Central Primary School

Computing Policy

Our motto: Children are Central.

Through teaching Computing, we equip children to participate in a world of rapidly-changing technology. We enable them to find, explore, analyse, exchange and present information. We also help them develop the necessary skills for using information in an effective way. This is a major part of enabling children to be confident, creative and independent learners while remaining safe and understanding the risks of afore-mentioned technology.

Computing has become part of the way we all work and entertain ourselves in the 21st century. Almost everything both adults and children do at school now involves the use of IT equipment. Some of these include:

- online lesson research, teaching plans and resource materials;
- lesson delivery via interactive whiteboard;
- communication by e-mail, website, system upload and fax;
- document distribution and storage;
- assessment information analysis;
- use of technological devices i.e. visualizers;
- production and editing of reports.

Computing Curriculum
The subject team launched a new computing curriculum in September 2017.
The new curriculum has been created to seamlessly combine the national curriculum computing requirements and additional E-safety units so that children can build an in depth understanding of ICT alongside a secure knowledge of appropriate use of technology and how to manage risks.

The Computing curriculum at Central is now made up of four key areas of learning:

1. Digital literacy (Using technology to communicate)
2. Computer Science (The study of computers)
3. Information Technology (The study of systems-within computers)
4. E-safety (Keeping children safe)

In order to develop Computing at Central, the subject leader has created six units of work for each year group, one for each half term. All lessons have been planned and resourced by the Computing team. These units cover a mix of the four areas, with two units per year focussing on E-safety. It is not a national requirement to teach E-safety discreetly however through conversations with child protection officers within the school, we have decided this is a need for us specifically in order to keep our students safe. All Computing units have been planned in conjunction with the 'Herts for Learning' scheme. We subscribe annually to Herts for Learning in order to gain access to up to date developments in technology, support and resources.

While these units have been creatively written to suit Central's needs, we have ensured that they meet all of the recommended statutory guidelines.

Early Years
In foundation stage It is important to give children a play-based experience of ICT and computing in a range of contexts, including off-computer activities and outdoor play. Computing is not just about computers. Early years learning environments should feature ICT scenarios based on experience in the real world, such as in role play. Children can then gain confidence and acquire the language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and controlling programmable toys.
Outdoor exploration is an important aspect and using digital recording devices such as video recorders, cameras and microphones can support children in developing communication skills. This is particularly beneficial for children who have English as an additional language.

In Key Stage One:
Children will be enabled:

- to develop computing capability in finding, selecting and using information;
- to use computing for effective and appropriate communication;
- to monitor and control events, both real and imaginary;
- to apply their computing skills and knowledge to their learning in other areas;
- to explore their attitudes towards computing and its value to them and society in general.

In Key Stage Two:
Children:

- Can understand and apply the fundamentals of computer science, including algorithms, logic, data representation, and communication.
- Can understand and analyse problems in computational terms and be able to apply them. Children also have the opportunity to complete repeated practical experience of writing computer programs in order to solve these problems.
- Can evaluate and apply information technology, including familiar or unfamiliar technologies and then analytically solve problems.

Teaching and learning style
An objective of teaching computing is to equip children with the technological skill to become independent learners, the teaching style that we adopt is as active and practical as possible.

We teach pupils computing in a variety of ways. Each week pupils receive a computing lesson as a discrete subject which teaches them skills and programmes which they will use in the rest of their computing work. This will assist them in their everyday lives. In addition to discreet lessons pupils will be using a range of computing equipment throughout their other curriculum learning, for example, children might research a history topic and then present their findings via a software programme on a PC.

We recognise that all classes have children with a wide range of computing abilities. This is especially true when some children have access to computing equipment at home, while others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child. We achieve this in a variety of ways:

- setting tasks which are open-ended and can have a variety of responses;
- setting tasks of increasing difficulty (not all children complete all tasks);
- grouping children by ability in the room, and setting different tasks for each ability group;
- providing resources of different complexity that are matched to the ability of the child;
- using classroom assistants to support the work of individual children or groups of children.

