is. - To open and respond to an email.
- To create a program using a given design
- To understand that algorithms follow a sequence.
- To understand that different objects have different properties.
- To create a program using a given design.
- To understand the need to test and debug a program repeatedly.

Overview:

Lesson 1: Algorithms
Lesson 2: Collision Detection
Lesson 3: Using a Timer
Lesson 4: Different Object Types
Lesson 5: Buttons
Lesson 6: 'Smelly Code' Debugging

Cross Curricular Links

Resources

• iPada • Purple Mash Login Details

Impact/Assessment

Most Children will: Children can explain that an algorithm is a set of instructions to complete a task. They have turned algorithms of more than one step into code using free code Chimp. For example, in Lesson 4 and 5 they have been able to make a program that follows their algorithm e.g. 'when the animal is clicked it moves forward then turns right'. Children show an awareness of the need to be precise in their designs so that algorithms can be successfully translated into code. (Unit 2.1 Lesson 5). Children use a planning format on paper before implementing on screen within 2Code as they recognise this is the best approach for designing a solution.
Less Able Children will: Children know that an algorithm is related to giving instructions. They can relate a simple one-step algorithm to the outcome of code in Free code Chimp. For example, in Lesson 1 they have been able to make a program that follows the algorithm e.g. 'when the helicopter is clicked it takes off'. With support, children can create a simple one step program that achieves a specific purpose. With support, children can identify and correct errors (Unit 2.1 Lesson 6).
More Able Children will: Children can create more complex programs that utilize all the coding constructs that they have learnt about and extend their own learning by trying out different ways to code that achieve a specific purpose. Children can identify and correct errors. For example, (Unit 2.1 Lesson 6). An exceeding pupil will be able to apply their knowledge as a transferable skill across a range of debugging scenarios including making logical attempts to debug their own more complex code.