Computing in Year 1

Topics: Technology around us, Digital Painting, Moving a Robot, Grouping Data, Digital Writing, Programming Animations

Technology Around Us

National Curriculum Statements:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Recognise common uses of information technology beyond school
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Key Knowledge:

- Identify examples of technology and explain how they can help us
- Recognise that a computer is an example of technology
- Describe what a keyboard is for
- Know a computer stores work in files
- Give examples of rules to keep them safe and healthy when they are using technology in and beyond the home

Implementing Skills:

- Choose a piece of technology to do a job
- Identify the main parts of a computer
- Use a keyboard to type their name on a computer
- Turn on the computer and log on with an aid
- Use a mouse in different ways – click, select and drag
- Use the keyboard to edit text and delete letters
- Demonstrate that they can use technology safely

Assessment:

- How successful were they in meeting the task requirements?

Digital Painting

National Curriculum Statements:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content

Key Knowledge:

- Explain what different freehand tools do
- Recognise that computers can be used to create a range of art
- Recognise a tool can be adjusted

Implementing Skills:

- Choose appropriate paint tools to recreate a picture
- Use freehand tools, changing the colour and brush size
- Use shape and line tools for precision, changing the size, shape and colour
- Use the undo button to correct mistakes
- Use the fill tool to colour an enclosed area

Assessment:

- What was the impact of the choices you made?
- How successful were you in meeting the task requirements?
- What are the differences between painting on a computer and on paper, and can they explain their own preference?

Moving a Robot

National Curriculum Statements:

- Understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs
- Recognise common uses of information technology beyond school

Knowledge:

- Explain what a given command does
- Predict the outcome of a sequence involving up to four commands
- Match a command to an outcome
- Understand that a program is a set of commands that a computer can run
- Know that a series of instructions can be issued before they are enacted

Implementing Skills:

- Predict the outcome of a command on a device
- Run a command on a floor robot
- Choose a command for a given purpose
- Choose a series of words that can be enacted as a program
- Build a sequence of commands in steps from a given starting point
- Combine commands in a program
- Run a program on a device
- Debug a program to correct errors

Assessment:

- How successful were they in moving a robot?
- Could they give several commands to a robot to make it move?
- Could they spot mistakes in their commands?

Grouping Data

National curriculum Statements:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Knowledge:

- Explain how objects have been grouped
- Know that labels are used to identify a group with similar characteristics

Implementing skills:

- Group the same objects in more than one way
- Count how many objects are in group and identify which has more
- Record how many objects are in a group
- Group objects to answer a question
- Compare objects to group them explaining what has been found

Assessment:

- Can they group objects and explain how they have grouped them?

Digital Writing

National curriculum Statements:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Knowledge:

- Know that a keyboard is used to enter text into a computer
- Know that the appearance of text can be changed

Implementing skills:

- Recognise some keys and use them to enter text on to a computer/device including some basic punctuation
- Add spaces between most words using a space bar
- Use the backspace key to delete text only as far as the section to be edited
- Use the toolbar to find and use the bold, italic, and underline tool

Assessment:

- Can they use basic features of a keyboard e.g. space, delete, bold, italic and underline?
- Can they identify the differences between writing on a computer and on paper, and explain their own preference?

Programming Animations

National curriculum Statements:

- Understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs

Knowledge:

- Explain what a sprite is
- Compare different programming blocks
- Know a series of commands can be joined together to form a program
- Understand that a program is a set of commands a computer can run

Implementing skills:

- Predict the outcome of a command
- List commands that can be used on a device
- Match a command to an outcome
- Recognise how to run a command
- Run different commands for different sprites
- Choose a command for a given purpose
- Build a sequence of commands in steps
- Use the start command to initialise a program
- Debug a program

Assessment:

- Can they test a program created and evaluate how successful it has been?
- Can they identify how closely a plan matches the outcome?