Half Term	Year 7	Year 8	Year 9
1	**E-Safety** Students investigate the dangers involved in using the internet and learn different measures that can be taken to stay safe. Over the course of the project students will produce tools to warn others and an extended piece of writing.	**Global Positioning Systems** Students learn how GPS has revolutionised the world of travel. We investigate how uses of satellite technology can help us plan events in other countries and track journeys around the world. The project will be the basis for an extended piece of writing.	**Networking** Students learn how computers communicate with each other including how we all connect and communicate across the internet including the illegal access of people's computers. Students will learn about network topologies and the hardware they require. This project will be the basis of an extended piece of writing at the end.
2	**Programming** Students will learn programming skills including sequencing, variables and decision making to produce a fully automated programme	**Programming** Students will use a text based programming language to create a quiz. They will use sequencing, if statements and different data types to create a program that will ask questions and keep score	**Programming** Students will use a text based programming language to create a game. They will use sequencing, if statements and loops to create a program that guesses what the student is thinking about
3	**Basic Binary** Introduction to Binary, understanding what binary represents, converting numbers into binary, how binary can be used to store letters and binary addition	**Binary: text and graphics** This expands on what was learnt in Year 7. In this project students go in to more detail on how binary including binary subtraction, storing text in binary (ASCII) and how binary can be used to store graphics	**Binary: video and sound** This expands on what was learnt in Year 8. Students learn the difference between binary and hexadecimal, and also how binary can store videos and sound
4	**Hardware** Students will learn to recognise pieces of computer hardware and their uses. Students will use their knowledge to make a game to build a computer from a mother board	**Raspberry Pi** Students use Raspberry Pi computers to accomplish a series of tasks that could include lighting lights in an order, creating a functioning door bell, interacting with a computer game (Minecraft) and creating music	**Logic gates** Students learn how logic gates control outcomes in a computer and can be used to create Boolean operators (AND, OR, NOT)

5	**Flowal** Students learn how to use flowcharts to plan a series of events and produce outcomes depending on specific inputs	**Programming** Students use a second programming language to create a game of their choice. They must use suitable algorithms to plan their programme	**Programming** Students use a second programming language to search and sort information. This could be BASIC, HTML, JAVA Script or SQL