At our school we teach computing to all children, whatever their ability and individual needs. Computing forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our computing teaching we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details, see separate policies: Inclusion; Gifted and Talented; English as an Additional Language (EAL).

Assessment

Teachers have been asked to choose five children from each class to assess each half term. This is on a swipe style document lifted and adapted from the Herts for Learning scheme. These five children will be assessed throughout the year in order to measure success. Alongside this, teachers will continually assess children's work in computing by making informal judgements during lessons, through learning in other curriculum areas and from other evidence sources. The teacher assesses the work, and uses this assessment to plan for future learning. Verbal feedback is given to the child to help guide his/her progress in line with the school's marking and feedback policy.

All class teachers keep samples of the children's work in a portfolio. This portfolio may contain photographs of children accessing computing equipment as well as screen print outs etc which indicate work being completed. This portfolio serves as an exemplar for the achievement in computing in each cohort.

Monitoring and review

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. The subject leader will constantly edit and update the Computing School Development plan by adding any monitoring notes from conversations and learning walks as well as formal observations each term. Time is allocated within the subject leader's timetable to enable all these actions. This policy is reviewed every two years.

Staff training

The computing subject leader will assess and address staff training needs as part of the annual development plan process or in response to individual needs and requests throughout the year. Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the subject leader.

Teachers will be encouraged to use Computing plans written by the subject leader and edit and improve those plans to suit the needs of the children in their classes.

Equality

In accordance with the Equality Act 2010 we seek to;

a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under the act
b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it
c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it

Appendix 1: Resources

Our school has PCs in each classroom with one running the whiteboard and at least two further ones to support pupil work during lessons. Each class shares a laptop bus which provides access to a further 15 laptops to allow for whole class teaching.

- There are 30 IPads which are shared between each year group
- There is an iPad Sync & Charge cabinet in school containing 16 USB ports.
- Every classroom from Nursery to Year 6 has a computer connected to the school network and an interactive whiteboard with sound and video facilities.
- Internet access is available in all classrooms.
- Each class from Year 1 – Year 6 has an allocated slot one afternoon per week for teaching computing as a discrete subject.
- The laptops and iPads are available for use throughout the school day as part of computing lessons and for cross-curricular use.
- Pupils may use ICT and computing independently, in pairs, alongside an LSA or in a group with the class teacher.
- The school has a computing technician who visits the school every other Wednesday afternoon.

Our school is currently trying to fix issues with the radio Wifi network that allows for the smooth running of computing lessons when a number of pupils are accessing the server at the same time. This seems to have become slower as the number of devices within the school grows. We are in constant contact with service desk to resolve these issues.

The school has numerous software programmes installed on the system and also buys into various internet-hosted programmes such as Twinkl and Mathletics.

Along with desktop and laptop computers, the school has the following:

Hardware

Examples of hardware used across the school include:

- network, including switch, router and server PC;
- network shared resources, including printers;
- interactive whiteboard and screen projection equipment;
- scanner;
- digital stills and video cameras and web cam;
- digital microscope;
- data logger and sensors;
- DVD and video recorders;
- tape-based listening centre and digital sound recorder;
- calculators;
- floor robot;
- control interface with buzzers etc.;
- headphones and microphones;
- USB drives for portable storage;
- keyboard (musical);
- visualisers;
- iPads
- Beebots
- Bluebots
- Microbits

Software

- word-processing and desktop-publishing programs;
- painting and drawing software;
- music composition package;
- multimedia presentation program;
- spreadsheet and database programs;
- control program and models;

- simulations;
- encyclopaedia reference material;
- virus protection.
- Clicker 6
- Literacy World
- Primary Maths games
- Early year programmes
- Tapestry

Online material

- online content subscriptions;
- school website and intranet;
- school e-mail accounts.
- Education City accounts.
- Mathletics accounts.
- Digimaps