

Beaucroft School Computing Overview

Rationale: At Beaucroft School, it is our vision for every student to engage, enjoy and achieve, developing self-esteem and resilience in preparation for adulthood. We want our Beaucroft community to **THRIVE** and be **T**houghtful and caring **H**appy and Safe **R**esilient **I**ndependent **V**alued **E**mpowered.

At Beaucroft, we want our pupils to be equipped to use computational thinking to engage and inspire them to use their creativity and work collaboratively through project-based tasks to understand the world. Through applying their knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content.

Topic Knowledge

Skills Progression

Curriculum Sequence

Early Years

Prerequisite skills for computing –
Following instructions,
Safely use equipment.
Show curiosity about the world around them.
Share own knowledge and ask question of
other to find out more.

Explore how things work
Develop their fine motor skills so that they can
use a range of equipment competently, safely
and confidently.
By the end of EYFS the children will have been
introduced to a variety of different electronics.
The children will have some directional
language and they will have some
understanding of a step by step sequence.

Understanding the world— variety of
electronic toys, role play with phones,
cameras. Literacy—beebots, children
can create their own stories about
where the beebot is going.
Communication Language — verbal
step by step guide on how to make a
sandwich. Mathematics— directional
language

Juniors

Computing has deep links with mathematics, science
and design and technology. 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. Computing also
ensures that pupils become digitally literate – able to
use, and express themselves and develop.

Pupils will have explored how beebots work and
they would have created their own algorithm using
left, right, forwards, backwards signs/signals. The
children would have further improved their skills on
how to use different apps on an Ipad and they
would have completed different projects. Through
these projects, the children will have deepened their
knowledge of computing by applying it to solve
problems and create content.

Computer Science -Computational
thinking (Problem solving), Coding &
Programming(Applying)
Information and Communication-
Word processing/typing, Data
Handling, Presentations, Animation,
Video creation, Photography and digital
art, Sound.
E-Safety- Self Image and Identify,
Online Relationships, Online
Reputation, Online Bullying, Managing
online information, Health and
Wellbeing, Privacy, Copyright.

Middle

To design, write and debug programs that
accomplish specific goals, including controlling or
simulating physical systems; solve problems by
decomposing them into smaller parts. To use
sequence, selection, and repetition in programs;
work with variables and various forms of input and
output. To use logical reasoning to explain how
some simple algorithms work and to detect and
correct errors in algorithms and programs. To
understand computer networks including the
internet.

Pupils will design, write and debug programs that
accomplish specific goals, including controlling or
simulating physical systems; solve problems by
decomposing them into smaller parts, use
sequence, selection, and repetition in programs;
work with variables and various forms of input and
output, use logical reasoning to explain how some
simple algorithms work and to detect and correct
errors in algorithms and programs, understand
computer networks including the internet

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creation, Photography and digital art,
Sound.
E-Safety- Self Image and Identify,
Online Relationships, Online
Reputation, Online Bullying, Managing
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Seniors

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, students 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.

Pupils will design, use and evaluate computational
abstractions that model real-world problems,
understand several key algorithms that reflect
computational thinking, use logical reasoning to
compare the utility of alternative algorithms for
the same problem,make appropriate use of data
structures e.g.lists, tables, understand how
instructions are stored and executed within a
computer system; understand how data of various
types (including text, sounds and pictures) can be
represented and manipulated digitally, undertake
creative projects that involve selecting, using, and
combining multiple applications, create, re-use,
revise and re-purpose digital artefacts for a given
audience, understand a range of ways to use
technology safely, respectfully, responsibly and
securely, including protecting their online identity
and privacy; recognise inappropriate content,

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