High Ercall Primary School Progression in Computing		
Date: Feb 2022	**Subject Lead: Rachael Preston**	**Review: Summer 2023**

Curriculum Intent:

Through teaching computing at High Ercall Primary School, we equip our children with the **substantive** and **disciplinary** knowledge needed to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. Children will increase their **substantive knowledge** in computing by developing an understanding of how to safely use technology, how to be computational thinkers and how to program. This will support the development of **disciplinary knowledge** by allowing children to interpret and apply their substantive knowledge in the creation of original digital content.

Computing is embedded across our curriculum due to its deep links with mathematics, PSHE, science, and design and technology. Computing at High Ercall encourages **resilience**, one of the key drivers that underpins the ethos of our school. Through a cross curricular approach and diverse range of contexts, children become confident, independent and positive participants in the digital world. Children will understand and know how to use computers in an effective, informed and safe way. The children are encouraged to develop the **5Rs** when studying computing and are supported to become **responsible** and **respectful** citizens who **reflect** upon their behaviour in a digital world. They will also develop an understanding and appreciation of how to use technology as a resource to support their wider learning.

Curriculum Expectations:

We follow the National Curriculum expectations for computing and expect that our pupils will have met or exceeded the expected standards for Year 6 pupils. The computing curriculum is made up of three main strands, which are linked together and are of equal importance:

- Computer Science, the core of computing, 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.
- Information Technology is the application of skills. Pupils are equipped to use information technology to create programs, systems and a range of content.
- Digital Literacy ensures that pupils can use, and express themselves and develop their ideas through, information and communication technology, ready for the future workplace.

By the end of Year 6, children will have developed skills in all three strands of the curriculum, as well as having a secure understanding of E-Safety and how to protect themselves online.

Links with reading and writing	Inspiration for creative writing Read and evaluate websites for reliability Correct punctuation when typing Using spell check to correct spellings Practise grammar skills when typing, using grammar check to ensure accuracy Use synonyms feature to extend vocabulary Voice recorders to help with recall of ideas Able to self-edit quickly and easily Rearrange, improve and up-level sentences easily Use dictionary and thesaurus tools to clarify meaning/improve words Add and adapt presentation features, particularly in NF (i.e.. Bullet points, underlined subheadings etc)	**Links to school key drivers**	**Resilience:** Use of debugging to identify mistakes and fix them, encourages a desire to solve problems, teaches independence. **Outdoor Learning:** Take photographs/videos of school grounds/wildlife etc and upload for use in software presentations or to print. Problem solving using programmable/remote-controlled toys. E.g. move through obstacle course or route planning to avoid a puddle. Google maps/earth to plan routes, find landmarks etc. **Diversity:** visual/audio aids to support learning, research different cultures and religions.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5 and 6
Computer Science	**Personal, Social and Emotional Development/Managing Self** - 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. **Physical Development** - Develop their small motor skills so that they can use a range of tools competently, safely and confidently. **Expressive Arts and Design / Creating with materials** - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	-Understands what algorithms are -Creates simple programs - To be able to understand simple coding.	-Understands that algorithms are implemented as programs on digital devices -Understands that programs execute by following precise and unambiguous instructions -Debugs simple programs -Uses logical reasoning to predict the behaviour of simple programs	-Writes programs that accomplish specific goals -Uses sequence in programs -Works with various forms of input -Works with various forms of output	-Designs programs that accomplish specific goals -Designs and creates programs -Debugs programs that accomplish specific goals -Uses repetition in programs -Controls or simulates physical systems -Uses logical reasoning to detect and correct errors in programs -Understands how computer networks can provide multiple services, such as the World Wide Web	-Solves problems by decomposing them into smaller parts -Uses selection in programs -Works with variables -Uses logical reasoning to explain how some simple algorithms work -Uses logical reasoning to detect and correct errors in algorithms
Information Technology		-Uses technology purposefully to create, store and retrieve digital content - To understand how technology works in the real world.	-Uses technology purposefully to organise digital content -Understand the difference between a digital and non-digital device	-Uses search technologies effectively -Uses a variety of software to accomplish given goals -Compares digital and non-digital devices -Collects information -Designs and creates content -Presents information	-Selects a variety of software to accomplish given goals -Selects, uses and combines internet services -Analyses and evaluates information -Collects and presents data	-Understands computer networks, including the internet -Appreciates how search results are ranked -Combines a variety of software to accomplish given goals -Selects, uses and combines software on a range of digital devices -Analyses and evaluates data -Designs and creates systems
Digital Literacy		-Uses technology safely -Keeps personal information private -Recognises common uses of information technology beyond school	-Uses technology respectfully -Identifies where to go for help and support when they have concerns about content or contact on the internet or other online technologies	-Uses technology responsibly -Keeps personal information private -Identifies a range of ways to report concerns about contact/content	- Describes some of the risks of sharing too much information online. -Understands the opportunities computer networks offer for communication -Identifies a range of ways to report concerns about content -Recognises acceptable/unacceptable behaviour	- Describe some of the risks of sharing too much information online. -Understands the opportunities computer networks offer for collaboration -Is discerning in evaluating digital content