

**ABC** Links to literacy  
We develop Computer science literacy through reading Computer science literature aloud, and applying knowledge to extended writing questions. We discuss key concepts with our peers to help embed key terms.

**AUTUMN - 2**  
Topic name: **Hardware & Software**  
Why study this topic?  
  
To learn the basic fundamentals of a computer system looking at software such as Microsoft excel/ word etc and the hardware such as the mouse and printer.

**SPRING - 2**  
Topic name: **Introduction to Programming**  
Why study this topic?  
  
We will look at the basic block coding. And basic building blocks to code.

**SUMMER - 2**  
Topic name: **Computer Networks/ Representation of data**  
Why study this topic?  
  
We will look at the way computers are connected on different network topologies as well as LANS and WANS



**Subject Intent statement**  
*"Our intent is to foster the mind of digital natives so that they can become well equipped in computing knowledge in order to play a significant role in a modern and dynamic world of technological innovations and big data. In line with our Academy intent, we ensure that all students studying Computer Science are able to access the curriculum we offer. To achieve this, we propose computing lessons which cater for differing learning needs by using a multi-sensory teaching approach.*

**AUTUMN - 1**  
Topic name: **E-Safety**  
Why study this topic?  
  
This topic we will look at how we can stay safe online and using social media.

**SPRING - 1**  
Topic name: **Introduction to HTML**  
Why study this topic?  
  
We will create a basic website which will have images and text as well as other HTML TAG FEATURES.

**SUMMER - 1**  
Topic name: **Programming Code Creator PT 2.**  
Why study this topic?  
  
We will look at block code and understand basic python syntax.

**123** Links to Numeracy  
In Computer Science, we use mathematics to organize and analyse data in tables and graphs, We make spreadsheets to see and make sense of patterns in the data, to represent Computer scientific phenomena and concepts



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### AUTUMN - 2

Topic name: **Understanding Computer**

Why study the topic?

Defining the function of the main internal parts of basic computer architecture and the main function of an operating system.

2

### SPRING - 2

Topic name: **Programming – Block Code**

Why study this topic?

CSD 1 - Animations and games. Creating authentic artefact and engage with Computer Science as a medium for creativity, communication and problem solving.

4

### SUMMER - 2

Topic name: **CSD Unit 3 - Animations and Games**

Why study this topic?

Build on previous coding experience to program animations, interactive art, and games in Game Lab. The unit starts off with simple shapes and builds up to more sophisticated sprite-based games.

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### AUTUMN - 1

Topic name: **Computer Networks & the internet**

Why study the topic?

Understanding the purpose, advantages and disadvantages of network topologies. Data packets and routing. Evaluating the hardware needed to create a network, physical connection from home to the internet.

### SPRING - 1

Topic name: **How data is represented in computers**

Why study this topic?

Understanding that digital computers use binary to represent all data and how bit patterns represent numbers and images. Defining data types: real numbers and Boolean.

### SUMMER - 1

Topic name: **CSD - Web Development**

Why study this topic?

Create and share the content of own web pages. After deciding what content to share with the world, learning how to structure and style web pages using HTML and CSS. Also practicing valuable programming skills such as debugging and commenting.



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**AUTUMN - 2**  
Topic name: **Binary Logic**  
Why study the topic?  
Knowing that inside a computer, the CPU is made up of millions of tiny switches that can only be in one of two states, either 'ON' or 'OFF'. Understanding different types of Logic gates and the truth tables

**SPRING - 2**  
Topic name: **Introduction to programming**  
Why study this topic?  
Understanding computational thinking, abstraction. Writing algorithms - flowcharts, pseudocode. Understanding programming constructs - sequencing, selection, iteration

**SUMMER - 2**  
Topic name: **Programming Project**  
Why study this topic?  
Creating a basic computer quiz - simplified version of Music quiz. Analysing and solving a problem using algorithms - flowchart, pseudocode. Testing and evaluating the solution.

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**AUTUMN - 1**  
Topic name: **Computer Systems**  
Why study the topic?  
Understanding the function of the main internal parts of basic computer architecture. The difference between embedded and general purpose computers. The concept behind the fetch-execute cycle. Knowing that there is a range of operating systems and application software for the same hardware.

**SPRING - 1**  
Topic name: **Representation of Data**  
Why study this topic?  
Defining the terms bit, nibble, byte, etc...Converting binary, denary, hexadecimal and vice versa. Performing binary division, multiplication, subtraction, additions and explaining what overflow is.

**SUMMER - 1**  
Topic name: **Python Fundamental**  
Why study this topic?  
Programming with a textual language. Designing basic programs. Understanding basic Python functions and the difference between a variable and list . Performing casting - converting one data type to another.

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**AUTUMN - 2**  
Topic name: Component 1  
Why study this topic?  
  
Topic name:  
Why study this topic?  
  
We will look at all the topics on: component 1 topics  
1.5.16.17

**SPRING - 2**  
  
GCSE Revision

**SUMMER - 2**  
  
GCSEs completed.

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**1**  
**AUTUMN - 1**  
Topic name: Component 1  
Why study this topic?  
We will look at topics:  
1.1.  
1.2  
1.3  
1.4  
  
Topic name:  
Why study this topic?  
  
Topic name: Why study this topic?

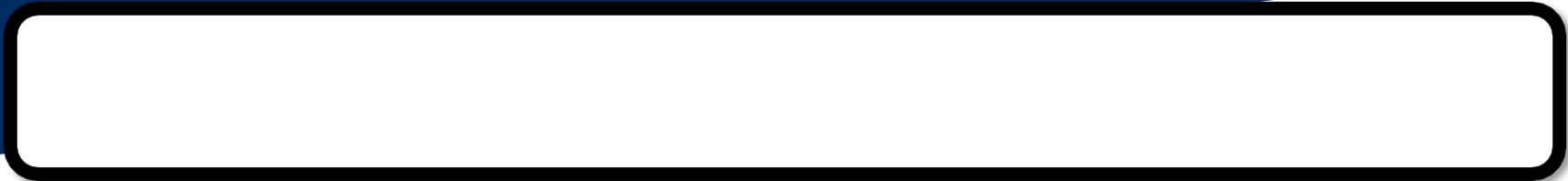
**3**  
**SPRING - 1**  
Topic name: Component 1  
Why study this topic?  
  
All the topics on Topic 2:  
2.1  
2.2  
2.3  
2.4

**5**  
**SUMMER - 1**  
  
GCSE Exams

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# Shortened Curriculum Intent



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