LONG TERM PLANNING   Key Stage 1 Computing/IT

The Purpose of Study

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design technology and provides insights into both natural and artificial systems. At the core of computing is computing science, in which pupils are taught the principals of information and computation, how design systems work, and how to put this knowledge to use through programming. Building on all of this, children are equipped to use IT to create programs, systems and a range of content. Computing also ensures that children become digitally literate – able to use and express themselves and develop their ideas through ICT – at a level suitable for the future workplace and as active participants in a digital world.

Aims of study

That all children:
- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Can analyse problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems.
- Can evaluate and apply IT, including new or unfamiliar technologies, analytically to solve problems.
- Are responsible, competent, confident and creative users of ICT.

At Nicholas Hawksmoor children are taught in half-classes every other week while the other half go to Art lessons. Thus, in a six week term, the children will cover 3 lessons, each of which is an extended half-morning or full afternoon session.

Pupils should be taught to:

- Understand what algorithms are, how they are implemented as part of programming on digital devices, and that programs execute by following precise and unambiguous instructions.

- Create and debug simple programs.

- Use logical reasoning to predict the behaviour of simple programs including applications of the same in the physical world eg. Beebots

- Use technology purposefully to create, organise, store, manipulate and retrieve content.

- Use technology, safely and respectfully, keeping personal information private and know where to go for help and support when they have any concerns about material on the internet or internet-based devices.

- Recognise common uses of information technology beyond school

Based on the Rising Stars for Computing Scheme the following coverage occurs across the year:

	Autumn	Spring	Summer
Year 1	We are treasure hunters-mapping and Beebots	We are painters – illustrate an eBook We are collectors – finding images We are story tellers – produce a talking book	We are presenters / We are TV chefs – Filming recipe instructions
Year 2	We are researchers – create mind maps adding media We are film makers – create Morfo animation of character from history	We are games testers – explore how games work We are programmers – programming on screen	We are photographers – taking and editing digital pictures

Children at Y1 complete 3 half terms doing IT projects while the other 3 are alternated with DT projects.
Children at Y2 complete 3 half terms doing IT projects while the other 3 are alternated with DT projects.

NICHOLAS HAWKSMOOR PRIMARY SCHOOL

Coverage   Key Stage 1 Computing/IT

Year 1	Year 2
Illustrate and create a talking eBook using Book Creator app on iPad. Children will make a simple eBook from a traditional tale they know well.	Research – Working with history project on Florence Nightingale children will learn how to use browser on iPad to make reliable/verifiable searches on the internet. 'Tree Octopus' activity reveals how easily duped we are.
Programming – Using Beebots children will program movements and sequences of movements that accomplish specific goals and desired outcomes over a given course.	Use Popplet to gather and create a mind map of relevant information about a subject. Use Morfo to create a movie of Florence Nightingale or one of the soldiers recounting their experiences.
Filming – Children will film the steps required to follow a recipe understanding that the steps have a logical order (algorithmic and computational thinking).	Games Testers / Coders – How do games work? By following set rules. What does the game do as you progress? Introduce variations on the previous level. Create a simple game on Scratch / Scratch junior. Use codemonkey to programme the movements of an onscreen character to accomplish set goals.
	Photography – Children will learn about the main functions and buttons of a camera on an ipad as well as how to select a good picture. Using apps like BeFunky they will also learn how to edit photos with effects.