Early Years Foundation Stage

Understanding the World

Understanding the World is a specific area and consists of:

People and Communities
The World
Technology

The ways in which the child engages with other people and their environment – playing and exploring, active learning, and creating and thinking critically – underpin learning and development across all areas and support the child to remain an effective and motivated learner.

The prime areas begin to develop quickly in response to relationships and experiences, and run through and support learning in all other areas. The prime areas continue to be fundamental throughout the EYFS.

The Unique Child reaches out to relate to people and things through the Characteristics of Effective Learning, which move through all areas of learning.

- playing and exploring

- active learning

- creating and thinking critically

Curriculum 2014 - *Computing*

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 and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, 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. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims

The national curriculum for computing aims to ensure that all pupils:

- 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 information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

Subject Content

Key Stage 1
Pupils should be taught to:

- understand what algorithms are, how they are implemented as programs 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
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- 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

Key Stage 2
Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Computing steps

Development matters in the Early Years Foundation Stage (EYFS)	
Specific area: *Understanding the World*	
	Aspect: Technology
Birth – 11 months 8-20 months	• *The beginnings of understanding technology lie in babies exploring and making sense of objects and how they behave. See Characteristics of Effective Learning* - Playing and Exploring *and* Creating and Thinking Critically
16-26 months	• Anticipates repeated sounds, sights and actions, e.g. when an adult demonstrates an action toy several times. • Shows interest in toys with buttons, flaps and simple mechanisms and beginning to learn to operate them.
22-36 months	• Seeks to acquire basic skills in turning on and operating some ICT equipment. • Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car.
30-50 months	• Knows how to operate simple equipment, e.g. turns on CD player and uses remote control. • Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. • Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. • Knows that information can be retrieved from computers
40–60+ months	• Completes a simple program on a computer. • Uses ICT hardware to interact with age-appropriate computer software. **Early Learning Goal** **Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.**

Computing				
	Aspect Communicating in the Digital World	**Aspect** Exploring the Digital World	**Aspect** Shaping the Digital World	**Aspect** E-safety
Band 1 Beginning Beginning+ Within Within+ Secure Secure+	• Change text size, font colour and font style. • Use a digital camera to take a photograph. • Use a digital camera or video recorder to take a video • Create a picture in a paint package. • Use a sound recorder to record and playback a sound. • Create simple sounds using a computer.	• Make a pictogram. • Click buttons to move around a website. • Talk about the use of computers beyond school.	• Explore an online simulation or game. • Explain what an algorithm is. • Use algorithms to make a floor robot move.	• Talk about some of the schools e-safety rules • Talk about what to do if they see anything online that upsets or worries them. • Name personal information that should be kept private. • Talk about favourite websites
Band 2 Beginning Beginning+ Within Within+ Secure Secure+	• Add an image to your document. • Add a caption to a photograph or image. • Edit a photograph in a simple way. • Create a newspaper headline or a poster heading. • Save work in your own folder. • Open your work, change it and save it with another name. • Use sounds in presentation. • Create a simple animation.	• Make a simple graph. • Put a web address into the address bar on the internet. • Search for information on the internet.	• Make simple changes to an online simulation or game. • Explain how algorithms are used in programs. • Talk about ways 'control technology' is used in the real world. (EG – traffic lights, a robots arm etc)	• Confidently identify school e-safety rules. • Identify risks of using the internet. • Talk about what they like and dislike about various websites.
Band 3 Beginning Beginning+ Within Within+ Secure Secure+	• Insert and begin to edit a table when text processing or using multimedia • Begin to add text, images and sound to a presentation from a variety of sources. • Begin to create an animation to tell a story. • Begin to edit photographs	• Collect data to use in a graph and create a graph • Begin to create different types of graphs • Use key words to search the internet	• Begin to plan, write, evaluate, and edit a sequence of instructions to a move a programmable robot	• Talk about e-safety rules and strategies that can be used to help stay safe. • Know who to report to and talk to. • Talk about what to do if content is inappropriate or upsetting and inform others.

Brewster Avenue School