Computing Curriculum

Computing vision statement

Through our computing curriculum at Sunnybrow Primary we aim to equip children with the skills and understanding to live in a technological world, this includes being able to use a variety of computer software and coding programmes. There is an emphasis on the importance of Online Safety for all year groups. We want our pupils to have a breadth of experience to develop their understanding of themselves as individuals and as responsible digital citizens.

We want children to become autonomous, independent users of computing technologies, gaining confidence and enjoyment from their activities. We want the use of technology to support learning across the entire curriculum and to ensure that our curriculum is accessible to every child.

Not only do we want children to be digitally literate and competent end-users of technology but through our computer science lessons we want them to develop creativity, resilience and problem-solving and critical thinking skills, this will help our children in the next stage of their life preparing them for the ever-changing digital world.

We believe that our computing curriculum makes children more resilient using their problem-solving skills, excellent communicators as individuals and team members as well as giving children self-motivation in completing tasks. These key skills will give the children knowledge that they can draw upon and help them to demonstrate cultural awareness to make them successful in society.

Intent

By the end of their time in each class, the key information and skills that we want children to have and apply is as follows:

Class 1:
Children will be able to recognise and name a range of technology that is used at home, school and their everyday life. They will be able to decide which technology is best suited to the purpose of their activity for example, how to record a piece of artwork or special event they want to remember. Children will also know the importance of e-safety and will know the main key points of how to act.

Class 2:
Pupils should understand what algorithms are and how they are implemented as programs. They will know that programs work by following precise instructions. They will be able to debug and create a simple program and use logical reasoning when using simple programs. They will understand the uses of the internet. Children will know how to use technology safely and respectfully, understanding that they need to keep certain information to themselves and will know where to go for help if any of this information has been given or if they have any concerns. They will be able to use technology purposefully, so they are able to store, organise and retrieve digital content.

Class 3:

Pupils will design, write and debug programs and will solve problems by decomposing them into smaller parts. They will use sequencing, selection and repetition in programs while using logical reasoning to explain how some algorithms work and will detect and correct errors in these algorithms or programs. They will also recognise the common uses of information technology beyond school such as blogging. They will understand the importance of using technology safely, respectfully and responsibly by recognising what behaviour is acceptable or unacceptable and identifying ways to report their concerns. Children will know the basics of online searching and will know how to conduct searches that provide them with the most relevant information. Pupils should be able to select, use and combine a variety of software to design and create a range of programs, systems and content using skills to collect, analyse, evaluate and present information.

Class 4:

Pupils should be able to design, write and debug programs that accomplish specific goals such as controlling or stimulating physical systems. They will use sequencing, selection and repetition working with various input and output forms. They will be able to use logical reasoning to explain how some algorithms work and will be able to detect and correct errors in algorithms and programs. They will have a secure and good knowledge of how to stay safe online. They will be able to show that they can use technology safely as well as show they can be respectful and responsible digital citizens where they will show a deep understanding of acceptable and unacceptable behaviours when online and will be able to identify a range of ways to report concerns about the content and contact people show or give online. Pupils will select use and combine a variety of software including internet services on a range of devices to design and create a range of programs, systems and content that accomplish given goals which may include analysing, evaluating and presenting information or data.

Implementation

At Sunnybrow Primary the computing curriculum is taught for two hours every other week, this is to allow children to really get into the topic that is getting taught, giving it flow and accuracy when teaching. We use the Purple Mash scheme of work and progression of skills document to teach computing. This gives teachers the support and guidance they need to cover the computing curriculum as this was an issue as staff didn't feel confident in their teaching. Along with the scheme of work Purple Mash are providing CPD to make sure teachers feel confident in delivering lessons. I have made sure that the scheme of work we are using links to the 2014 National Curriculum.

At present, each classroom contains at least one teacher's PC that is linked to the interactive whiteboard. There are also either IPads' or laptops in each classroom which are designated to all pupils. Every computer in the school is linked to the school's filtered broadband connection, which means each child will be able to access the Internet and use the World Wide Web in a safe and respectful way.

At Sunnybrow Primary we have a team of eCadets which are a group of KS2 children from the various year groups who teach the rest of the children throughout the school how to stay safe online, this has included lessons about social media, gaming, blogging and online safety. This has worked well as children can really focus on the parts of computing they will use most outside of the classroom giving them a positive attitude and skills to understand how to cope and what to do if they come across anything negative. At Sunnybrow we also have an off timetable day to focus on Internet Safety Day each year. This is where children will look at how to stay safe online and what to do if they feel uncomfortable or find anything that they feel is inappropriate, we also try

and include the parents in this and send out leaflets that the children have made to make them aware.

Impact

Throughout lessons children will develop their skills and knowledge of the three main areas of the computing curriculum. Children will have their own log in details so teachers can easily access their work. If children are working in small groups or pairs they will all save the piece of work. We measure the impact of our curriculum through the following methods:
· Learning walks
· Lesson observations
· Scrutiny of work
· Pupils discussion and questionnaire
· Staff questionnaire
· Teacher assessment

Teachers assess children's knowledge, understanding and skills in computing by making observations throughout lessons, through conversations with children in lessons and looking at the work saved in their folder. This helps teachers make a judgement and will input the data to our tracking system. This will then be looked at by subject leaders to see if there are any gaps to plug.