Curriculum Intent

Subject: Computing

End points for Early Years	End points for KS1	End points for KS2
Expressive arts and design Creating with Materials Statements for EYF: ❖ Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. At Cranford Primary School, children use Purple Mash to explore and create 3D models. The children also use 2Paint projects or 2Paint on the whiteboard/screen as part of continuous provision. The children have opportunities to explore the other Painting tools in 2Paint a Picture. Simple Slice Spinner Wet Paint Swirly Use the above painting tools to and think about which tool you would use to create different pictures and patterns. Children access busy things, here they can retell stories using drag and drop, they can also listen to stories	By the end of KS1 children should be able to understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions. At Cranford Primary School we achieve this using NCCE. In the units Digital literacy and Computer science pupils use their programming skills to create simple animations, creating avatars, making pictures etc.	By the end of KS2 children should be able to Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. At Cranford Primary School we use NCCE, Teach Computing Year 3 children achieve this through units 3.3 and 3.6 Children are taught how to sequence a programme and how to edit and manipulate pictures through SCRATCH and JIT. Children will begin by moving a sprite in four directions (up, down, left and right). Year 4 children achieve this through units 4.3 and 4.6 Children will create programs by planning, modifying, and testing commands to create shapes and patterns. and they will explore the concept of repetition in programming using the Scratch environment. Year 5 children achieve this through units 5.3 and 5.6 children will use physical computing to explore the concept of selection in programming through the use of the Crumble programming environment. children will also explore the links between events and actions, whilst consolidating prior learning relating to sequencing. Year 6 children achieve this through units 6.1, 6.3 and 6.6 Children are introduced to the concept of variables in programming through games in Scratch. Children also develop a program to use inputs and outputs on a controllable device

Mathematics	By the end of KS1 pupils are expected to create and debug simple programs. At Cranford Primary School, In Year 2, Pupils achieve this in the following unit 'NNCE Unit 3 - Robot algorithms' where they use ICT tools to create or fix a simple program.	By the end of KS2 children should be able to Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.
Number Statements from EYF: ❖ Have a deep understanding of numbers to 10, including the composition of each number. ❖ Subitise (recognise quantities without counting) up to 5. ❖ Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. At Cranford Primary School the children use the Interactive White Board (IWB),Busy Things Top mark - IWB mini mash and purple mash and its various programmes to select, rotate and manipulate shapes to develop spatial reasoning skills, compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. And in addition, continue, copy and create repeating patterns.		At Cranford Primary School Children are taught to enter a specific search enquiry (input) and then getting a response from their search (output) Year 3 children achieve this through units 3.1, 3.3 and 3.6. children will be Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks. Year 4 children achieve this through units 4.3, 4.4 and 4.6. Recognising how and why data is collected over time, before using data loggers to carry out an investigation. Year 5 children achieve this through units 5.3 and 5.6 Exploring selection in programming to design and code an interactive quiz. Year 6 children achieve this through units 6.3 and 6.6 Exploring variables when designing and coding a game.
Understanding the world Past and Present Statements: ❖ Comment on images of familiar situations in the past. ❖ Compare and contrast characters from stories, including figures from the past. At Cranford Primary School, pupils use Mini Mash to explore what they know about people and the roles they play in society. Children should be able to answer the following questions ● How do these people help us? What do they provide for us?	By the end of KS1 pupils are expected to use logical reasoning to predict the behaviour of simple programs. At Cranford Primary School, In Year 1, Pupils achieve this in the following unit 'NNCE Unit 1.3 - moving a Robot' here they use ICT tools to Writing short algorithms and programs for floor robots, and predicting program outcomes.	By the end of KS2 children should be able to Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. At Cranford Primary School children in KS2 are expected to follow simple instructions from programmes such as SCRATCH and JIT to correct and detect errors of code in programmes and algorithms. Year 3 children achieve this through units 3.3 and 3.6 Year 4 children achieve this through units 4.3 and 4.6 Year 5 children achieve this through units 5.3 and 5.6 Year 6 children achieve this through units 6.3 and 6.6

