Caversham Park Primary School

Together we enjoy, create and achieve

Computing Curriculum Rationale

Intent

At Caversham Park Primary School we are **responsible digital citizens**. The use of technology affects almost every aspect of 21st century life including work and education, transport, safety, and access to food and healthcare. The aim of the computing curriculum at Caversham Park is prepare our children to ensure that they have the skills to responsibly participate in this rapidly changing world and to widen their job opportunities for the future.

Many children enter our school showing competence at using household technology, such as mobile devices, however, they may not know how to use these appropriately and safely. Therefore, teaching children how to use technology responsibly is of high importance to us at Caversham Park and this is demonstrated through the integration of 'Internet Safety' into both the Computing and PSHE curriculums.

Computing also offers a good opportunity for our children to develop resilience and perseverance when facing problems and challenges. We believe ensuring opportunities to develop Computational Thinking (problem solving, analysing and evaluating) enable children to develop this resilience and is essential to teaching computing. For example, at an early age, the children learn that when programming they need to "de-bug" their algorithm to fix any problems that occur.

Computing at Caversham Park Primary School embodies the school's motto of 'Enjoy, Create and Achieve'. The children learn to enjoy using technology and its many benefits to create their own content and then apply this to achieve outcomes across the wider curriculum. The children also have the opportunity to apply the school's core learning behaviours in order to achieve the desired outcomes, for example, they need to show resilience when carrying out programming and control activities so that they can overcome errors and make amendments to their programmes.

"A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world." (National Curriculum, 2013)

Implementation

Online safety is at the heart of the computing curriculum at Caversham Park. Each unit begins with a dedicated online safety lesson using the Digital Citizenship Curriculum from Common Sense Media primarily and enhanced with other resources. These lessons are a priority and have therefore been placed as the first lesson in each unit to ensure that they are not left off at the end of the unit. In addition to dedicated digital citizenship lessons online safety is interwoven throughout the computing curriculum. An example of this is in Year 1 when the children learning about taking photographs and they learn that they must ask for permission first. Then, in the Year 4 photo editing unit they learn about the ethics around editing and retouching photographs. Each year we also participate in Safer Internet Day.

The Caversham Park computing curriculum has been developed using the DFE funded Teach Computing from the National Centre for Computing Excellence (https://teachcomputing.org/) whose vision is for every child in every school in England to have a world-leading computing education. This curriculum has been design around 12 pedagogy principles which can be found here.

A curriculum map (here) shows how the sequence of the units are taught and progress with common themes being revisited each year. Unit overviews then show the sequence of lessons with in a unit and short-term plans and resources are available to teach from.

Each individual lesson begins with retrieval practice that reviews what the children have learnt previously. At the end of every computing session the children review what they have learnt within that lesson and also looks forward to what they will learn next in order to develop links between lessons. Across the curriculum there are a mixture of plugged and unplugged lessons. Many new concepts are taught unplugged (without technology) to ensure that the children have a concrete understanding before working digitally.

Impact

Both formative and summative assessment is used to monitor the impact of the curriculum. Teachers will use their observation of children within lessons to formatively assess how the children are progressing so that scaffolding can be put in place to enable them to achieve the intended outcome.

Summative assessment of the computing curriculum is carried out through 'end point' tasks. These tasks are typically either:

- a practical demonstration of procedural knowledge
- an end of unit retrieval quiz.

Where a practical demonstration is used to assess children's knowledge at the end of a unit of work, an assessment rubric is available to support teacher knowledge of the expected outcomes. The rubrics indicate the criteria for 'emerging'; 'expected'; and 'exceeding' outcomes.

By the end of Year 6 at Caversham Park Primary School, Children should feel confident in using a range of technology for a variety of purposes. They should be able to recognise how to keep themselves safe online, and they should understand the importance of being a good digital citizen.