Learning Organiser: Computer Systems and Networks searching and systems

In this unit: Learners develop their understanding of computer systems and how information is transferred between systems and devices.

1. **eSafety** – terms and conditions, personal information, social media.

2. **Systems** – understand what a system is, components that make up a system, input-process-output, devices and communication.

3. **Computer systems and us** – tasks managed by systems, human elements, benefits, eSafety – personal information

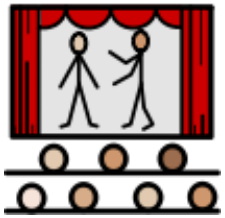
4. **Searching the web** – web search, refining and comparing results, trustworthiness.

5. **Selecting search results** – reasons why we use search engines, web crawlers and indexes, search terms.

6. **Ranking searches and search influences** – ordering, ranking, criteria and rules, influences and limitation, money making.

Vocabulary

System
Component
Input
Process
Output
Web search
Search engine
Web crawler
indexes



What do we know?

Know that some websites or information is not trustworthy on the Internet Y4

Know why individuals, systems and society interact with computer systems Y3

Know how to recognise common uses of information technology Y3

Big Ideas-

Big Ideas

E safety and Using Technology

Forever Facts

Know that computer networks and systems, including the internet, provide multiple services, such as the World Wide Web.

Know why search results are selected, ranked and influenced.

Know how to use a search engine effectively.

Where will it go?

Showcase

Research project to add information to your mock webpage.

Learning Organiser: **Year 5 – Data and information – Flat-file databases**

In this unit we are exploring how flat-file databases can be used to organise data.

1. Creating a paper-based database.
2. Computer databases: Explain, Navigate, Sort data.
3. Using a database to group.
4. Using search tools.
5. Comparing data visually.
6. Databases in real life.

What do we know?

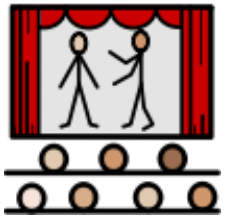
Know that there are databases that are programmes used to organise data.

Know why databases are used to collect, analyse, evaluate and present information.

Know how to present data from a database to answer a question.

Vocabulary

Database
Field
Record
Refine
Chart
Filter
Sort



Big Ideas-

E safety and Using Technology

Forever Facts

Know that databases are programmes used to organise data.

Know why databases are used to collect, analyse, evaluate and present information.

Know how to present data from a database to answer a question.

Where will it go?

Showcase

Create a chart to answer a question about the data base.

Learning Organiser: Programming B – Selection in quizzes

In this unit: you will design and program a quiz and test and evaluate the program.

1.Exploring conditions: Recall how conditions are used in selection. Identify conditions in a program. Modify a condition in a program.

2.Selecting outcomes: Use selection in an infinite loop to check a condition. Identify the condition and outcomes in an if, then and else statement. Create a program that uses selection to produce different outcomes.

3. Asking questions: Explain that program flow can branch according to a condition, Design the flow of a program that contains if, then and else. Show that a condition can direct program flow in one of two

4. Designing a quiz: Outline a given task. Identify the outcome of user input in an algorithm. Use a design format to outline my project.

5. Testing a quiz: Implement an algorithm to create the first section of their program. Testing and sharing a program.

6. Evaluating a quiz: Identify the way the program could be improved

Vocabulary

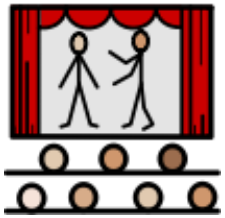
Conditions
Loop
Statement
Outcome
Program flow
User
Input
algorithm

What do we know?

Know that sequence, selection, and repetition in programs determine the outcome of that program.

Know why if, then or else statements are used in a program.

Know how to design, write and debug programs that accomplish specific goals.



Big Ideas-

Programming

Forever Facts

Know that Know that sequence, selection, and repetition in programs determine the outcome of that program.

Know why Know why if, then or else statements are used in a program.

Know how Know how to design, write and debug programs that accomplish specific goals

Where will it go?

Showcase

Implement an algorithm to create, test and evaluate own program.

