

Painsley Catholic College – Computing Department Curriculum statement

Intent – What we are trying to achieve?

- At KS3 Computing is split into 3 strands (Computing, Digital Literacy and IT). The overarching purpose of the curriculum is to allow students to investigate key computing concepts such as binary, components of a computer and programming, whilst Digital Literacy is the development of the students' IT proficiency when using a computer. Finally the IT strand focusses on how the students use IT. In this topic we look at working on the Internet safely and using reliable sources to gather information along with developing students' understanding of online safety issues.
- At KS4 most students carry out the Creative iMedia course. This course is to help students understand the need for careful planning and evaluation when carrying out a project as well as developing a range of IT skills including using office applications, developing working interactive products and graphical adverts. The computer science curriculum provides students with an in depth understanding of how computers and computer systems work. They also develop computational thinking skills learning how to break problems down and code solutions.
- At KS5 students can choose either an A Level Computer Science course or the BTEC IT. Both are worth the equivalent of 1 A Level. The Computer Science course builds on the work done at GCSE and looks in depth at how computers work and how the components integrate with each other. The BTEC IT course looks at how IT systems are used in the real world and develops skills in spreadsheets, databases along with how companies develop an online presence using social media.
- Computing is an essential part of the curriculum. The curriculum at all levels is designed to develop digital literacy skills (how to effectively use a computer) along with how to break problems down into smaller more manageable tasks to ensure their successful completion.
- All units will have some focus on Digital Literacy skills at KS3. The focus for each lesson is explained to students throughout the lesson, depending on the task set.
- The computing curriculum at KS3 is based around the national curriculum. We also ensure that computer science at KS4 is offered to all students as an option where we typically have a healthy uptake of 2 GCSE groups.
- The needs for students are carefully considered during the option blocks. For example, both at KS4 and KS5 students have options to take an IT based course designed to develop students' IT skills and a computer science course specifically covering elements like programming. Students are encouraged to take which options best suit their needs.

Implementation – How do we translate our vision into practice?

- Success criteria are used in all computing lessons. Each lesson and homework has at least a Grade 6 to a Grade 9 objective/task. These are used to structure the task to show a level of learning related to their academic target. For example, students start with the first target on the board and then as they complete each one they then add to their understanding/work by moving onto the next criteria. Success criteria for iMedia are slightly different due to the work being completed in lessons being assessed as official coursework. This means that the success criteria are directly linked to the mark scheme strand related to that lesson's purpose.
- The curriculum intention is met through offering both IT and computer science qualifications. This means that students have the opportunity to develop IT skills, and opt to take a more programming/computing based qualification at both KS3 and KS4.
- Subjects being taught at KS4 are computing as this has to be offered to students as part of the national curriculum. iMedia is an option that will help students to develop their IT skills that could be applied to any career/course that they may do later in life.
- There is a strong link with maths and computing, particularly the logic and calculations that need to be completed when writing a program. In addition students have to be aware of different number systems (denary, binary and hexadecimal). iMedia has a stronger link with English/literacy and media, particularly in the evaluation /report writing that they have to do within the coursework.

- In computing (both at GCSE and A Level) the theory is often taught primarily in Y9 and the first half of Y10. This allows us to revisit topics throughout the second half of the course and set exam questions for homework on any area of the syllabus. This means the constant recall of information in order to help students to remember the key concepts covered. For the iMedia course most of the theory for the exam is covered as homework. This is then used in a practical way in lessons to embed the understanding. Exam questions on the theory topics are also spread out through Year 10 and Year 11 to help recall the key concepts and develop exam technique.
- As there are no tiers for the final exams, results are primarily differentiated by outcome. However, it is an expectation of all teachers to ensure that they specifically differentiate for the needs of the students in their class.
- Within the department we have an IT specialist, 3 computer science specialists and a maths/economics specialist. The computer science teachers often take the computer science groups at GCSE and A Level, leaving the IT specialist to focus on KS3 and the Creative iMedia course. Training on BTEC this year has helped massively to boost student performance in the externally assessed units.

For teachers

- Success criteria ARE used in every lesson and in homework tasks. These are designed to develop the level of understanding needed for the course. These are based on curriculum content and mark schemes for exam and coursework.
- In iMedia lessons this forms the vast majority of lessons where the progress of students is monitored closely to ensure that work being produced is of a high standard and that all students are completing tasks successfully.
- Schemes of learning are linked to the requirements of each unit in the specification to ensure that all points are clearly covered. Evidence for teachers to access both the outline and medium term plans is included in the staff shared area.
- Once the scheme of learning has been identified, an outline plan is developed to see what is being delivered on a weekly basis. These then tie in with the individual lesson resources also found on the staff shared area.
- Success criteria are used in all lessons and these are carefully structured to allow students to show a deeper knowledge of a topic the further they progress through them.
- Schemes of learning, resources and long term plans are all planned in conjunction with each other to ensure that all parts of the curriculum are being covered effectively.
- Homework is used to test the knowledge from lessons covered previously. At GCSE they are based on exam style questions and encourage students to read around the subject where appropriate.

Impact – What is the impact of our curriculum on the students?

- Results for Computer Science and Creative iMedia historically have been high. Although this is the first year to have such a large cohort completing iMedia, the results lower down the school show an improving trend.
- Students taking A Level computer science typically go on to study at degree level or do a higher apprenticeship.
- Formative assessment is used in every lesson. Students are constantly questioned about the learning that is taking place with significant help and advice on how to push students onto the next level. Summative lesson is done fortnightly (assessed homework) and through the 5 assessment windows held throughout the year. Comments and follow-up tasks are completed in lessons to correct misconceptions and further students' learning.
- Our curriculum is having a positive impact on all students, including disadvantaged groups. We offer a mix of courses to allow students to choose an option that is appropriate to them. In addition we give up significant time both at lunchtime and after school for students to complete homework, and hold intervention sessions after assessment windows to help students who have not hit their target.

For teachers

- All years complete 5 assessments throughout the year which tests the subject knowledge covered not just recently but throughout the course so far. Typical topics that are covered frequently in exams are also repeated to ensure that students' knowledge of these is in depth.
- Teachers assess students' understanding by getting them to put into practice the ideas taught in lessons. This should also translate into the assessments completed throughout each of the assessment windows.
- As a department we constantly evaluate the curriculum we teach. We use the information about what went well each year to decide how the curriculum will be taught the following year. Each teacher will also ensure that the resources given to the department are adapted to match their teaching style and for the ability of the student.