



Alcester
Academy



ICT & Computing

iMedia

COMPUTER
SCIENCE



At the start of year 9 pupils can choose to take IT as an option. We offer two pathways: Cambridge National in Creative iMedia, and GCSE Computer Science.

Key Stage 4 (Years 9-11)

ICT & Computing

Unit R082 - Creating Digital Graphics Outline

The digital media sector relies heavily on the use of digital graphics. The digital media sector relies heavily on the use of digital graphics. The digital media sector relies heavily on the use of digital graphics.

Learning Outcome	Details
LO1: Understand the purpose & properties of digital graphics	Understand why and how digital graphics are used, different types and different file formats.
LO2: Be able to plan the creation of a digital graphic	Understand how to interpret client requirements, how to plan digital graphics, how to use photo editing software, how to use photo editing software, how to use photo editing software.
LO3: Be able to create a digital graphic	Understand how to create a digital graphic, how to use photo editing software, how to use photo editing software.
LO4: Be able to review digital graphics against a specific brief	Understand how to review digital graphics against a specific brief, how to use photo editing software, how to use photo editing software.

Teaching Resources Links

Unit R081 - Pre Production Skills Outline

The unit will enable you to understand and plan pre-production skills used in the creative and digital media sector. It will develop your understanding of the client brief, time frames, deadlines, and preparation techniques that form part of the planning and creation process.

Planning is an essential part of working in the creative and digital media sector. This unit will enable you to acquire the underpinning knowledge and skills needed to create digital media products and gain an understanding of their application.

On completion of this unit, learners will understand the purpose and use of a range of pre-production techniques. You will be able to plan the pre-production of a creative digital media product to a client brief, and will understand how to review pre-production documents.

Learners studying the optional unit will be able to apply knowledge and understanding gained in this unit to help develop their skills further during the completion of these units.

This unit is the only externally assessed unit in OCR iMedia, and it is assessed through a 1 1/2 hour written examination. The unit constitutes 25% of your overall final grade.

Teaching Resources Links

Unit R082 - Learning Outcome 1: Understand the purpose & properties of digital graphics

During the learning outcome 1 you will start to learn why & how digital graphics are used, and what different file types & formats are suitable for specific use. You will also start to learn how different purposes & audiences influence the design & layout of digital graphics.

Teaching Resources Links

Lesson	Other
Lesson 1 Powerpoint - Purpose & properties of digital graphics	Use Google Classroom to complete research & analysis task.
Lesson 2 Powerpoint - Types of digital graphics	Use Google Classroom to complete research & analysis task.
Lesson 3 Powerpoint - File Formats	Use Google Classroom to complete research & analysis task.
Lesson 4 Powerpoint - File Properties & suitability for use	Use Google Classroom to complete research & analysis task.
Lesson 5 Powerpoint - Composition, white space & colour	Use Google Classroom to complete research & analysis task.

LO1 Marking Criteria

Practice Assignment

Cambridge National Creative iMedia

The current iMedia course consists of four units: Pre-Production, Digital Graphics, Website Design, and Game Design. Each unit is worth 25% of the final grade. There is one external written exam, and three controlled coursework units. This course is more suited to pupils who prefer to use ICT in a creative manner, combining it with graphical/website/game design.

Key Stage 4 (Years 9-11)

The top banner features the Alcester Academy logo on the left, which includes a shield with a bird and the text 'Alcester Academy'. To the right of the logo is a collage of four images: a school sign, a classroom, a group of students, and a school building. Below these images, the text 'THE BEST THAT WE CAN BE' is partially visible.

ICT & Computing

OCR iMedia - Key Points


- The current iMedia course is a 'Cambridge National' - a 'Technical Award' - an alternative to the traditional GCSE (similar in some ways to BTEC, but different requirements).
- The current specification for this course is due to finish in 2023, which means if you are considering this as an option now you will be starting the new version of this course.
- The government & exam boards haven't yet released the final details of these courses, however it is likely the exam content will increase to at least 40% and be assessed at the end of the course in year 11.
- It is likely there will still be a large coursework element to the new course, possibly two units of work, contributing 30% each towards your final grade.
- Although not a traditional academic GCSE, there is still a large amount of written evidence to complete in each coursework unit.



Alcester
Academy



ICT & Computing



INTRODUCTION TO PYTHON

BASICS

Python is a high level programming language that is very powerful

OUTPUT TEXT
`print("Hello")`
Your program can output simple text strings by putting them in between Quotes

OUTPUT NUMBERS
`print(1234)`
Numbers can be typed in without anything to enclose them

VARIABLES

Naming variables then setting them to a value using = means we can use the name later to call the value that we set

STORE & USE TEXT
You can change the value of a variable but not the type of data

ITERATION

Iteration is where you tell the program to loop around some code whilst a condition is True

WHILE LOOP

```
count = 0
while(count<5):
    print(count)
    count=count+1
```

The while loop keeps executing its code until the condition becomes true. In this case it will keep running the two lines of code as long as count is less than 5, the moment it hits 5 the execution here is complete

FOR LOOP

```
count=0
for count in range(1,10):
    print(count)
```

This loop makes it easier to iterate over a range of values without having to write code to change that value ourselves, making the likelihood of an infinite loop much smaller

NESTING

You can place any construct inside another, this is called nesting

GCSE COMPUTING COURSE SUMMARY

Who should take GCSE Computing?
This course is suitable for young people who want to explore and investigate how computers work, and how they are used. You are most likely to enjoy the subject if you have a real interest in how computers work, you are a logical thinker and enjoy problem solving.

This course will be best suited for students working at level 7.0 and above in Mathematics at Key Stage 3.

A451 Computer Systems and Programming (10%)
The computer systems and programming unit will test a wide range of issues such as hardware and software in computer systems, databases, computer communication and programming and more.

A452 Practical Investigation (controlled as 10%)
The practical investigation is all about engaging with a computing topic in more depth. You'll look at a computing topic in more depth and investigate it into a computing issue.

A453 Programming Project (controlled assessment, 30%)
The programming project will...

G

CSE COMPUTING

The course gives students a real, in-depth understanding of how computer technology works. Students will no longer be familiar with the use of computers and other related technology from their other subjects and elsewhere. However, this course will give them an insight into what goes on behind the scenes, including computer programming, which many students find absorbing.

The course provides excellent preparation for higher study and employment in the field of computer science. The increasing importance of information technologies means there will be a growing demand for professionals who are qualified in this area. Students who have taken a GCSE in Computing and who then progress to study the subject at A Level or university will have an advantage over their colleagues who are picking up the subject at these levels.

The course will develop critical thinking, analysis and problem-solving skills through the study, analysis and programming, giving students the skills to...

GCSE (9-1) Computer Science

The GCSE Computer Science course is suitable for pupils who want to explore how computers work and how they are used. It is a more technical course, consisting of a two exams, and a programming project. This course is 100% exam based.

Key Stage 4 (Years 9-11)



Alcester
Academy



ICT & Computing

OCR Computer Science GCSE - Key Points

- Academic & technical content, suitable for pupils in top Maths set. You will need to have demonstrated an interest in developing your coding skills during projects in year 8 IT lessons.
- Due to the challenging & academic nature of this course, it is not an 'open choice' for all pupils.
- Two main units of work in the course: Unit 1 - Computing Systems, and Unit 2 - Computational thinking, algorithms & programming.
- Each unit is assessed through an exam (2 exams worth 50% each at the end of year 11).
- You will also complete programming projects during the course, but these do not count towards the final grade. Your programming skills & knowledge is assessed during the Unit 2 Computational thinking exam.