

Welcome to the Computing Curriculum Evening

Aims of tonight:

1. How has the Computing Curriculum changed since 2014?
2. What is included in the Computing National Curriculum?
3. What hardware and software is available to children in our school?
4. Esafety talk from Keith Hodgkins
5. Workshops to see how the equipment is used in each year group.

'Computers are now part of everyday life. For most of us, technology is essential to our lives, at home and at work. 'Computational thinking' is a skill children must be taught if they are to be ready for the workplace and able to participate effectively in this digital world.'

Simon Peyton-Jones Chairman, Computing At School

Changes to Curriculum

The new National Curriculum 2014, introduced a change from ICT to Computing. This has been developed to equip young people with the foundational skills, knowledge and understanding of computing they will need for the rest of their lives.

Through the new programme of study for computing, children will learn how computers and computer systems work, they will design and build programs, develop their ideas using technology and create a range of content.

The focus of the new programme of study moves towards programming and other aspects of computer science. This begins right at the start. By Key Stage 2 (ages 7 to 11) they'll be designing, writing and debugging programs using fairly sophisticated concepts of sequence, selection, variables and repetition.

Three aspects of the computing curriculum:

1. Computer science (CS) -

The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming.

Children can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.

2. Information technology (IT)

Children can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.

3. Digital literacy (DL)

Children are responsible, competent, confident and creative users of information and communication technology.

Allowing children to use, and express themselves and develop their ideas at a level suitable for the future.

Expectations for the three aspects of computing at each key stage.

	KS1	KS2
CS	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web</p> <p>Appreciate how [search] results are selected and ranked</p>
IT	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p>Use search technologies effectively</p> <p>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</p>
DL	<p>Recognise common uses of information technology beyond school</p> <p>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</p>	<p>Understand the opportunities [networks] offer for communication and collaboration</p> <p>Be discerning in evaluating digital content</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>

Hardware available

EYFS - Year 4 iPads

Year 5 -Year 6 Chrome books

Esafety

S SAFE Keep safe by being careful not to give out personal information – such as your full name, email address, phone number, home address, photos or school name – to people you are chatting with online.

M MEETING Meeting someone you have only been in touch with online can be dangerous. Only do so with your parents' or carers' permission and even then only when they can be present.

A ACCEPTING Accepting emails, IM messages, or opening files, pictures or texts from people you don't know or trust can lead to problems – they may contain viruses or nasty messages!

R RELIABLE Information you find on the internet may not be true, or someone online may be lying about who they are.

t TELL Tell your parent, carer or a trusted adult if someone or something makes you feel uncomfortable or worried, or if you or someone you know is being bullied online.
You can report online abuse to the police at www.thinkuknow.co.uk

Year 1 and Year 2

Algorithm cards Purple Mash

Phonics (Twinkl) Squeebles

Year 3 and Year 4

Scratch Junior Green Screening

Pages Pic Collage

Squeebles

Year 5 and 6

How to use a Chrome book

Shared documents and working collaboratively

Thinking blocks- fractions

Google classroom

Workshop 1 7pm- 7.30pm

Workshop 2 7.30- 8 pm

Programming

EYFS- Programmable toys.

Yr 1 - Understanding algorithms (a sequence of instructions)

Use algorithms to program Beebots

Activities in the classroom and Purple Mash.

Yr 2 - Begin to write their own algorithms.

Introduce 'repeat loop' (iteration) and 'when' statement (selection)

Using Purple Mash.

Yr 3/4 - 'debugging' programs and introduce 'variables' (score)

Using Scratch Junior.

Yr 5/6 - Explain how algorithms work, debug scripts with errors, create games including skills taught in previous years (sequence, selection, repetition, variables) Can we add new levels? **Using Scratch**

Multimedia

EYFS- Use cameras and ipads to take photos, identify different types of technology, make marks and patterns using **2paint** a picture, make a story in **2Create a Story in Purple Mash**

Yr 1 - Choose a website from a list to gather information, create a picture using different graphic software (**2paint, Purple Mash, dazzle**) and insert text, capture photos and resize.

Yr 2 - Begin to use child friendly search engines, choose graphic software to combine text and images, capture photos and insert into documents.

Yr 3/4 - What is the internet/WWW? Use search engines effectively, copy images from the internet, use '**Pages**' and '**publisher**' on ipads to combine text and images, **animation (Yr 3), Green Screening (Yr 4)**

Yr 5/6 - Select and use appropriate information from the internet to create independent and shared documents.

Data

EYFS- Collect data on a given topic, create class pictogram using **2Count in Purple Mash**

Yr 1 - Understand what we can do on a computer, create Pictograms using **2Count and 2Graph**

Yr 2 - Understand that a computer converts data into information (words, numbers and pictures), Introduction to pixels and how TV/computer screens are made up of tiny pixels, use **2Graph** to create graphs for specific purposes, explore branching datadases.

Yr 3/4 - Introduction to binary numbers, **2Investigate** to interrogate a set of data and sort in different ways, explore different databases and discuss how they work

Yr 5/6 - Use online activities to answer questions about a set of data, create Spreadsheets.