Computing at Yaxham Primary School

At Yaxham we recognise that technology and computing are an integral part of life and that children come to school with a range of technological experiences.
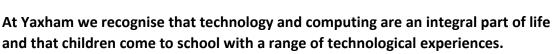
We aim to harness this knowledge and enthusiasm and use technology to promote and sustain learning in a range of subject areas as well as learning about the technology itself.

By the end of year 6 we aim for our children to have built up the skills and knowledge which enable them to:

- ✓ Be safe when using technology and the internet and understand their own technological responsibilities and their own digital identity and information trail.
- ✓ Be discerning about when the use of technology enhances learning or presentation.
- ✓ Use technology creatively and widely to express themselves or their knowledge.
- ✓ Understand and be able to use technology to perform tasks.

We have divided the computing curriculum into 3 main areas:

- ✓ Being a Computer Scientist
- ✓ Being Creative
- ✓ Being e-safe

During the year each class engages with 3 elements of the computing curriculum. Each element is covered twice throughout the year.

The activities used each half term will differ depending on class interests and topic areas, however the skills and knowledge will be consistent and will build up through the year.

We are following the curriculum as designed by **Sally Tippet** with permission.

The full curriculum can be found in school as a hard copy.

Progression of skills and Knowledge

Being a computer Scientist

		Knowledge and skills
R	Year A	Pupils will recognise devices that follow instructions Pupils will be able to follow instructions given by the teacher Pupils will understand the need for accuracy when giving or following instructions Pupils will be able to sequence a simple set of instructions in the correct order
YR 1	Year A	Pupils will be able to give directional instructions that can be understood and followed Pupils will be introduced to the word algorithm Pupils will understand the need for accuracy when giving instructions Pupils will share and discuss their knowledge of directional instructions with their peers

		Pupils will begin to create and debug simple programs using directional language
Yr 2	Year A	Pupils will understand what algorithms are Pupils will understand the need for accuracy when giving or following instructions Pupils will be able to create and debug simple programs Pupils will be able to predict the behaviour of simple programs and explain their reasoning
YR 3	Year A	Pupils will explain how simple algorithms work and will start to spot some errors Pupils will be able to write and debug simple programs that accomplish specific goals Pupils will be able to use repeat procedures in their programs Pupils will understand the need for accuracy when giving or following instructions
YR 4	Year A	Pupils will explain how algorithms work and will be able to detect errors Pupils will be able to write and debug programs that accomplish specific goals Pupils will be able to use repeat procedures in their programs Pupils will be able to write a procedure that instructs the turtle to draw a flower Pupils will apply their knowledge of the importance of accuracy when giving instructions
YR 5	Year A	Pupils will be able to write programs that control or simulate physical systems Pupils will begin to solve problems by decomposing them into smaller parts Pupils will apply their knowledge of the importance of accuracy when giving instructions Pupils will understand how input/output devices work
YR 6	Year A	Pupils will be able to write and debug programs that accomplish specific goals Pupils will be able to solve problems by decomposing them into smaller parts Pupils will be able to use logical reasoning to explain how simple algorithms work and to detect and correct errors Pupils will apply their knowledge of the importance of accuracy when giving instructions
YR 6+		

Being Creative

		Knowledge and skills.
R	Year A	Pupils will know how to log on and off from a computer Pupils will be able to use a mouse or tracking device to navigate around a computer screen Pupils will know how to print work Pupils will be able to enter text on screen Pupils will know the difference between a digital image and a moving image (digital camera/video camera) Pupils will explore the role of ICT in the world around them

