

| Module/Unit of Learning                        | Taught During          | What will students learn?   | How are students challenged to become experts?   | Links to other Subjects |
|--|------------------------|---|--|-------------------------|
| <b>Computer Networks</b>                       | <b>Autumn – Term 1</b> | Computer networks have become an integral part of our daily lives. This unit allows learners to explore how a computer network works from the hardware required to the protocols used for communication. It also allows them to explore simulations of networks using Packet Tracer software. Packet Tracer is free for schools to use and is used in universities to train network engineers | Students challenged to apply understanding of networks to a given scenarios.   |                         |
| <b>Revision and Python Programming Project</b> | <b>Autumn – Term 2</b> | At the start of this term, learners revise key computing concepts for their upcoming PPE's. In the second half of the term learners work on an extended programming project.  | Students will be given the opportunity to solve significant problems using Python. Students may draw on some of the content in both components when engaged in Practical Programming |                         |

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|-------------------------|------------------------|---|--|--|
| <b>Network Security</b> | <b>Spring – Term 1</b> | This unit enables students to gain knowledge and understanding of the range of cybersecurity threats impacting the world, our organisations, as well as us as individuals. Learners will explore security measures that can be put in place to protect networks and your data against different forms of automated and non-automated forms of attack. Once they have understood the impact of cybercrime, they will be inspired to be part of the solution, when they learn about the potential for lucrative and fulfilling careers in cybersecurity | Students challenged to apply understanding of networks to a given scenarios. |  |
| <b>Revision</b>         | <b>Spring – Term 2</b> | Throughout this term learners revise key computing concepts in preparation for their upcoming Exams   |  |  |
| <b>Revision</b>         | <b>Summer – Term 1</b> | Throughout this term learners revise key computing concepts in preparation for their upcoming Exams   |  |  |