TELFORD JUNIOR SCHOOL - COMPUTING CURRICULUM

KEY CONCEPTS	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Autumn Term Communicate Collect	**TOPIC: Dance mat typing** - Pupils can identify the 'home row' - Pupils can identify the six keys below the home row. - Pupils can use the correct fingers for the correct keys. - Pupils can type six new keys that lie below the home row including letters v, m, b, n, c and the comma. **TOPIC: Word processing skills** - Pupils can use two hands for typing. - Pupils can keep typing at the end of a line.	**TOPIC: Writing for different audiences (Word)** - Pupils explore how font size can affect the impact of a text. - Pupils can use their skills in Word to produce a newspaper report. - Pupils produce a document for a community campaign. **TOPIC: Effective searches** - Pupils use a search engine effectively to find information. - Pupils assess if a source of information is reliable or not.	**TOPIC: Graphic modelling (Word)** - Pupils use clipart images and shapes in Word to create collages. - Pupils can demonstrate a variety of skills using the shapes in Word (Wanted Poster). - Pupils create a portrait of Henry VIII (cross curricular link to history topic). - Pupils can use all skills learnt (copying, pasting, cloning, rotating, resizing, layering etc) to create a birds eye view of the classroom – demonstrating all skills learnt from previous lessons). - Pupils can demonstrate 3D design using a website (Roomtodo) **TOPIC – Spreadsheets** - Pupils know what a spreadsheet is and can identify it usefulness. - Pupils can locate specific cells on a spreadsheet.	**TOPIC: Blogging** - Pupils understand how a blog can be used as an informative text. - Pupils recognise the features of a blog. - Pupils understand how to use a concept map to develop ideas for their blog. - Pupils create blog posts about a landmark in London. - Pupils assess the effectiveness of their blog and other blogs. - Pupils take feedback and further improve their blog. **TOPIC: Web page creation** - Pupils explore and review existing websites to evaluate their content. They will develop a small understanding of HTML. - Pupils take the role of a web designer and use existing websites to help form their own design.

	- Pupils can save work in my folder. - Pupils can use <shift>, <CAPS LOCK> and <space> correctly. - Pupils can edit using <backspace>, <delete>, the arrow keys, undo and redo. - Pupils can select and format text. Pupils can use the change case button.		- Pupils learn simple formulae to do simple calculations. - Pupils can use trial and error to find specific numbers. - Pupils can use a spreadsheet to calculate a budget.	- Pupils develop their understanding of copyright law and how to search, reuse and reference images. - Pupils create their own website using Google sites. - Pupils use their knowledge of hyperlinks to reference others work within their own website.
Spring Term **Connect** **Communicate**	**TOPIC: Emails** - Pupils can list a range of different ways to communicate. - Pupils can use 2Connect to highlight the strengths and weaknesses of each method.	Topic – Refer to summer term planning iPads to create stop motion video?	**TOPIC: Creative media** - Pupils can understand how to hyperlink across multiple slides to create a choice based story. - Children can use hyperlinking skills to create an interactive quiz.	**TOPIC: App design** - Pupils discuss what an app is and their usefulness in todays society. - Using PowerPoint, pupils design the logo for their app following a tutorial. - Pupils create a home screen for their app using the

	- Pupils can order the various types of communication that have been used through history.		- Pupils can use a Microsoft program (Word) to create unique trading cards. - Pupils can input and change elements of a program to create an interactive media.	design elements from the previous lesson. - Pupils design an app using hyperlinking learned in year five. - Pupils consider the main features of their app and can demonstrate the features of their app and its application to the real world.
Summer Term Code	**TOPIC: Programming Textease Turtle** - Pupils can write commands in the correct order. - Pupils can write a variable value where required. Pupils can correct any mistakes. - Pupils can use the commands fd, bk, lt, rt to move or rotate the turtle. - Pupils can use cs to clear the screen. Pupils	Topic – Refer to Spring term planning (sequence of lessons isn't focused only on Rapid Router?).	**TOPIC: Programming (Scratch)** - Pupils can design, write and debug programs that accomplish specific goals including controlling or simulating physical systems, solve problems by decomposing them into smaller parts. - Children use sequence, selection and repetition in programs; work with variables and various forms of input and output. - Pupils design a maze game. - Pupils add a final level, further enhancing the code in a maze game. - Pupils add sound effects with a purpose.	**TOPIC: Programming (Scratch)** **TOPIC: Programming (Kodu part 2)**

	can use the repeat command **TOPIC: Programming (Scratch)**		- Pupils design and program a game within Scratch that uses Boolean operators. **TOPIC: Programming (Kodu)** - Pupils understand the efficient procedures/algorithms that can be used to solve problems and to plan for specific outcomes. - Pupils will design and write programs that accomplish specific goals. - Pupils solve problems by decomposing them into smaller parts. - Pupils use sequence, selection and repetition in programs. - Pupils use logical reasoning to explain how a simple algorithm works and to detect errors in algorithms and programs.	
Vocabulary progression	Keyboard Typing Save Folder Shift Caps Lock space bar edit backspace	Font Bold Italic Underline Search engine Results page Internet Reliability	Program Copy Paste Shortcut Textbox Spellcheck Layering Open	

