

## 1) The Faculty Context and Line Management Structure:

FACULTY CONTEXT		
<i>Numbers in brackets indicate where corresponding whole school objectives are being achieved.</i>		
STAFF CODE	NAME	FACULTY RESPONSIBILITIES
SW	Satwinder Wilks	Head of Computer Studies
BF	Ben Ford	2nd i/c of Computer Studies & KS4 Computer Science
KMA	Kate Manning	i/c KS4 and KS5 Vocational Courses
JS	Joel Suthesh	Teacher of Computing
NAU	Nadira Uddin	Temporary Teacher of Computing & ICT (until 31/8/19)
<b>Facilities:</b>		
In ICT and Computing we have five specialist teaching rooms, all designed for whole class teaching and all with interactive whiteboards. The computers are installed with current software including Adobe Photoshop, Fireworks and Dreamweaver <b>(7, 16)</b>		

## 2) Curriculum Plans

ICT/COMPUTING		
<b>Years 7 and 8 (Key Stage 3)</b>	<p>Students cover a range of thematic, project-based learning to reinforce both ICT and Computer Science skills.</p> <p>In year 7 students are assessed at the end of each topic, every half term; they also sit an exam at the end of the year. Year 7 start with learning how to use the network and Fronter and about e-safety. They then go on to doing a variety of topics which include both Computer Science and ICT skills and content. In the final half term there is a focus on programming skills where students use Scratch to create a game.</p> <p>In year 8 students are assessed at the end of each topic every half term. They start with creating a website in the first half term. The second unit they complete develops skills in spreadsheets. There is a programming unit (HTML/Javascript/SmallBasic) which is taught just before they choose their options to help students understand the difference between Computer Science and ICT. The latter part of the year focuses on looking at Hardware and Software, Artificial Intelligence and developing Python programming skills. <b>(2, 6, 7)</b></p>	<b>2 x 50 minute lessons per week</b>
	<p>The content covered in Year 7 and Year 8 includes:</p> <ul style="list-style-type: none"> <li>• Website Design</li> <li>• Image Editing</li> <li>• Databases</li> <li>• App Development</li> <li>• Spreadsheet modelling <b>(3)</b></li> <li>• Game Design and development</li> <li>• Programming in HTML, JavaScript, Small basic &amp; Python</li> <li>• Binary conversion <b>(3)</b></li> <li>• Boolean Logic <b>(3)</b></li> <li>• Computer Components</li> <li>• Artificial Intelligence</li> <li>• E-Safety &amp; Cyber bullying <b>(4)</b></li> <li>• Computational Thinking <b>(3)</b></li> </ul>	

<p><b>Year 9 &amp; 10 (Key Stage 4)</b></p>	<p><b>ICT: Cambridge Nationals Certificate In Creative iMedia – (OCR)</b>  Cambridge Nationals are vocational qualifications that are equivalent to GCSEs. We are intending to enter all students into the level 2 qualification (GCSE 9-4), however, there is an opportunity for and entry into a level 1 qualification (GCSE 3-1). Students will learn the practical IT skills required for web development, gaming and animation and will provide the groundwork for practical coursework and controlled assessments that take place during KS4. Additionally, students will be introduced to the theory topics which is tested in the mandatory written paper.</p> <p>The skills students will be developing include: -</p> <ul style="list-style-type: none"> <li>• Website design</li> <li>• Graphics</li> <li>• Digital animation</li> <li>• Games Development</li> <li>• Understanding, planning, producing and reviewing pre-production documents</li> </ul> <p><b>(1, 2, 3, 4, 6, 7)</b></p> <p>The units students will be studying include in year 10 will be:</p> <ul style="list-style-type: none"> <li>• Pre-production skills (mandatory) – Written paper 1 hr 15 mins (60 marks)</li> <li>• Creating digital graphics (mandatory) – Centre assessed (60 marks)</li> <li>• Creating a multipage website (optional) – Centre assessed (60 marks)</li> <li>• Creating a digital animation (optional) – Centre assessed (60 marks)</li> </ul> <p><b>(1, 2, 3, 4, 6, 7)</b></p> <p>The qualification is graded Distinction*, Distinction, Merit, Pass at Level 2.</p> <p><b>GCSE Computer Science (9-1) OCR J276</b>  Students who have opted to study Computer Science will be developing their skills in programming to prepare them for the practical coursework and controlled assessments that take place during KS4. Additionally, students will be introduced to the theory which is tested via the examination. There are 3 components, 2 written papers and a programming project.</p> <p>The skills students will be developing in Computer Science include: -</p> <ul style="list-style-type: none"> <li>• Developing a database using access</li> <li>• HTML</li> <li>• Javascript</li> <li>• Python programming</li> <li>• Java programming</li> <li>• LMC assembly language programming</li> <li>• Computational thinking</li> <li>• Algorithms</li> </ul> <p><b>(1, 2, 3, 4, 6)</b></p> <p>In year 10 the units/topics which will be covered include</p> <ul style="list-style-type: none"> <li>• Computer Systems: <span style="float: right;">Written paper (40%)</span>  Systems Architecture  Memory</li> </ul>	
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<p><b>Year 11 (Key Stage 4)</b></p>	<p><b>ICT CiDA (Edexcel Level 2 Digital Applications)</b></p> <p>Students will be completing for Pearson Edexcel Level 2 Certificate in Digital Applications (CiDA). The qualification is graded at A*, A, B and C. This is equivalent to a grade 9-5 at GCSE.</p> <p>Students will be required to complete one mandatory unit and one optional unit.</p> <ul style="list-style-type: none"> <li>○ Mandatory Unit: Developing Web Products</li> <li>○ Optional Unit: Game Making</li> </ul> <p><i>This qualification has not been included in the DfE 2020 performance tables for technical and vocational qualifications.</i></p> <p><b>GCSE Computer Science (9-1) OCR J276</b></p> <p>Students will continue to have lessons in theory to prepare them for the written paper. The students will also complete their controlled assessment (programming project) this year.</p> <p>There are 2 written papers and a programming project.</p> <ul style="list-style-type: none"> <li>• Computer Systems : Written paper (50%) Systems Architecture Memory Storage Wired and wireless networks Network Topologies System Security Systems Software Ethical, legal, cultural and environmental concerns</li> <li>• Computational Thinking, Algorithms and Programming: Written paper (50%) Algorithms Programming Techniques Producing robust programs Computational logic Translators and facilities of languages Data representation</li> <li>• Programming Project Programming techniques Analysis</li> </ul>	<p><b>3 x 50 minute lessons per week</b></p>

