Lanivet School

Computing Curriculum Statement

September 2019

Introduction

The use of information and communication technology (ICT) is an integral part of the national curriculum and is a key skill for everyday life. At Lanivet Primary School, we strive to provide up to date computing devices and software to allow children to progress and learn the skills needed to use these devices effectively.
This statement aims to set out how the school will achieve these goals.

Aims:

- To provide a relevant, challenging and enjoyable curriculum for computing for all pupils.
- To meet the requirements of the national curriculum programmes of study for computing.
- To use computing as a tool to enhance learning throughout the curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use computing throughout their later life.
- To enhance learning in other areas of the curriculum using computing.
- To develop the understanding of how to use computing safely and responsibly.

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

- Can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication.

- 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.

Early Years Objectives

By the end of Foundation Stage, pupils should be taught to:

- Pupils build confidence to use technology purposefully to support their learning for all Early Learning Goals as appropriate.
- Pupils in Foundation Stage class will have experiences using technology indoors, outdoors and through role play in both child-initiated and teacher-directed time.

Key Stage 1 Objectives

By the end of 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 a sequence of instructions.
- Write and test simple programs.
- Use logical reasoning to predict and computing the behaviour of simple programs.
- Organise, store, manipulate and retrieve data in a range of digital formats.
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

Key Stage 2 Objectives

Objectives By the end of key stage 2, pupils should be taught to:

- Design and write 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; generate appropriate inputs and predicted outputs to test programs.
- Use logical reasoning to explain how a simple algorithm works 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.
- Describe how Internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely.
- Select, use and combine a variety of software (including Internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Resources

The school strives to continually update the resources available for teaching to ensure that all strands of the IT curriculum are deliverable. The school uses a variety of resources to teach the IT curriculum across Key Stage 1 and 2.

The children will use:
- Coding programmes such as Scratch and Bee Bot.
- IPads, cameras and voice recorders.
- Laptops and printers.
- Music composition software.
- Photo-editing software.

Each coding program allows the teacher to support and challenge his/her pupils appropriately, while focusing on a variety of different strands of the IT

curriculum. All computing devices have internet access which is filtered by an internet filter.

Contribution of the IT curriculum to other subjects

English
Through the development of keyboard skills and the use of computers, children learn how to edit and revise text. They learn how to improve the presentation of their work by using desk-top publishing software.

Maths
Many ICT activities build upon the mathematical skills of the children. Children use computing in mathematics to collect data, make predictions, analyse results, and present information graphically. They also acquire measuring techniques involving positive and negative numbers, and including decimal places.

Monitoring and Reviewing

The monitoring of the standards of the children's work and of the quality of teaching in computing is the responsibility of the subject leader and class teacher. The subject leader is responsible for supporting colleagues in the teaching of computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school.

Security

All computing devices are equipped with up to date anti-virus software which is maintained and updated regularly. Online Safety is taught in all year groups.