"It's about problem solving, not just computers."

Willingdon
COMMUNITY SCHOOL

BTEC DIT Results – 74% Pass and above(2025 Results) (11% 9 to 7)

What our students say:

"The BTEC DIT course has helped me become more independent and confident. I enjoy sharing the skills I have learnt to help other people with IT problems. I have learnt how to deal with my own challenges I face day-to-day using problem solving skills learnt.
I have learnt advanced formulas which help organise your calculations in the most efficient way."

Year 10 BTEC DIT student Choe F

"I've learnt how to meet deadlines for the tasks and coursework, building my resilience and perseverance when tasks became difficult such as the excel spreadsheet when the calculations didn't work. This BTEC DIT course has also allowed me to challenge myself and improve prototypes for a business context - Town Bakery, provoking me to think differently and out of the box when considering the different adaptations of the prototype."

Year 10 BTEC DIT student Liam O

CURRICULUM BOOKLET

Computer Science and IT

July 2025

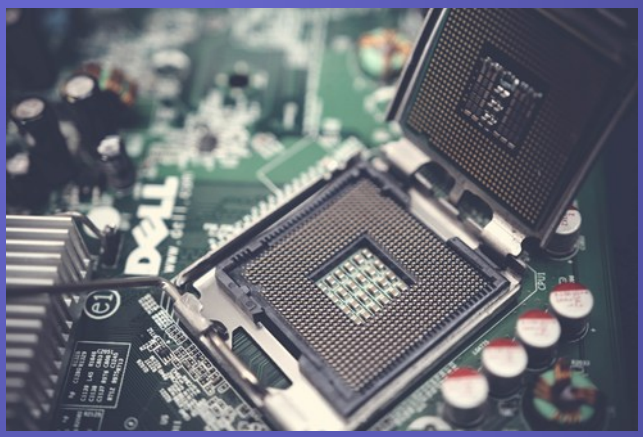
"It's about problem solving, not just computers."

Our School Curriculum Intent

The Computing curriculum at Willingdon Community School offers a broad, balanced, personalised and challenging educational experience, which builds on students' experiences in the primary phase of their education.

It aims to provide all students with the knowledge, understanding, skills and attitudes to become successful learners who enjoy learning, making progress and aspire to achieve the best they are capable of.

Subject Vision for Computing



Computing and IT are about problem solving, not just about computers. It is an exciting, creative subject that can be applied to almost any issue, from supporting peoples' mental health to providing solutions to sports training. The art of coding is to inspire learners to create innovative and unique solutions rather than be a consumer of existing products.

Our vision is to empower all students with the digital knowledge, practical skills, and creative confidence needed to thrive in a rapidly evolving technological world. Through a dynamic and inclusive computing curriculum—including KS4 BTEC Digital Information Technology and engaging lessons across KS3—we aim to develop resilient, innovative learners with a strong understanding of emerging technologies and their role in shaping the future.

Our BTEC DIT course is for learners interested in taking a hands-on course alongside their GCSEs that will offer them an insight into what it is like to work in the Digital sector. Digital skills span all industries, and almost all jobs in the UK today require employees to have a good level of digital literacy, putting it increasingly on a par with English and maths skills.

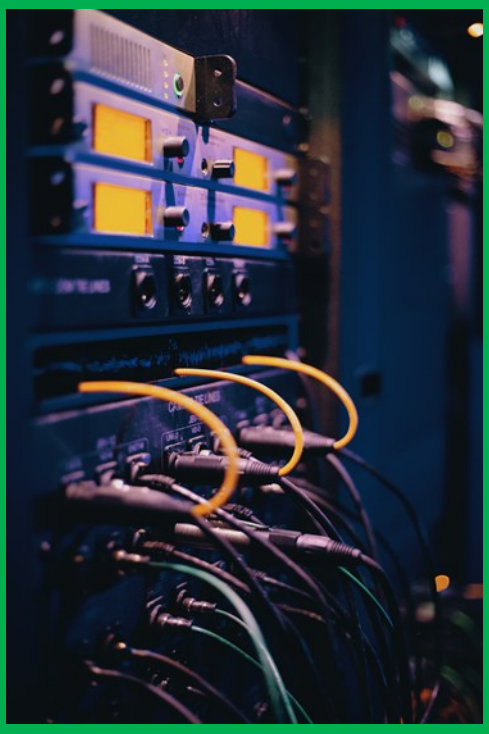
“It’s about problem solving, not just computers.”