delete	Easter Egg	Save	
arrow keys		Save as	
undo	Spring – No key vocabulary	Wrap text	
redo	Summer – No key vocabulary	Clipart	
select		Resize	
format		Format	
change case		Insert	
Uppercase		Layout	
lower		Rotate	
case		Resize	
capitals		Modelling	
text box		2D	
format		3D	
wrap text		Graphics	
square		Design	
<ctrl> key		Dimensions	
control key			
keyboard		PowerPoint	
shortcut		Hyperlink	
menu buttons		Add/delete	
bullet point		Slide	
numbered point		Format	
indent		Layer	
ruler		Text box	
align text		Algorithm	
left		Copy	
right		Paste	
centre		Import	
justified			
show all characters			
		Algorithm	
Spring term – Vocabulary missing		Sprite	
Algorithm			

	Instructions Commands forward (fd) left (lt) right (rt) move turn clear screen (cs) variable pen up pen down calculation Sprite block command background backdrop green flag key press background backdrop		Backdrop Script Block Backdrop Coordinates Drawing Cloning Speech bubble Thought Bubble Volume Stage Costumes Page Rule Tile Condition Action Parameter Indent Parent Rule can run Idiom Pursue Consume Default Conflict Earlier rule Priority Action takes effect State Transition	

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Year 3 / Year 4 / Year 5/ Year 6

Code

Milestone 1:

Motion – Control motion by specifying the number of steps to travel, direct and turn – Year 3

Looks – Add text strings, show and hide objects and change the features of an object – Year 3

Sound – Select sounds and control when they are heard, their duration and volume – Year 3

Draw – Control when drawings appear and set the pen colour, shape and size – Year 3

Events – Specify user inputs (such as clicks) to control events – Year 3

Control – Specify the nature of events (such as a single event or loop) – Year 3

Sensing – Create conditions for actions by waiting for a user input (such as responses to questions like: What is your name?) – Year 4

Variables and lists – From year 3 onwards – Year 3

Operators – From year 3 onwards – Year 3

Milestone 2:

Motion – Use specified screen coordinates to control movement – Year 4+5

Looks – Set the appearance of objects and create sequence of changes – Year 4+5

Sound – Create and edit sounds. Control when they are heard, their volume, duration and rests - Year 4+5

Draw – Control the shade of the pens – Year 3/4

Events – Specify conditions to trigger the events – Year 4+5

Control - Use 'IF THEN' conditions to control events or objects – Year 4+5

Sensing – Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions) – Year 4+5

Operators – Use the Reporter operators (+ / - / * / /) to perform calculations - – Year 4+5

Milestone 3:

Motion – Set 'IF' conditions for movements. Specify the types of rotation giving number of degrees – Year 5/6

Looks – Change the position of objects between screen layers (send to back, bring to front) - Year 5/6

Sound – Uploads sounds from a file and edit them. Add effects such as fade in and out and control their implementation - Year 5/6

Draw – Combine the use of pens with movement to create interesting effects – Year 5/6

Events – Set events to control other events by 'broadcasting' information as a trigger – Year 5/6

Control - Use 'IF, THEN, ELSE' conditions to control events or objects – Year 5/6

Sensing – Use a range oof sensing tools (including proximity, user inputs, loudness and mouse position) to control events or actions – Year 5/6

Variables and lists – Use lists to create a set of variables – Year 5/6

Operators – Use the Boolean operators (< , = , >, and, or, not) to define conditions. Use reporter operators (+,-,*,/) to perform calculations. Also including (pick random, join, letter, length, mod) – Year 6

Connect

Milestone 1

- Participate in class social media accounts – Not currently runnning
- Understand online risks and the age rules for sites – Year 3/4

Milestone 2

- Contribute to blogs that are moderated by teachers – Year 6
- Give examples of the risks posed by online communications – Year 3/4/5/6
- Understand the term 'copyright' – Year 5/6
- Understand that comments made online that are hurtful or offensive are the same as bullying – Year 3/4/5/6
- Understand how online services work – Year 5/6

Milestone 3

- Collaborate with others online on sites approved and moderated by teachers – Year 3/4/5/6
- Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems - Year 3/4/5/6
- Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express written permission, from the copyright holder - Year 5/6
- Understand the effect of online comments and show responsibility and sensitivity when online - Year 3/4/5/6
- Understand how simple networks are set up and used – Year4/5/6

Communicate

Milestone 1

- Use a range of applications and devices in order to communicate ideas, work and messages – Year 3/4/5/6

Milestone 2

- Use some of the advanced features of applications and devices in order to communicate ideas, work or messages professionally - Year4/5/6

Milestone 3

- Choose the most suitable applications and devices for the purpose of communication - Year 5/6
- Use many of the advanced features in order to create high quality, professional or efficient communications - Year 5/6

Collect

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Milestone 1
- Use simple databases to record information in areas across the curriculum - Year 3/4
Milestone 2
- Devise and construct databases using applications designed for this purpose in areas across the curriculum – Year4/5/6
Milestone 3
- Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner - Year 5/6