St James' Church of England Primary School
Computing Overview Sheet

Year 5 – 5.1 Coding

Prior and Future Learning Links:
Year 6 – **Coding -** Using Functions **Text Adventures -** Development from text-based coding **Binary** - Use of 2Code to understand binary conversation algorithms
Year 4 – **Coding -** Number Variables **Logo -** Number Variables **Animation –** Sequencing and animation in logical steps:
Year 3 – **Coding -** Code, test, debug process **Branching Databases** - Modelling selection on a binary model.

Learning Objectives:
· To review existing coding knowledge.
- To understand what a simulation is.
- To take a real-life situation, decompose it and think about the level of abstraction.
- To begin to understand what a function is and how functions work in code.
- To understand what the different variable types are and how they are used differently.
- To begin to explore text variables when coding

Overview:
Lesson 1: Coding Efficiently
Lesson 2: Simulating a Physical System
Lesson 3: Decomposition and Abstraction
Lesson 4: Friction and Functions
Lesson 5: Introducing Strings
Lesson 6: Text Variables and Concatenation

Cross Curricular Links

Resources
• iPada • Purple Mash Login Details

Impact/Assessment
Most Children will: Children understand what simulations are and can formulate and program an algorithm for an observed traffic light sequence. (Unit 5.1 Lesson 2). Children understand the processes of decomposition and abstraction and can apply this knowledge when planning algorithms for a program. (Unit 5.1 Lesson 3). Children can include sequence, selection and repetition into code as well as use functions to make their programming more efficient. (Unit 5.1 Lesson 4).
Less Able Children will: With support, children can begin to create more complex programs that include different types of events in their code (Unit 5.1 Lesson 1). They are beginning to understand what simulations are and with support they have formulated an algorithm for a simple traffic light sequence (Unit 5.1 Lesson 2). As their coding becomes more complex, they will require support to tackle debugging in a logical rather than a trial-and-error method.
More Able Children will: Children can write algorithms for and program simulations, they easily adapt their code to (Unit 5.1 Lesson 2). Children understand the processes of decomposition and abstraction and naturally apply this knowledge when planning algorithms for programs beyond the point at which it was taught (Unit 5.1 Lesson 3). Children intuitively grasp the concepts of selection, repetition and variables. They like to challenge themselves to combine these with other coding structures to personalise and to improve their programs. They understand how to use functions to improve efficiency (Unit 5.2 Lessons 4-5).