	<p>Design Development Testing, evaluation and conclusion</p> <p>Ofqual has decided that this task will not count towards the grades for this qualification. They do however require us to ensure all students have the opportunity to spend 20 hours of timetabled time on the task.</p> <p><b>(1, 2, 3, 4, 6)</b></p>	
<p><b>Year 12 &amp; 13 (Key Stage 5)</b></p>	<p><b>Pearson BTEC Level 3 National Extended Certificate in IT</b></p> <p>This qualification is equivalent in size to one A Level.</p> <p>There are 4 units of which 2 are mandatory. Units include:-</p> <ul style="list-style-type: none"> <li>• Information Technology Systems (Mandatory, assessed externally)</li> <li>• Creating Systems to Manage Information (Mandatory, assessed externally)</li> <li>• Using Social Media in Business (Optional, internally assessed)</li> <li>• Website Development (Optional, internally assessed)</li> </ul> <p>All externally assessed units will be examined in year 13 in the Summer exam series.</p> <p><b>Computer Science OCR H446</b></p> <p>A level Computer Science will only be offered as an A level. Students will not be sitting the AS exam.</p> <p>The course comprises 3 units:</p> <ul style="list-style-type: none"> <li>• <i>Unit 1: Computer Systems</i>                      <i>Written paper (2 hrs 30 mins)</i>      40% Input, output, storage devices Software and software development Exchanging data Data types, data structures and algorithms Legal, moral, cultural and ethical issues</li> <li>• <i>Unit 2: Algorithms and Programming</i>      <i>Written paper (2 hrs 30 mins)</i>      40% Elements of computational thinking Problem solving and programming Algorithms to solve problems and standard algorithms</li> <li>• <i>Unit 3: Programming Project</i>                      <i>Non-Exam Assessment</i>                      20% Analysis of the problem Design of the solution Developing the solution Evaluation (This unit is completed in year 13) <b>(1, 2, 3, 4, 6, 11)</b></li> </ul>	<p><b>6 x 50 minute lessons per week</b></p>

## EXTRA-CURRICULAR PROVISION IN THE COMPUTER STUDIES DEPARTMENT

Within ICT & Computer Science students can attend a range of extracurricular clubs:

- Coding Club Year 7 and Year 8
- The ICT & Computing Surgery
- Coursework catch up

Students also have the opportunity to attend a range of extracurricular trips to a wide variety of places, such as:

- Bletchley Park
- The National museum of Computing

The Faculty will be running a trip to Florida Easter 2020. The trip includes visits to Orlando Science Centre and Kennedy Space Centre as well as students participating in Disney YES programme on the “Evolution of Technology”.

All Year 7 students will be involved in coding workshops run by Brunel University.

Selected Year 9 students will be given the opportunity to attend Computer Science masterclasses at Brunel University.

Throughout the year the department offers a variety of after school catch up sessions for students to attend in order to complete outstanding controlled assessment practical work or to improve their knowledge of theory topics. **(19)**