




ICT and Computing Curriculum Map L1 - U4

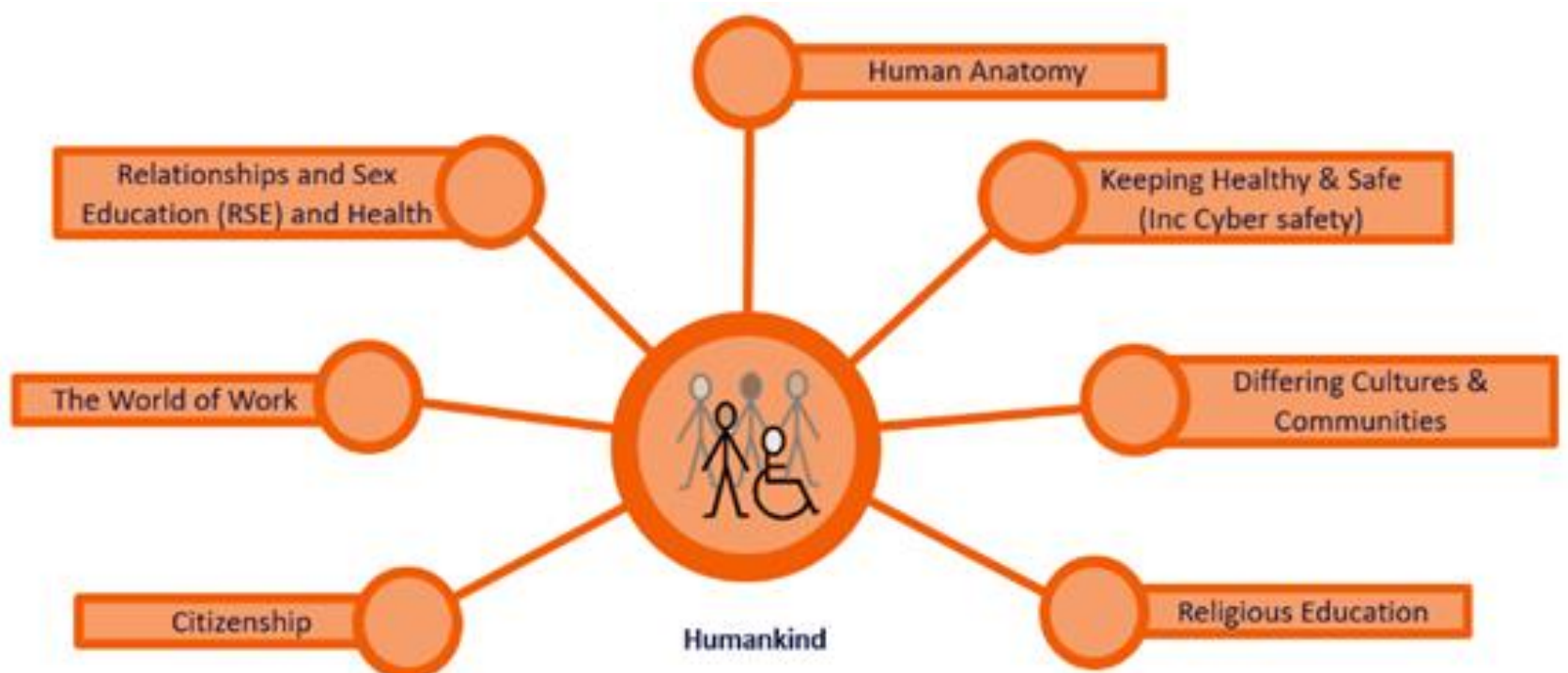
Intent

The intent of ICT and Computing at Discovery is to allow 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.





Curriculum Map L1 - U4

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

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

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

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

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.

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

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.

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.

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.

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.

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.

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.

U1/2/3

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

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.

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

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.

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."

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.

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.

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

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.

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.

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.

Stop motion animation; Photography; Presentations

L3

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

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.

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

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

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.

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."

L2

Programming a floor robot; Stop motion animation.

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

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

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

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.

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

L1