Learning Organiser: Year 5 Microbits

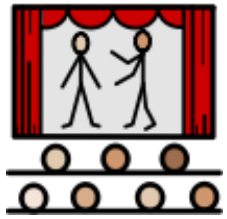
You will need: https://makecode.microbit.org/- https://microbit.org/teach/lessons/first-lessons-with-makecode-and-the-microbit/

In this unit: Children learn how to code using the micobit. They will use external sensors to create a variety of programs using a block code similar to

1. Name Badge – Understand micro: bit is a tiny computer which needs instructions (code) to work. Use Make:Code. and transfer and then show data.
2. Flashing heart- children learn how to program the LEDs on the software and transfer the code to the microbit.
3. Emotion Smileys: children use the button function on the microbit to create different
4. Creating a digital step counter using variables
5. Using logic and the 'if' command to make a nightlight https://microbit.org/projects/make-it-code-it/nightlight/
6. Using the microbit's accelerometer sensor to create a game of rock paper scissors

Vocabulary

Forever
On start
Pair
Input
Output
Pin
String
Loop
Variables
Logic
randomiser



What do we know?

Know that sequence, selection, and repetition in programs determine the outcome of that program.

Know why if, then or else statements are used in a program.

Know how to design, write and debug programs that accomplish specific goals.

Forever Facts

Know that the 'if' command can be used to make different outputs happen

Know why inputs and outputs are important in using an external device

Know how to use code to program and transfer code to a microbit

Big Ideas-

Programming

Where will it go?

Showcase

Can the pupils create their own game based on rock paper scissors and alter the variables?

Learning Organiser: Creating Media- Introduction to Vector graphics

In this unit, learners create vector drawings using various tools. They learn that vector images are made of shapes and lines, with each element being an object. They practice layering, grouping, and duplicating objects to create more complex drawings.

1. We can experiment with shapes and lines to create simple vector drawings in 'Google drawing'.
2. We can move, resize, change the colour, duplicate and rotate the shapes in a vector drawing.
3. We can modify our images using the zoom tool and use the grid and resizing handles to improve our drawings.
4. We can use layers in our drawings and understand how to manipulate these.
5. We can group and ungroup objects and duplicate objects in our drawings.
6. We can create our own vector paintings using the skills we have learnt.

Vocabulary

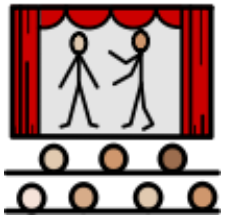
Vector
duplicate
rotate
align
group
ungroup
order

What do we know?

Know that different templates can be used for different audiences and purposes

Know why manipulating text and images can help good communication

Know how to add text and images to templates



Forever Facts

Know that a range of tools can be used to modify a vector-based image

Know why vector based images are used by designers

Know how to use layers in drawings and how to group objects to edit them

Digital Literacy

Where will it go?

Showcase

Create a vector based picture linked to Art/ DT unit

Learning Organiser: Creating Media- Video production

Learners will create short videos in pairs or groups, developing skills in video capture, editing, and manipulation. They follow step-by-step guidance from concept to completion and reflect on their progress at the end.

2. We can identify different effects used in videos and are able to understand what to do to keep safe if we see a video that makes us uncomfortable.

2. We can record videos, use different camera angles and use the microphone.

3. We can use a storyboard to explore a variety of filming techniques.

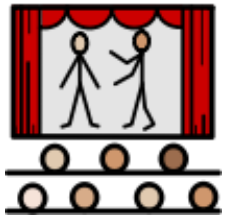
4. We can plan our own video using storyboard to decide on our techniques.

5. We can film and import our videos. We can edit our videos.

6. We can edit our videos, re-order clips, trim sections and export our videos

Vocabulary

Edit
Storyboard
Camera angle
Trim
Lens
High angle
Low angle
export



What do we know?

- **Know that recording can be edited and different effects can be layered.**
- **Know why editing is an important part of the production process.**
- **Know how to record and edit their own podcast using Audacity.**

Forever Facts

- **Know that different techniques can be used to film**
- **Know why planning a storyboard can be helpful in shooting a short film**
- **Know how to edit and export a short film using software**

Digital Literacy

Where will it go?

Showcase

Film show- premiere our films to a wider audience