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| **Subject: Computing** |
| **Year 9** |
| 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 | Using count-controlled (for loops) and condition-controlled (while loops) iterationCombining iteration with selection (if, else, elif statements) to create more complex programsWorking with variables, inputs, and outputs to design programs that solve specific problems | Applying logical reasoning to predict, test, and evaluate programs, supporting the development of debugging skills Designing and developing modular programs with clear, maintainable code and appropriate comments | Learn how to convert between positive denary numbers into binary numbers and vice versa. Learn how to add two binary integersUnderstand how NOT, AND & OR gates process their inputsWork out the output of a logic circuit for a given set of inputsExplore logic gates, explain their rules and complete their truth tableTo be able to create logic diagrams/ circuits for given scenarios | Learn the purpose and use of databases in storing and retrieving dataUnderstand key concepts such as tables, records, fields, and data typesUse simple SQL commands to retrieve data (SELECT, WHERE, ORDER BY)Develop problem-solving skills by querying databases to find information | Use Python to create a digital escape room with interactive puzzlesApply problem-solving skills to design challenges that require computational thinkingIncorporate selection and iteration to create engaging and dynamic gameplayTest and evaluate digital puzzles, making improvements based on feedbackDevelop logical reasoning through coding and debugging | Use Python with Turtle to develop a simple retro game (e. g., Snake, Pong)Apply creativity by designing visual elements and game mechanicsLearn how to test and debug code to improve game functionalityExplore how to make games user-friendly with clear instructions and feedback |