

Manor Primary School
Computing Year 3
Bringing Images to Life (Strand Create & eWorlds)

<p>Overview of the Learning: In this unit children will develop understanding of the ways that digital images can be edited and transformed. They develop understanding of animation, using digital tools to create their own animation. They use programming software to produce programmed animations, using sequence, repeat and selection.</p>	
<p>Core Aims</p> <p>To equip pupils to use computational thinking and creativity to understand and change the world.</p> <p>To make links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems.</p> <p>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.</p> <p>To equip pupils are use in-formation technology to create programs, systems and a range of content.</p> <p>To ensure that pupils become digitally literate</p> <p>To be able to use, and express themselves and develop their ideas through in-formation and communication technology at a level suitable for the future workplace and as active participants in a digital world.</p>	<p>Pupils should be taught</p> <ul style="list-style-type: none"> • 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
<p>National Curriculum Guidance</p> <p>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</p> <p>2.ii Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>2.iii Pupils should be taught to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>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 in-formation</p> <p>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.</p>	
<p>Expectations</p>	

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- To understand that digital images can be changed and edited and that this can have an impact on how we think and feel.
- To understand software is comprised of programmed instructions which enable a computer to carry out specific tasks and digital image software allows us to edit and/or enhance digital images.
- To understand that digital images can be altered to communicate different moods or ideas. Experiment using tools and effects.
- To understand the need to seek consent before capturing and/or using the images of others.
- To know that some digital images may not be appropriate and understand what to do if such materials are accessed.
- To understand that the appearance of movement can be created in inanimate objects using stop-motion animation.
- To understand that animation can be used to convey a message or idea. Identify key message or idea.
- To know that animation software/resources include a range of different features and tools; investigate, compare and comment.
- To understand the importance of planning animation work. Use a storyboard or other approach to plan a simple animation.
- To understand a precise sequence of steps is required for digital animation. Develop an algorithm to animate an object/character.
- To know that an algorithm can help us write a computer program.
- To write a program to animate an object/character.
- To know that a program can control the behaviour and appearance of different onscreen elements. Apply to a programmed animation.
- *Use appropriate file-naming conventions and understandable folder structure to save, organise and retrieve their work.*

Manor Primary School
Computing Year 3
Keeping In-formed (In.fo..In.fo... & eWorlds)

Overview of the Learning:

In this unit children will understand the difference between data and information. They will use sensing and datalogging tools to gather data to support their science investigations. They structure data in branching and flat-file databases and understand how to derive information from these sources.

Core Aims

To equip pupils to use computational thinking and creativity to understand and change the world.

Pupils should be taught

- design, write and debug programs that accomplish specific goals, including controlling or simulating



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<p>To make links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems.</p> <p>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.</p> <p>To equip pupils are use in-formation technology to create programs, systems and a range of content.</p> <p>To ensure that pupils become digitally literate</p> <p>To be able to use, and express themselves and develop their ideas through in-formation and communication technology at a level suitable for the future workplace and as active participants in a digital world.</p>	<ul style="list-style-type: none"> ● 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
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<p>National Curriculum Guidance</p> <p>2.i design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>2.ii use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>2.iii use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>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</p> <p>2.vii use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	
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Expectations

- To know the difference between data and information. Understand that technology helps us to process data into information.
- To understand dataloggers and sensors can show and record environmental changes. Relate to concept of inputs and outputs
- To use dataloggers to support analysis of environmental data.
- To understand digital tools can support investigational work.
- To understand branching databases sort and classify objects. Evaluate questions. Show selection is used in these databases.
- Develop high level questioning based on characteristics of objects. Design, create, test and improve a branching database.
- To understand databases are structured into files, records and fields to support organisation and searching.
- Understand that using electronic databases can improve efficiency in finding answers to questions. Explore a database; add a record.
- To know database records can be sorted and results displayed as a graph. Explore questions which could/could not be answered.
- To understand that using electronic databases can improve efficiency in information searching. Use search tools and compare.
- To understand that database fields contain different types of information which aid data entry and effective querying.
- To understand need for accuracy when creating databases. Create records in a database and interrogate it, presenting findings
- *To review and evaluate their work; check for accuracy and correct.*
- *Use appropriate file-naming conventions and understandable folder structure to save, organise and retrieve their work.*

To understand the need to keep electronic and other data secure.

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Computing Year 3

Developing Communication (Strand Create & Digital Communication)

Overview of the Learning:

In this unit children will use online communication tools such as email, blogs and discussion forums to support collaborative learning, safely and respectfully. They use simple sound editing software to record and manipulate sound clips.

Core Aims

To equip pupils to use computational thinking and creativity to understand and change the world.

Pupils should be taught

- 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.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.



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Expectations

- To review electronic communications used at home/ school. Explore style, language and format considering how these meet the audience and purpose.
- To understand that electronic communications require connections between devices to enable the sending and receiving of data in various forms.
- To use a safe online environment to communicate, using appropriate language and style. Use email for messages. Add attachments, maintain contacts.
- To collaborate using a safe and appropriate online environment, using language/style appropriate for the purpose and audience.
- To consider how sound can be recorded and manipulated to communicate meaning and/or atmosphere.
- To understand that sound-editing software can be used to capture, import and manipulate sounds.
- To understand how software can be used to organise and modify sounds. Produce a sound recording.
- *Use appropriate file-naming conventions and understandable folder structure to save, organise and retrieve their work.*
- *To take an active role in using electronic communication safely and responsibly.*
- *To be aware that many online games include chat facilities; use with care, protect identity; only talk to those they know.*
- *To understand the need to seek consent before capturing and/or using sounds created by others.*

To understand the school's eSafety rules and to know what to do in the event of an incident at home or school.



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