PARKSIDE SCHOOL

# I.C.T. – KS5

## What is Parkside aiming to achieve through its I. C. T. curriculum?

Students live in a digital age; their work environments and lives are ever adapting and technology plays a bigger role than ever. The role of the computing curriculum is to equip students with computational thinking skills and understanding of the digital age so that they can better understand and live in a digital world. Computing ensures that students are digitally literate and able to express themselves digitally. This is important as it prepares them for a job market where computational thinking skills are in demand.

Not all students will study Computer Science at KS4 so it is essential that students gain a broad set of skills and an awareness of the subject and its impact on the modern world. Part of this involves developing students' problem-solving abilities, which are transferable skills and impact a variety of other STEM subjects.

GCSE Computer Science and Cambridge Technical IT are further options at Key Stage Four and Five, respectively, which will allow learners to continue to develop key knowledge and skills, exploring a range of topics and preparing for future progression in this area.

**Parkside School Subject Curriculum Plan**
**Subject: I. C. T.**

| Year | Unit 1 | Unit 1 | Unit 12 | Unit 12 | Unit 8 | Unit 8 |
|---|---|---|---|---|---|---|
| 12 | **Understand computer hardware**<br>• Computer hardware<br>• Computer components<br>• Types of computer system<br>• Connectivity methods<br>• Communications hardware<br>• Hardware troubleshooting<br>• Units of measurement<br>• Number systems<br>• Number conversion<br><br>**Understand computer hardware**<br>• Types of software<br>• Applications software<br>• Utility software<br>• Operating systems<br>• Communication methods<br>• Software troubleshooting<br>• Protocols | **Understand business IT systems**<br>• Networking characteristics<br>• Connectivity methods<br>• Business systems<br><br>**Understand employability and communication skills used in an IT environment**<br>• Communication skills<br>• Communication technology<br>• Personal attributes<br>• Ready for work,<br>• Job roles<br>• Professional bodies<br>• Industry certification | **Understand mobile technologies**<br>• Devices<br>• Connectivity<br>• Mobile device operating systems<br>• Current and potential future uses<br><br>**Be able to investigate how businesses use mobile technologies**<br><br>Uses of mobile technologies Ethical | **Be able to determine solutions for the use of mobile technologies**<br>• Investigating business requirements<br>• Planning<br>• Technology business plan<br><br>**Be able to present solutions for the use of mobile technologies**<br>• Promoting the mobile technological solution<br>• Improvements to mobile technological solution<br>Predicting consequences of change | **Understand the project life cycle Project methodologies**<br>• Project life cycle<br>• Project issues<br>• Documentation<br><br>**Be able to initiate and plan projects**<br>• Initiation phase<br>Planning phase | **Be able to execute projects**<br>• Execution phase<br><br>**Be able to carry out project evaluations**<br>Evaluation phase |

**Parkside School Subject Curriculum Plan**

**Subject: I. C. T.**

| Year | Unit 1 | Unit 1 | Unit 12 | Unit 12 | Unit 8 | Unit 8 |
|---|---|---|---|---|---|---|
| | **Understand business IT systems**<br>• Types of servers<br>• Virtualisation<br>• Networking characteristics | **Understand ethical and operational issues and threats to computer systems**<br>• Ethical issues<br>• Operational issues<br>• Threats,<br>• Physical security<br>• Digital security<br>Safe disposal of data and computer equipment | | | | |

**Parkside School Subject Curriculum Plan**
**Subject: I. C. T.**

| Year | Unit 2 | Unit 2 | Unit 12 | Unit 12 |
|---|---|---|---|---|
| 13 | **Understand where information is held globally and how it is transmitted**<br>• Holders of information<br>• Types of information storage media<br>• Types of information access and storage device<br>• The internet<br>• World Wide Web (www) technologies<br>• Information formats<br>• Advantages<br>• Disadvantages<br>• Advantages<br><br>**Understand the styles, classification and the management of global information**<br>• Information styles and their uses<br>• Information classification<br>• Quality of information<br>• Information management<br><br>**Understand the use of global information and the benefits to individuals and organisations**<br>• Data versus information,<br>• Categories of information used by individuals<br>• Categories of information used by organisations<br>• Stages of data analysis<br>• Data analysis tools<br>• Information system structure | **Understand the legal and regulatory framework governing the storage and use of global information**<br>• UK legislation and regulation relating to the storage and use of information<br>• Global information protection legislation and regulation<br>• Green IT<br><br>**Understand the process flow of information**<br>• Information sources and data types<br>• Data flow diagrams (DFDs)<br><br>**Understand the principles of information security**<br>• Principles of information security<br>• Risks<br>• Impact | **Understand mobile technologies**<br>• Devices<br>• Connectivity<br>• Mobile device operating systems<br>• Current and potential future uses<br><br>Be able to investigate how businesses use mobile technologies<br>• Uses of mobile technologies<br>• Ethical | **Be able to determine solutions for the use of mobile technologies**<br>• Investigating business requirements<br>• Planning<br>• Technology business plan<br><br>Be able to present solutions for the use of mobile technologies<br>• Promoting the mobile technological solution<br>• Improvements to mobile technological solution<br>• Predicting consequences of change |