Examination board: OCR (course code J276)

Examinations: Computer Systems:

(90 minutes, 80 marks, 50% of the total GCSE)

Computational Thinking, Algorithms and Programming:

(90 minutes, 80 marks, 50% of the total GCSE)

Non examined assessment:

Year 10 Summer Term:

Programming Project: (20 hours, compulsory part of the

course, internally assessed, time allocated monitored by

the examination board.)

Course content:

The course gives learners a real, in-depth understanding of how computer technology works.

Learners will no doubt be familiar with the use of computers and other related technology from

their other subjects and elsewhere. However, the course will give them an insight into what goes

on ‘behind the scenes’, including computer programming, which many learners find absorbing.

Focus on cyber security – It looks at phishing, malware, firewalls and people as the ‘weak point’

in secure systems.

Encourages mental versatility – Students use their new-found programming skills on an

independent coding project by solving a real-world problem of their choice. The primary

language used at QMGS is Python.

Unit J276/01: Computer systems

Systems architecture

Memory & Storage

Network topologies, protocols & layers, Wired & wireless networks

System software & System security

Ethical, legal, cultural & environmental concerns

Unit J276/02: Computational thinking, algorithms and programming

Algorithms & Programming techniques

Computational logic

Translators & facilities of languages

Data representation

Unit J276/03: Programming project (compulsory 20 hour task)

Programming techniques

Analysis, Design, Development, Testing, Evaluation & conclusion

The non-exam assessment tasks are provided by OCR. Learners will produce a report that details

the iterative development for the project. While this is not marked by the exam board, it is a

vital part of the course to build computational thinking and programming skills for the written

examination and to gain a rounded understanding of the subject.