



Subject: Computer Science

Lead Teacher: Mr Ley

Year: 7

Curriculum organisation

Students are taught in mixed groups of 30 for 1 hour per week, each with a computer to use.

Overview of Topics & Key Information

Term	Unit(s) of Work	Key Enquiry Questions	Key Content/ Terminology	Skills developed	How will your child be learning?
Autumn Term	7.1 Introduction 7.2 Web Development	<ul style="list-style-type: none"> How do I use the network resources? How do I safeguard my digital environment? How do I access work and transfer it from home to school? What project team am I in and who is the project leader? How do I set the web site defaults in Google sites? How do I plan my page layout? How do I insert content? How do I handle advanced web elements like video and image carousels? How do I publish my site? 	<ul style="list-style-type: none"> Network Login Personal Information Network drives Remote access The cloud Project team Web site Page layout White space Image data 	<ul style="list-style-type: none"> Organisation of data Safeguarding personal information Handling data within a cloud Creating a web site Creating and handling image data Creating and handling video data Working in a project team 	<p>By trying out the tasks set on the computer in school and at home.</p> <p>As part of a project team, but also by individually creating the necessary web material in the Google cloud.</p>
Spring Term	7.3 Scratch Programming	<ul style="list-style-type: none"> What characters am I going to have in my version of PacMan? What is my maze going to look like? How am I going to program my sprites to move? How am I going to score and lose lives? How am I going to control the start and end of the game? How am I going to animate my sprites? 	<ul style="list-style-type: none"> Sprite Stage costumes Forever Loop If statements Variables Broadcasts 	<p>Basic programming skills:</p> <ul style="list-style-type: none"> Use of loops Use of IF statements Use of variables Use of Scratch broadcasts Artistic skills for the sprite costumes 	By building up a program in scratch by adding in coding blocks and checking they work.
Summer Term	7.4 Spreadsheet Model 7.5 Flowol	<ul style="list-style-type: none"> What is a formula? What is a variable? What is a label? What if...? What are the short cuts? What is the most suitable graph to use? How is a program automated? How are traffic lights programmed? How decisions made in programs? How can a program be broken up into sub tasks? 	<ul style="list-style-type: none"> Model Formula Variable Line fill Autosum Format painter Sequencing Sensor Actuator Feedback Loop Variable Sub routines 	<ul style="list-style-type: none"> Creating profit and loss financial models Creating formulas Using Line fill (Formula replicator) Using Format Painter Creating Graphs Programming devices with flowcharts Splitting up large programs into sub routines 	<p>By creating spreadsheet models a number of times and changing the variables.</p> <p>By using mimics to simulate devices then programming them using Flowol.</p>

Equipment needed for lessons	How will learning and progress be assessed?
<ul style="list-style-type: none"> Windows Personal Computer (provided) 	<ul style="list-style-type: none"> Peer and self-assessment End of topic assessments (subject knowledge focus) Whole School assessment week (May)

Extension & Enrichment opportunities	What can you do to support your child?
<ul style="list-style-type: none"> Coding club Digital Leaders (club) Computer rooms open most lunchtimes National Competitions (BEBRAS) 	<ul style="list-style-type: none"> Ensure there are digital resources they can use. (A normal windows PC is ideal). Get your daughter to help you with digital tasks.

Inclusion
<ul style="list-style-type: none"> Teachers follow student passports to ensure that the needs of all students with SEND are met. Work is enlarged to the necessary size for visually impaired students. Teachers will ensure that classrooms are quiet learning environments where possible and will dim lights to support students with sensory needs. Students have the use of laptop if they have a SEND need whereby use of a laptop supports them. Hearing impaired students are supported through use a radio aid and teachers ensure that students can lip read at all times during lessons. Dyslexic students are encouraged to use coloured overlays when they are required to read long passages. Use of dyslexic friendly fonts and coloured backgrounds used in PowerPoints/resources. Students with ADHD are given movement breaks, fidget toys and lessons are ‘chunked’ to aid concentration. Students are seated according to their needs, students work with the SENDCo to decide upon this.
Additional Inclusion for Computer Science
<ul style="list-style-type: none"> Computer monitors can be adjusted for brightness and contrast to support students with sensory requirements Spell check in Word gives support to Dyslexic students

If you have any questions about this Learning Overview, please contact the named Teacher above.