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| **Subject: Computing** |
| **Year 8** |
| Half -Term | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Themes/Content/A can of a product  Description automatically generated with medium confidenceUnits covered | Learn how to use Turtle to create simple shapes and edit the appearance of these (e.g. size, colour, line width)Use Turtle graphics to create shapes and patterns with iterationLearn the purpose of variables in programmingTake inputs from a user to create customised programs | Use subroutines in TurtleCreate algorithms using listsSolve a computational problem (creating a Turtle race game) | Write and execute Python programsLearn common syntax errors and how to debug programsCreate variables with appropriate naming conventionsLearn how to take inputs from a user and store this in a variableUse arithmetic operators in Python to perform calculations | Identify the use of selection in programsUse if, elif and else to create decision paths in a programCreate interactive programs using selection to respond to user inputLearn how to use the random number module in PythonCreate interactive games such as ‘rock, paper, scissors’ and ‘guess the number’.  | Understanding the basics of computer networks (LAN, WAN, Internet)Identifying network topologies and hardware (routers, switches)Exploring the fundamentals of cybersecurity (threats like malware, phishing, and prevention methods) | Learn the basics of web design and development using HTML and CSSCreate simple web pages with headings, text, images, and linksUnderstand the structure of a website (e.g., header, body, footer)Use CSS to style web pages and improve designDevelop an understanding of online safety and digital literacy through responsible web publishing |