



Stocksbridge Junior School Computing

“Computers are incredibly fast, accurate, and stupid. Human beings are incredibly slow, inaccurate, and brilliant. Together they are powerful beyond imagination.”

Albert Einstein

SJS Computing

1

Computer systems and networks - Identifying hardware and using software, while exploring how computers communicate and connect to one another.

2

Programming - Understanding that a computer operates on algorithms, and learning how to write, adapt and debug code to instruct a computer to perform set tasks.

3

Creating Media - Learning how to use various devices — record, capture and edit content such as videos, music, pictures and photographs.

4

Data Handling - Ensuring that information is collected, recorded, stored, presented and analysed in a manner that is useful and can help to solve problems.

5

Online Safety - Understanding the benefits and risks of being online — how to remain safe, keep personal information secure and recognising when to seek help in difficult situations.

End Points in Learning in the Computing Curriculum

Year 3 End Points

Computing systems and networks

- Pupils can explain what a network is and how devices communicate and share information.
- Pupils can send emails with attachments and explain what cyberbullying is.
- Pupils can describe the role of computer parts and how a computer works.

Programming

- Pupils can use logical thinking to explore the programme Scratch, following the 'predict, test, review' cycle.
- Pupils can use 'loops' and are able to programming a simple animation, story and game.

Creating Media

- Pupils can use digital video skills to create trailers, with special effects and transitions.

Data Handling

- Pupils can identify records, fields and data and can sort and filter data.

Online Safety

- Pupils can explain the difference between fact, opinion and belief
- Pupils know how to deal with upsetting online content.
- Pupils can explain how to protect personal information online.

Year 4 End Points

Computing systems and networks

- Pupils know how to work collaboratively and exploring a range of collaborative tools.
- Pupils understand how web pages and sites are created and how to embed media and links.
- Pupils know about the markup language behind a webpage; are familiar with HTML tags, changing HTML and CSS code to alter images and are able to 'remix' a live website.

Programming

- Pupils can confidently use the key features of Scratch and are beginning to use 'variables' in code scripts.

Creating Media

- Pupils can solve problems effectively using the four areas of abstraction, algorithm design, decomposition and pattern recognition.

Data Handling

- Pupils can research and store data on spreadsheets and and design a weather station to collect data.

Online Safety

- Pupils can search for information and make a judgement about the probable accuracy; recognise adverts and pop-ups; and understand that technology can be distracting.

Year 5 End Points

Computing systems and networks

- Pupils know about how page rank works and how to identify inaccurate information.

Programming

- Pupils use programming and music skills to create different sounds, beats and melodies.
- Pupils can create algorithms and programs that are used in the real world. Using the 'predict, test and evaluate' cycle to create and debug programs with specific aims.

Year 6 End Points

Computing systems and networks

- Pupils know the history of Bletchley and learn about code breaking and password hacking. Pupils can demonstrate digital literacy skills by creating presentations.

Programming

- Pupils use the programming language 'Python' to create designs and art.
- Pupils can create loops and nested loops to make their code more efficient.

Creating Media

- Pupils can write, record and edit radio plays set during WWII.

Creating Media

- Pupils can create animations, storyboard ideas and decompose a story into small parts.

Data Handling

- Pupils explore how and why the Mars Rover transfers data including instructions, and how messages can be sent using binary code.

Online Safety

- Pupils know about app permissions; the positive and negative aspects of online communication; that online information is not always factual; how to deal with online bullying and managing our health and wellbeing.

- Pupils can explain how computers have evolved.

Data Handling

- Pupils can identify how barcodes and QR codes work and can explain how infrared waves are used for the transmission of data.
- Pupils can explain how networks and the Internet are able to share information.
- Pupils can explain how data can be used to design smart buildings.

Online Safety

- Pupils can explain how to deal with issues online; about the impact and consequences of sharing information online; how to develop a positive online reputation; how to combat and deal with online bullying and how to protect passwords.

At Stocksbridge Junior School, every child is a computer scientist!