All Hallows RC High School

Specialising in Business, Enterprise & Sports

COMPUTING CURRICULUM OVERVIEW

MRS NODEN/ MR CRITCHLEY

September 2021

WE AIM FOR ALL HALLOWS RC
BUSINESS, ENTERPRISE AND SPORTS COLLEGE TO BE A
CATHOLIC SCHOOL
TO WHICH CHILDREN WISH TO COME
TO WHICH PARENTS WISH TO SEND THEIR CHILDREN
AND WHERE TEACHERS
WISH TO TEACH

OUR MISSION IS TO OFFER A
HIGH QUALITY
CATHOLIC EDUCATION
FOR ALL, IN AN ENVIRONMENT WHERE
GOSPEL VALUES ARE CENTRAL
TO TEACHING AND LEARNING
AND IN WHICH THE
UNIQUE VALUE
OF EACH PERSON IS
RECOGNISED AND RESPECTED

Curriculum Intent

At All Hallows IT Department, we aim to give our pupils a curriculum that is broad, balanced and relevant. We want to promote a love for learning and enquiry, as well as making IT engaging and relevant to the real world. We strive for our pupils to learn and master skills which will help them understand and IT of yesterday, today and the future.

- **We aim** to create engaging lessons that promote teaching for understanding of computational thinking rather than covering fragmented content.
- **We aim** to teach the pupils the KS3 National curriculum and use a logical order of objectives providing insights into both natural and artificial systems
- **We aim** to group topics so they are in a sequenced and logical order; a spiral idea where topics have a natural progression in order of increasing difficulty and understanding.
- **We aim** to have a bigger focus on digital literacy in each topic so pupils are able to use IT as active participants in a digital world both within IT and also other school subjects.
- **We aim** for pupils to be able to use, express themselves and develop ideas at a level suitable for the future workplace.

WHAT DO WE WANT PUPILS TO ACHIEVE FROM OUR KS3 CURRICULUM?

To ensure that all pupils:

- **Can understand** and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- **Can analyse** problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- **Can evaluate and apply** information technology, including new or unfamiliar technologies, analytically to solve problems
- **Are responsible, competent, confident and creative** users of information and communication technology

Taken from **National Curriculum:**
Key stage 3 Pupils should be taught to:

- design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems (1)
- understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem (2)
- use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions (3)
- understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal] (4)
- understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems (5)
- 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, in the form of binary digits (6)
- undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users (7)
- create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability (8)
- understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns (9)

KS3 Order of Teaching 2021/2022

Year	Term 1	Term 2	Term 3
Year 7	Intro to Google (8) Collaborating online respectfully (Esafety) (8,9)	Modelling data (1,7) Networks (5)	Scratch(I) (1,2,3) Scratch (II)(1,2,3)
Year 8	Computer Systems (5) Data representation (4,6)	Python (I) (1,2,3) Python (II) (1,2,3)	Developing for the Web (HTML) (3) Cyber Security (9)
Year 9	Intro to Creative I Media (7,8) Animations (7,8) *if Blender can be installed*		

Current Plan:

https://docs.google.com/document/d/1HtXKWfVtDTw6yjW0VkhyWDXgYqGhQQkmbKzu62b-C4w/edit

KS4 Order of Teaching 2021/2022

Year	Term 1		Term 2		Term 3	
9			Intro to Algorithms	Algorithms: Data Flowcharts Intro to Pseudocode	Intro/Recap Python	Python
10	Data representation	Data representation	Computer systems	Computer systems	Computer Networks	Computer Networks
11	Cyber Security	Cyber Security	Ethical, Legal, Technological	Recap/ Revision	Recap/ Revision	Recap/ Revision

KS4 Order of Teaching 2021/2022

Year	Term 1	Term 2	Term 3
9		RO85	RO85
10	RO82	RO82	RO82
11	RO81	RO81	RO81

NOTE

This current year can drop a Unit from this course, therefore there are only 3 units. Usually there would be 4 - so this may need amending for the Year after depending on if there are any further amendments

#TheAllHallowsWay

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