St James' Church of England Primary School
Computing Overview Sheet

Year 1 – 1.4 Lego Builders & 1.5 Maze Explorers

Prior and Future Learning Links:

Year 2 – **Questioning -** Forward planning to achieve a solution & Familiarity with a code environment. **Coding -** Collision detection

Year 3 – **Coding -** Code, test, debug process & Logical planning of sequences. **Branching Databases -** Modelling selection on a binary model.

Year 4 – **Coding -** Repeat Until and IF/ ELSE Statements & Selection and repetition algorithms **Logo** - Utilize understanding of coding structures

Learning Objectives:

· To emphasise the importance of following instructions. (Lego Builders)
- To follow and create simple instructions on the computer. (Lego Builders)
- To consider how the order of instructions affects the result. (Lego Builders)
- To understand the functionality of the basic direction keys in Challenges 1 and 2. (Maze Explorers)
- To understand how to create and debug a set of instructions (algorithm). (Maze Explorers)
- To understand how to change and extend the algorithm list. (Maze Explorers)

Overview:

Lesson 1: Following Instructions (Lego Builders)
Lesson 2: Following and Creating Simple Instructions on the Computer. (Lego Builders)
Lesson 3: To consider how the order of instructions affects the result. (Lego Builders)
Lesson 4: Challenges 1 and 2 (Maze Explorers)
Lesson 5: Challenges 3 and 4 (Maze Explorers)
Lesson 6: Challenges 5 and 6 (Maze Explorers)

Cross Curricular Links

Resources

• iPada • Purple Mash Login Details

Impact/Assessment

Most Children will: Children can assimilate a set of simple Lego model instructions and look at the outcomes produced from these instructions. They can state where an error has occurred on one of the models from the instructions given (Unit 1.4. Lesson 1). Children understand the effect that accuracy of the instructions has on the outcome. They know that any unexpected outcome is due to the code that they have created and make logical attempts to try to fix this code rather than attributing it to a fault with the computer understanding the instructions.

Less Able Children will: Children understand that to achieve the effect they want when building something, they need to follow instructions. They can give another child instruction to build a simple model, but their instructions might not anticipate all possibilities. In (Unit 1.5 Lesson 2), they needed support with challenges 4 and 5 which require anticipating several steps. Children can tackle challenges 4-6 with support, though they might not complete all challenges.

More Able Children will: Children understand the effect that precise accuracy of the instructions has on the outcome. Children can give instructions that demonstrate they are anticipating the outcome. Children choose to plan their moves several steps at a time towards the goal. In (Unit 1.5 Lessons 2 & 3), they can complete challenges 4 - 6 which require anticipating several steps with ease.