

# YEAR 3

## Terms 1&2

We start the life of Upton's Computing Curriculum with a "Computer Skills License". This helps all children at Upton getting used to Windows, saving on the network and accessing the internet safely.

With TEACH-IT, the children learn to:

Use-IT, Draw-IT, Type-IT, Find-IT, Surf-IT, Merge-IT and Prove-IT. In specialist computing sessions the children Cup-IT, Code-IT, Loop-IT and Prove-IT. The children are encouraged to self-assess their learning by colouring in the "IT" part of their booklet either Red, Yellow or Green. This booklet is then used in the classroom, to enable effective support during a lesson with computers or Ipads.  
The Code-IT lessons

During the Afternoon Class Lessons.  
PowerPoint Project  
I can plan a branching story.  
I can create slide templates and organise slides with hyperlinks.  
I can add theme, transitions and animation to a presentation.  
I can insert audio and video.  
I can evaluate slide layout and make improvements.

## Terms 3&4

### Rapid Router

- 1) Creating simple instructional algorithms. (move forward, turn right etc)
- 2) Developing efficiency in algorithms (Shortest route, shortest algorithm)
- 3) Introduce loops with variables. (Run the loop 4 times)
- 4) Develop the use of loops to increase efficiency
- 5) Start to use an IF statement. (IF you can go forward, then go forward)
- 6) Start to use Nested IF with ELSE statements. (IF you can't go forward, then turn right)

Regular E-Safety lessons from National Online Safety  
  
Starting to search the internet safely and effectively.

## Terms 5&6

This Programming Turtle Logo and Scratch unit will teach your class to create and debug algorithms. Following on from the earlier Year 2 unit on Preparing for Turtle Logo, the children use the basic commands in Logo to move and draw using the turtle on screen, and then further develop algorithms using the "repeat" command. These skills are then developed by teaching children to create algorithms in Scratch using a selection of blocks. As the children learn how to use a coding language they then produce a simple electronic juke box / media centre.

By the end of the "block"  
...most children will be able to:

- Draw shapes with spaces between using penup and pendown (Turtle Logo)
- Change and alter the pen settings (Scratch)

# YEAR 4

## Terms 1&2

This unit follows up the earlier units on programming Scratch on a computer. In this unit, the children write quizzes by combining questions. While specific skills in Scratch are taught, the unit aims to teach children the wider programming skills of solving problems, testing, debugging, improving and evaluating.

By the end of the "block"  
...most children will be able to:

- Use repetition and selection.
- Work with variables and adjust these depending on the effect they wish to create.
- Understand and use the duplicate function.

Demonstrate that they understand how to combine a range of different effects to create their own quiz

## Terms 3&4

This Programming Turtle Logo unit will teach children how to create an algorithm to program a procedure. Lessons are designed to be used with MSWLogo. Children are reminded of the basic commands and how to repeat alongside a variable. The children are then shown how to program their own procedures, use colour and set the position of the turtle using coordinates. In the concluding lesson, they use the arc command to create patterns using different shapes and randomly selected colours, which they are encouraged to share with the rest of the class.

By the end of the "block"  
...most children will be able to:

- Draw shapes using setpos or setxy.
- Fill shapes in different colours.
- Draw arcs of different sizes as required.

## Terms 5&6

This unit introduces children to two different software choices for a creative way of presenting digital photos. Using existing images or photos taken in advance, children spend three lessons learning skills in Microsoft Publisher and a further three lessons using Windows Movie Maker. In each case, the intended finished result is to present a 'photo story' using their still images. Lessons are designed to be used with Microsoft Publisher and Windows Movie Maker.

By the end of the "block"  
...most children will be able to:

- Layer images and text.
- Add effects to improve images in a Desk
- Top Publisher.

Refine audio and captions in Video Editing to compliment an image sequence.

During the Afternoon Class Lessons.

### Word Processing Project

I can format images for a purpose.

I can use formatting tools to create an effective layout.

I can use the spellcheck tool.

I can insert and format a table in a word processing document

I can change a page layout for a purpose

I can create hyperlinks within a word document.

Regular E-Safety lessons from National Online Safety

Starting to search the internet safely and effectively.

