**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
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| **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
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| **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
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