

Computing intent and implementation

At Huby we equip our students to:

- Be able to confidently and responsibly use the skills they have learnt to help navigate the world around them
- Use computing as a means to gain a greater understanding of other subjects
- Understand and build upon the fundamental concepts of computer science
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- Use skills learnt to analyse and solve problems in inventive and creative ways
- Are responsible, competent and creative users of information communication technology
- Understand how to safely use and navigate the internet

Key concepts

We teach computing through 3 key concepts that can be found below:

Computer Science

- Hardware
- Networks and data representation
- Computational thinking
- Programming

Information Technology

- Using software
- Using email and the internet
- Using data
- Wider use of technology

Digital Literacy



Provision map

The computing curriculum is based on the skill progression for the national curriculum, it is taught through a two-year rolling plan, allowing the children to build on the skills they have learnt in previous years. The curriculum is based on the 'Kapow' scheme of work, however takes aspects from other schemes, such as 'Crumble' to ensure the students are accessing a broad and varied curriculum.

Class	Progression of skills	Area of study
Class 1 (Reception)	<ul style="list-style-type: none"> • Tinkering and exploring with different computer hardware and learning to operate a camera • Children learn about directions, experiment with programming a Bee-bot/Blue-bot and tinker with hardware • The children learn to receive and give instructions and understand the importance of precise instructions • Children sort and categorise data and are introduced to branching databases and pictograms • Learning about the main parts of a computer and how to use the keyboard and mouse. Logging in and out. 	Computing through continuous provision Using a computer Exploring hardware All about instructions Introduction to data Programming Bee-bots
Class 2 (Year 1&2)	<ul style="list-style-type: none"> • Login, navigation and mouse skills • Developing early programming skills using either the Bee:Bot or virtual Bee:Bot. • Algorithms in real life • Photo capture and editing • Gathering and recording animal data • Keyboard skills, sequencing and debugging in a rocket project • Inputs/outputs and uses • Touch typing and staying safe online • Programming apps • Data collection, display and interpretation • Storyboarding and simple animation creation using either tablet devices or devices with cameras • Learning about staying safe online • Programming: Plugged-In and Unplugged 	Getting started Y1 Online safety Y2 Programming Bee-bots Y1 What is a computer Y2 Algorithms unplugged Y1 International space station Y2 Digital imagery Y1 Algorithms and debugging Y2 Introduction to data Y1 Programming Y2 Rocket to the moon Y1 Touch typing and staying safe online Y2
Class 3 (Year 3&4)	<ul style="list-style-type: none"> • Networks and how devices communicate • Emailing With attachments and cyberbullying 	Emailing Y3 Online safety Y4

	<ul style="list-style-type: none"> • Programming apps • Inputs/outputs and purpose • Developing filming and editing video skills through the storyboarding and creation of book trailers. • Understanding and using databases • Learning about online safety: 'fake news', privacy settings, ways to deal with upsetting online content, protecting our personal information on social media. Learning how to navigate the internet in an informed, safe and respectful way • Website creation and Google Sites. • Researching and storing data and green screen video • Using variables in coding 	<p>Networks and the internet Y3 Website design Y4 Programming Y3 Make a coloured spinner</p> <p>Journey inside a computer Y3 Make a nightlight Top trumps database Y3 Further coding Y4 Digital literacy Y3 Investigating weather Y4</p>
Class 4 (Year 5&6)	<ul style="list-style-type: none"> • The meaning and purpose of programming • Potential online dangers and safety (through PSHE) • Storyboarding ideas, taking photographs and editing to create a video animation • Research skills and finding accurate information • Data transfer and binary code and 3D design skills • Code breaking and password hacking and WWII and the first computers • Using the programming language of Python • Designing and promoting a new product 	<p>Mars Rover Y5 Search engines Y5 Stop motion Y5 Make a chair-o-plane Programming Y5</p> <p>Bletchley Park Y6 Tessellation Skills showcase Y6 Make traffic lights Intro to Python Y6</p>

A more comprehensive skills progression can be found here

Cross curricular links

Due to the connected nature of today's world, computing can be and is used to help facilitate learning in other subject areas. At Huby we use computing through a variety of different subjects to further progress the learning and development of our students.

- Teaching online safety through PSHE

- Using data analysis within maths and science
- Word processing and keyboard familiarity through English
- Music through programming
- Online navigation and familiarity through online games such as: Timestable Rockstars, Spelling shed, Teach your monster to read, Mathletics and Lexia