	Terms 1&2	Terms 3&4	Terms 5&6
YEAR 5	<p>Using FLIP-IT, the children develop their skills using a "flipped" teaching model. The children access resources, whether it is images, videos or written examples and learn what they need to know to complete the different milestones of the task. This unit builds on the previous unit in Year 4 (Questions and Quizzes) using Scratch to build and edit algorithms for simple games. The unit is designed to help children develop their skills in writing their own algorithms as well as editing and debugging existing codes. The children develop a game in Scratch, a simple maze and then a jumping game.</p> <p>By the end of the "block" ...most children will be able to:</p> <ul style="list-style-type: none"> <li>• Program an algorithm as a sequence of game instructions with actions and consequences.</li> </ul>	<p>Mbots are small programmable robots. They connect to the computers and Ipads in school. To create algorithms the children software very similar to scratch to build simple routines.</p> <p>A huge challenge is getting the children to independently connect the Mbot, transfer their coding to the robot and then running the robot with the PC connected.</p> <p>The children are challenged to write simple codes that make the robots dance, light up and make sounds - or even try to turn them into police cars, driving around and avoiding obstacles.</p>	<p>Designing a website and creating original content.</p> <p>Using WordPress the children will develop their skills in developing and evaluating web pages creating a web page layout using HTML and plugins from the WordPress site. Children will create their own images and content for the website, ensuring the children understand about copyright and intellectual property. The web pages will be linked together using hyperlinks.</p> <p>The children will need to understand about how to be safe on the Internet and that the school's version of WordPress is only accessible within school.</p>
	<p>During the Afternoon Class Lessons.</p> <p><u>Sketch-Up 3D Modelling</u></p> <p>I can draw 3D shapes.</p> <p>I can add detail to 3D drawings.</p> <p>I can add and manipulate 3D models.</p> <p>I can create a complex 3D model.</p> <p>I can create a 3D model of my own design.</p>		<p>Regular E-Safety lessons from National Online Safety</p> <p>Searching the internet safely and effectively using a search engine.</p>

	Terms 1&2	Terms 3&4	Terms 5&6
YEAR 6	<p>Using FLIP-IT, the children develop their skills using a "flipped" teaching model. The children access resources, whether it is images, videos or written examples and learn what they need to know to complete the different milestones of the task. New skills are introduced to structure code and animate characters and scenes, gradually building to create a short animated story.</p> <p>By the end of the "block"</p> <p>...most children will be able to:</p> <ul style="list-style-type: none"> <li>• Create a sequence of story scenes with added audio.</li> <li>• Structure and sequence the animation of characters in each scene.</li> <li>• Use the repeat command to create animation effect.</li> <li>• Make a character visible or invisible at the correct times.</li> </ul>	<p>Mbots are small programmable robots. They connect to the computers and Ipads in school. To create algorithms the children software very similar to scratch to build simple routines.</p> <p>A huge challenge is getting the children to independently connect the Mbot, transfer their coding to the robot and then running the robot with the PC connected.</p> <p>The children are challenged to write simple codes that make the robots dance, light up and make sounds - or even try to turn them into police cars, driving around and avoiding obstacles.</p>	<p>This unit allows children to use software and digital devices for recording sound. Based on the theme of a Radio Station, it is designed to encourage a creative approach that includes interviewing, making adverts and using jingles. Other software is incorporated where children write scripts and design additional advertising for their Radio Station. Opportunities are included for children to present, listen, review and evaluate their own content as well as professional and commercial examples, plus those created by their peers.</p> <p>By the end of the "block"</p> <p>...most children will be able to:</p> <ul style="list-style-type: none"> <li>• Listen to and improve on their own recordings by re-recording</li> <li>• Locate and download existing sound files to be imported into recording software</li> <li>• Combine two or more tracks to make a new, original recording</li> <li>• Plan and record appropriate audio content for a podcast</li> <li>• Evaluate what features make good quality audio content</li> </ul>
	<p>During the Afternoon Class Lessons.</p> <p><u>Spreadsheets</u></p> <p>I can enter data and formulae into a spreadsheet.</p> <p>I can order and present data based on calculations.</p> <p>I can add, edit and calculate data.</p> <p>I can use a spreadsheet to solve problems.</p> <p>I can plan and calculate a spending budget.</p> <p>I can design a spreadsheet for a specific purpose.</p>	<p>Regular E-Safety lessons from National Online Safety</p> <p>Searching the internet safely and effectively using a search engine.</p>	