YR 1	Year A	Pupils will be able to use a computer to create and develop digital art work Pupils will be able to use a digital camera to record selected images Pupils will be able to use images they have taken within in other software packages Pupils will be able to use a digital video camera to record a class activity Pupils will be able to use ICT to represent information graphically and begin to interpret that data accurately
Yr 2	Year A	Pupils will learn that technology can be used to communicate ideas Pupils will recognise common uses of information technology beyond school Pupils will recognise that some forms of communication are better than others Pupils will be able to create, store and retrieve digital content Pupils will be able to use a branching database to integrate data
YR 3	Year A	Pupils will use and combine a variety of software to design and create digital and printed media Pupils will collect and present data accurately Pupils will be able to use search technologies effectively to locate appropriate resources needed for their work Pupils will understand the principles of animation
YR 4	Year A	Pupils will use and combine a variety of software to design and create digital and printed presentations Pupils will recognise and use good features of digital presentation Pupils will collect and analyse and present data accurately Pupils will be able to make simple edits to a film
YR 5	Year A	Pupils will recognise that technology can be used to alter and manipulate images Pupils will use and combine a variety of software to design and create digital and printed media Pupils will explore and create 3D animation Pupils will recognise the benefits of using a spreadsheet to manipulate data
YR 6	Year A	Pupils will use and combine a variety of software to design and create a digital presentation for a given audience Pupils will collect and analyse and present data accurately within a spreadsheet Pupils will understand computer networks including the internet and the services they provide (world wide web) Pupils will recognise how these services offer opportunities for communication and collaboration Pupils will use search engines effectively in research
YR 6+		

Being e-Safe

		Knowledge
R	Year A	Pupils will learn how to login to the school computers safely Pupils will learn that staying safe online is similar to staying safe in the real world Pupils will learn the school rules for staying safe on the internet Pupils will understand the importance of asking for help from an adult when on the internet or using computers Pupils will learn how they can use the internet to find information

YR 1	Year A	Pupils will learn that they may leave a digital footprint when using the internet Pupils will learn ways for staying safe when using the internet Pupils will learn that they can use the computers to discover new ideas and visit new places Pupils will learn how people can use the internet to bully others and where they can go for help
Yr 2	Year A	Pupils will learn why passwords are important and the reasons for keeping them private Pupils will learn that computers can be used to communicate with people close and far away Pupils will learn that they must use technology safely and respectfully
YR 3	Year A	Pupils will learn how they can protect themselves online and discuss the information they share with others Pupils will learn where they can go for help and support when they have concerns Pupils will learn that they must use technology safely and respectfully
YR 4	Year A	Pupils will learn the importance of using and keeping safe their passwords Pupils will understand the term plagiarism Pupils will know what spam is and how to deal with it Pupils will be able to demonstrate the importance of keeping personal information private
YR 5	Year A	Pupils will be learn that they must keep their personal information private when online Pupils learn how to identify secure sites that they can use safely Pupils compare cyberbullying and in-person bullying and learn strategies for coping with it Pupils discuss and identify where to go for help and support when they need it
YR 6	Year A	Pupils will become familiar with digital media and associated vocabulary Pupils will understand how others can access their private information online Pupils discuss and identify where to go for help and support when they need it
YR 6+		

Used with permission from the Sally Tippet scheme of work.

Timetable for activities and spread of learning. Year A and B

Teachers will use the **Sally Tippett** scheme to ensure that all knowledge and skills for that year are taught.

	Autumn	Spring	Summer
Class 1	**E-safety.** **Being creative**	**Being a computer Scientist** **E-Safety**	**Being creative** **Being a computer scientist**
Class 2	**E-safety** **Being a computer Scientist**	**E-Safety** **Being Creative**	**Being a computer scientist** **E-safety**
Class 3	**E-safety** **Being Creative**	**Being a computer scientist** **E-Safety**	**Being creative** **Being a computer scientist**

Subject Content

Key stage 1

Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions CS
- create and debug simple programs CS:C
- use logical reasoning to predict the behaviour of simple programs CS
- use technology purposefully to create, organise, store, manipulate and retrieve digital content C:DL
- recognise common uses of information technology beyond school CS
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. DL:ES

> CS = Computer Science
> C = Creativity
> DL = Digital Literacy
> ES = E-Safety

Key stage 2

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts CS:C
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output CS:C
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs CS
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration CS:DL:ES
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content DL:ES

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- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information C:DL:ES
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. DL:ES