



## Year 7 Progress Grid – Spring Term

Name:

Class:

| Topic                       | Grades 3/2/1 - (D/E/F)  | Grades 6/5/4 - (B/C)  | Grades 9/8/7 - (A*/A)  |
|-----------------------------|---|---|--|
| <b>Terminology</b>          | I need support to use the correct terminology   | I sometimes use the correct terminology   | I always use the correct terminology   |
| <b>Number Systems</b>       | <ul style="list-style-type: none"> <li>I can identify storage capacity in size order with help</li> <li>I can convert 2 bit binary numbers into denary</li> <li>I can explain the term 'character set'</li> </ul> | <ul style="list-style-type: none"> <li>I can identify storage capacity in size order</li> <li>I can convert 4 bit binary numbers into denary</li> <li>I can explain how ASCII represents that character set of a computer</li> </ul>        | <ul style="list-style-type: none"> <li>I can identify storage capacity in size order</li> <li>I can convert 8 bit binary numbers into denary</li> <li>I can explain the difference between using an ASCII character set and a Unicode character set</li> </ul> |
| <b>Encryption</b>           | <ul style="list-style-type: none"> <li>I am aware of one method of encryption (Morse)</li> </ul>  | <ul style="list-style-type: none"> <li>I am aware of different methods of encryption (Morse, Semaphore, Caesar Ciphers)</li> </ul>  | <ul style="list-style-type: none"> <li>I am aware of a range of encryption methods (Morse, Semaphore, Caesar Ciphers and Vigniere Ciphers)</li> </ul>  |
| <b>Image Representation</b> | <ul style="list-style-type: none"> <li>Using binary code provided, I can represent images on paper</li> <li>I can explain the term metadata</li> </ul>  | <ul style="list-style-type: none"> <li>Using binary code provided, I can represent images on paper</li> <li>I can create my own images using binary code</li> <li>I can explain the term metadata and apply to limited scenarios</li> </ul> | <ul style="list-style-type: none"> <li>I can represent images on paper using binary code</li> <li>I can create my own images using binary code</li> <li>I can explain the term metadata and apply it to a range of scenarios</li> </ul>                        |



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|                               |  |  |   |
|-------------------------------|--|--|---|
| <b>Software</b>               | <ul style="list-style-type: none"> <li>• I can explain the term software</li> <li>• I can explain the purpose of an operating system and give at least 2 examples</li> </ul>   | <ul style="list-style-type: none"> <li>• I can explain the term software</li> <li>• I can explain the purpose of an operating system</li> <li>• I can explain the main categories of software and give examples:               <ul style="list-style-type: none"> <li>○ Proprietary</li> <li>○ Bespoke/Customised</li> <li>○ Operating Systems</li> <li>○ Open Source</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• I can explain the term software</li> <li>• I can explain the purpose of an operating system</li> <li>• I can explain the main categories of software and give examples</li> <li>• I can give examples of the main types of software</li> <li>• I can explain the advantages and disadvantages of different categories of software</li> </ul> |
| <b>Databases</b>              | <ul style="list-style-type: none"> <li>• I can explain the term database</li> <li>• I can recognise some of the main features of a database               <ul style="list-style-type: none"> <li>○ Tables</li> <li>○ Fields</li> <li>○ Records</li> </ul> </li> <li>• I can recognise the main data types</li> </ul> | <ul style="list-style-type: none"> <li>• I can explain the term database</li> <li>• I can recognise most of the main features of a database:               <ul style="list-style-type: none"> <li>○ Tables</li> <li>○ Fields</li> <li>○ Records</li> <li>○ Queries</li> </ul> </li> <li>• I can recognise most data types</li> </ul>   | <ul style="list-style-type: none"> <li>• I can explain the term database</li> <li>• I can recognise most of the main features of a database:               <ul style="list-style-type: none"> <li>○ Tables</li> <li>○ Fields</li> <li>○ Records</li> <li>○ Queries</li> <li>○ Reports</li> <li>○ Data Entry Forms</li> </ul> </li> <li>• I can recognise all data types</li> </ul>    |
| <b>Computational Thinking</b> | <ul style="list-style-type: none"> <li>• I can explain the term ‘algorithm’ and give limited examples</li> <li>• I can write basic pseudocode steps</li> <li>• I can follow a basic flow chart (sequence)</li> <li>• I can recognise some flowchart symbols</li> </ul>   | <ul style="list-style-type: none"> <li>• I can explain the term ‘algorithm’ and give some examples</li> <li>• I can explain the term decomposition</li> <li>• I can create an algorithm</li> <li>• I can write pseudocode steps</li> <li>• I can recognise most flow chart symbols</li> </ul>  | <ul style="list-style-type: none"> <li>• I can explain the term ‘algorithm’ and give a range of examples</li> <li>• I can explain the term decomposition</li> <li>• I can create my own algorithm</li> <li>• I can write detailed pseudocode steps</li> <li>• I can recognise a range of flowchart symbols</li> </ul>   |





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|                               |  |  |   |
|-------------------------------|--|--|---|
|                               |  | <ul style="list-style-type: none"> <li>I can create a flowchart to match pseudocode</li> </ul>   | <ul style="list-style-type: none"> <li>I can create a flowchart to match pseudocode</li> </ul>  |
| <b>Visual Programming</b>     | <ul style="list-style-type: none"> <li>I am familiar with the basic features within the Scratch interface</li> <li>I can create a polygon in Scratch (square)</li> </ul>   | <ul style="list-style-type: none"> <li>I am familiar with most features within the Scratch interface</li> <li>I can independently create a range of polygons</li> </ul>  | <ul style="list-style-type: none"> <li>I am familiar with a range of features within the Scratch interface</li> <li>I can independently create a wide range of polygons</li> <li>I can create Spirograph patterns using polygons</li> </ul>   |
| <b>Text Based Programming</b> | <ul style="list-style-type: none"> <li>I am familiar with the basic features within the Python interface</li> <li>I can recognise the difference between the Command Line and IDLE interfaces</li> <li>I can use Turtle graphics to create a polygon (square/sequence) using the code provided</li> <li>I can alter the pen size and colour, with support</li> </ul> | <ul style="list-style-type: none"> <li>I am familiar with most features within the Python interface</li> <li>I can explain the difference between the Command Line and IDLE interfaces</li> <li>I can use Turtle graphics to create polygons using the code provided</li> <li>I can independently alter the pen size and colour</li> <li>I can change the speed of the turtle</li> </ul> | <ul style="list-style-type: none"> <li>I am familiar with a range of features within the Python interface</li> <li>I can explain the difference between the Command Line and IDLE interfaces</li> <li>I can explain the advantages and disadvantages between the Command Line and the IDLE interfaces</li> <li>I can use Turtle graphics to create a range of polygons using the code provided including loops</li> <li>I can independently alter the pen size and colour</li> <li>I can change the speed of the turtle</li> <li>I can change the shape of the turtle</li> <li>I can relate the pen colour to Hexadecimal code</li> </ul> |

