



Wimbledon College Curriculum Intent

Our curriculum, rooted in our vision statement and the key principles of Jesuit education, provides aspirational pathways for all pupils to enable them to strive for excellence in all that they do so that they can achieve their potential and progress on their career pathway.

All pupils engage with a broad, balanced and sequenced curriculum and are supported to develop their knowledge and understanding of concepts, skills and talents. They also have access to an extensive range of extra-curricular activities which provides both a balance to their academic studies and enriching cultural capital opportunities.

We are committed to care for the individual pupil and their development as a whole person and help them to grow the personal characteristics and virtues within the Jesuit Pupil Profile. Being 'men and women for others' means that each pupil has the desire and capacity to make a positive difference in the lives of those they meet now as pupils and in their future lives.

Intent

The Computing department at Wimbledon College aims to equip students with the skills to participate in a rapidly-changing world through challenging and engaging topics. Students develop an understanding and application in the fundamental principles of computer science, e-safety and digital literacy by having the opportunity to write programs, design webpages and produce professional digital products. Computing skills are a major factor in enabling children to be confident, creative and independent learners and it is our intention that children have every opportunity available to allow them to achieve this.

The national curriculum for Computing aims 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.

In Computer Science we are dedicated to ensuring our students leave with the skills to fully embrace a future of rapidly advancing computer technology, which is in line with the key principles of a Jesuit Education.

Implementation

Implementation

The Teach Computing curriculum is used, allowing for coherence and flexibility in delivery that is inclusive, ambitious and researched informed, whilst making use of effective computing pedagogy such as leading with concepts, challenging misconceptions and reading and exploring code using PRIMM. Units are organized with regard to interleaving concepts across the year.

The sequence of learning in KS3 looks at improving computational thinking, decomposition and abstraction by linking programming units with the Bebras challenge as well as linking units that look at data representation and computational workings such as data structures, binary logic gates and the transfer of data in networks at KS3. Each strand of the computing curriculum, e-safety, computing and digital literacy is recapped each year to build on the understanding learnt the year before. The curriculum is carefully sequenced between these three strands to help build knowledge and skills.



For KS4 Computing and KS5 IT the exam board recommended scheme of work is used to ensure that learners learn all of the needed skills and knowledge. For KS5 Computing, the recommended scheme of work from PG Online, created in partnership with the OCR exam board, is used. By using these resources, we ensure that the learners learn all of the needed skills and knowledge in the right order.

There is a common approach to teaching across the department using the pedagogy recommended by the NCCE. Limited vocabulary can be a barrier to learning. Pupils are given keywords before the start of each unit, which are signposted throughout and used for spelling tests. Lessons are made engaging by using real life examples as well as making concepts as practical as possible. Topics have stretch and challenge questions within lessons as well as outside, fostering a love of learning whilst ensuring lessons are based at the right level of stretch for each pupil. Topics are sequenced to help support all pupils through interleaving theories. At KS4 and KS5 flipped learning is used to foster independent learning, help pupils to be at the same starting point and to deal with misconceptions efficiently and effectively.

We ensure subject knowledge is retained in a range of ways. At KS3 pupils are taught how to make Cornell revision notes and these are revisited at the end of the year to check retention levels. Interleaving within topics is utilised to check memory retention with regard to classwork and homework activities as well as retrieval practice in the form of revision notes to help prepare the pupils for topic tests. Seneca is used to aid the development of memory location strategies. At KS4+KS5 continual assessment and use of smart revise help repetition of topics and shows what areas are being remembered well and where are the common misconceptions for each topic. Pupils are also taught about pre-learning using Craig and David resources so that lessons are a recap of theory and allows misconceptions to be resolved.

Impact

Impact is measured in a number of ways:

Assessment –At KS3 diluted exam questions from GCSE are used in the form of multiple-choice questions and long answer questions, these assessments take place every half term. These are then used to find misconceptions that can be resolved in response sessions, via either pupil's improving answers or answering questions to show and stretch new understanding. As concepts are a diluted version of GCSE topics, time is spent in department meetings before topics to cover common misconceptions for the topic and from the year before as well as keywords. CPD is also offered for non specialists via the NCCE and Future learn to help deliver consistency.

At KS4 assessments in the form of exam questions are used as well as multiple choice questions and Smart Revise. KS4 Pupils are assessed at the end of each module, and will have three cumulative tests as well as an end of year assessment in year 10. This allows us to highlight common misconceptions and topics which then lead to additional teaching or assessment around these areas. At year 11 they will complete two mock tests to help aid retention of concepts from year 10 as well as prepare them for their papers in the summer. Smart revise data will also show the department the top ten misconceptions as well as the strengths, to help aid how we teach our concepts.

At KS5 assessments in the form of exam questions are used as well as multiple choice questions and Smart Revise. Ks5 Pupils are assessed at the end of each module, and will have three cumulative tests as well as an end of year assessment in year 12. This allows us to highlight common misconceptions and topics which then led to additional teaching or assessment around these areas. At year 13 they will complete two mock tests to help aid retention of concepts from year 12 as well as prepare them for their papers in the summer. Smart revise data will also show the department the top ten misconceptions as well as strength to help aid how we teach our concepts.

All resulting data is analysed and used to deal with misconceptions. Misconceptions are dealt with using extra lessons or questions on these misconception topics

Evaluation- The computing curriculum is always changing so to keep up to date the curriculum is evaluated every year and changes made where appropriate. Teachers and leaders keep up to date with the computing curriculum from exam boards as well as the NCCE for example GCSE accelerators course, Computer systems: input, output and storage . CPD ensures that teachers' subject knowledge is strong and that they can evaluate the impact of their work effectively.

Impact 2021-2022

The data below shows the impact of our curriculum with performance above national data for both our A levels and GCSE.

GCSE				A Level						Btec Level 3 - Extended Diploma			
	9-7	9-5	9-4		A*- A	A*- B	A* - C	A - E		D*- D	D*- M	D*-P	
2019	29%	54%	72%	2019	0	17%	50%	100%	2019	62.5%	87.5%	100%	
2022	18%	62%	93%	2022	30%	60%	80%	100%	2022	62.5%	87.5%	100%	
National Data	34%	52%	75%	National Data	18%	34%	59%	92%	National Data				