



**Highsted Knowledge Organiser**  
**Computer Science: E-safety – Year 7 – Term 1**

**What I need to know**

- What are the dangers of the Internet
- How to identify signs of cyberbullying and prevent them
- How to have a positive digital footprint online
- How to create a strong password
- How to prevent malware

**Key Vocabulary**

- Cyberbullying	- Private information	- Digital footprint
- Malware	- Antivirus	- Phishing
- Attachment	- Password	- Sharing online
- Hackers	- Data theft	- Social media

**Student reference point**

**Online Safety**

**Cyberbullying:** Act of using technological device to bully someone online  
**Private information:** name, date of birth, address  
**Malware:** A software that is design to corrupt, damage or gain unauthorised access to a computer system  
**Anti-virus:** A software that scans the computer system and attempts to remove all the malware on the system  
**Hacking:** When someone gets unauthorised to a system to steal information  
**Digital footprint:** The content that we leave behind online  
**Phishing:** An attempt to gain information via pretending to be someone else mainly using emails  
**Data theft:** When someone gets hold of sensitive data like financial or confidential information illegally  
**Social media:** It is a technology that allows people to share information via text or multimedia instantly through a network

**Keeping your data safe**

- Use a strong password that contains at least 8 characters including letters, numbers, symbols
- The password should be memorable but not include any personal or private information
- Use biometrics or patterns such as face recognition or your voice as your password
- Install an antivirus software to prevent viruses from getting into your system or hackers getting into your system
- Use physical key and lock to keep things secure (important paper files or servers)



**Cyberbullying**

- It is the use of technology to harass, intimidate, bully other people online, such as on social media, messaging platforms, gaming platforms and mobile devices.
- Other terms used alongside cyberbullying are flaming, cyberstalking, trolling, denigration, exclusion, impersonation and trickery.
- Behaviour associated with cyberbullying are:
  - Spreading lies or posting embarrassing photos or videos
  - Sending hurtful, abusive messages
- People are affected mentally, emotionally, physically from cyberbullying.
- To help prevent cyberbullying you can help by:
  - Thinking what you post
  - Use privacy settings on your social media services
  - Speak out
  - Protect your password
  - Contact CEOP, the police or NSPCC

**Digital Footprint**

- Digital footprint is the content you leave behind when going online.
- It can be used to track your history and activities online, for instance online shopping, fitness tracking and many others.
- Your digital footprint can be both positive and negative.
- Positive digital footprint can be being polite online.
- Negative digital footprint can be posting rude comments online.
- Digital footprint activities can be active or passive.
- Active digital footprint is when you are deliberately sharing personal information online for example being very active on a social networking site.
- Passive digital footprint is when websites you are visiting are collecting your data like your IP address or search history without you realising it.

**Challenge question**

- What precautions will you take with your data when saving it on the cloud?

**Suggested reading**

- <https://www.bbc.co.uk/bitesize/guides/zrtrd2p/revision/1>
- <https://www.bbc.co.uk/bitesize/guides/z9p9kqt/revision/1>



## Highsted Knowledge Organiser

### Computer Science: Databases – Year 7

#### What I need to know

- What is a database
- What are the advantages and disadvantages of databases
- What are the different data types
- How to create and populate a table
- How to design a form

#### Key Vocabulary

- Database	- Data types
- Table	- Fields
- Records	- Form
- Look up/validation rules	- Primary key

#### Student reference point

Database	Examples of databases	Advantages of databases	Disadvantages of databases
<p>A database is a collection of an ordered set of data in a <b>table</b>. A <b>field</b> is one piece of information of a person or object. (column)</p> <p>A <b>record</b> is all the information for one person or object. (row)</p>	<p>Facebook, Google, dictionary, SIMS, Amazon</p>	<ul style="list-style-type: none"> <li>- Easy to add, delete, amend data</li> <li>- Data can be saved securely by the use of passwords and access levels</li> <li>- Data can easily be shared with many people at once</li> </ul>	<ul style="list-style-type: none"> <li>- Databases are expensive to design and maintain</li> <li>- Database system has its limitations on expanding and making it better – a new one might be required</li> </ul>

Data Types	Tables Creation	Table View																				
<p><b>Autonumber</b> – generates an automatic numeric data</p> <p><b>Number</b> – allows only numeric data entered by the user</p> <p><b>Text</b> – allows letters, numbers, symbols</p> <p><b>Date/time</b> – allows date and time format data</p>	<p>Create the fields and choose the data types</p> <table border="1"> <thead> <tr> <th>Field Name</th> <th>Data Type</th> </tr> </thead> <tbody> <tr><td>ID</td><td>AutoNumber</td></tr> <tr><td>Superhero name</td><td>Short Text</td></tr> <tr><td>Gender</td><td>Short Text</td></tr> <tr><td>Intelligence</td><td>Number</td></tr> <tr><td>Speed</td><td>Number</td></tr> <tr><td>Power</td><td>Number</td></tr> <tr><td>Species</td><td>Short Text</td></tr> <tr><td>Salary</td><td>Currency</td></tr> <tr><td>Picture</td><td>OLE Object</td></tr> </tbody> </table>	Field Name	Data Type	ID	AutoNumber	Superhero name	Short Text	Gender	Short Text	Intelligence	Number	Speed	Number	Power	Number	Species	Short Text	Salary	Currency	Picture	OLE Object	<p>Add data to the table</p>
Field Name	Data Type																					
ID	AutoNumber																					
Superhero name	Short Text																					
Gender	Short Text																					
Intelligence	Number																					
Speed	Number																					
Power	Number																					
Species	Short Text																					
Salary	Currency																					
Picture	OLE Object																					

Forms – allow data to be presented in a better way, can be customised with styles	Example of a form online

#### Challenge question

- How can we ensure that data is entered correctly in the database and has met all the criteria of the data type format?

#### Suggested reading

- <https://www.bbc.co.uk/bitesize/guides/zswnb9q/revision/1>