Key Concepts in IT & Computing

The skills you will learn in both Computing and BTEC DIT will get you ready for the modern, digital world. Technology is moving so fast that understanding how computers work and being an expert in the use of software is an essential skill needed in most careers. Digital literacy and digital resilience are key in developing skills that are in demand by every type of industry.

E-Safety is taught at the start of each year: learning how to be safe, considerate and mindful of others’ actions on-line. In the e-safety unit, we teach students how to limit their exposure to, and minimise risk from, both viruses and unwanted content. Students are taught how their actions affect other people online and the future impact of your digital footprint.

The key computational thinking skills of decomposition and abstraction are emphasised through game design that focuses on problem-solving. Students explore different coding languages and formats, as well as how to plan algorithms using flowcharts. These skills develop coding skills as well as an understanding that failure and debugging are part of the programming process. Students are supported to become independent and resilient by learning from mistakes.



At KS3, students code games in Scratch and Python to learn the fundamental programming techniques, beginning with block-based coding and progressing to industry standard language Python. Computer hardware and software are introduced at KS3, to gain understanding of the main hardware features and how data is represented. This includes exploring the concept of binary and how it is used to represent text, image and sound.

Students will develop their ability to plan and produce interactive and engaging products within a variety of modern scenarios. This includes Game and App development skills. Students will learn how to use App development programs that utilize the same hardware inputs and outputs that we see in many modern smart devices. They produce a rough sketch as a prototype and use it to complete finished product.

In order to best prepare them for the data driven, digital world, that we live in, students also develop skills in Excel and Google Sheets to analyse data to make important decisions in business.

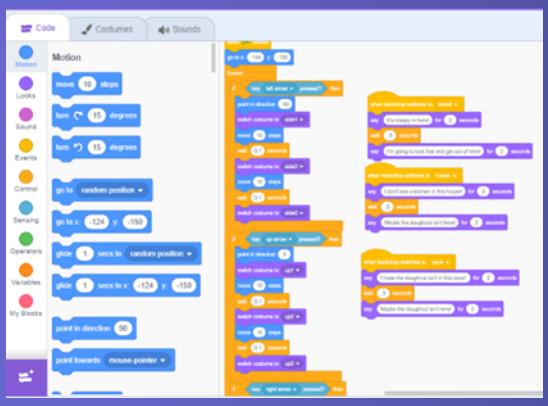
“It’s about problem solving, not just computers.”

Programme of Study Key KS3

Y7 Outline of units

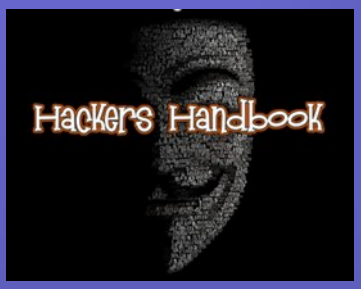
- E-safety Online Gaming
- I want to be a Games designer
- I want to be a Data Analyst
- I want to be a Programmer
- I want to be a Researcher - History and Pioneers in Computing

Y8 Outline of units

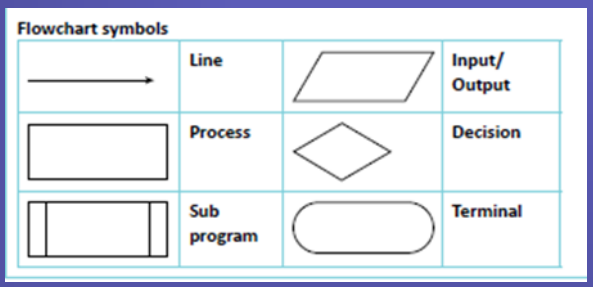


- I want to be a Cyber Security specialist - E-safety Digital footprint
- I want to be a Hardware Engineer
- I want to be a Graphic Designer
- I want to be an App Developer

