Learning Organiser: Computing systems and networks – The Internet

This unit covers understanding how the internet is a network of networks which needs to be secure. The World Wide Web is part of the internet and I will learn about who owns the content. I will evaluate online content to see how reliable it is.

1. **Connecting networks:** I can explore how networks communicate to form the internet, examine devices like routers, and discuss how to secure networks by controlling what is allowed in or out.

2. **What is the internet made of?** I can describe how network components connect to form the internet and use this to explain how the internet enables access to the World Wide Web, recognizing that the web is part of the internet and contains websites and web pages.

3. **Sharing information:** I can explore what can be shared on the World Wide Web, where websites are stored, and how the web can be accessed on different devices

4. **What is website?** I can find a website's key components, consider what content can be added and the factors to consider before doing so, and then create their own content using an online platform.

5. **Who owns the web?** I can explore content ownership on the World Wide Web, investigate what can and cannot be done with content on various websites, and relate these findings to real-world principles of ownership and sharing.

6. **Can I believe what I read?** I can recognize that not everything on the internet is true or accurate, evaluate images to determine their authenticity, explore why web searches can yield misleading results, and engage in a practical activity showing how quickly information can spread uncontrollably.

Vocabulary

Router
Network
Switch
Server
WAP
Web address
Web page
Links
Ownership
Accuracy

What do we know?

Know that digital devices accept inputs and produce outputs

Know why digital devices can change the wat that we work

Know how devices in networks are connected and the benefits of devices

Big Ideas-

Forever Facts

Know that: the internet is a network of networks.

Know why: the internet allows us to explore the World Wide Web.

Know how: to determine whether something on the internet is trustworthy.

Where will it go?

Showcase

A poster to explain that not everything on the internet is accurate.

Learning Organiser: Data and Information-Data Logging

Links to maths and science curriculum- to combine

In this unit: In this unit, pupils will learn how data is collected using sensors, review and analyse data sets, and use data loggers to answer their own questions by gathering data automatically

1. We can ask and answer questions about data gathered over time.
2. We can use information from sensors, collected over time, to answer questions.
3. We can use a datalogger to collect information at intervals and talk about the data I have collected.
4. We can analyse and sort data that we have collected.
5. We can plan an investigation using our data loggers.
6. We can use our data to answer a question.

Vocabulary
Sensor
Data logger
Data
Table
Interval
Data set
Import
export

What do we know? (yr3)

- Know that a branching database can be used to sort objects according to attributes
- Know why ordering questions carefully is important in creating a database
- Know how to create their own simple branching database

Big Ideas-

E safety and Using Technology

- Know that data loggers can be used to collect information over time
- Know why collecting information over time is useful.
- Know how to analyse data and use it to answer questions

Forever Facts

Where will it go?

Showcase

Presenting the results of the investigation to the class using information from data loggers

Learning Organiser: Programming-Repetition in Shapes

This unit looks at repetition and loops within programming. Pupils will create programs by planning, modifying, and testing commands to create shapes and patterns. They will use Logo, a text-based programming language

1. We can use basic commands in logo to read and write a simple code.
2. We can write a program to draw my initials and debug any problems.
3. We can use the 'repeat' command in logo to create repeating images.
4. We can create a count controlled loop and can change the values in this.
5. We can create 'code snippets' to use in our programming.
6. We can use my skills to create our own wrapping paper.

Vocabulary
Logo
Command
Debug
Algorithm
Turtle
Code snippet
Count-controlled loop
Repetition
decompose

What do we know?

- **Know that we can control technology by using commands**
- **Know why** vocabulary is important
- **Know how** to use a simple single step command

Programming

Forever Facts

- **Know that variables can be changed and the effect this can have on the outcome**
- **Know why creating code snippets is useful**
- **Know how to create a repeating pattern in logo**

Where will it go?

Showcase

I can create my own wrapping paper to display to the class using my logo programming skills

Learning Organiser: Programming-Repetition in games

This unit teaches repetition in programming using Scratch. Pupils explore count-controlled and infinite loops, modify animations and games with repetition, and design a game using these concepts as their final project.

1. We can create shapes in scratch using count-controlled loops.
2. We can use count-controlled and infinite loops with scratch to create images.
3. We can animate our names using repetition in scratch.
4. We can modify and change parts of a game in scratch.
5. We can design our own game in scratch using repetition.
6. We can fix our designs, refine our codes and improve our designs as we work on our games

Vocabulary

Sprite
Loop
Value
Infinite loop
Count-controlled loop
Costume
Repetition
forever

What do we know?(yr 4 unit)

- Know that variables can be changed and the effect this can have on the outcome
- Know why creating code snippets is useful
- Know how to create a repeating pattern in logo

Programming

Forever Facts

- **Know that repeats and loops can be used as tools within a program**
- **Know how changing values within a program will affect the outcome.**
- **Know how to create repetitions within scratch**

Where will it go?

Showcase

I can design my own computer game in scratch

Learning Organiser: Creating Media- Audio Production

Using Audacity- free software

Learners will use a microphone and Audacity to create and edit podcasts, discussing audio copyright and providing peer feedback. The theme is The Vikings

1. We can record and play back audio on a computer.
2. We can edit and improve our recording like a production engineer.
3. We can import sound effects into our recordings. We can plan our own podcast
4. We will record, edit and trim our voice recordings for our podcast.
5. We can add background music and sound effects to our podcast.
6. We can listen to and evaluate each others' podcasts

Vocabulary

Podcast
Trim
Edit
Sound effect
Input
Output
Align
Layer
Audio
waveform

What do we know? (Yr 2)

Know that music has rhythm and can be represented by notes

Know why computers can be useful in creating sequences of sounds.

Know how to create sequences of sounds

Digital Literacy

Forever Facts

Know that recording can be edited an 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.

Where will it go?

Showcase

I can create and edit my own podcast about the Vikings

Learning Organiser: Creating Media- Photo editing

https://www.getpaint.net/download.html- software needs to be downloaded- ask IT support prior to teaching unit

Learners will develop their understanding of how digital images can be changed and edited, and how they can then be resaved and reused. They will consider the impact that editing images can have, and evaluate the effectiveness of their choices.

1. We know how editing, rotating and cropping an image can change an image.
2. We can edit an image using different colours and filters.
3. We can use the cloning tool to duplicate areas.
4. We can combine images by copying and pasting. We understand why editing photos can sometimes be good and bad.
5. We can plan, take and edit our own photos using the skills we have learnt.
6. We can review our image and make changes if necessary.

Vocabulary

Filter
Edit
Clone
Crop
rotate
retouch
combine
copy
paste

What do we know? (Yr 2)

Know that photos can be edited and effects used to alter them

Know why lighting and focus are important to take a good photograph

Know how to use my skills to create and edit an image.

Digital Literacy

Forever Facts

Know that photos can be edited and retouched

Know why photo editing can be good and bad

Know how to edit a photo using cloning, filters and colour

Where will it go?

Showcase

Taking my own photo for the class gallery- display on website