Topic: 7.3 Programming in Scratch		Duration: 6 weeks	Composite: Project
Key vocabulary:	**Core knowledge questions / skills development**	**Powerful knowledge crucial to commit to long term memory**	**Links to previous and future topics**
Scratch Code Code Blocks Sprite Costume Stage Co-ordinates Backdrop Motion Looks Sound Events Control Operators Variables Random Iteration Selection Sequence	1. Follow instructions accurately to complete a given task and achieve expected outcomes 2. Identify working areas of **Scratch** such as **Code**, **Sprite** and **Stage** 3. Use Sprite **Costumes** effectively to represent motion 4. Use a variety of **Code Blocks** to control **Sprites** 5. Join **Code Blocks** together in **Sequence** 6. Use x and y **Co-ordinates** to navigate and distribute elements on the **Stage** 7. Associate a variety of **Code Blocks** with the **Motions** that they will perform 8. Control Sprites using **Variables** such as speed and score 9. Use **Selection** to perform decisions 10. Use **Iteration** to repeat tasks until a specific condition is met 11. Use the **Random** function appropriately when programming a game in Scratch	• Programming refers to the art of writing instructions, known as **algorithms**, to tell a computer what to do • In order to make a program in any programming language, you need to think through the **sequence** of steps • **Iteration** refers to the repetition of a series of instructions. Scratch uses the repeat, repeat until or forever blocks • A **conditional** statement is a set of rules performed if a certain condition is met. In Scratch, the if and if-else blocks check for a condition (**selection**) • A **variable** stores specific information that may change. The most common variables in computer games for example, are score and timer • **Boolean logic** is a form of algebra in which all values are reduced to either <u>true</u> or <u>false</u>. The <u>and</u>, <u>or</u>, <u>not</u> statements are examples of Boolean logic.	• The three basic constructs of programming: **Sequence**, **Selection** and **Iteration** are a theme throughout all programming topics and will lead nicely into programming in Python • **Boolean logic**, or a form of it, is also used in the WWW topic, for narrowing searches • **Variable** and **Random** are also functions that will be useful when programming in Python

We will develop these skills:

Impressive reading	Impressive speaking	Impressive writing	Resilience	Numeracy via:	Digital Literacy via:	Employability via:
Reading aloud and evaluating one-another's projects. Reading and following written instructions to complete a practical task.	Reading aloud and evaluating one-another's projects	Writing constructive feedback for peers when evaluating one-another's projects.	Develop student ability to problem solve and find errors in program code.	Use of co-ordinates, scores, lives, speed, angles and distances to create interactive projects.	Appropriate use of computers to complete computational tasks and solve computational problems. Use of the online program Scratch as well as use of Word documents and PDFs.	Team work, independent work, communicating effectively by giving appropriate and constructive feedback to other students.