Y9 Outline of units



- E-safety Cyber Security
- I want to be a Software Engineer - Python
- I want to be a cybersecurity engineer
- I want to be a Data analyst
- I want to be a AI and Robot engineer




```
print("What is your first initial?")
initial = input()
print("What is your surname")
surname = input()
print("What is your age?")
age = int(input())
print("True or False - you like marmite")
likes_marmite = input()
marmite = "True"
decades = float((age / 10))
print(f"Well hello {initial} {surname}.")
print(f"It is {likes_marmite==marmite} that you like marmite.")
print(f"This is probably because you are {decades} decades old")
```

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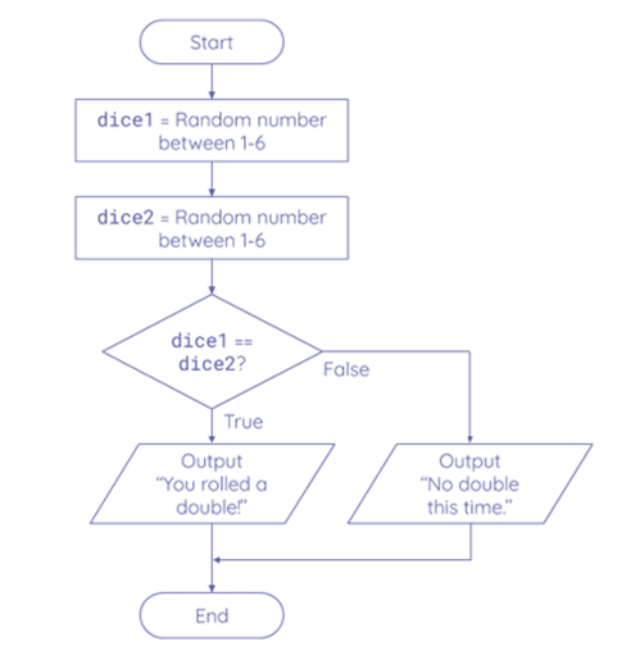
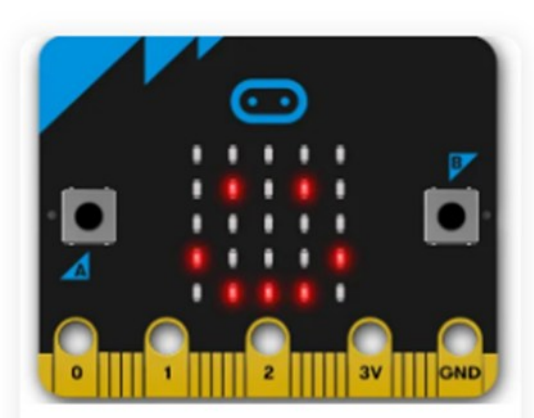
Assessment Plan for Key Stage 3





Students receive live verbal feedback and marking to make improvements to their work based on the feedback given.

Towards the end of each project or unit, students receive feedback in one of three ways – either by using a given set of success criteria to self-evaluate or providing peer feedback to a classmate. In other units, students will receive teacher feedback on their task.

Each of these types of feedback will provide students with an improvement target alongside praise for work that shows achievement at their working level. Students are then expected to use these improvement targets as the starting point to make further improvements to their work. Students will also receive literacy feedback on their written work to ensure correct understanding of technical words.

Knowledge and understanding are tested in a variety of ways: using online tests, end of unit tests or by the quality of their solutions to the various tasks.

Before each project, students are provided with an exemplar and a set of success criteria are agreed so that students know what they are expected to include and the quality they are expected to meet.

Homework is set to reinforce learning or test specific vocabulary.

