



LDA Computer Science Curriculum Pathway



Possible careers

- Software Engineer.
- Network Manager
- Tech Entrepreneur
- Cybersecurity

Ambition & Aspiration

Elements of Living in a digital world

List Protocols and layers, Network security and Threats

Understand How Computers Store Data

□ Title of unit

■ Dean Trust Curriculum Values

■ Knowledge: What I will know

■ Skill: What I will be able to do

■ Enrichment

A-Level, BTEC, Degree

The Bigger Picture

Communication

Computers

Careers Interviews

Explain how data protection, copyright, IT in the workplace, future technologies enhance are lives

Extra Study Sessions

Know how computers communicate

How computer Systems operate

Global Citizenship

Sequence, Selection, Iteration.

Subroutines

Demonstrate Advanced lists, functions, Read/Write to text files in python.

Binary, Hex, arithmetic shifts, encryption.

YEAR 11

Advanced Programming

Data

Searching & Sorting Algorithms

Understand advanced Principles of programming

Powerful Knowledge

Describe how Logic, Operating Systems and Utility software work

Understand Principles of programming

CodeAcademy

Ambition & Aspiration

IDEA Award

Sampling Frequency & Compression

Tracks, Layering & Editing

YEAR 10

Professional Skills

Digital Sound

Binary, Denary, & Hex

Decompose a problem and develop a program that meets user requirements

Healthy in Mind, Body & Soul

How to Stay Safe online

IBM Skill Build

CyberFirst

Select appropriate digital content

Abstraction & Decomposition

Ambition & Aspiration Careers

YEAR 9

Games Development

Web Design

LAN/WAN/PAN/MAN

Algorithms & Flowcharts

Animation Techniques

Iteration & Subroutines

Design Principles

Global Citizenship

UI/UX

Taster Sessions

Network devices

DNS, IP & MAC

Photo Editing

Pixels, Resolution, & Colour Depth

String Manipulation

Legislation

Presentation planning & Delivery

Web Scripting

Networks

Image Representation

Binary, Denary, & Hex

Programming Constructs: Selection & Iteration

Cyber Security

Threats and Prevention measures

Encryption

Presenting information for audience

Libraries (Turtle & Random)

Sequence & Selection statements

Sequence & Selection

The internet as a Network

Digital Video Editing

Graphics/Drawing creation tools

Hardware & Software

Powerful Knowledge

Computer Systems

Select appropriate digital content

Staying safe online & in computer rooms

Algorithms & Flowcharts

Use pre-coded loops in Micro:Python

Global Citizenship

Sequence & Selection statements

Physical Computing

The Internet

Storyboarding

Social Media and Data: Security & Privacy

How to Stay Safe online

Global Citizenship

Sequence & Selection statements

Physical Computing

The Internet

Storyboarding

Social Media and Data: Security & Privacy

How to Stay Safe online

Global Citizenship

Sequence & Selection statements

Physical Computing

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Social Media and Data: Security & Privacy

How to Stay Safe online

Global Citizenship

Believe . Achieve . Succeed



Curriculum Values at LDA



The Curriculum at Lord Derby Academy is highly **ambitious** for **ALL** pupils and built on the **Dean Trust Curriculum Values**:



Computer Science Curriculum Statement of Intent:

To inspire all pupils to develop the skills and knowledge to be an effective, safe and discerning user and creator of a range of computer systems.



THE DEAN TRUST
Lord Derby Academy