

## Holland Park School | **Year 7: Topic 1: E-safety**

| Overview       | This unit introduces the key principles of E-safety. It covers the dangers of being online and using social media and the differences between private and public information. Students will learn how to safely use technology and how to stay safe online, including knowing what to do if they feel unsafe online. Here, students broaden their understanding of cyberbullying and the differences |
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|                | between inappropriate and appropriate content and will be able to identify the points of contact in different scenarios. This unit will  |
|                | prepare students to navigate the complex digital world in a safe way.  |
| Assessment     | Students will learn how to answer scenario-based questions in this unit. They will learn how to evaluate a scenario and to make  |
|                | informed judgements based on learning. They will also learn key skills in presenting information culminating in the production of a  |
|                | presentation to evidence learning. This will be assessed through summative assessment with question testing student's key  |
|                | knowledge.   |
| Additional key | Data   |
| terms          | Cyberbullying  |
|                | Private information  |
|                | Public information   |
|                | Social media   |
| Additional     | https://www.bbc.co.uk/bitesize/guides/zrtrd2p/revision/1 pages (1,4)   |
| Resources      |  |



## Holland Park School | **Year 7**: **Topic2: Introduction to algorithmic thinking**

| Overview       | This unit introduces the concepts of algorithms. It builds a foundation of algorithmic thinking and the use of decomposition &     |
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|                | abstraction to help solve real world problems more efficiently. It will equip students with the skills to create algorithms by     |
|                | decomposing large problems and abstracting unnecessary information to increase efficiency. Students will learn how computers       |
|                | think and develop an understanding of how to plan their programs and the level of detail required to program applications.         |
| Assessment     | Skill focus: thinking logically.   |
|                | Students will practice the creation of algorithms and be learning to use both abstraction & decomposition to create algorithms for |
|                | multiple different tasks. They will learn to show working when creating an algorithm and will showcase this in class. This will be |
|                | assessed through an end of unit assessment.  |
| Additional key | Algorithms   |
| terms          | Decomposition  |
|                | Abstraction  |
| Additional     | https://www.bbc.co.uk/bitesize/articles/z8ngr82#znghsk7  |
| Resources      | https://www.bbc.co.uk/bitesize/guides/zttrcdm/revision/1   |
|                | https://www.bbc.co.uk/bitesize/articles/z3whpv4  |



## Holland Park School | **Year 7: Topic3: data representation: Binary numbers**

| Overview       | This unit introduces the concepts of data representation for computers. It builds a foundation of how computers understand numbers by introducing binary numbers as base 2 numbers and comparing them to denary(base 10). Students will learn how to convert denary numbers to binary and vice versa. They will develop an understanding of why computers as a collection of transistors understand and use binary and how computers view all data entered by users. |
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| Assessment     | Students will learn how to convert numbers between binary and denary and how to show working during this process. They will be assessed through in class questions requiring comprehensive conversion questions to be answered. This unit will be assessed through summative assessment with question testing student's key knowledge.   |
| Additional key | Binary   |
| terms          | Denary   |
| Additional     | https://www.bbc.co.uk/bitesize/guides/z26rcdm/revision/2   |
| Resources      | https://www.bbc.co.uk/bitesize/quides/z26rcdm/revision/3   |



## Holland Park School | Year 7: Topic4: Basic Application development

| Overview       | This unit introduces the fundamentals of computer programming and the use of planning & programming to create a product to a set     |
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|                | of requirements. Students will learn the use of sequence, selection and iteration and develop a basic understanding of the use of if |
|                | statements and for loops for number manipulation to make programs to a set brief. They will develop an understanding of how          |
|                | computers can process information using conditions to decide the next action while learning the basics of repeating actions          |
|                | efficiently.   |
| Assessment     | Skill focus: programming skills  |
|                | Students will practice questions that require knowledge of programming and be assessed through practical programming done in         |
|                | class in relation to a project. Students' knowledge of programming will be assessed through an end of unit assessment.               |
| Additional key | Sequence   |
| terms          | Selection  |
|                | Iteration  |
|                | If statement   |
|                | For loop   |
| Additional     | https://www.bbc.co.uk/bitesize/guides/z2p9kqt/revision/1   |
| Resources      |  |