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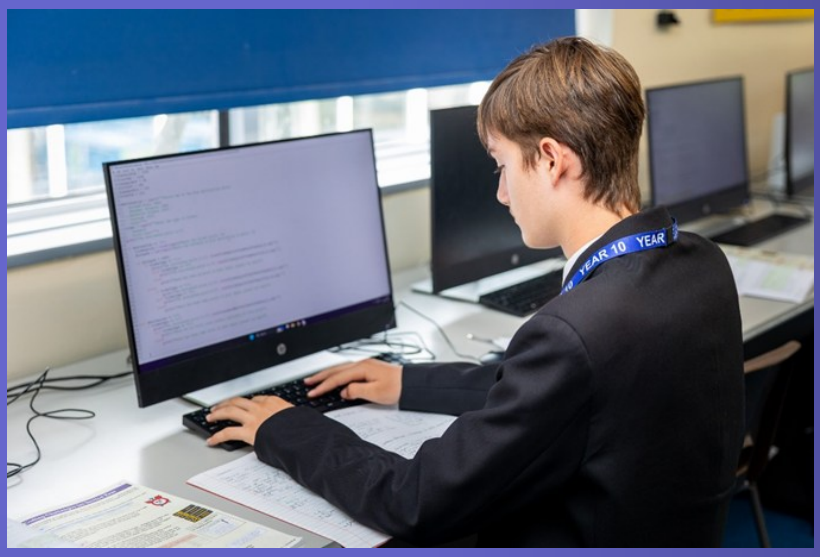
Personal Skills in Computing and IT

Team Work

Resilience



Creativity

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Specification Overview

BTEC Digital Information Technology:

Unit 1. Exploring user interface design principles and project planning techniques

(Internally assessed and externally moderated)

Students will develop their understanding of what makes an effective user interface and how to effectively manage a project. They will use this understanding to plan, design and create a user interface.

Learning outcomes:

A. Understand interface design for individuals and organisations
B. Be able to use project planning techniques to plan, design and develop a user interface
C. Be able to review a user interface.

Unit 2. Collecting, presenting and interpreting data

(Internally assessed and externally moderated)

Students will understand the characteristics of data and information and how they help organisations in decision making. They will use data manipulation methods to create a dashboard to present and draw conclusions from information.

Learning outcomes:

A. Understand how data is collected and used by organisations and its impact on individuals
B. Be able to create a dashboard using data manipulation tools
C. Be able draw conclusions and review data presentation methods.

Unit 3. Effective digital working practices
(Externally assessed)

This external component builds on knowledge, understanding and skills acquired and developed across the qualification. It requires learners to select and integrate knowledge and understanding synoptically from all components. It is assessed through an external assessment that is set and marked by Pearson.

Questions will require learners to apply knowledge and understanding to the given scenarios or context.

An exam worth 60 marks will be completed under supervised conditions. The supervised assessment period is 1 hour and 30 minutes.

	Component 1	Component 2:	Component 3:
How it is assessed	Teacher assessed assignment	Teacher assessed assignment	External Written exam
How much it is worth	30%	30%	40%

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Your Computing and IT Learning Journey

IT and Computing are problem-solving, not about computers. Our curriculum is jobs centric and focuses on the knowledge and skills required to be successful in that particular career.

YEAR 11

Modern Technologies
Wider implications of digital systems
Exam Jan
Communication
Revision
Exam May
Cyber Security
Ethical, legal and environmental impacts
Mock revision

BTEC Digital IT

Evaluation
Create a dashboard
Data Collection Methods
Evaluation
Planning and Design Prototypes
Project Proposal

Component 2: Collecting, Presenting and Interpreting Data

Component 1: Coursework: Interface design

YEAR 10

Exploring AI in future careers
Spreadsheet Dashboards
Programming games and quizzes
Cyber Security – threats to data and protection
Password checking in Python
Programming and debugging
Python intro
Advanced spreadsheet functions

YEAR 9

Careers Roles in Technology
App Lab mini project
Data analysis, charts and finding trends

YEAR 8

School log in
Collaborating online respectfully
Programming in scratch
Spreadsheets
Intro to Google Classrooms
Modelling data in spreadsheets
Careers in Computing

YEAR 7

Sit SATS In Y6
Visit us for Year 6 Open evening

PRIMARY SCHOOL

Begin my Computing Learning Journey

Apply for a place at Willingdon Community School

Willingdon COMMUNITY SCHOOL

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Literacy in IT & Computing

Students are provided with a list of keywords for each topic and are given regular spelling and explanation tests to embed these words. Students are also taught how to find and fix errors in their programming, which requires learning a completely new syntax and logic.

