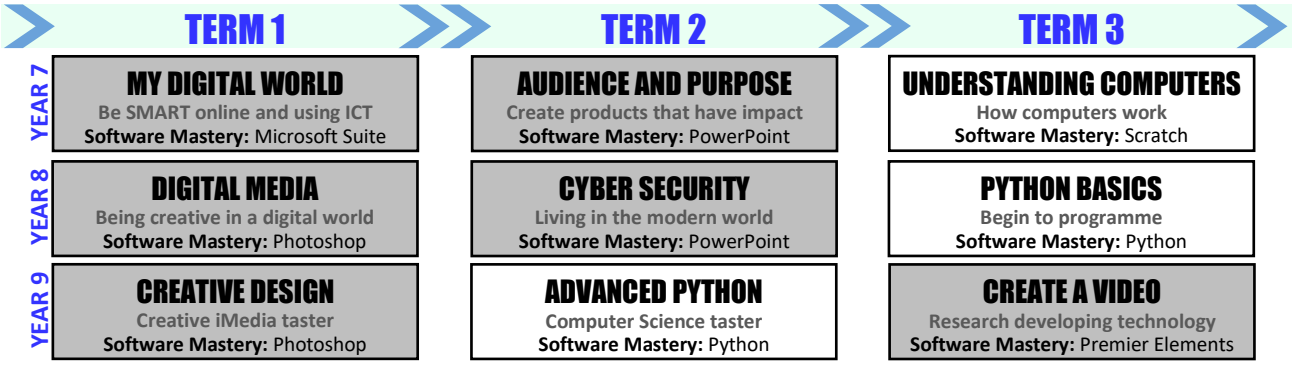
LEARNING JOURNEY GCSE Computer Science
YEAR 11 – Computer Science: TERM 2

J277/01 – COMPUTER SYSTEMS

PRIOR LEARNING (from Key Stage 3):



Aim of the Unit

In this unit students will learn how to develop an understanding of computer systems function. Students will learn the role of the Binary, and how Characters, Images, Sound are represented within computers.

Topics to be covered:

- Binary
- Images
- Sound
- Compression

Assessment Procedure

The topics covered in this unit, will help prepare students for some of the theory needed for Paper 1. This will be examined at the end of Year 11 and is worth 50% of the final mark for the course. During the lessons, students will undertake informal MCQ (multiple choice questions) to diagnose misconceptions. They will then undertake an end of unit assessment. The assessment will be out of 50 marks.

Homework

Homework will be set at least once a week. Seneca assignments will be assigned to help with knowledge retrieval in the run up to assessments. Details of individual homework can be found on Synergy.

How can you help?

Encourage your child to attend sessions with their teacher after school to improve their understanding. They should also review their theory regularly at home, as well as complete homeworks thoroughly as they are all from past exam papers. Support is also available through explainer videos contained on the class team's page.

Unit 2 – DATA REPRESENTATION (Knowledge)				
2.1 Units of data storage and binary numbers	Date:	☺	😐	☹
Binary | Bit | Byte |Nibble | Denary				
2.2 Binary arithmetic and hexadecimal	Date:	☺	😐	☹
| Addition | Overflow |Shifts | Hexadecimal |				
2.3 Characters	Date:	☺	😐	☹
Character Set | ASCII | Extended ASCII				
2.4 Images	Date:	☺	😐	☹
Vector | Pixels | Size | Resolution | Bitmap | Colour Depth | Metadata |				
2.5 Sound	Date:	☺	😐	☹
Analogue |Digital | Analogue – Digital Converter ADC | Sample | Sample resolution | Sample Rate | Hertz				
2.6 Compression	Date:	☺	😐	☹
Lossy | Lossless				

Revision, Test and Closing the Gap for topics covered so far	
TEST RESULT:	**Target Grade:**
Mark:	**Percentage:**
Grade:	**On target?**

FUTURE LEARNING: