Scheme of Work

Year Two IT and Computing

One lesson of 50 minutes each week.

Homework: This can and may be set but **not** each week.

Throughout the year core computing, ICT and digital citizenship skills are covered and re-enforced in context with particular attention at the start of the academic year.

Topic	**Learning objective(s)**	**Term/Sequence**	**Notes and pupil assessment**	**Core IT and Computing Skills**
Computers in our world	To Explore, research and then present the wider effects of the use of ICT and computers, in terms of the social, environmental, and economic impact in a chosen area. **Desktop and iPad use** **5 lessons**	**Autumn 1**	Task set on Google classroom. **A digital report uploaded to Classroom** Unit graded on 1-7 scale with comment.	• Effective searching via the WWW with Search engines. • Citation and referencing using a word processor • Inserting images, tables and other formatting skills inherent in competent WP use. • Understanding ICT in a global society and the impact in the area selected.
Digital Literacy	**Using computers safely,** effectively and responsibly. E-safety and savvy computer to use.	**Autumn 1/2**	Discrete lessons in file management, data safety, social networking, using e-	• file management • data safety • social networking

	Desktop and iPad use **To be confident in:** file management, data safety, social networking, using e-mail and searching the web **5/6 lessons**		mail and searching the web. Unit graded on 1-7 scale with comment. Various outcomes submitted to Google classroom.	• using e-mail • Searching the web.
Mobile App development	To take an idea from spark to prototype and then pitch. To use some basic spreadsheet modelling skills for the business case. **Desktop to make and iPad** **7 lessons**	**Autumn 1/2**	Task set on Google classroom. **A screencast walkthrough of their app uploaded to Classroom** Unit graded on 1-7 scale with comment.	• Effective web searching • Image editing • Effective use of Google Classroom • Use of spreadsheet to model business case • Programming
Control systems	To learn about the algorithms that influence our lives. How computers control systems to assist us. To be able to draw a precise an accurate flowchart.	Spring 1/2	Task set on Google classroom. **A google doc. With screen grabs and comments uploaded to Classroom** Unit graded on 1-7 scale with comment.	• Use of Microsoft Visio or Google IO (Draw) to create diagrams • Use of a Word Processor • Understanding how and where systems are under automatic control

	Pupils will use Yenka to control dancers and a car park entry system. **Desktop.** **5 lessons**			• Use of Google Classroom
Introduction to Computer Science	To explore some computer science concepts further. Including binary and logic gates. Encryption/encoding etc. **Desktop and iPad use.** **6 lessons**	Spring 2/Summer 1	Task set on Google classroom. **Various tasks uploaded to Classroom** Unit graded on 1-7 scale with comment.	• Understanding how encryption works – what it is an example of use • Exploring algorithms and understanding their importance in all areas of life • Use of Google Classroom • Use of Google Docs • Use of Google Sheet (hex/dec/bin) • Exploring number systems – maths link – some teachers cover this
Exploring Robotics	To understand what robots are and where they are used. To solve a variety of challenges using the new Evo Lego mind-storms Individually using the Robomind app. **iPad app**	Summer 2	Tasks and challenges set on Google classroom. **Various tasks uploaded to Classroom** Unit graded on 1-7 scale with comment.	• Understanding through application the use of robotics • Applying STEAM skills - physics and Mathematics concepts • Collaboration • iPad use.

	6 lessons			