Year / Topic	Term	National Curriculum Links	Length of Topic
7.5 / 7.6 Creating an animation and Game Design & making	Summer 1	IT3.3, CS3.2	5 Weeks

Resources
Compute – IT book 1
Scratch 2.0 & 1.4
PowerPoint, SketchNation, IPads

Target Skills
Programming
Problem solving (debug)
Logic, Design and Evaluation.

Curriculum Links
Maths: Variables, patterns, sequences.
DT
Art
English

E-Safety Coverage
Students will need to consider copyright when sourcing images or media for their games. Searching for content for their games or viewing others' games also gives the opportunity to develop safe habits.

Key Classroom ICT Activity

In this unit students will learn how to create an animation by recreating a dance routine using programming techniques such as: sequences, iteration, procedures, selection and variables. Students will then create a game using programming skills above. Students will also : plan, design, implement, test, improve and evaluate a game which will be designed using Sketch Nation. Students will use a range of devices and software such as: cameras, computers and IPads to create a simple computer game.
By the end of this unit students will be able to:

- Identify all of the required steps in an algorithm for a dance routine writing instructions which describe the process accurately.
- Identify the stages in a sequence in a process to create an algorithm that describes that process accurately. Justifying which tasks humans perform more effectively and which tasks computers perform more effectively.
- Know that a procedure is a sequence of instructions that can be called on and executed when required, creating part of a dance routine using an iteration loop and a condition ('forever if')

Assessment - Progression Pathways
All children should: CS, Designs solutions (algorithms) that use repetition and two-way selection i.e.: if then and else. Uses diagrams to express solutions.
Some children should: CS, Shows awareness of tasks best completed by humans or computers. Designs solutions by decomposing a problem and creates a sub- solution for each of these parts (decomposition) Recognises that different solutions exist for the same problem.
Some children could: CS, Understands that iteration is the repetition of a process such as a loop. Recognises that different algorithms exist for the same problem. Represents solutions using a structured notation. Can identify similarities and differences in situations and can use these to solve problems (pattern recognition)

Assessment Criteria 7.5/ 7.6 Creating an animation & Game making	
Emerging	✓ I can design solutions (algorithms) that use repetition. ✓ I can design solutions (algorithms) that use a two-way selection i.e. if then else. ✓ I can design, use and evaluate computational abstractions that model the behaviour of real world problems and systems.
Developing	✓ I can use diagrams to express solutions. ✓ I can take part in creative projects that involve selecting, using and combining multiple applications.
Secure	✓ I can design solutions by decomposing a problem. ✓ I can recognise that different solutions exist for the same problem. ✓ I can show an awareness of the tasks best completed by humans or computers. ✓ I can take part in creative projects that involve selecting, using and combining multiple applications across a range of devices.
Mastered	✓ I can understand that iteration is the repetition of a process such as a loop. ✓ I can understand that different algorithms exist for the same problem. ✓ I can identify similarities and differences in situations and use these to solve problems (pattern recognition).