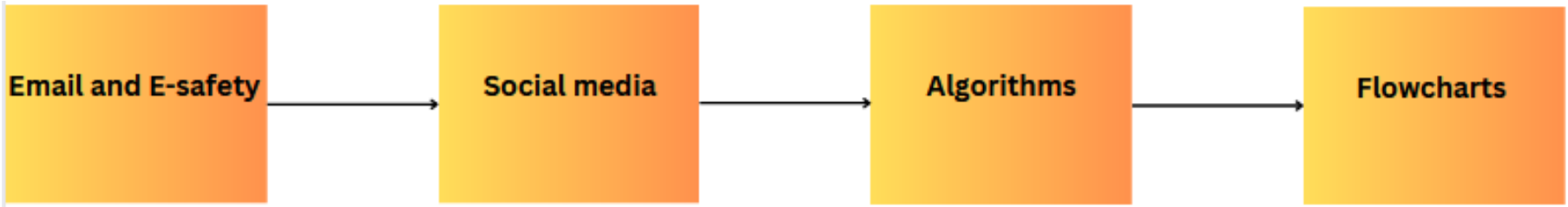
# Holland Park School | *Year 7 Computer science: Online safety and algorithms*

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| **Overview** | By the end of this unit, students will be able to confidently identify:<br><br>• Dangers of using technology<br>• How to safely use technology and computers<br>• The role of email and how to use emails<br>• Dangers of using social media and how to mitigate these<br>• The key components of algorithmic thinking (abstraction, decomposition &pattern recognition)<br>• The key components of a flowchart<br>• The uses of flowcharts to solve different programmatic problems. |
| **Assessment** | By the end of the unit students will understand:<br><br>1. What the dangers of being online are including cyberbullying, online strangers and identity theft.<br>2. How to keep data secure and create strong passwords.<br>3. How to stay safe online and what to do in case you are uncomfortable online (Block, Report, CEOP).<br>4. Abstraction, decomposition and pattern recognition.<br>5. The shapes and methods used to draw a flowchart.<br>6. How to create flowcharts based on a series of algorithms |

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| **Key words** | **Email, social media, data, computer, network, cyberbullying, block, report, private data, public data, abstraction, decomposition, algorithm, flowchart, decision** |
| **Key dates** | **n/a** |

| Topics | Key content | Glossary link | Knowledge Organiser link |
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| **E-safety and E-mail** | The core dangers associated with using technology and how to safely use computers and electronic devices.<br>How to safely use email and basic email functionality.<br>Understand netiquette and how to structure emails to professionals and peers. | | https://www.bbc.co.uk/bitesize/guides/z7t6jhv/revision/2<br>https://www.bbc.co.uk/bitesize/guides/z7t6jhv/revision/3<br>https://www.bbc.co.uk/bitesize/guides/z8nk87h/revision/5 |
| **Social media** | The dangers of social media<br>The effects of using social media<br>How to stay safe when online and key methods to avoid damages online | | https://www.bbc.co.uk/bitesize/guides/zrtrd2p/revision/1<br>https://www.bbc.co.uk/bitesize/guides/zrtrd2p/revision/2 |
| **Algorithms** | Algorithmic thinking as a combination of Decomposition, Abstraction & pattern recognition.<br><br>Writing algorithms for scenarios using Algorithmic thinking. | | https://www.bbc.co.uk/bitesize/guides/zpp49j6/revision/1 |
| **Flowcharts** | The basic shapes associated with creating flowcharts<br>Converting algorithms into flowcharts and vice versa<br>How to create flowcharts for different scenarios and problems. | | https://www.bbc.co.uk/bitesize/guides/zpp49j6/revision/3 |