

## Key Stage 5 Curriculum Map 2019 - 2020

### Term 1

| <b>Subject: Computer Science</b>                |   | <b>Year Group: 13</b> |
|---|---|-----------------------|
| <b>Week/Date</b>                                | <b>Focus/Topic</b>  |                       |
| 1<br>Sept 2 <sup>nd</sup> -5 <sup>th</sup>      | <ul style="list-style-type: none"> <li>• Baseline assessments, curriculum orientation and expectations</li> </ul>   |                       |
| 2<br>Sept 8 <sup>th</sup> -12 <sup>th</sup>     | <ul style="list-style-type: none"> <li>• Programming paradigms - both procedural and object-oriented programming paradigms.</li> </ul>  |                       |
| 3<br>Sept 15 <sup>th</sup> -19 <sup>th</sup>    | <ul style="list-style-type: none"> <li>• Programming paradigms - both procedural and object-oriented programming paradigms.</li> </ul>  |                       |
| 4<br>Sept 22 <sup>nd</sup> -26 <sup>th</sup>    | <ul style="list-style-type: none"> <li>• Abstract data types               <ul style="list-style-type: none"> <li>○ Stacks</li> <li>○ Queues</li> <li>○ Lists</li> <li>○ Graphs</li> </ul> </li> </ul>                          |                       |
| 5<br>Sept 29 <sup>th</sup> -Oct 3 <sup>rd</sup> | <ul style="list-style-type: none"> <li>• Abstract data types               <ul style="list-style-type: none"> <li>○ Binary Tree</li> <li>○ Hashing/hash table</li> <li>○ Dictionary's</li> <li>○ Vectors</li> </ul> </li> </ul> |                       |
| 6<br>Oct 6 <sup>th</sup> -10 <sup>th</sup>      | <ul style="list-style-type: none"> <li>• Reverse Polish Notation</li> <li>• Programming linear &amp; binary searches</li> <li>• Sorting algorithms</li> <li>•</li> </ul>  |                       |
| 7<br>Oct 13 <sup>th</sup> -17 <sup>th</sup>     | <ul style="list-style-type: none"> <li>• Optimisation algorithms -Dijkstra's short path algorithm</li> <li>• Traversals</li> <li>• FSM</li> </ul>   |                       |
| 8<br>Oct 22 <sup>nd</sup> -24 <sup>th</sup>     | Mid Term Break  |                       |
| 9<br>Oct 27 <sup>th</sup> -Oct 31 <sup>st</sup> | <ul style="list-style-type: none"> <li>• Maths for regular expressions</li> <li>• Regular expressions</li> </ul>  |                       |

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|---|---|
| 10<br>Nov 3 <sup>rd</sup> -7 <sup>th</sup>                        | <ul style="list-style-type: none"> <li>• BNF</li> <li>• Big O Notation</li> </ul> |
| 11<br>Nov 10 <sup>th</sup> -14 <sup>th</sup>                      | <ul style="list-style-type: none"> <li>• Turing Machine</li> </ul>                |
| 12<br>Nov 17 <sup>th</sup> -21 <sup>st</sup>                      | <ul style="list-style-type: none"> <li>• Number systems</li> </ul>                |
| 13<br>Nov 24 <sup>th</sup> -28 <sup>th</sup>                      | <ul style="list-style-type: none"> <li>• NEA</li> </ul>                           |
| 14<br>Dec 1 <sup>st</sup> -5 <sup>th</sup>                        | <b>Assessment Weeks</b>   |
| 15<br>Dec 8 <sup>th</sup> -12 <sup>th</sup>                       |   |
| Winter Break: December 13 <sup>th</sup> – January 2 <sup>nd</sup> |   |