Curriculum Map for Computing Years 9 to 11

First Year

|  |  |  |  |
| --- | --- | --- | --- |
| Year 9 | **Topic 4 – Computers**4.1 Machines and computational modelling4.2 Hardware4.3 Logic4.4 Software4.5 Programming languages | **Topic 3 – Data**3.1 Binary3.2 Data representation3.3 Data storage and compression3.4 Encryption | **Topic 5 – Communication and the Internet**5.1 Networks5.2 Network security5.3 The internet and the world wide web |

**Delivery** is aimed at engaging students early with topics that they should have some familiarity with. We start with Topic 4 as it gives a good understanding of how computers work. This understanding is fundamental to all other topics.

During the delivery of each unit programming will be taught, which is **Topic 1**. Students will learn about basic programming constructs in 1 lesson every week throughout year 9. All aspects covered in year 9 will be covered later in the course in greater depth.

The **exam technique** focus will be on the command words State and Describe – 20% of the exam questions are this type and it’s essential they build this skill. Students will also learn about specific Computing questions such as creating an expression and interpreting programming questions.

For **assessment**, every unit will have an assessed homework during delivery and an assessed test at the end. All these pieces will be given a GCSE grade, which will inform the SIMs assessments. The end of unit exam is a modified Edexcel paper to reflect units covered.

Second Year

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year 10 | **Topic 1 – Problem Solving**1.1 Algorithms1.2 Decomposition and abstraction | **Topic 3 - Data**3.1 Binary3.2 Data representation3.3 Data storage and compression3.4 Encryption3.5 Databases | **Topic 6 – The Bigger Picture**6.1 Emerging trends, issues and impact | **Topic 2 – Programming**This will again be taught throughout the year |

**Delivery** builds on the basic concepts learned in year 9. In year 9, only the basic concepts of Topic 3 are taught. In year 10 these basic concepts are developed into the more complex knowledge required. We also cover 3.5 Databases, which is too complex for year 9. Again, programming is taught throughout the year.

The pupils will develop **knowledge** in all areas and increasingly be able to link this knowledge to exam questions more effectively.

The **exam technique** focus will be on Paper 2 and the specific ways to develop both Flow Chart and Pseudo-Code answers. This again links in to the programming topics. Students will also focus on Compare questions.

For **assessment**, every unit will have an assessed homework during delivery and an assessed test at the end. All these pieces will be given a GCSE grade, which will inform the SIMs assessments. The end of unit exam will be an official Edexcel Unit 1 paper so pupils will focus their revision on Topics 3 – 6.

Third Year

|  |  |  |  |
| --- | --- | --- | --- |
| Year 11 | **Topics 1 and 2**Review of Topics 1 and 2 and full practice paper for Paper 2. | **Topics 3 and 4**In depth coverage of Topics 3 and 4 with exam questions to develop exam technique. | **Topics 5 and 6**In depth coverage of Topics 5 and 6 with exam questions to develop exam technique. |

**Delivery** is focussed on embedding all knowledge needed and applying to exam questions.

This year is aimed at perfecting the **exam techniques** and ensure students understand how to answer the very specific Computing questions. This exam technique will be embedded in every lesson, with a key focus question in every one.

For **assessment**, every unit will have an assessed homework during delivery and an assessed test at the end. All these pieces will be given a GCSE grade, which will inform the SIMs assessments. Students will also do a full mock paper for papers 1 and 2. And extra papers will be given during the year.