



**Progression of Skills in Computing**

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|  | **Digital Literacy** | **eSafety and Use of the Internet** | **Computer Science** |
| Nursery | Pupils will follow age-appropriate links provided by the teacher to research information.Pupils will be able to identify different types of technology.  | Pupils can name their work so they know it belongs to them touching on copyright issuesPupils will know to tell an adult if something makes them feel sad or scared online | Pupils can follow simple instructions like a computer. Pupils will be able to correct a mistake if something goes wrong. |
| Reception | Pupils will follow age-appropriate links provided by the teacher to research information.Pupils will understand the appropriate and/or relevant vocabulary according to the equipment available (eg screen, headphones, keyboard, mouse, iPad). | Pupils will identify what is personal information and always tell a grown up if you see something that makes you feel sad. Pupils will understand simple aspects of copyright that the work they create belongs to them  | Pupils will be able to understand, write and follow simple directional instructions. . Pupils will be able to spot and correct a mistake if something goes wrong. |
| Year 1 | Pupils will follow age-appropriate links provided by the teacher to research information.Pupils will understand the appropriate and/or relevant vocabulary according to the equipment available (eg screen, headphones, keyboard, mouse, iPad). | Pupils will begin to understand the concepts: People you don’t know are strangersSome information is personalAlways tell a grown up if you see something that makes you feel uncomfortable. | Pupils will be able to understand, write and follow simple directional instructions. Pupils will be able to debug simple directional programs.  |
| Year 2 | Pupils will develop awareness of keyboard layout and use of a mouse.Pupils will use navigation skills to access appropriate parts of a web site.Pupils will begin to use an appropriate search engine supported by an adult.Pupils will begin to save and retrieve pictures and text. | Learning will reinforce awareness that:People you don’t know are strangers and not always who they say they areBe nice to people on the computer as you are on the playgroundSome information is personal and needs to be privateAlways tell a grown up if you see something that makes you feel uncomfortable. | Pupils will understand the purpose of a range of different technology, eg easi-speak microphones, talking tins, tablets, desk top computers, laptops, cameras.Pupils will be able to describe a series of instructions as a sequence. Pupils will be able to use logic to predict what a program will do Pupils will be able to debug an algorithm. |
| Year 3 | Pupils will know that ICT enables access to a wider range of information and tools to help find specific information quickly.Pupils will produce work using a computer, using more advanced features of programmes and tools.Pupils will work collaboratively to create documents, including presentations.Pupils will use desk top publishing tools effectively and understand the differences between a word processor and desk top publisher.Pupils will understand the basic structure of a database. Add data to a premade database.Pupils will use the data in a pre-made database to generate graphs and charts.Pupils will use technology to create graphs and charts. | Pupils will follow a simple search to find specific information from a web site.Pupils will find and use appropriate information.Pupils will navigate a web page to locate specific information.Pupils will understand a web site has a unique address.Pupils will understand that networks can allow multiple people to contribute to shared documents.  | Pupils will develop an understanding of how technology works and computers process instructions and commands.Pupils will create, edit and refine more complex sequences of instructions for a variety of programmable devises.Pupils will use a computer to create basic applications, investigating how different variables can be changed and the effect this has.Pupils will use a range of simulations to represent real life situations.Pupils will use simulations to make and test predictions. |
| Year 4 | Pupils will collaborate to create a website, giving thought to its audience and including links, images, embedded media and documents.Pupils will understand that evaluation and improvement is a vital part of a design process and ICT allows changes to be made quickly and efficiently.Pupils will continue to use technology, including spreadsheets to create graphs and present data in different ways.Pupils will design and create basic database, including using basic data validation.Pupils will use a database to answer questions by constructing queries.Pupils will look at how networked devices make up the internet and how websites are accessed and shared via the WWW | Pupils will understand how emails work and be able to send an email, including choosing a suitable subject and entering addresses in the ‘to’, ‘cc’ and ‘bcc’ fields.Pupils will understand and evaluate the dynamics of different search engines.Pupils will skim read and sift information to check its relevance and modify search strategies.Pupils will understand that the information they use needs to be appropriate for the audience they are writing for eg copying and pasting difficult language.Pupils will recognise that anyone can author on the internet and sometimes authors can produce content which is offensive, rude and upsetting and to follow school rules if anything is found. | Pupils will understand that ICT allows for situations to be modelled which it would be impractical to try out in real life and investigate the effect of changing variables in these simulations.Pupils will develop further their understanding of how technology works and how computers process instructions and commands. Pupils will be able to use repeat and loop commands (including counted and forever loops) and explain why they are used in algorithmsPupils will be able to decompose a task into smaller stepsPupils will use templates on a computer to create a game, which can be controlled by external inputs, changing parameters and algorithms and investigating the effect this has on the response. |
| Year 5 | Pupils will use technology to present their work, showing and increasing degree of skill and using advanced features of software and tools.Pupils will select tools which they can use to help them achieve a specific aim and justify these choices to others.Pupils will continue to use, search, enter data into and create their own databases continue to use technology, including speadsheets to crate graphs and present data in different ways.Pupils will be able to identify a network and recognise the role of a computer system in everyday life.  | Pupils will use a range of sources to check validity and recognise different viewpoints and the impact of incorrect data.Pupils will save and use pictures, text and sound and be able to import into a document for presentation (ref. multimedia presentation).Pupils will recognise that the internet may contain material that is irrelevant, bias, implausible and inappropriate.Pupils will understand issues of copyright and how they apply to their own work.Pupils will share and exchange their ideas using email and electronic communication-inside the school environment.Pupils will collaborate with other children online.  | Pupils will develop understanding of how technology works; how computers process instructions and commands, including the use of coding languages.Pupils will explore ways in which software can be planned.Pupils will use assisted programming software to create basic software which interacts with external controllers and elements on screen, creating algorithms and using logic calculations.Pupils will be able to use conditional statements within their algorithms and explain their use. Pupils will investigate the effect of changing variables in simulations.Pupils will know that simulations are often guided by hidden rules.Pupils will use software to model 3D objects. |
| Year 6 | Pupils will use technology to present their work, showing an increasing degree of skill and using advanced features of software and tools (eg using non-linear presentation tools such as Prezi)Pupils will be able to use and identify how search engines are used and the ranking of the results. Pupils will be able to identify questions and answer using data.Pupils will choose suitable ways to present their data.  | Pupils will create an app for a specific purpose and improve. Pupils will understand issues about self image and identity online.Pupils will understand about their reputation online and know how to report any online bullying and trolling.Pupils will understand the effect that being online can have on their health and wellbeing. Pupils will understand issues of copyright and how they apply to their own work. | Pupils will develop their understanding of how technology works and how computers process instructions and commands, including using coding languages.Pupils will create and manipulate 3D objects and construct a 3D digital model to then develop and improve. Pupils will be looking at variables and how they are used and how they effect their programming. Pupils will be looking at how to create a program to use on a controllable device.  |