Year 7   Introduction to Computer Science   8 Lessons

Aims: This unit of work is designed to introduce students to the basics of computer programming. The planning and developing of a programme and the use of flow charts and pseudocode. The use of visual coding will be developed and students taught how to create a programme in a text based language.

Links to KS4:
Collection of Information (Computer programming)
Planning / logic (Maths)

Key Skills	Literacy Links:	Numeracy Links:
- To develop skills in logical thinking and the processes and planning involved. - To understand the use of Denary, Binary and Hexadecimal - To learn how to problem solve and resolve issues that arise - To learn to use features within scratch to make successful programs - To evaluate and make changes and improvements to achieve a desired aim	**Key Words:** **Programming, Algorithms, Variables, Procedure, Conditional Statement, Pseudocode, Loops, Scratch.** Be able to understand how to plan and create a program using block/visual coding and convert into a text based language.	Opportunity to problem solve and logical think.

Assessment	Cross-Curricular Links
Students will be assessed on their understanding of programming through planning and creating a practical task based on scratch and python. Knowledge - Students will gain an understanding of how to begin creating a program using block/visual code. - Students will be assessed on their understanding of the keywords throughout the unit Research - Students will consider how programming is used in the real world and how it can be applied. Planning - Students will be required to create a visual plan and pseudocode for their program Skills - Students should be able to demonstrate a range of skills in Scratch and visual coding. Evaluation - Students should be able to assess the success of the game they have produced and respond to any issues they may encounter making the appropriate corrections	- Maths – Problem solving and logical thinking - English – speaking and listening. **SMSC opportunities and British values** - enable students to develop their self-knowledge, self-esteem and self-confidence - Online security features to be aware of when creating programs - The laws of Copyright and hacking

Opportunities for further learning

Homework will be given out twice during the unit to widen students understanding of programming and to consolidate knowledge gained.
- Programming homework will be to research how programming is used in the real world, considering apps and websites the students use.
- Create a programming hint sheet using the key words and skills they have learnt in the paper-scratch-python unit.