




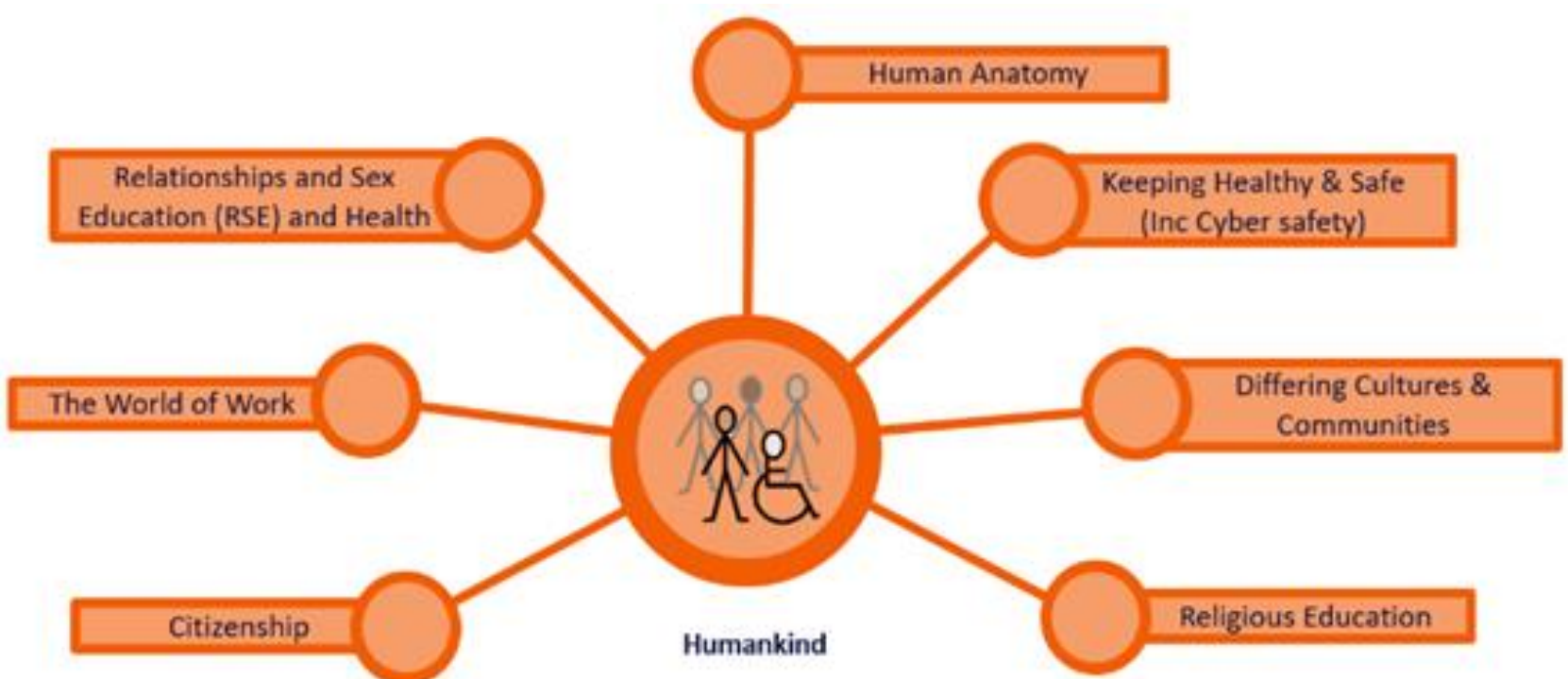
ICT and Computing Curriculum Map, L1 - U4

ICT and Computing at Discovery allows our students to develop their digital literacy and programming skills through a variety of engaging and thought-provoking methods. Our students will develop their knowledge of E-safety and computational thinking in relation to computing in modern society and the future. Our students will develop their knowledge and skills through the grades and steps driven by topics every half term that uses the 4 corners of Engage, Develop, Innovate and Express to embed learning.

The following represent key focus areas within each subject, taken from the knowledge map:

Safety and Responsibility		Have knowledge on becoming safe, responsible, competent, confident and creative users of information and communication technology.
Analyse Problems		Gain knowledge and analyse problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems.
Computer Science		Gain knowledge and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.

Computing and ICT creates cross-curricular links through the humankind big idea.



By prioritising safeguarding as a thread throughout the ICT and computing curriculum, this ensures that the skills and knowledge that children require to keep themselves safe is consistently taught.

Multimedia
Use of image editing software to develop personal images.
Create a range of mini beast images using a range of image editing skills and techniques




Online Safety strand: recognise inappropriate content








Data Handling
Gathering and recording data to begin to develop data handling skill.
Gather data based on weather patterns. Record data using a range of Spreadsheet skills and pictograms

Online Safety strand: recognise inappropriate contact and conduct




Photography
Creating digital maps; Research; Logical reasoning and algorithms; E-safety; Online discussion; Posters

Online Safety strand: know how to report concerns


Multimedia: Combine and use a range of software to Develop an informative interactive presentation with information gathered during the topic.

Online Safety strand: Privacy settings online.

Multimedia: Use and explore image editing software and develop simple editing skills. Capture and edit images using image editing software to create past and future images.




Online Safety strand: Explore online identities.





Programming: Understanding the programming techniques needed for a given project. Create a sequence of instructions to navigate the astronaut around the moon

Online Safety strand: understand a range of ways to use technology safely, respectfully, responsibly and securely

U4

Multimedia: Further develop internet searching skills and knowledge of interactivity. Create an ecommerce website for witches and wizards to buy their essential equipment from.




