



## Computing Policy

September 2021

This policy outlines the purpose and management of computing taught and learned at Verwood C of E First School and Nursery. The school policy reflects the consensus of opinion of the teaching staff. The implementation of this policy is the responsibility of all the teaching staff.

### **The importance of and entitlement to computing**

At Verwood C of E First School it is recognized that children can enhance and extend their learning through the use of Information and Communication Technologies. It is therefore our aim to motivate children and develop their confidence in using ICT.

In order to achieve this, a variety of programs are offered presenting a range of challenging activities through which children can increase their ICT capabilities in preparation for a later life.

### **Aims and Objectives**

- children are taught computing as specified in the National Curriculum Programmes of Study.
- children develop the knowledge and understanding of how to use computing in a safe and responsible way.
- the delivery of an enjoyable computing curriculum that motivates and challenges children.
- computing offers the potential for effective, reciprocal group work and builds resilience and creativity.
- computing supports children's creativity and cross curricular learning to engage children and enrich their experiences in school.
- use computing as a source of knowledge to give children immediate access to richer source materials.
- provide children with the confidence and knowledge to develop computing skills that benefit them now and in the future.
- embrace and respond to new developments in technology.

### **The 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.

## **Resources:**

The use of information and communication technology is an integral part of our curriculum. We have a variety of resources around the school including desktop computers, Chromebooks, iPads, interactive whiteboards, bee-bots and cameras that are used by pupils and staff to acquire, organise, store, communicate and present information. Exposing pupils to the uses of technology whilst teaching them to use it effectively in a structured and progressive way is our aim at Verwood First.

## **Inclusion, equality of opportunity and differentiation**

We believe that all children have the right to access ICT and Computing and we carefully consider children's various starting points. We understand the accessibility opportunities technology can provide for our SEND pupils and also acknowledge that it may be necessary to adapt the delivery of the Computing Curriculum for some SEND pupils.

Through the teaching of Computing we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Where appropriate Computing can be used to support SEND children on a one to one basis where children receive additional support.

## **Ensuring continuity and progression in learning**

All activities will relate to the National Curriculum and use of the Progression Map will ensure continuity and progression, we provide a knowledge and skills-based curriculum.

Discrete computing skills will be planned for a one-hour session every week for each class. In addition to this, teachers will develop the use of ICT and computing in their planning, ensuring opportunities are identified and developed.

## **Early Years Foundation Stage:**

It is important in the Early Years Foundation Stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. ICT is not just about computers. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or drive a remote-controlled toy. Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills.

## **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 the behaviour of simple programs in computing;
- 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.

**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.

**Approach to learning and teaching**

Computing is taught through a variety of approaches including whole class teaching, group activities and individual tasks.

**In computing, teachers:**

- share with pupils what they are expected to learn and how they are expected to learn it;
- encourage pupils to describe, explain, predict and evaluate computer processes;
- provide plenty of opportunities for pupils to work as individuals, in pairs and in groups;
- encourage discussion so that pupils clarify their thinking;
- follow the school's Computing progression of skills to ensure that learning is sufficiently challenging;
- provide pupils with regular feedback about their learning and about what they need to do next in order to improve;
- should determine the pupils' levels of knowledge and understanding, before, during and after units of learning;

· expect pupils to record their learning in a variety of ways, including diagrams, illustrations, pictures, letters, posters, annotated drawings and maps, reports, presentations and scratch files;

### **Summative Assessment**

Teachers regularly assess capability through observations and looking at completed work. Key objectives to be assessed are taken from the National Curriculum to Assess Key ICT and Computing Skills each term. Assessing Computing is an integral part of teaching and learning and central to good practice. It should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of the concepts of ICT and Computing. As assessment is part of the learning process it is essential that pupils are closely involved.

Formative assessments are carried out during and following short focused tasks and activities. Prior learning is reviewed and consolidated if necessary through low stake methods to determine recall and identify misconceptions such as quizzes and questioning. Computing also involves a high level of active learning during which teachers make informal judgements used to guide pupil progress.

Summative assessment should review pupils' capability and provide a best fit level. Use of independent open-ended tasks, provide opportunities for pupils to demonstrate capability in relation to the term's work. There should be an opportunity for pupil review and identification of next steps. Summative assessment should be recorded for all pupils – showing whether the pupils have met, exceeded or not achieved the learning objectives.

We will also make and report to parents a summative judgement about a pupil's knowledge and understanding of computing on four occasions during the primary phase:

Summer term of Year 1

Summer term of Year 2

Summer term of Year 3

Summer term of Year 4

In making these summative judgements teachers will be able to use their knowledge and understanding of each pupil gained through extensive formative assessment. At this point they need to take into account the relative strengths and weaknesses of each pupil and reach a 'best fit' summative judgement taking into account the whole of the attainment target rather than specific parts of it. Most critically this decision is based on the professional knowledge and judgement that the teacher possesses of the pupil, built up over an extended period of time, which is then used to make a holistic judgement of their attainment in computing. Computing work is saved on the school network where applicable. Other work may be printed and filed within the subject from which the task was set.

### **Parent and governor communication:**

The ICT Leader will share with the governors any new ICT developments that affect the progress of ICT within the school.

Parents are informed of the new ICT developments. The extended connection within school of the Internet and the use of the national grid for learning means that parents are able to communicate to school via email and visit school web pages.

### **In computing, teachers are responsible for:**

- the individual child and their Computing experiences.
- developing each pupil's Computing capability in accordance with the school policy.
- ensuring that each pupil has access to ICT and Computing resources.
- monitoring and evaluating each pupil's use of ICT and computing to ensure continuity and progression.
- keeping a record of children's ICT and Computing experiences.
- ensuring that an Assessment Tool is applied for each child.
- delivering half-termly e-safety inputs. (ICT subject leader to monitor and oversee)

### **Continuing Professional Development**

The Computing Lead keeps abreast of relevant new developments through managed self-learning. Using resources available throughout the Internet. The lead is responsible for being aware of developments disseminated by national organisations as well as available government recommendations and guidelines. The Computing Lead is also able to take part in relevant on-line discussions.

### **Staff:**

All staff, TAs and children have appropriate security access to the network.

### **Staff training:**

a) INHOUSE SUPPORT: ICT and Computing training has and will continue to be provided through whole school training staff sessions, staff meetings, group training sessions and individual informal tutorials. These take place via inset days, twilight sessions or before and after school.

b) INSET will also be supplied from other agencies (e.g. police coming in to train staff, parents and children).

### **Health and safety**

The school is aware of the health and safety issues involved in children's use of ICT and computing.

- all fixed electrical appliances in school and all portable electrical equipment is tested. It is advised that staff should not bring their own electrical equipment in to school but if this is necessary, then the equipment must be PAT tested before being used in school.
- damaged equipment should be reported to WAT IT.
- children should not put plugs into sockets.
- trailing leads should be made safe behind the equipment
- liquids must not be taken near the computers

- e-safety forms an integral part of the curriculum and the school will deliver further education through assemblies termly and parent presentations.

### **The Vision for Computing at Verwood C of E School:**

Computing and ICT is an essential part of everyday life and will continue to grow and evolve. Verwood C of E First School aims to provide a safe and secure environment where ICT and Computing is integrated into all aspects of school life in a way which actively supports and promotes motivated life-long learners, helping all learners to make links to the wider world whilst preparing everyone for the challenge of a rapidly developing and ever-changing technological environment.

### **Policy Review**

This policy will be reviewed in line with the school's policy review programme.