Overview of the Learning:

In this unit children will use spreadsheet software to structure numeric information, making calculations using formulae and functions. They import data collected using dataloggers and analyse it using functions within the software. They carry out what-if modelling, using this for prediction and present results using graphs

Core Aims	Pupils should be taught to:
To equip pupils to use computational thinking and creativity to understand and change the world. To make links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. To ensure pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. To equip pupils are use information technology to create programs, systems and a range of content. To ensure that pupils become digitally literate. To enable the children be able to use, and express themselves and develop their ideas through information and communication technology at a level suitable for the future workplace and as active participants in a digital world.	• design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output • select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; • identify a range of ways to report concerns about content and contact.

National Curriculum Guidance:

2.i Pupils should be taught to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

2.ii Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output

2.vi Pupils should be taught to select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

2.vii Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Expectations

- To understand that spreadsheets have a specific structure which supports locating and changing cells and ranges.
- To understand that spreadsheets have a range of editing tools to support appearance and clarity.
- To understand that spreadsheet calculation tools allow numbers and cell references to be used within formulae.
- To understand that spreadsheet functions enable calculations to be carried out on ranges of numbers.
- To understand that spreadsheets provide useful tools for data analysis. Analyse data using spreadsheet functions.
- To understand that the contents/format of a cell in a spreadsheet can be set up to change depending on value being input.
- To identify opportunities for investigations involving the use of data sensing devices. Analyse using a spreadsheet.
- To understand spreadsheets can be used to support the user. Plan and create calculation tools within a spreadsheet for others.
- To understand spreadsheet models allow us to explore different situations. Identify variables in existing spreadsheet models and explore effects of changing these. Make/test predictions.
- To understand spreadsheets can be used to create models to support problem solving. Build and use spreadsheet models.
- *To understand the need for accuracy and efficiency in spreadsheet work. Save drafts.*
- *To organise their work confidently in agreed locations, using appropriate file-naming conventions and folder structures.*
- *To understand need to keep electronic/other data secure; protect personal information online; encourage eSafe practice in others*

Manor Primary School
Computing Year 6
Staying Connected   (Strand Digital Research & Digital Communication)

Overview of the Learning:
In this unit children will use blogs for collaborative projects in school, uploading different types of digital content, while checking copyright and crediting sources. They work as a class to build a wiki around a class topic, taking editorial responsibility for their work. They know the school's eSafety rules and encourage other children to keep safe online.

Core Aims	Pupils should be taught
To equip pupils to use computational thinking and creativity to understand and change the world.	- design, write and debug programs that accomplish specific goals, including controlling or simulating - physical systems; solve problems by decomposing them into smaller parts

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To make links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems.

To ensure pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.

To equip pupils are use information technology to create programs, systems and a range of content.

To ensure that pupils become digitally literate

To be able to use, and express themselves and develop their ideas through

information and communication technology at a level suitable for the future

workplace and as active participants in a digital world.

- use sequence, selection, and repetition in programs; work with variables and various forms of input
- and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors
- in algorithms and programs

National Curriculum Guidance

2.iv   Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration

2.v   Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

2.vi   Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

2.vii   Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Expectations

- To analyse and evaluate online digital communication and collaboration tools, understanding how they are used in our lives.
- To be safe, respectful and responsible users of online technologies. Review eSafe approaches to using such spaces.
- To understand that personal information is shared online without the owners being aware that they have given permission.
- To understand the need to organise/adjust language/style of digital communications, according to context, audience, technology.
- To understand a blog is an online space, created by an individual, with regular entries and providing opportunities for comment.
- To understand how blogs can support learning and sharing of ideas and may include a range of media. Create and comment.
- To understand that there are complex copyright rules for digital resources such as word-based texts, images, sound and film.
- To understand a wiki is a tool for organising collaborative, validating and expanding shared information.

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- To know that information can vary in accuracy, bias and viewpoint, and be unhelpful, irrelevant and misleading.
- To organise their work confidently in agreed locations, using appropriate file-naming conventions and folder structures.
- To understand and use security settings and features offered in online environments, to protect privacy and safety.
- To understand all online users have the right to be respected. Obtain permission before using/sharing online materials.
- To evaluate the effectiveness, risks and benefits of digital communication and collaboration tools used at home and school.
- To identify ways to report concerns about content and contact.
- To be proactive in keeping electronic/other data secure, protecting personal information online and encouraging others to be eSafe.

Digital Research & Digital Communication)

Overview of the Learning:

In this unit children will use blogs for collaborative projects in school, uploading different types of digital content, while checking copyright and crediting sources. They work as a class to build a wiki around a class topic, taking editorial responsibility for their work. They know the school's eSafety rules and encourage other children to keep safe online.

Core Aims	Pupils should be taught
To equip pupils to use computational thinking and creativity to understand and change the world. To make links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. To ensure pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. To equip pupils are use information technology to create programs, systems and a range of content. To ensure that pupils become digitally literate	- design, write and debug programs that accomplish specific goals, including controlling or simulating - physical systems; solve problems by decomposing them into smaller parts - use sequence, selection, and repetition in programs; work with variables and various forms of input - and output - use logical reasoning to explain how some simple algorithms work and to detect and correct errors - in algorithms and programs

Manor Primary School

To be able to use, and express themselves and develop their ideas through information and communication technology at a level suitable for the future workplace and as active participants in a digital world.	

National Curriculum Guidance

2.iv   Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration

2.v   Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

2.vi   Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

2.vii   Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Expectations

- To analyse and evaluate online digital communication and collaboration tools, understanding how they are used in our lives.
- To be safe, respectful and responsible users of online technologies. Review eSafe approaches to using such spaces.
- To understand that personal information is shared online without the owners being aware that they have given permission.
- To understand the need to organise/adjust language/style of digital communications, according to context, audience, technology.
- To understand a blog is an online space, created by an individual, with regular entries and providing opportunities for comment.
- To understand how blogs can support learning and sharing of ideas and may include a range of media. Create and comment.
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- *To understand all online users have the right to be respected. Obtain permission before using/sharing online materials.*
- *To evaluate the effectiveness, risks and benefits of digital communication and collaboration tools used at home and school.*
- *To identify ways to report concerns about content and contact.*

Manor Primary School

- To be proactive in keeping electronic/other data secure, protecting personal information online and encouraging others to be eSafe.