Online Safety strand: recognise inappropriate content








Multimedia: Develop internet searching skills and knowledge of interactivity. Create an interactive guide to the USA using information and resources from different areas of ICT.

Online Safety strand: recognise inappropriate contact and conduct

Programming. Develop an understanding of algorithms and how programs use specific instructions. Create an algorithm to describe the human digestive system and create a visual program to represent the process.

Online Safety strand: know how to report concerns

Data Handling: Develop further knowledge of effective data handling. Create a spreadsheet and database for a brand-new The Romans museum. Keep track of profit and loss.

Online Safety strand: Privacy settings online.





Multimedia: Research and design information and resources to create a final project. Create a magazine with a music theme, editing images and gathering information on different themes of the topic. digital recordings.




Online Safety strand: Explore online identities





Using search engine techniques effectively to gather reliable information. Create a presentation or information leaflet based on how technology can be use in the future to produce energy.




Online Safety strand: understand a range of ways to use technology safely, respectfully, responsibly and securely

U1/2/3




Multimedia: Develop software skills to develop an interactive presentation. Create an interactive presentation based on the findings from the topic.

Online Safety strand: recognise inappropriate content




Data handling. Develop an understanding of data handling software and its simple features. Gather data and create a simple spreadsheet including a table and bar chart to represent the data.

Online Safety strand: recognise inappropriate contact and conduct




Programming: Developing programming skills and knowledge. Create a simple program using sequences, loops and controls.

Online Safety strand: know how to report concerns

Data Handling: Develop an understanding of data collection and formatting techniques. Produce a questionnaire to find out the favourite food of staff and students. Represent the data using a table and charts using Microsoft Excel.

Online Safety strand: Privacy settings online.

Multimedia: Develop an understanding of the features of presentation software. Gather information about historical heroes and heroines to produce a presentation to present to the class."




Online Safety strand: Explore online identities.





Programming: Use a range of programming devices and software to develop coding skills. Create a simple program to navigate a programming device through a planned route.




Online Safety strand: understand a range of ways to use technology safely, respectfully, responsibly and securely

L4/5




Flow diagrams; Online research; Using logical reasoning; Graphics software; Presentations. Presenting information on different types of predators e.g. aquatic, parasites, insects, birds of prey.

Online Safety strand: recognise acceptable/unacceptable behaviour when using technology.




Multimedia: Use of technology to create and view digital images. Record videos or capture images of a synchronised routine

Online Safety strand: identify a range of ways to report concerns about content and contact.




Data handling: Develop an understanding of data handling software and its simple features. Gather data and create a simple spreadsheet including a table and bar chart to represent the data.

Online Safety strand: identify where to go for help and support when they have online concerns

Multimedia: Music focus, use of audio recording hardware or software to record voices, create songs, rhymes. Use editing software tools to alter the volume, tempo and pitch and share their manipulated recordings.

Online Safety strand: the importance of passwords to keep personal information private.

Multimedia: Use of digital technology to view online content and images. Use of digital devices to view a virtual tour or gather images of famous royal households.




Online Safety strand: use technology safely, respectfully and responsibly





Stop motion animation; Photography; Presentations




Online Safety strand: the different online technologies.

L3

Creating and debugging programs; Algorithms; Uses of ICT beyond school; Stop motion animation; Logical reasoning; Presentations


Online Safety strand: recognise acceptable/unacceptable behaviour when using technology.

Multimedia: Use of digital technology to view online content and images. Use of digital devices to view a virtual tour or gather images of famous royal households.




Online Safety strand: identify a range of ways to report concerns about content and contact.








Creating and debugging programs; Algorithms; Uses of ICT beyond school; Stop motion animation; Logical reasoning; Presentations

Online Safety strand: identify where to go for help and support when they have online concerns




Multimedia Use of technology to create animations. Create an animation based on the Rio carnival, use animation software and relevant hardware.

Online Safety strand: the importance of passwords to keep personal information private.




Programming: Use coding skills to create a street/map based game in Scratch or Scratch Junior e.g. 'slug trail game', or program your sprite to move around a neighbourhood.

Online Safety strand: use technology safely, respectfully and responsibly

Programming: Use a range of programming devices and software to develop coding skills. Create a simple program to navigate a device through a planned route and debug any issues where necessary."


Online Safety strand: the different online technologies.

L2




Programming a floor robot; Stop motion animation.

Online Safety strand: how to use a password to keep devices protected





Multimedia: Develop an understanding of different sounds. Use a range of digital devices to hear animal sounds, record sounds using talk tins and playback.

Online Safety strand: Identify where to get help when there is a problem online.




Data Handling: Collecting, organising, storing and manipulating data. Collect data based on the cars in the carpark and create visual representations of the data.

Online Safety strand: Identify how to report concerns about content or contact online.




Programming: Develop understanding of simple algorithms and programs. Create a story based on navigating the BeeBot through an adventure pathway.

Online Safety strand: keeping personal information private.

Multimedia: Develop skills by pressing parts achieve effects such as sound. Use a range of interactive equipment to create sounds by using buttons, touch screen and motions.

Online Safety strand: Using technology safely.

Multimedia: Using digital devices to take a picture. Taking digital pictures and videos of new friends. Making sounds using digital devices.

Online Safety strand: What can we use technology for?





L1