# BOURNVILLE SCHOOL

# CURRICULUM OVERVIEW 2019-2020

## SUBJECT:  Computing

| | | AUTUMN 1 | AUTUMN 2 | SPRING 1 | SPRING 2 | SUMMER 1 | SUMMER 2 |
|---|---|---|---|---|---|---|---|
| | | THE BIG QUESTIONS | THE BIG QUESTIONS | THE BIG QUESTIONS | THE BIG QUESTIONS | THE BIG QUESTIONS | THE BIG QUESTIONS |
| YEAR 11 | CS | **3.1 Fundamentals of Algorithms** How can pseudocode be used for problem solving? | Non-exam assessment | **3.5 Computer Networks** How are networks set up?  How can networks be made secure? | **3.4 Computer Systems** How do computers process data? | **Revision** | |
| | IMEDIA | **RO86:  Creating a digital animation**  How can digital animations be planned? | **RO86:  Creating a digital animation**  How can digital animations be created? | **RO86:  Creating a digital animation**  How can a digital animation be developed further? | **Catch up** | | |
| YEAR 10 | CS | **3.1 Fundamentals of Algorithms** How can algorithms be written to solve computational problems? | | **3.2 Programming** How can Python be used in finding solutions to complex problems? | | **3.6 Fundamentals of cyber security** What are cyber threats? How can these be prevented? | **3.7** What are the ethical, legal and environmental impacts of digital technology on wider society? |
| | IMEDIA | **RO85:  Creating a multipage website** How can multipage websites be planned for specific briefs? | **RO85:  Creating a multipage website** How can multipage websites be created? | **RO85:  Creating a multipage website** How can multipage websites be improved? | **RO81:  Pre-Production Skills** What is the purpose and content of pre-production? | **RO81:  Pre-Production Skills** How can pre-production be planned? | **RO86:  Creating a digital animation** What are the purposes and features of animation? |
| YEAR 9 | CS | **3.4 Computer Systems** What are computer systems?  How do they work? | | **3.5 Computer Networks** What is a network? How are networks set up?  How can networks be made secure? | **3.2 Programming** How can Python be used in finding solutions to simple problems? | **3.3 Fundamentals of data representation** How is data and instructions converted to binary? | |
| | IMEDIA | **RO81:  Pre-production skills** How can pre-production documents be created? | **RO82:  Creating Digital Graphics** What is the purpose and properties of digital graphics? | **RO82:  Creating Digital Graphics** How can digital graphics be planned for creation? | **RO82:  Creating Digital Graphics** How can digital graphics be created? | **RO82:  Creating Digital Graphics** How can digital graphics be improved? | **RO85:  Creating a multipage website** What are the properties and features of multipage websites? |

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| YEAR 8 | What are the different cyber threats? | How can sorting and searching algorithms be represented in pseudocode? | How can a textual programming language be used to solve a variety of computational problems? | How can ICT be used to solve graphical problems? | How are computer animations made? | How are websites developed? |
| YEAR 7 | How to stay safe online? What is the history of computers? | What are computer systems? How do they work? | What are algorithms? How can they be represented in flowcharts? | How is binary used by computers? | What is programming? How can visual programming be used to create solutions? | How can data be collected and analysed to develop creative solutions? |