• Do they need any special tools to do their job? • Do you think they did their jobs differently in the past?		
Communication and Language Statements: ❖ Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions. ❖ Make comments about what they have heard and ask questions to clarify their understanding. ❖ Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. At Cranford Primary School, pupils use programmes such as Simple City on Mini Mash & Purple Mash in relation to the different topics being taught. For example, for people who help us, the children can copy what is happening in the slideshow showing the roles of people with different occupations. The children then attempt to create their own vet's role play area or garden centre.	By the end of KS1 pupils should be able to use technology purposefully to create, organise, store, manipulate and retrieve digital content. This is achieved in Cranford Primary School as in Year 1 Data and Information as they organise groups and compare other groups.	By the end of KS2 children should be able to 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. At Cranford Primary School children in KS2 are expected to learn and understand how the internet works and what information is effective for their learning. Year 3 children achieve this through units 3.1 Year 4 children achieve this through units 4.1 Year 5 children achieve this through units 5.1 Year 6 children achieve this through units 6.1
Personal, Social and Emotional Development Managing Self Statements from EYF: ❖ Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. ❖ Explain the reasons for rules, know right from wrong and try to behave accordingly. At Cranford Primary School, children are expected to find their way around the Mini Mash home screens. The children talk about what happens when they explore and which part of the screen they like clicking	By the end of KS1 pupils should be able to recognise common uses of information technology beyond school. At Cranford Primary School we achieve this as in Year 1, Spring 2 under Introduction to Animation as they are giving instructions to make an algorithm in a programme. Both in Year 1 and Year 2 pupils are taught the importance of online safety.	By the end of KS2 children should be able to Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. At Cranford Primary School pupils are expected to learn about the internet and online safety through many technologies effectively. Children are then expected to select and rank these. Year 3 children achieve this through units 3.5 and 3.6 Year 4 children achieve this through units 4.1, 4.2 and 4.5

on the best and why? The children use the painting tools in the drawing and painting area, where they then explore painting with the tools, creating a picture and printing out the finished picture.		Year 5 children achieve this through units 5.2 and 5.4 Year 6 children achieve this through units 6.2
Literacy Word Reading Statements EYF: ❖ Say a sound for each letter in the alphabet and at least 10 digraphs. ❖ Read words consistent with their phonic knowledge by sound-blending. ❖ Read aloud simple sentences and books that are consistent with their phonic knowledge, including some common exception words. At Cranford Primary School, The children use Busy things, Purple Mash and Mini Mash. Children can use the Mashcam to create a character. Children read simple sentences from the characters. There are Quizzes based around each letter of the alphabet where children have to choose the word with the correct initial sound. Cloze activities and flash cards to help teach and practise phase 2 & 3 phonics.	By the end of KS1 pupils should be able to 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. Year 1, Autumn 1 the children learn how to safely use technology in Technology around us. They create rules for using technology responsibly. In Year 2, Autumn 1 in the topic IT around us they look at how to use technology and information safely.	By the end of KS2 children should be able to 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. At Cranford Primary School pupils are expected to achieve this through all units taught. pupils are expected to learn about databases through different programmes such as scratch, crumble, microsoft photos, purplemash and TTS data logger. Throughout their learning the children will be able to create a database and understand/learn about how a database works.
Physical Development Fine Motor Skills Statements from EYF: ❖ Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases. ❖ Use a range of small tools, including scissors, paint brushes and cutlery. ❖ Begin to show accuracy and care when drawing. At Cranford Primary School children use 2Handwrite to demonstrate, record and play back letter formation, handwriting joins and spelling patterns. Children do this using the Interactive Whiteboard or touchscreen.Children can practise fine motor skills and		By the end of KS2 children should be able to Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. At Cranford Primary School pupils are taught and expected to know/understand what information is reliable and which information is safe to search and which resources are reliable to use and gather information from. The pupils are taught this through Online Safety. Year 3 children achieve this through units 3.2 and 3.4 Year 4 children achieve this through units 4.1, 4.2 and 4.5

movements through playing games which include dragging and dropping.		Year 5 children achieve this through units 5.1 and 5.2 Year 6 children achieve this through units 6.2, 6.3 and 6.5