



## **Year 9 Computing Summer Assessment**

The exam paper will be a total of **50 marks**.

**Year 9 – 30 marks, Year 8 – 10 marks, Year 7 – 10 marks**

Revision tips: We would suggest creating mind maps, record cards with the question one side and answer on the other (self-testing), and try the quizzes (links below).

**Section A: Year 9 topics:** (students should use their books and presentations on google classroom)

**E-Safety-** be able to define sexting, selfies, trolling and age ratings.

### **iMedia**

- Lossy and lossless compression- be able to describe the difference between lossy and lossless compression.
- File types- audio, suitability for use and size.

### **System Architecture & Data Representation**

- CPU- definition (carries out an endless cycle of fetch, decode, execute).
- Clock speed – number of F-D-E cycles per second.
- Logic Gates - state the output from given inputs (AND, NOT)
- Binary - binary addition.
- Hexadecimal – decimal to hex, reason why we use hex instead of binary.
- Images- understand how bitmap images are stored on a computer.
- Software – Task carried out by the operating system. Utility software used for security.
- Computational thinking- define, giving examples (algorithms, decomposition, pattern recognition and abstraction).

### **Helpful resources:**

- 1) E-safety: <https://tinyurl.com/2kky6b6c>
- 2) Lossy and lossless compression: <https://tinyurl.com/2p8btax9>
- 3) File types: <https://tinyurl.com/4ctrwsva>
- 4) CPU: <https://tinyurl.com/2jz8z93d>, <https://tinyurl.com/bdcuzzdh>
- 5) Logic gates: <https://tinyurl.com/4m6ada3b>, <https://tinyurl.com/yrek4efm>
- 6) Binary: <https://tinyurl.com/5n8y2shd>, <https://tinyurl.com/yzzv7y2w>
- 7) Hexadecimal: <https://tinyurl.com/mm82b3hz>, <https://tinyurl.com/yc42vr3f>
- 8) Images: <https://tinyurl.com/889z2x2t>, <https://tinyurl.com/2p93br8e>
- 9) Software: <https://tinyurl.com/bdd4tw57>,  
<https://www.blooket.com/set/61f6cb30ea27e20db2853d7a>,
- 10) Computational thinking: <https://tinyurl.com/2p949ed5>



### **Year 8 topics (10 marks)**

- Define a white hacker.
- Describe a DDoS network attack.
- Identify the law that makes hacking illegal.
- Describe a Star network topology
- Identify a variable in a python program
- Know there are 3 programming constructs: Sequence, Selection & Iteration
- Write syntax to extend a program using selection (IF-ELSE)
- Identify syntax to carry out multiplication

### **Helpful resources:**

- 1) Types of hackers - <https://tinyurl.com/2ccfzctc>
- 2) Computer Misuse Act - <https://tinyurl.com/4w4h332y>
- 3) Difference between the internet and world wide web- <https://tinyurl.com/z937nnx8>
- 4) Network Topologies - <https://tinyurl.com/mv88zbde>
- 5) Python - [www.w3schools.com/python/](http://www.w3schools.com/python/)

### **Year 7 topics (10 marks)**

- Describe the difference between cyberbullying and onling grooming.
- Describe the purpose of the motherboard motherboard
- Know the purpose of RAM and ROM.
- State the type of secondary storage e.g. optical, magnetic or solid state.
- Define an algorithm by an mage e.g. pseudocode or flowchart.
- Create and debug python code to output a string e.g. `print("Hello")` or carry out calculations e.g `print(4/2)` divides

### **Helpful resources:**

- 1) E-safety: <https://tinyurl.com/2p8ksmrw>
- 2) Internal computer components: <https://tinyurl.com/ycksthcn>
- 3) RAM and ROM: <https://tinyurl.com/5xymcby7>
- 4) Secondary storage: <https://tinyurl.com/3fpcnfs2> (Oak Academy)
- 5) What is an algorithm: <https://tinyurl.com/7m9hz643>
- 6) Python arithmetic <https://tinyurl.com/2p96nvjf>