**KS3 ICT / COMPUTING ASSESSMENT YEAR 9**

**Student Name Teacher Class Year**

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| **Target Level** |  | **Term 1** |  | **Term 2** |  | **Term 3** |  | **Term 4** |  | **Term 5** |  | **Term 6** |  | **Final****Level** |  |

**LEVEL 5**

❒❒❒❒❒❒❒ I partially decompose a problem into its sub-problems and make use of a notation to represent it.

❒❒❒❒❒❒❒ I analyse and present an algorithm for a given task. (robomind)

❒❒❒❒❒❒❒ I explore the effects of changing the variables in a model or program. (Spreadsheet)

❒❒❒❒❒❒❒ I develop, try out and refine sequences of instructions, and show efficiency in framing these instructions.

❒❒❒❒❒❒❒ I can make use of procedures without parameters in their programs;

❒❒❒❒❒❒❒ I will also be able to manipulate strings and select appropriate data types.

❒❒❒❒❒❒❒ I can design and use simple (1D) data structures.

❒❒❒❒❒❒❒ I recognise similarities between simple problems and algorithms.

❒❒❒❒❒❒❒ I can reflect critically on their programs in order to make improvements in subsequent programming exercises

Examples of what I did

What do I need to do next?

**LEVEL 6**

❒❒❒❒❒❒❒ I can describe more complex algorithms, for example, sorting or searching algorithms.

❒❒❒❒❒❒❒ I can describe systems and their components using diagrams.

❒❒❒❒❒❒❒ I can design and use 2D data structures.

❒❒❒❒❒❒❒ I can fully decompose a problem into its sub-problems and can make use of a notation to represent it.

❒❒❒❒❒❒❒ I can recognise similarities in given simple problems and able to produce a model which fits some aspects of these problems.

❒❒❒❒❒❒❒ I use programming interfaces to make predictions and vary the rules within the *programs*.

❒❒❒❒❒❒❒ I can assess the validity of their programs by considering or comparing alternative solutions.

❒❒❒❒❒❒❒ I am capable of independently writing or debugging a short program

❒❒❒❒❒❒❒ I make use of procedures with parameters and functions returning values in the programs and can manipulate 1-dimensional arrays.

Examples of what I did

What do I need to do next?

**LEVEL 7**

❒❒❒❒❒❒❒ I can describe key algorithms, for example sorting/searching, parity, aware of efficiency.

❒❒❒❒❒❒❒ I can fully decompose a problem into its sub-problems and can make error-free use of an appropriate notation to represent it.

❒❒❒❒❒❒❒ I can recognise similarities in given more complex problems and are able to produce a model which fits some aspects of these problems.

❒❒❒❒❒❒❒ I use pre-constructed modules of code to build a system.

❒❒❒❒❒❒❒ I can analyse complex data structures, use and simplify them

❒❒❒❒❒❒❒ I can design and use complex data structures including relational databases.

❒❒❒❒❒❒❒ I can debug statements.

❒❒❒❒❒❒❒ I consider the benefits and limitations of programming tools and the results they produce.

❒❒❒❒❒❒❒ I can use these results to inform future judgements about the quality of their programming.

❒❒❒❒❒❒❒ I program in a text-based programming language, demonstrating the processes outlined above.

❒❒❒❒❒❒❒ I can document and demonstrate that their work is maintainable.

❒❒❒❒❒❒❒ I use suitable tools to work in a variety of contexts, translating specifications expressed in everyday language into the form required by the system.

Examples of what I did

What do I need to do next?

**LEVEL 8**

❒❒❒❒❒❒❒ I independently select appropriate programming constructs for specific tasks, taking into account ease of use and suitability.

❒❒❒❒❒❒❒ I can recognise similarities in more complex problems and are able to produce a model that fits most aspects of these problems

❒❒❒❒❒❒❒ I can independently write the program for others to use and apply advanced debugging procedures.

❒❒❒❒❒❒❒ I can Pupils can analyse, use and simplify complex data structures, for example, normalisation.

❒❒❒❒❒❒❒I can demonstrate an understanding of the relationship between complex real life and the algorithm, logic and visualisations when programming.

Examples of what I did

What do I need to do next?

**EXCEPTIONAL PERFORMANCE**

❒ I can recognise similarities between more complex problems, and are able to produce a general model that fits aspects of them all.

❒ I competently and confidently use a general-purpose text-based programming language to produce solutions for problems using code efficiently.

How well have you worked? Write the date onto the line to track your progress.

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**Teacher Comment**