Aycliffe Drive Skills Progression in Computing 2023

At Aycliffe Drive Primary School we follow the Teach Computing Curriculum produced by the Department for Education. We believe that this curriculum equips our children the best skill set to use computers independently. We want our children to be able to make the correct choices on which programmes to use when given a specific task (i.e. not typing up a whole piece of writing in Excel). The Ofsted Research Review also recommends the teach computing curriculum to ensure all strands are up to date and the curriculum is current. In addition to this, we cover E-Safety using CEOP's Band Runner films and interactive games. E-Safety is also covered in school through the PSHE curriculum (Jigsaw), E-Safety week, workshops by Hazard Alley, opportunities for parents to attend workshops either online or in school as well as staff training.

Early Years Foundation Stage	In the EYFS, children are introduced to technology through using the Interactive Whiteboard to teach, playing age-appropriate games linked to the curriculum on the board with supervision. Parents are asked about what technology is available to the children in the home through questionnaires and this information is used to inform planning, incorporating suitable games they are already familiar with. This encourages smoother transitions from home to school and staff are able to extend children's learning through already familiar apps and games, as well as others.
	Children have the opportunity to explore technology in the classroom and learn about its wider uses in their lives. We encourage the use of Tapestry by parents as an important tool for sharing information and use the children's voice as much as possible in the observations we post. Children are able to to incorporate items from real life in their imaginative play, such as phones, keyboards, remote controls and other suitable items.
	Parents are also included in the distribution of E-Safety newsletters and invited to Parent workshops on E-Safety when available. Staff talk about E-Safety using 'in the moment' opportunities such as when using a search engine to find information online, talking about the need for supervision when using the internet and who to talk to if children see something they don't like online.
	In order to prepare children for their next stage of learning, children in the Foundation Stage will be taught: To follow simple two-step instructions, e.g. "Hang up your coat and then sit on the carpet" To know that information can be received from digital devices and the internet To use an iPad to take a photo To use technology in everyday life. operating simple equipment, cd player, remote control, iPad, touch screen device, game console, qwerty keyboard To have an understanding of which words to use to retrieve information/photo online (dictating and/or typing) To use technology safely and respectfully. To understand the need to stay safe online and when using technology

Aycliffe Drive Primary is a one and a half form entry school. We operate with two straight classes and one mixed class in each key stage, i.e. Key Stage 1 consists of a Year 1 class, Year 2 class and a mixed Year 1 and 2 class.

In **Key Stage 1 and Lower Key Stage 2**, (Years 3 and 4), Computing is taught in the mixed classes according to the outcomes expected for each child's year group, that is, staff ensure that the skills children in the mixed class are taught are appropriate to their year group. Lessons are taught concurrently by the teacher and support staff to make sure that content is not repeated by children the following year.

In **Upper Key Stage 2**, Years 5 and 6, Computing is taught on a 2 year cycle in half-termly rotations with Music. For instance, in Spring 1 (Jan 2024) children will have a term of Music, with a 1 hour lesson and in Spring 2 (after Feb half term 2024) they will do a Computing 1 hour lesson in the same slot and carry this on for summer term.

	Computing systems and networks	Creating media	Programming	Data and information
Year 1	-To identify technology -To identify a computer and its main parts -To use a mouse in different ways -To use a keyboard to type on a computer -To use the keyboard to edit text -To create rules for using technology responsibly	-To describe what different freehand tools do -To use the shape tool and the line tools -To make careful choices when painting a digital picture -To explain why I chose the tools I used -To use a computer on my own to paint a picture -To compare painting a picture on a computer and on paper -To use a computer to write -To add and remove text on a computer -To identify that the look of text can be changed on a computer -To make careful choices when changing text -To explain why I used the tools that I chose -To compare typing on a computer to writing on paper	-To explain what a given command will do -To act out a given word -To combine forwards and backwards commands to make a sequence -To combine four direction commands to make sequences -To plan a simple program -To find more than one solution to a problem -To choose a command for a given purpose -To show that a series of commands can be joined together -To identify the effect of changing a value -To explain that each sprite has its own instructions -To design the parts of a project -To use my algorithm to create a program	-To label objects -To identify that objects can be counted -To describe objects in different ways -To count objects with the same properties -To compare groups of objects -To answer questions about groups of objects

