

Introduction

Computational thinking lies at the heart of what New Wave Federation teaches our students, helping us to develop logical thinkers and problem solvers with an enriched and deeper knowledge of the digital world. It is our aim to teach children how to apply computational thinking beyond computing itself, enabling them to recognise aspects of computation in the world that surrounds us.

Our computing curriculum focuses on computer science in an engaging and cross-curricular way, providing an important set of tools to be applied across the primary curriculum. We place a strong emphasis on improving children's digital literacy skills through safe and respectable communication online and develop their information technology skills, supporting them to organise, store and manipulate digital content in a range of digital formats.

We believe that computing underpins today's modern lifestyle. We understand that it is essential that all learners gain the confidence and ability that they need in this subject in order to prepare them for the challenge of a rapidly developing, and changing technological world.

Aims and Objectives

Computing is presented as a creative and fascinating process in which learners are encouraged to use their own initiative, imagination, reasoning and investigative skills for enjoyment and problem solving.

Pupils appreciate the relevance of computing in our society and that they see it as an essential tool for learning, communication, finding information and for controlling and understanding their environment.

Differentiation is planned for in each area of the computing curriculum so that pupils achieve to the best of their ability.

Pupils are given opportunities to learn about computing both individually and collaboratively.

Pupils have a heightened interest and awareness of computing through the regular use of the classroom computing toolkit to enhance learning in the classrooms and around the school.

Professional development of staff ensures that computing is embedded purposefully, throughout the curriculum.

Health and Safety

It is the responsibility of staff to ensure that classroom computing equipment is stored securely - this includes ensuring that electrical cables are neat and tidy, cleaned regularly and that their class or themselves return any equipment after use.

An adult should always supervise children when they are accessing information via the Internet. The LGfL broadband service provider does filter information but staff are ultimately responsible for information accessed by pupils. All staff are expected to teach eSafety as a thread throughout all lessons where appropriate.

Assessment

Computing capability should be monitored regularly in relation to the National Curriculum objectives. New Wave Federation has created an assessment framework to be used in conjunction with classroom monitor. Teachers should assess module requirements with reference to children's knowledge, understanding and skills. Other opportunities for assessment will arise from cross-curricular work.

Samples of work should be kept for each child. These can be stored:

- within the class folder on the class drive
- Google Education drive storage
- and/or as a hard copy in books

Clear learning objectives and success criteria in relation to the curricular objectives are used by all teachers. Samples should be annotated or a written record kept, stored in the above ways and children are expected to reflect on their learning to show their reasoning and understanding. For Nursery and Reception it may not always be practical to keep samples of work, but observations and discussions are recorded using the learning diary.

High Aspirations ○ High Standards ○ High Achievement

Computing Policy



Present Resource Provision

It is our belief here at New Wave Federation that in order to best provide for our children we teach them across a wide range of computing hardware and software to better prepare them for their lives beyond primary education.

All three schools have a robust wireless system, secure servers and a designated drive for working across the federation

Our provision includes three 'Tech Hubs' that are spaces for children to create digital content and apply coding skills using robotics. Each hub has Apple Macs located at learning stations, Apple TV, a 'Green Screen' space and a range of robotic devices.

Mobile technology takes the form of Chromebooks, MacBooks and iPads with each class having a set iPads.

We provide Beebots, probots, Makey Makey, Code bug, Raspberry Pi, EasiSpeak Microphones, Easi Torches, Lego WeDo and Lego MindStorm. Software packages and licences include, Google Education, Minecraft education, Accelerated Reader, Mathletics, 2simple and the London Grid for Learning.

Inclusion and Differentiation

All children should have access to the use of computing regardless of gender, race, cultural background or physical or sensory disability. Where use of a school computer proves difficult for a child because of a disability, the school will endeavor to provide specialist equipment and software to enable access.

Children with learning difficulties can also be given greater access to the whole curriculum through the use of computing resources. Their motivation can be heightened and they are able to improve the accuracy and presentation of their work. This in turn can raise self-esteem.

The children are supported with a range of appropriate software and hardware to meet their needs as learners. Progression in skills is planned for through our overviews. Individual teacher planning is based on assessment of learning to match the learning opportunities offered with the children's age, abilities and skills.

Curriculum

A computing scheme of work is in place to accommodate the new computing curriculum. Our focus is that computing and computational thinking is delivered in a cross-curricular context.

A yearly overview has been made for KS1 and KS2 which gives an overview of all skills to be taught. Additional computer science specific schemes of work have been developed to support progression of skills across the year groups which are linked to IPC. An assessment framework has been developed and our curriculum is linked to these objectives

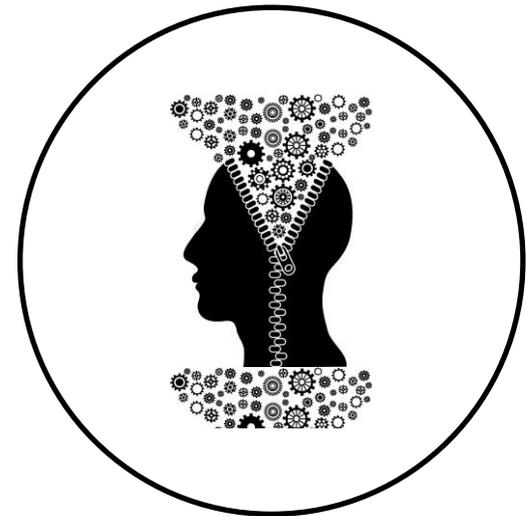
In Computing, as with all subjects, in order to develop the continuity and progression of teaching and learning, a balance between whole class, individual and group exploration, and direct teaching, pupil investigation and skills practice should be planned throughout the school.

Organisation

Computing is organised to be integrated in a cross curricular way, mostly through topics within the IPC curriculum. Computing coordinators ensure that those skills that need to be taught discretely are timetabled.

Due to the fact many computing skills are useful in all subjects many of these skills are applied throughout the whole curriculum. To ensure this is effective application staff are given a variety of training opportunities.

A designated Digital Learning Leader is supported by 3 computing coordinators, Apple Distinguished Educators, Google Certified Educators and the external technical team from Turn



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