

Highfield Middle School

Computing

Intent, Implementation and Impact

2022

Intent

In Key Stage 2 Computing, pupils will:

- Design, write and debug programs that accomplish specific goals using a visual programming language.
- Solve problems by decomposing them into smaller parts
- Use logical reasoning to explain how simple algorithms work and detect and correct errors in algorithms and programs
- Understand computer networks, including the internet
- Use technology safely, respectfully and responsibly
- Recognise acceptable and unacceptable behaviour online
- Identify a range of ways to report concerns about content and contact

In Key Stage 3 Computing, pupils will build on Key Stage 2 knowledge as well as:

- Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems
- Use Python (a text based programming language) to solve computational problems
- Understand simple Boolean logic
- Understand hardware and software and how they communicate
- Understand how numbers can be represented in binary

Implementation

At Highfield Middle School, computing is taught by a specialist teacher with an undergraduate degree in computing. Pupils at Highfield Middle School receive one lesson per week of computing education and the schemes of work are planned and updated making sure it is current and relevant with where technology is at that point. In Key Stage 2 visual programming is used to introduce pupils to programming, making it fun and interesting. In Key Stage 3 this knowledge is built on and developed using the text based programming language Python.

Computing is a paperless department. All work in class is set and completed on google classroom. This can be accessed at home if needed so pupils who are unable to be physically in the lesson still have access to the work. The tasks set allow all pupils to access the topic to some degree. Pupils with more knowledge on a topic can push themselves and try the more challenging tasks. Pupils that may have missed prior learning have the ability to learn the topic almost from the beginning if they need to.

One of the main focuses for our department is to introduce pupils to as many topics as possible to give them as wide a view of what computing is as possible. Ensuring pupils know that computing isn't just about sitting in front of a computer using office software is

very important to us. These skills are important and do have a place in our curriculum however in order to meet the demands that pupils' future careers could take them we feel it is our responsibility to begin preparing them for wherever their lives take them.

Assessment in computing is happening all the time; pupils are self-assessing, peer assessing and looking for ways to further improve their knowledge. Formal assessments vary depending on the topic. At the end of each half term pupils show their knowledge of that and all previous topics. This is done either by an end of topic quiz where pupils are given a variety of open and closed questions to help stretch them to achieve their potential, or by allowing pupils free time on the software they have been using to create whatever they want in order to demonstrate the skills they have learnt and developed.

Impact

- Termly data drops with an overall grade using BTED. After each data drop, the curriculum leader will analyse data and will identify any differences between key groups of pupils and work out a plan to diminish these.
- As topics throughout the year don't always follow on in the next topic. Pupils are assessed half termly to be able to keep on top of any pupils that may be struggling. Topics are also varied to allow for all pupils to have a chance to shine. Pupils that may be amazing at one topic may struggle with another so being assessed after each topic allows for them to see where their strengths and weaknesses lie.
- Pupil voices at the end of topics help us to modify the subject keeping pupils' opinions on lessons in mind.