COMPUTING Concepts

Computing Systems

- Computer systems
- Computer networks
- Safety and security
- Impact of technology
- Effective use of tools

Programming

- Programming
- Algorithms
- Design and development
- Safety and security
- Effective use of tools
- Impact of technology

Data & Information

- Data and information
- Recording data
- Safety and security
- Organising data
- Effective use of tools
- Impact of technology

Creating Media

- Creating media
- Design and development
- Safety and security
- Effective use of tools
- Impact of technology

Online Safety

- Self-image & identity
- Online relationships
- Online reputation
- Online bullying
- Managing online information
- Health, wellbeing and lifestyle
- Privacy and security
- Copyright and ownership

Concepts				
Computing systems and networks	**Programming**	**Data and information**	**Creating media**	**Online Safety**

Components

Computer systems - Understand what a computer is, and how its constituent parts function together as a whole. **Computer networks** - Understand how networks can be used to retrieve and share information, and how they come with associated risks.	**Programming** - Create software to allow computers to solve problems. **Algorithms** - Be able to comprehend, design, create, and evaluate algorithms. **Design and development** - Understand the activities Involved in planning, creating, and evaluating computing artefacts.	**Data and information** - Understand how data is stored, organised, and used to represent real-world artefacts and scenarios.	**Creating media** - Select and create a range of media including text, images, sounds, and video. **Design and development** - Understand the activities involved in planning, creating, and evaluating computing artefacts.	**Self-image and identity** - explores the differences between online and offline identity beginning with self-awareness, shaping online identities and media influence in propagating stereotypes. It identifies effective routes for reporting and support and explores the impact of online technologies on self-image and behaviour. **Online relationships** - explores how technology shapes communication styles and identifies strategies for positive relationships in online communities. It offers opportunities to discuss relationships, respecting, giving and denying consent and behaviours that may lead to harm and how positive online interaction can empower and amplify voice. **Online reputation** - explores the concept of reputation and how others may use online information to make judgements. It offers opportunities to develop strategies to manage personal digital content effectively and capitalise on technology's capacity to create effective positive profiles. **Online bullying** - explores bullying and other online aggression and how technology impacts those issues. It offers strategies for effective reporting and intervention and considers how bullying and other aggressive behaviour relates to legislation. **Managing online information** - explores how online information is found, viewed and interpreted. It offers strategies for effective searching, critical evaluation of data, the recognition of risks and the management of online threats and challenges. It explores how online threats can pose risks to our physical safety as well as online safety. It also covers learning relevant to ethical publishing. **Health, wellbeing and lifestyle** - explores the impact that technology has on health, well-being and lifestyle e.g. mood, sleep, body health and relationships. It also includes understanding negative behaviours and issues amplified and sustained by online technologies and the strategies for dealing with them.
Effective use of tools - Use software tools to support computing work.				**Privacy and security** - explores how personal online information can be used, stored, processed and shared. It offers both behavioural and technical strategies to limit impact on privacy and protect data and systems against compromise.
Impact of technology - Understand how individuals, systems, and society as a whole, interact with computer systems.				**Copyright and ownership** - explores the concept of ownership of online content. It explores strategies for protecting personal content and crediting the rights of others as well as addressing potential consequences of illegal access, download and distribution.
Safety and security - Understand risks when using technology.				

References:

- Teach Computing Curriculum, NCCE, https://teachcomputing.org/curriculum

- Education for a Connected World (2020), https://www.gov.uk/government/publications/education-for-a-connected-world