BEECHWOOD PRIMARY SCHOOL
Meredith Street, Crewe, Cheshire. CW1 2PH
Headteacher: Mrs S Harper

'Striving to be the best we can be.'

www.beechwoodprimary.org

Long Term Plan for Computing

It is our intent at Beechwood Primary School to provide all of our children with a high-quality education in computing which provides access to an ever changing and expanding digital world. We wish to develop a love of computing and provide children with the ability to enhance their knowledge, skills and understanding through different types of media whilst keeping safety at the forefront of their minds. We believe that this will give our children the tools they need to succeed in a digital world.

At Beechwood Primary school we want children to become digitally literate by developing a range of transferrable skills which can make them active participants in a digital world and prepare them for the world of work. We aim to encourage children to use, express themselves and develop their ideas through a range of information technology.

	Autumn		Spring		Summer	
Year 1	This unit will teach children the basic computer skills that they will need in order to be able to use a desktop or laptop computer. Children will learn how to use a computer mouse or a trackpad and how to switch on and shut down a computer.	This Word Processing Skills unit will teach your class basic typing and word processing skills. Children will learn how to type with two hands, use the shift, space and enter key properly, and edit work by using the backspace, delete and arrow keys	This Painting unit will teach your class basic painting skills in a painting application on a computer or tablet device. Children will use a simple painting program to paint with different colours and brushes, create shapes, fill areas, undo and redo and add text.	In this unit about programming toys, children will be introduced to the principles of programming through unplugged tasks and the use of Bee-Bots. They will be introduced to algorithms as a set of step-by-step instructions given to a device.	This unit introduces children at Key Stage 1 to the principles of coding, using the age-appropriate Scratch Jr software. The platform encourages basic understanding of algorithms and how to create precise instructions for visual working programs.	In this unit, children learn about the potential dangers in the online world and what basic steps we need in order to have positive digital experiences. They learn about using search engines safely to find images. They learn the SMART rules and look at what information should be kept safe on the internet.
Year 2	This unit focus' on important computer skills needed for safe and effective computer use and introduce some further skills concerning the use of folders, searching for files and printing. In lessons we introduce children to presentations and teach the skills needed to create a simple presentation.	In this 'Computer Painting' unit the children will have the opportunity to learn about reproducing the painting styles of great artists using computer programs. Each lesson focuses upon a different artist and their particular style. This will be used as inspiration for mastering specific techniques within design-based software.	This unit has two main aims; to enable children to create, test and debug algorithms, and preparing children to use the language of Turtle Logo. The children begin by giving and following instructions to move forward and make quarter turns, followed by walking different Rectilinear shapes.	Children are given the opportunity to use their skills in a new context and apply them within software they are familiar with in order to complete a final project.	This unit introduces children to using the Internet safely and with a purpose. Children are shown how to search the Internet using one word; how to make sense of the returned results; how to use "for kids" to return more suitable results; how to follow links and return to the search results. Children will also learn	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.