Students are taught how to compose answers to longer questions which expect high levels of literacy.

Numeracy in IT and Computing

Students learn about number bases, specifically binary and hexadecimal. They learn how to manipulate numbers in these bases and how to convert between different number bases. Students learn to use mathematical operators and formulas in programming and data analysis, including some not covered in maths lessons and use logic gates to create solutions. Students also learn about unit sizes and perform calculations around file sizes and required storage amounts.

RECORD OF ACHIEVEMENT

Name:

POINTS: 250

AWARD LEVEL: BRONZE

PASSED: 05/07/2023

CITIZEN BADGES

Digital awareness, safety and ethics

Brain Hack	Learning, Understanding	MAY 2023
Digital Ethics	Citizenship, Ethics, Safeguarding, EHealth	JUL 2023
E-Safety & Online Etiquette	Safety, Reputation, Etiquette, Responsibility, Ethics, Problem Solving	MAY 2023
Fake News	Citizenship, ESafety, Ethics, Etiquette, Cyber, Data, Information	MAY 2023
Farm Tech	Technology, Careers, SDGs, Global Goals, Farming, Sustainability	JUL 2023
GDPR	Citizenship, Compliance, Data Responsibility, Due Diligence, Governance	MAY 2023
Global Goals	Citizenship, Innovation, Coding, Sustainability, Problem Solving, Aiming High, Technology	JUL 2023
Safe Online	Safety, Reputation, Etiquette, Responsibility, Ethics	MAY 2023
Social Media Ethics	Ethics, ESafety, Fake News, Social Media, Safeguarding	MAY 2023
Social Media Set-Up	Social Media, ELearning, Communication, Marketing, Responsibility	MAY 2023
What is the Cloud?	Cloud Computing, Collaborating, Data	JUL 2023

WORKER BADGES

Tools and techniques which are useful in the workplace

Collaboration	Collaboration, Digital Careers, Sharing, ECommerce	JUN 2023
Digital Portfolios	ELearning, Digital Careers, Planning	MAY 2023
Digital Research	Surfing, Data, Organisation	MAY 2023
Image Specialist	Design, Image	JUN 2023
Interviews	Interview Skills, Employability Skills, Raising Aspiration, Research, Listening, Career Development, Etiquette, Communication	JUN 2023

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Verification Code: F7UQBPUHPA

Page 1

Raising aspirations in IT and Computing

Each unit at KS3 is designed to inform students about the technology jobs available and to develop the knowledge and skills required to pursue one of these jobs. The skills developed in spreadsheet data analysis and modelling are in high demand in many areas, such as data analyst, financial analyst, business analyst, market research analyst, and operations analyst. While the photo and video editing skills open up the world of graphic design and the creative industry to students. Many of our students go on to be very successful at 6th form and university.

Broadening horizons in IT & Computing

Activities to try at home.

KS3 Students complete the Inspiring Digital Enterprise Award, known as iDEA. This is an international award-winning programme that helps you develop and demonstrate your digital, enterprise and employability skills for free. Students complete a record of achievement.

https://code.org/athome - Try an Hour of Code

Watch a short video series about the basics of CS

Take an introductory, self-paced course

https://scratch.mit.edu/ – join the world's largest coding community by exploring and creating digital stories, games and animations.

https://www.codecademy.com/learn - Teach yourself python for free. Many different courses to choose from covering a wide range of job-ready skills and real-world projects.

