**Year 8 Computing & ICT Assessment – Summer Term**

*Units: Binary & Logic Gates, Road Safety*

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|  | Mastery | KS2 L5 | KS2 L4 | KS2 L3 |
| **Knowledge** | I can:   * Explain how logic gates can be used to manipulate binary values * Discuss how non-numeric data can be stored on computers using binary | I can:   * Explain why numbers are stored on computers using binary * Describe how logic gates can be used together to solve real-world problems | I can:   * Explain how numbers are stored on computers using binary * State the names and purposes of different logic gates | I can:   * Understand that numbers are stored on computers using binary * Name simple logic symbols |
| **Skills** | IT Skills:   * Consistently use file and folder names to organise my work logically   Media Skills:   * Combine extremely effective and detailed planning tools with clear and engaging multimedia tools to promote a finished product   Computing Skills:   * Create efficient code that uses logic, variables and a range of control structures * Accurately convert numbers between binary, denary and hexadecimal | IT Skills:   * Use file and folder names to organise my work in a logical manner   Media Skills:   * Use a variety of different planning methods   Computing Skills:   * Use a variety of methods to loop or repeat program code * Use variables to store data * Calculate truth tables from logic circuits with 2 or more gates * Accurately convert 4 and 8 bit binary numbers to denary | IT Skills:   * Use meaningful filenames * Use formatting tools to create consistent documents   Media Skills:   * Create a simple plan (visualisation, storyboard or mindmap) for a product   Computing Skills:   * Use if statements or similar events to make things happen in computer programs * Calculate truth tables from simple logic gates * Convert 4 bit binary numbers and denary equivalents | IT Skills:   * Save files in specific locations * Use some formatting tools   Media Skills:   * Create a basic idea for a product   Computing Skills:   * Create a computer program from a blank page |
| **Application** | * Design appropriate and efficient logic circuits that solve real world problems * Deisgn and create a computer game that is fit for audience and purpose as well as being technically detailed | * Design logic circuits to solve a given problem * Create an effective computer game that gives the user feedback (eg. score / timer) | * Use logic gates to solve simple problems * Create a basic or largely functioning computer game | * Identify larger or smaller binary numbers * Create a part of a computer game |