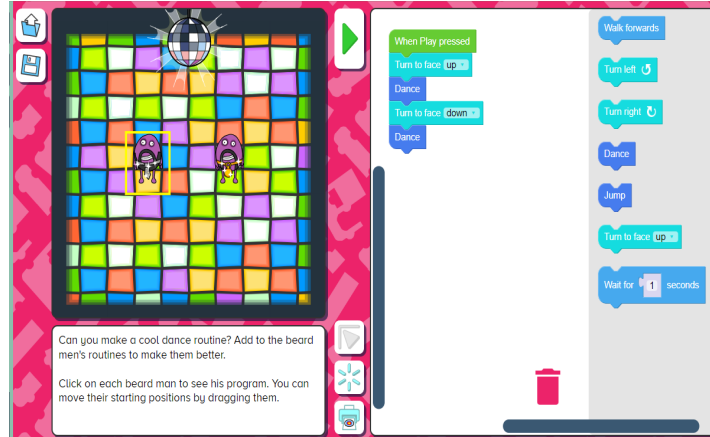


### Prior Learning

**Sequencing:** A set of steps carried out in order.  
 -I understand that computers need precise instructions and that programs run by following precise instructions  
 -I understand what an algorithm is and begin to develop computational thinking by following instructions to move around a course and create a series of instructions for others to follow.  
 -I can explore outcomes when individual buttons are pressed on Beebots and combine these together to draw simple shapes or follow a route  
 -I understand that programs run by following precise instructions and that computers have no intelligence and will do nothing unless a program is run  
 -I can begin to understand what an algorithm is and can represent it using symbols.



### Lesson ideas incorporating Core Skills

**Crazy Character Algorithms (see opposite)**  
**Carpet times and Continuous Provision Computing Area activities:**  
**Busy things**

Code disco section 1: The basics (Not saved)  
 Challenge: dance steps (Not saved)  
 Project: Dancing 1 (Teacher to assign and pupils to save project)

**J2Code – LGFL** (To be assigned via Google classroom)

<https://www.j2e.com/j2code/>

KS1 - Lessons 2 and 3



To understand how block coding works.  
 To program a simple algorithm using block coding. (save activities online)

**Extra activities for Provision and Greater Depth**

**Code.org Course B**

<https://studio.code.org/s/courseb-2021>

-Lesson 1, 2, 3, 4 Sequencing with Angry birds



-Lesson 5 programming with Harvester (some children might move onto looping in these lessons but this is optional and more for greater depth children)



### Key Vocabulary

**Algorithm** – a step-by-step method for solving a problem or accomplishing a goal, especially by a computer.  
**Debug** – identify and remove errors from (computer hardware or software).  
**Program** – a series of coded software instructions to control the operation of a computer or other machine.  
**Clockwise**- in the same direction as the way in which the hands of a clock move round.  
**Anticlockwise** – in the opposite direction to the way in which the hands of a clock move round.  
**Sequence** – a set of steps carried out in order  
**Repeat** - do (something) again or more than once.  
**Block Coding**- the most basic form of computer programming. Rather than having to write complex lines of computer code, with block coding, we use visual instruction blocks

### NC Learning Objectives

To understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions.  
 To create and debug simple programs  
 To use logical reasoning to predict the behaviour of simple programs.

### Essential Knowledge

**Sequencing with block coding: Block-based coding or programming using a drag-and-drop learning environment, where programmers use coding instruction “blocks” to construct animated stories and games.**  
 I can begin to understand that the on screen avatar can be directed through the use of ‘blocks of code.’  
 I can use logical reasoning to predict outcomes and the behaviour of programs.  
 Find and correct simple errors ie debugging.  
 I know that computers have no intelligence and that computers can do nothing unless a program is run .  
 I can begin to use loops within programs with support.

### Offline Resources

**Barefoot Computing**  
**Crazy Character Algorithms**



-Pupils will create a set of instructions on how to draw a crazy character and so start to understand what algorithms are. (Lesson plan saved on drive)