https://microbit.org/code/ - start programming

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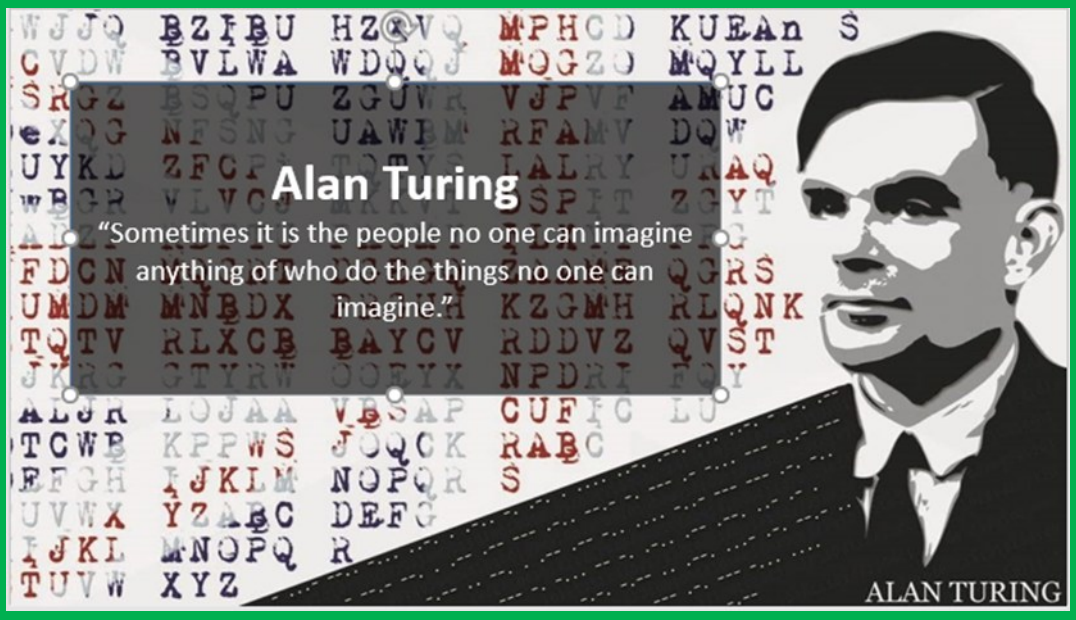
Ambition



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Spiritual, Moral, Social and Cultural values in Computing and ICT

Spiritual:

Students explore how technology connects people worldwide and enables sharing of ideas and experiences. They learn to respect different beliefs, values, and cultures when designing and using digital content.

Moral:

Students learn about the ethical and legal issues in technology, such as online behaviour, cyberbullying, internet safety, and data privacy. They understand the consequences of their actions and the importance of behaving responsibly online.

Social:

Students explore how technology affects communication and relationships, including the risks of social media. They work in teams, share ideas, and learn to communicate respectfully. They also consider how to design technology that meets different users’ needs.

Cultural:

Students learn about the impact of technology on culture and society. They explore digital inclusion, environmental concerns, and how different communities contribute to Computing. They reflect on how culture is represented online and the rise of global digital communication.

British Values in Computer Science and ICT

Positive Values in Computing

Across all year groups, students learn the importance of respect, tolerance, and kindness—both online and in person. Whether gaming, writing, or collaborating, they are taught to consider others’ feelings and communicate respectfully.

Students develop independence, resilience, and confidence by learning from mistakes—especially in programming. They support each other, share ideas, and act as critical friends, helping improve each other's work in a positive and respectful environment.

We promote high expectations, teamwork, and a growth mindset, encouraging students to take on challenges and become role models in class and in the wider community.

British Values in Computing

Democracy & Respect: Students learn to value diverse opinions, especially online. They use sources responsibly and consider different viewpoints.

Online Safety & Etiquette: Students are taught how to communicate positively online, understand their digital footprint, and know what to do if they encounter harmful content.

Understanding the Law: Students are introduced to key laws, including:

Copyright Designs and Patents Act (1988)

Computer Misuse Act (1990)

Data Protection Act (2018) & GDPR

They explore how these laws affect them, from protecting data to the risks of illegal downloading or spreading false information.