					about blogs and how to write one safely.	
Year 3	In this unit, children will learn to use various features for formatting text. Sessions will include a learning presentation alongside a home learning task, challenge cards, posters and help cards. Lessons will also focus on some important computer skills and introduce children to screenshots, the Snipping Tool and secure use of passwords.	In this unit, children will create and debug algorithms to draw regular polygons using the repeat command/ block (Turtle Logo and Scratch). Children will then draw regular polygons using Logo to calculate the angle (Turtle Logo) and then create and debug algorithms to draw patterns by repeating regular polygons (Scratch).	This unit is aimed at developing children's graphic and presentation skills by introducing drawing rather than painting. Children will learn about layouts using a desktop publishing application and also how to draw, order, group and manipulate objects to make a picture. They will also learn to evaluate and create effective layouts, combining text and images.	This unit focuses on how to effectively search using key words and how to safely communicate online. The lessons focused on internet research will demonstrate the importance of word order when searching. They will also start to examine the results returned and how to distinguish between a reliable and unreliable website.	This unit develops children's use of presentation skills. Children will learn to set the theme, slide transitions, animating objects onto the slide, creating hyperlinks in the action settings and adding audio and video. This will be linked to another area of the curriculum and presented to other pupils and parents.	In this unit, children are introduced to email and other forms of online communication. They will look at how to write and send emails, as well as how to decide if an email is safe to open. They will build on their existing knowledge of cyberbullying and how to deal with unkind behaviour online as well as discussing the types of information we should not share online.
Year 4	In this unit, children learn about preventing and dealing with cyberbullying; how to use search engines efficiently; how to avoid plagiarism online; and how to be a good digital citizen. The unit ends with children applying their new knowledge to design a character to be displayed around school to promote online safety.	In this unit children will learn about formatting images and organising content into and effective layout. Children will learn new skills and techniques and apply them to creating a range of different word documents (posters, letters to parents, job rotas, recipe cards and e-vouchers) which they will use during a cake sale project.	This unit teaches children the basic principles and techniques of simple animation. Beginning with the history of animation, children research some of the early animation techniques used before the use of computers. They then compare a range of free animation software and will then be given the opportunity to evaluate their experiences.	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.	In this unit, children will be using and applying the skills they have learnt and developed so far to work as a group to create a photo story. Pupils will plan activities thoroughly before dividing up the separate tasks required to complete the whole project. Children will present their projects to an audience and will evaluate the team and individual achievements.	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. They will use the arc command to create patterns using different shapes and randomly selected colours, which they will then share with the class.
Year 5	This unit progresses well from the year 4 unit 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.	This unit allows children to use software and digital devices for recording sound. Based around 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.	This unit introduces children to flowcharts and how they are used to program and control devices. Children will use Flowol software that includes simulations of real life automatic computer systems. Children are taught to build sequences of instructions, control multiple outputs and structure algorithms with decisions and inputs.	This unit combines the further development of children's skills for searching the internet with the introduction of creating and editing a webpage using Google Sites. Children will learn how to use some of the other advanced search features in Google, such as fill in the blanks. They will also create a webpage with a layout of their choice including images and hyperlinks.	In this unit the children extend their drawing skills to create 3D models based on using the software SketchUp Make. Children will learn how to create simple and complex 3D models. They will be able to add detail and manipulate 3D models using a variety of tools.	In this unit, children will learn about email safety with a focus on preventing and dealing with spam. They will consider the importance of strong passwords and learn how to create them. Children will build on their knowledge of plagiarism and fair use of people's work by learning how to write citations and references for websites they may use.

Year 6	In this unit about online safety, children will be taking a more in depth look at a variety of online safety issues, most of which they will have been familiarised with in previous years. They will be introduced to the idea of the internet, as a type of media, and how it can shape our ideas about boys and girls through stereotypes. Children will be given ways to deal with online content that they find worrying or even believe to be dangerous.	The aim of this unit is to allow children to explore various aspects of film-making. They will choose and use appropriate software in order to complete tasks such as writing a script, researching information, filming and editing. As well as using digital devices for recording, children work through pre- and post-production stages, planning good-quality interviews for a documentary and completing the process with use of video editing software.	Children are given an understanding of spreadsheets and how they can be used. In the first set of lessons, a different spreadsheet template is provided in which children learn skills in formatting and entering specific formulas. The following lessons include investigative skills in using the spreadsheet to solve specific problems. Examples include number calculations, sports league tables, test scores, and budget planning The final part of the unit allows an open-ended task for pupils to design their own spreadsheet, with ideas and direction provided for particular purposes.	This unit builds on the previous unit in Year 5 (Scratch: Developing Games) as well as prior units introducing Scratch in Year 2 and Year 4. The unit is designed to help children in continuing to develop their skills in writing their own algorithms as well as editing and debugging existing codes. New skills are introduced to structure code and animate characters and scenes, gradually building to create a short animated story.	This unit introduces children to programming with Kodu, a simple visual programming language made specifically for creating games. The distinguishing features of Kodu are visual icons that are added together like building blocks to form instructions and game environments constructed by the user in a 3D scene editor