



**Kettlethorpe**  
**HIGH SCHOOL**

Kettlethorpe High School  
Progression Steps  
Digital Subjects

## 9

### Strand One: Computer Science:

- I understand the importance of indentation showing programming constructs
- Using computational thinking to problem solve like abstraction. Decomposition, algorithmic thinking and pattern recognition.
- Use of Boolean logic to solve a circuit. Identification of gates and completion of truth tables
- I can Analyse stages of systems, constructing the success criteria of the system; design stage of systems life-cycle and designing the features of the system based on success criteria.

### Strand Two: Information Technology:

- I can plan my website using tables and widgets
- I can test and modify my digital artifact responding to the client and adapt my product to suit a range of audiences
- I can evaluate my website and that of my peers
- I can consider the properties of media when importing them into digital artifacts

### Strand Three: Digital Legacy:

- I understand and can advise how different clients can protect networks against a range of threats
- I can identify vulnerabilities in networks for a range of end users

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### Strand One: Computer Science:

- I can design a complex algorithm using a flowchart
- I can explain how instructions can be written efficiently and describe the efficiency of my programs.
- Computer architecture - CPU, RAM, ROM, Secondary Memory, Embedded systems. How the Fetch-Decode-Execute cycle works
- I can use multiple software and integrate them to create a digital product. E.g Pivot table and paste link spreadsheets in PPT

### Strand Two: Information Technology:

- I can analyse and evaluate data to meet the needs of a known user group
- I can test and modify my digital artifact responding to the client and adapt my product to suit a range of audiences

- I can evaluate the reliability of digital content for use in my work. I can explain and consider how user friendly my digital product is along with its suitability to the audience and purpose
- I can respond to a client brief, obtain original assets, use a range of advanced software tools in Photoshop

### Strand Three: Digital Legacy:

- I understand the ethical, legal, moral, cultural issues of technology. of technology
- I can understand the legalities of owning, using and sharing data and can advise an end user on ways to ensure they abide by the law.

## 7

### Strand One: Computer Science:

- I can evaluate existing computer systems and spot errors and suggest improvements
- I can test the different modules of my programs as I am developing them, reflect on the results and then improve them.
- I can create my own data structures in text based programming
- I can take a real world problem and divide it into its main sub-problems

### Strand Two: Information Technology:

- I can develop creative products that meets the needs of an audience. E.g. effective Sci-Fi film poster and effective Alan Turing presentation
- I can document user feedback, the improvements identified and the refinements I make E.g. keep an improvement log on your work
- I can design and create digital productions for multiple audiences. E.g. adapting a product for adults and for children
- I can explain the properties of media when importing them into my digital products. E.g. PDF, JPG,GIF and how each is used

### Strand Three: Digital Legacy:

- I can explain the importance of protecting data on the internet for personal safety. E.g. Social engineering and cyberattacks
- I can discuss the advantages and disadvantages of the use of technology on society referencing relevant laws.

## 6

### Strand One: Computer Science:

- I can compare manual and automated computer systems for efficiency.

- I can develop a computer based solution to a real life problem that I have tested and refined
- I can develop a program using functions/procedures in a text-based language
- I can take solutions to one problem and adapt them for similar problems.

### Strand Two: Information Technology:

- I can use multiple software and integrate them to create a digital product.
- I can make refinements to my work using peer and teacher feedback evaluating my improvements
- I can evaluate the reliability of digital content for use in my work. I can explain the Creative Commons and copyright
- I can save digital products in a suitable format

### Strand Three: Digital Legacy:

- I know how to identify and report inappropriate content for real-life scenarios.
- I can identify the impact of ICT on society and give examples from our own community.

## 5

### Strand One: Computer Science:

- I can write sequences of instructions and data in a way that a computer will understand.
- I can explain what automated input devices/sensors are.
- I can write programs in a text based language, using parameters and selection and specify different data types
- I can use selection and repetition correctly in my programs.

### Strand Two: Information Technology:

- I can select appropriate software to create digital products. I can evaluate the appropriateness of application software to achieve goals.
- I can use success criteria to identify improvements and make refinements to my work
- I can create a complex query/filter on a single data source. E.g. <, > contains
- I can identify different operating systems and software that can be used on the same hardware.

### Strand Three: Digital Legacy:

- I can discuss the issues and dangers of using IT irresponsibly and can explain what the Computer Misuse Act is.

- I can make recommendations to help protect data held on computer systems by explaining the principles of GDPR

## 4

### Strand One: Computer Science:

- I can explain why we must be accurate when working with computers systems
- I can create instructions using variables in a text-based language.
- I can create instructions using variables in Scratch.
- I can develop a flowchart for a given sequence of events.

### Strand Two: Information Technology:

- I can identify an audience when creating digital products and create a success criteria to evaluate my work
- I can explain that poor quality data and information leads to unreliable results and inaccurate IT products
- I can search for information using Boolean Operators . e.g. AND, OR and NOT
- I can analyse and evaluate data and information using tools in the software and my own knowledge

### Strand Three: Digital Legacy:

- I can explain how to use computers and the internet safely. and report any concerns if digital content is unsuitable
- I can explain the impact of IT for collaboration when computers are networked.

## 3

### Strand One: Computer Science:

- I can explain that computer systems work step-by-step and only do what we tell them.
- I can create a simple sequence of instructions for something I want to happen.
- I can read a sequence of instructions and predict what the result will be
- I can describe the goals of a given problem. E.g. problem solving with computer solutions

### Strand Two: Information Technology:

- I can share my ideas with others using software

- I can use ICT tools to present information.
- I can create a simple folder structure using OneDrive
- I can use ICT to save work and use suitable file names

### Strand Three: Digital Legacy:

- I can describe my use of ICT in and outside of school.
- I can explain that ICT can be harmful to myself and others if used inappropriately.