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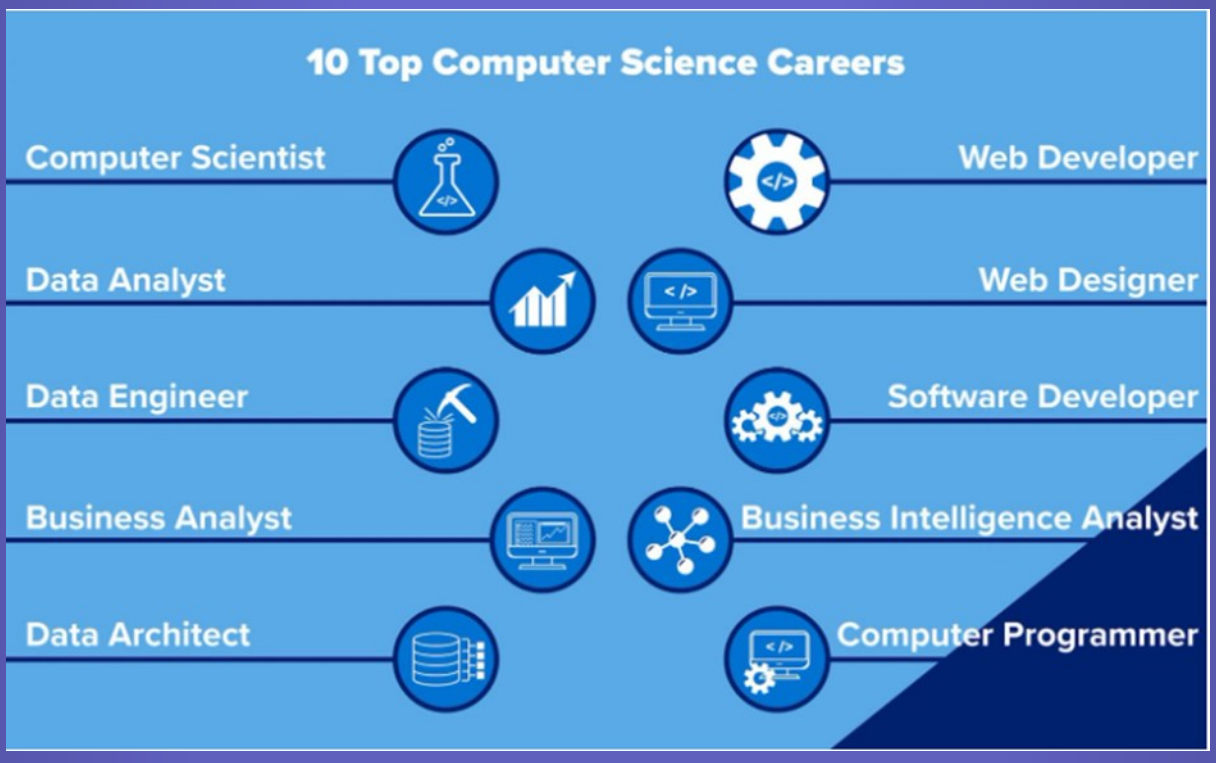
Careers in Computing and IT

What can I do next with Computing and IT?

Almost every career in the future will have an element of computing involved. You might work in film, finance, the NHS, journalism, manufacturing, music or security. IT careers are wide ranging and can be used to create Apps, predict environmental impacts of deforestation or the most effective ways to get medicine and supplies where needed.

10 Top Computing Careers



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Parents can help their child by…

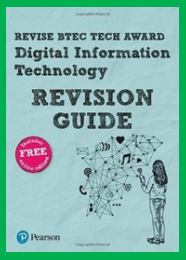
Websites to study curriculum content:

BTEC Digital Information Technology

https://www.knowitallninja.com/ (school subscription for resources)

Revision resources to motivate students with varied, engaging activities & exam-style questions to be shared in class.

Recommended Course books Available on ParentPay



Revision Guide for the BTech Award Digital Information Technology Course

How to revise for Component 3 ?

Use your books/revision website/lessons on google classroom to create flash cards.

Once created use them to test yourself or ask someone to test your knowledge.

Pick a topic and create a mind map writing down everything you can remember about it.

Maybe start with ten words associated with a topic spaced out on a page.

Films

Imitation game - based on the 1983 biography Alan Turing: The Enigma by Andrew Hodges.

Books

Ready player one -by Ernest Cline, about a teenage that devotes his life to puzzles hidden within this world's digital confines, puzzles that promise massive power and fortune to whoever can unlock them.

Places to visit

The bett show January 2026. Get excited about the latest innovations in technology and be inspired to find out more about future careers in technology.