



Computing Teaching and Learning Policy

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Introduction

As a school we ensure that all children and staff are treated fairly and equally. All children have equal rights to access all areas of the curriculum, regardless of race, gender and disability. Within this subject area, the SLT and all staff endeavour to provide the appropriate provision for this to occur. This policy follows the guidelines and practices that are stated and outlined in Howard Park Equality Scheme.

Intent

In line with the 2014 National Curriculum for Computing, our aim is to provide all pupils at Howard Park with rich and deep learning experiences that balance all the aspects of computing. It is a subject that not only stands alone but is woven into all areas of the curriculum and can therefore provide a wealth of learning opportunities and transferrable skills explicitly within the computing lesson and across other curriculum subjects. Technology plays a big part in today's society and although many of the children at Howard Park are exposed to technology outside of school, we believe 'Computational thinking' is a skill children must be taught if they are to be able to participate effectively and safely in this digital world beyond our gates. By the time they leave Howard Park, children will have gained key knowledge and skills in the three main areas of the computing curriculum*: **computer science** (programming and understanding how digital systems work), **information technology** (using computer systems to store, retrieve and send information) and **digital literacy** (evaluating digital content and using technology safely and respectfully). The objectives within each strand support the development of learning across the key stages, ensuring a solid grounding for future learning and beyond.

Implementation

Every class (KS1 and KS2) has a timetabled computing lesson and within that lesson, they have access to Chromebooks. We encourage staff to incorporate technology throughout the wider curriculum and the Chromebooks can be booked when needed. Each class has access to SMART boards and teaching is delivered using this technology. The children are introduced to a wide range of equipment and resources throughout their time at Howard Park as they follow the Kapow scheme of work. The implementation of the curriculum ensures a balanced coverage of computer science, information technology and digital literacy. Kapow supports teachers with implementing the curriculum in a coherent and confident way. The children will have experiences of all three strands in each year group, but the subject knowledge imparted becomes increasingly specific and in depth, with more complex skills being taught, thus ensuring that learning is built upon.

In Early Years:

- Computer Science will be demonstrated through:
 - Taking photographs using iPads

- Continuous provision - tinkering with old technology such as iPods, cameras etc., using keyboards, a mouse and monitors in roleplay
- The use of verbal, pictorial and written instructions in class as well as using 'hands-on' technology like Bee Bots.
- Information Technology will be demonstrated through:
 - Using simple online paint tools
 - Watching the teacher use the SMART board and being part of discussions around online searches.
 - Sorting objects and categorising data (unplugged activities)
 - Creating pictograms
 - Exploring databases through physical games
- Digital Literacy will be demonstrated through:
 - Recognising that a range of technology is used in homes and school
 - Learning to log in and log out
 - Learning what to do if they come across something on the internet that worries them.

In KS1:

- Computer Science will be demonstrated through developing the skills they learnt in Early Years as well:
 - Learning where keys are located on keyboards
 - Understanding that computers and devices use inputs and outputs and that buttons cause an effect
 - Understanding computers are made of different components
 - Understanding the term algorithm and being able to create, follow and de-bug one
- Information Technology will be demonstrated through developing the skills they learnt in Early Years as well::
 - Use word processing skills (on Google Docs) including; copy, paste, keyboard shortcuts, altering text
 - Edit photographs
 - Search and download images from the internet safely
 - Collecting data and input it into a spreadsheet (Google sheets)
 - Interpret and represent data in tables ad charts

- Knowing how computers are used in the wider world
- Digital Literacy will be demonstrated through developing the skills they learnt in Early Years as well:
 - Knowing how to stay safe when talking to people online
 - Saving work into their Google Drive
 - Knowing the importance of passwords

In KS2:

- Computer Science will be demonstrated through developing the skills they learnt in Early Years and KS1 as well as:
 - Learning about ROM and RAM
 - Learning the history of computers and how they have evolved
 - Understanding barcodes and QR codes
 - Knowing when corruption can happen
 - Learning what a network is and its purpose
 - Learning how computers transfer information in code (binary)
 - Writing scripts of code and using decomposition to solve problems in it
 - Writing complex algorithms for a purpose and being able to debug them
- Information Technology will be demonstrated through developing the skills they learnt in Early Years and KS1 as well as:
 - Building web pages
 - Creating presentations (Google Slides)
 - Using animation, 3D design and music software
 - Using further word processing skills (on Google Docs) including;
 - Creating and editing videos
 - Using email accounts (writing, sending, replying to emails)
 - Understanding how search engines work and using them effectively
 - Gathering sensor data
 - Creating formulas within a spreadsheet
- Digital Literacy will be demonstrated through developing the skills they learnt in Early Years and KS1 as well as:

- Identifying possible dangers online and how to stay safe
- Recognising that information on the internet may not be true and how to check this and use trustworthy sources
- Learning about cyberbullying
- Knowing that software can be used to prevent data corruption and hacking

Assessment

Our Computing curriculum is high quality, well thought out and is planned to demonstrate progression. If children are keeping up with the curriculum, they are deemed to be making good or better progress. The children at Howard Park will be digitally literate and able to join the rest of the world on its digital platform. They will be equipped, not only with the skills and knowledge to use technology effectively and for their own benefit, but more importantly – safely. As children become more confident in their abilities in computing, they will become more independent and key life skills such as problem-solving, logical thinking and self-evaluation become second nature. Staff frequently monitor the attainment of children. Leaders gather knowledge of how the curriculum is being taught through lesson observations and pupil interviews where children can articulate and demonstrate the skills they have been taught. Evidence can also be monitored on the pupils' Google Drives.