

Subject:	ICT & Computing Intent:
<h1>ICT & Computing</h1>	The aim of the ICT & Computing Department is to help students to develop problem solving skills that support their success throughout the curriculum, to ensure each student has an understanding of different types of programming language and that they are able to program to the best of their ability, to encourage students to understand how computers work and to develop information technology skills that support all of the curriculum.

The Big Questions...

Year 7	Year 8	Year 9
<ul style="list-style-type: none"> - September-December: How do I access the technology I need to ensure I work well as a Yateley School student? What are the hardware components of a computer and why is the CPU so important? What is software? How do I program a Micro:Bit? How do I use powerpoint and Word for the best effect? - January-April: What is an algorithm and how do I write one. How can I solve problems and show the steps involved as a flowchart? How do computers search and sort data? - May-July: How do I write programs to make shapes appear on the monitor? What are the main concepts within a programming language? How do I model a problem using spreadsheet software? Why does it help me to use formulae rather than just type in the numbers? How do I draw a graph using spreadsheet software? 	<ul style="list-style-type: none"> - September-December: How are images and sound stored in a computer? What is the importance of binary and how do I convert between denary and binary? What is compression and how is it used? - January-April: What does data validation mean and why is it important in systems such as spreadsheets. How do I program my spreadsheet to give me information dependent on what was typed in? Why are databases so important and how do I set them up. How can I program a database to make use of the information within them? - May-July: How do networks work? How can I program a simple website? What are logic gates used for in computers and how do they work? 	<ul style="list-style-type: none"> - September-December: How can I solve more complex problems and give the solutions in flowcharts. How can I solve more complex challenges using the Python programming language. - January-April: How can I write a game using Game Maker software? Can I work in a team to produce the best game? - May-July: Why is eSafety so important? What does eSafety really mean? How do I use Publisher and why is it very useful? How can I program a more complex website with validation included?

What skills will I develop?

- In ICT & Computing you will develop the logical thinking skills that enable the solving of more complex problems. You will be encouraged to break problems in to smaller steps and produce flowcharts and programs for your solutions.
- You will be encouraged to program in a number of different ways including block language, HTML, CSS and Javascript, spreadsheets with the main programming language being Python.
- You will develop an understanding of how computers work and how networks are so important for working together.
- You will be encouraged to use the MicroSoft Office products in a sensible manner to help you with your work across the curriculum.

What great resources can I use?

- www.bbc.co.uk/bitesize contains great links to all materials studies as well as test you can take online
- Youtube videos, especially with the GameMaker project.

How will I be assessed?

At Key Stage 3 your work is regularly assessed through the completion of classwork and homework. Your teacher will give verbal feedback during the lessons and some written feedback. Some of your topics will have an end of topic test. You will know in advance and be expected to prepare well. Most topics will be graded as a GCSE grade and you will be able to see how you are progressing against your target grade. You will receive a comment on what went well and how you could improve.

Three ways that parents/carers can help...

1. Encourage your child to understand how important ICT & Computing are to their future life, explain how you use it in your lives.
2. Encourage your child to approach their ICT & Computing homework as an opportunity to ensure they have a good understanding of that specific topic, completing it with plenty of time to get help before the due date.
3. Encourage your child to contact their teacher if they are struggling with a topic to get extra help.