Year 2	-To recognise the uses and features of information technology -To identify the uses of information technology in the school -To identify information technology beyond school -To explain how information technology helps us -To explain how to use information technology safely -To recognise that choices are made when using information technology	-To use a digital device to take a photograph -To make choices when taking a photograph -To describe what makes a good photograph -To decide how photographs can be improved -To use tools to change an image -To recognise that photos can be changed -To say how music can make us feel -To identify that there are patterns in music -To experiment with sound using a computer -To use a computer to create a musical pattern -To create music for a purpose -To review and refine our computer work	-To describe a series of instructions as a sequence -To explain what happens when we change the order of instructions -To use logical reasoning to predict the outcome of a program -To explain that programming projects can have code and artwork -To design an algorithm -To create and debug a program that I have written -To explain that a sequence of commands has a start -To explain that a sequence of commands has an outcome -To create a program using a given design -To change a given design -To create a program using my own design -To decide how my project can be improved	-To recognise that we can count and compare objects using tally charts -To recognise that objects can be represented as pictures -To create a pictogram -To select objects by attribute and make comparisons -To recognise that people can be described by attributes -To explain that we can present information using a computer
Year 3	-To explain how digital devices function -To identify input and output devices -To recognise how digital devices can change the way we work -To explain how a computer network can be used to share information -To explore how digital devices can be connected -To recognise the physical components of a network	-To explain that animation is a sequence of drawings or photographs -To relate animated movement with a sequence of images -To plan an animation -To identify the need to work consistently and carefully -To review and improve an animation -To evaluate the impact of adding other media to an animation -To recognise how text and images convey information -To recognise that text and layout can be edited -To choose appropriate page settings -To add content to a desktop publishing publication -To consider how different layouts can suit different purposes	-To explore a new programming environment -To identify that commands have an outcome -To explain that a program has a start -To recognise that a sequence of commands can have an order -To change the appearance of my project -To create a project from a task description -To explain how a sprite moves in an existing project -To create a program to move a sprite in four directions -To adapt a program to a new context -To develop my program by adding features -To identify and fix bugs in a program	-To create questions with yes/no answers -To identify the attributes needed to collect data about an object -To create a branching database -To explain why it is helpful for a database to be well structured -To plan the structure of a branching database -To independently create an identification tool

		-To consider the benefits of desktop publishing	-To design and create a maze-based challenge	
Year 4	-To describe how networks physically connect to other networks -To recognise how networked devices make up the internet -To outline how websites can be shared via the World Wide Web (WWW) -To describe how content can be added and accessed on the World Wide Web (WWW) -To recognise how the content of the WWW is created by people -To evaluate the consequences of unreliable content	-To identify that sound can be recorded -To explain that audio recordings can be edited -To recognise the different parts of creating a podcast project -To apply audio editing skills independently -To combine audio to enhance my podcast project -To evaluate the effective use of audio -To explain that the composition of digital images can be changed -To explain that colours can be changed in digital images -To explain how cloning can be used in photo editing -To explain that images can be combined -To combine images for a purpose -To evaluate how changes can improve an image	-To identify that accuracy in programming is important -To create a program in a text-based language -To explain what 'repeat' means -To modify a count-controlled loop to produce a given outcome -To decompose a task into small steps -To create a program that uses count-controlled loops to produce a given outcome -To develop the use of count-controlled loops in a different programming environment -To explain that in programming there are infinite loops and count controlled loops -To develop a design that includes two or more loops which run at the same time -To modify an infinite loop in a given program -To design a project that includes repetition -To create a project that includes repetition	-To explain that data gathered over time can be used to answer questions -To use a digital device to collect data automatically -To explain that a data logger collects 'data points' from sensors over time -To recognise how a computer can help us analyse data -To identify the data needed to answer questions -To use data from sensors to answer questions

Year 5	-To explain that computers can be connected together to form systems -To recognise the role of computer systems in our lives -To experiment with search engines -To describe how search engines select results -To explain how search results are ranked -To recognise why the order of results is important, and to whom	-To explain what makes a video effective -To identify digital devices that can record video -To capture video using a range of techniques -To create a storyboard -To identify that video can be improved through reshooting and editing -To identify that drawing tools can be used to produce different outcomes -To create a vector drawing by combining shapes -To use tools to achieve a desired effect -To recognise that vector drawings consist of layers -To group objects to make them easier to work with -To apply what I have learned about vector drawings	-To control a simple circuit connected to a computer -To write a program that includes count-controlled loops -To explain that a loop can stop when a condition is met -To explain that a loop can be used to repeatedly check whether a condition has been met -To design a physical project that includes selection -To create a program that controls a physical computing project -To explain how selection is used in computer programs -To relate that a conditional statement connects a condition to an outcome -To explain how selection directs the flow of a program -To design a program which uses selection -To create a program which uses selection -To evaluate my program	-To compare paper and computer-based databases -To outline how you can answer questions by grouping and then sorting data -To explain that tools can be used to select specific data -To explain that computer programs can be used to compare data visually -To use a real-world database to answer questions
Year 6	-To explain the importance of internet addresses -To recognise how data is transferred across the internet -To explain how sharing information online can help people to work together -To evaluate different ways of working together online -To recognise how we communicate using technology -To evaluate different methods of online communication	-To review an existing website and consider its structure -To plan the features of a web page -To consider the ownership and use of images (copyright) -To recognise the need to preview pages -To outline the need for a navigation path -To recognise the implications of linking to content owned by other people -To recognise that you can work in three dimensions on a computer -To identify that digital 3D objects can be modified -To recognise that objects can be combined in a 3D model	-To define a 'variable' as something that is changeable -To explain why a variable is used in a program -To choose how to improve a game by using variables -To design a project that builds on a given example -To use my design to create a project -To evaluate my project -To create a program to run on a controllable device -To explain that selection can control the flow of a program -To update a variable with a user input -To use a conditional statement to compare a variable to a value	-To create a data set in a spreadsheet -To build a data set in a spreadsheet -To explain that formulas can be used to produce calculated data -To apply formulas to data -To create a spreadsheet to plan an event -To choose suitable ways to present data

		-To create a 3D model for a given purpose -To plan my own 3D model -To create my own digital 3D model	-To design a project that uses inputs and outputs on a controllable device -To develop a program to use inputs and outputs on a controllable device	