Knowledge Progression for Computer Science and Computational Thinking

Year 1

EYFS ELGs

Communication and language :

Responds to instructions involving a two-part sequence.

Children follow instructions involving several ideas or actions

Uses talk to organise, sequence and clarify thinking

Mathematics :

Can describe relative position such as 'behind' 'next to'

Orders and sequences familiar events

Year 1

Give one another instructions to move around a large space

Create a program to move a toy/robot to a particular location

Understand input, program and output in the context of a robotic toy

Explain the steps of a recipe in the correct order

Debug a program

Year 2

Describe clearly what happens in a computer game

Plan an algorithm to move a sprite on screen in steps

Follow instructions given to them as if they were a robot

Use logical reasoning to predict what their recipe or other instructions will do

Conduct tests to check their predictions

Vocabulary

Sequence

Instruction

Algorithm

Debug

Input

Program

Knowledge Progression for

Digital Literacy and Online Safety

Year 1

ELG

PSE development:

They say when they do or don't need help.

Children talk about how they and others show feelings, talk about their own and others' behaviour, and its consequences, and know that some behaviour is unacceptable.

Year 1

Search safely for images using online galleries

Appreciate that it is only OK to copy images where their creator has given permission

Know what to do if they see or hear something online that upsets them

Know that they should not post personal information or photos to the web

Understand that rules help us stay safe, both in the real world and online.

Understand the importance of playing games in shared spaces where grown-ups are available for support.

Understand the importance of taking breaks away from technology.

Year 2

Be aware of and observe age restrictions on commercial games

Know that they should tell their parents or carers if they are concerned about something in a computer game

Understand that playing computer games should be balanced with other activities

Reflect on what makes games enjoyable and sometimes addictive

Begin to understand the concept of online bullying and how to respond

Vocabulary

Internet

Images

Web

Safe

Report

Permission

Private Information

Knowledge Progression for Information Technology

Year 1

ELG Technology

Expected : Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

Exceeding: Children find out about and use a range of everyday technology. They select appropriate applications that support an identified need – for example in deciding how best to make a record of a special event in their lives, such as a journey on a steam train

Year 1

Can use a range of digital technologies to store and access digital content.

Use a paint program to create an illustration, edit and improve it

Be able to retrieve previously saved work

Record sound effects or dialogue using a digital audio recorder (or software)

Review and improve recordings

Understand how to use the keyboard to enter alphabetic and non-alphabetic characters

Combine text, image or sound to make eg a greetings card or e-book with a clear purpose

Film video, keeping the camera still and steady

Join video clips together

Year 2

Take focused, sharp photos using a digital camera, tablet or smartphone and apply adjustments and effects to digital photos

Select their favourite photos for inclusion in a shared portfolio

Find useful information and images on websites.

Create short presentations or Information leaflets

Save and retrieve their presentations; add images or other media as appropriate.

Create and label charts to show data they collect

Explore Google Maps or Google Earth to find a familiar location

Vocabulary

Image

Save

Open

Camera

Video

Audio Recording

Text

Keyboard