COMPUTER SCIENCE ROAD MAP

Yavneh College

SUCCESS COMES FROM HARDWORK

YEAR 13 – A level

- 2.3.1 Big O
- 1.2.1 Need for & Types of OS
- 1.3.3 Networks
- 1.1 .3 Input, Output & Storage
- 3.4 Evaluation
- 1.4.3 Flip Flops & Adders
- 1.4.3 Boolean Algebra
- 3.3 Developing the solution
- 1.1.1 Processor Components
- 1.1.1 Performance Factors
- 1.4.1 Data Types
- 1.2.2 Translators
- 1.5.2 Moral and ethical Issues
- 1.1.2 Types of processor
- 1.2.1 Functions of an OS & Virtual Machines

YEAR 12 – A level

- START OF A LEVEL
- 1.5.1 Computing related legislation
- 1.4.2 Data Structures
- 2.3.1 Algorithms
- 1.2.4 Assembly Language (LOAD #2, STORE 14, HALT)
- 2.1.1 Thinking abstractly
- 2.1.3 Thinking procedurally
- 2.1.5 Thinking concurrently
- 2.2.1 Iteration, Sequence & Branching
- 2.2.1 Modularity
- 1.2.3 Writing and following algorithms
- 2.2.2 Problem recognition
- 2.2.2 Problem Solving
- 1.2.2 The nature of apps
- 3.2 Design of the solution
- 3.1 Analysis of the problem
- 1.3.2 Databases
- 1.2.3 Software Development Lifecycles
- 2.2.1 Recursion
- 2.2.1 Use of an IDE
- 1.2.4 Programming paradigms
- 2.1.4 Thinking logically
- 2.1.2 Thinking ahead
- 1.3.1 Compression, Encryption and Hashing
- 1.3.4 Web Technologies
- 2.2.1 Object Oriented techniques
- 1.2.4 Object Oriented Terms

YEAR 11 – GCSE

- 1.3.1 Network and Topologies
- 1.2.5 Compression
- 1.2.3 Units
- 1.2.1 Primary Storage (Memory)
- 1.2.2 Secondary Storage
- 1.2.4 Data Storage
- 1.3.2 Wired and Wireless networks, protocols and layers
- 1.4.1 Threats to computer systems and networks
- 1.4.2 Identifying and Preventing Vulnerabilities
- 1.5 System Software
- 1.6 Ethical, Legal and Cultural Concerns
- 2.5 Programming Languages & IDEs
- 2.4 Boolean Logic

YEAR 10 – GCSE

- 1.1.3 Embedded Systems
- 1.1.2 CPU Performance
- 1.1.1 Architecture of the CPU
- 2.3.2 Testing
- 2.3.1 Defensive Design
- 2.1.3 Searching and Sorting Algorithms
- 2.1.2 Designing, creating and refining algorithms
- 2.1.1 Computational Thinking
- 2.2.3 Additional Programming Techniques
- 2.2.2 Data Types
- 2.2.1 Programming Fundamentals
- START OF GCSE

YEAR 9 – GCSE

- Summer – Software Engineer
- Spring – Digital Artist
- Autumn – Website Development

YEAR 8 – KS3

YEAR 7 – KS3

- Autumn – Computer Technician
- Spring – Game Designer
- Summer – Content Creator
- START OF KS3