

Subject :	Computer Science	Year Group:	7
	September to October	October- February	February - June
Scheme title	Internet Safety	Algorithms with Flowgorithm	MSW Logo Programming
Purpose of scheme	A high-quality Computer Science education ensures all students are prepared for the future giving them opportunities to gain knowledge and develop skills for the ever changing digital world	Students develop the ability to think in a logical way and become better at making decisions and problem solving.	Students develop the ability to think in a logical way, improve decision making and problem solving.
Knowledge in sequence	<ul style="list-style-type: none"> *Can meet a success criteria and shows an awareness of target audience and purpose *Able to choose the right soft-ware to create/modify images *Evaluates the trustworthiness of digital content *Understands the importance of file types/sizes when im-porting *Use peer feedback to make improvements. *Understands Data Protection Act and the 8 principles *Understands the Computer Misuse Act. *Understands the Copyright Designs and patent Act 	<ul style="list-style-type: none"> *An algorithm is a sequence of steps to complete a task. *Use pseudo-code or flowcharts. *Explained in terms of their in-puts, processing and outputs. *Understand the terms decom-position and abstraction. *Compare the efficiency of algo-rithms in solving a problem. *Explain how linear search and binary search algorithms work. *Explain the bubble sort and merge sort algorithms. *Compare and contrast linear and binary search algorithms. *Compare and contrast merge sort and bubble sort algo-rithms 	<ul style="list-style-type: none"> *Use Turtle Graphics to draw com-pound shapes involving angles of different sizes *Understand Cartesian coordinates. *Use the SmallBASIC commands *Understand the use of positive and negative angles and distances. *Use the counter variable of a loop in the loop code. *Allow user input to determine size/distance *Be able to use nested loops to tessellate the plane. *Understand and create flowcharts to plan a sequence of moves, in-volving repetition and user input
Skills	<ul style="list-style-type: none"> *Recognise what is right and wrong behavior when using technologies and online services. *Knows how to report concerns (CEOP) *Understands the dangers of posting personal information online *Understands how to change privacy settings to keep identity secure 	<ul style="list-style-type: none"> Problem Solving Logical Thinking Skills Real Life Situations Resilience and Independent Skills 	<ul style="list-style-type: none"> Understand how to draw shapes Understand polygonal shapes Use Cartesian coordinates Problem Solving Logical Thinking Skills Real Life Situations Use tessellating patterns Resilience and Independent Skills
Key Words	Internet, E-safety, Cloud computing, CEOP, Password, Social Network, Cyber bullying, Grooming, Hacking, Sexting, Troll, File type, Downloading, Importing, Data protection, Copyright, Patent	Algorithm, Problem solving, Flowchart, Pseudo-code, Program, Sub-problem, Decomposition, Abstraction, Input, Process, Output, Trace table	Programming, Algorithm, Flowcharts, Input, Output, Process, Intellisense, Command, Execute, Debug, Cartesian Co-Ordinates, Tessellation, Iteration, Repetition
End Point	Students are able to stay safe whilst using the internet. They are aware of the right and wrong behaviours and know how to report dangers to CEOP.	Students are able to write their own step by step algorithms for a given problem. They can write in pseudocode and create flowcharts.	Students are able to write their own programs and can successfully debug their code.
Assessment method	Final Written Assessment: *Internet Safety Exam 25 marks * Peer marked homework 15 marks	Final Written Assessment: *Algorithms with Flowgorithm Exam 50 marks *Mid Unit Reflection Grid 25 marks	Final Written Assessment: * MSW Logo Programming Exam 50 marks * Mid Unit Reflection Grid 25 marks