**Year 2 Computing Progression in Skills and Knowledge**

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| **NC Knowledge and Computational Skills** | **Pupils not securing learning** | **Pupils achieving depth in learning** |
| **Autumn 1** [**Computing systems and networks** Information technologyaround us (2.1)](https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-it-around-us)**\**** Identifying IT and how it’s responsible use improves our world in school and beyond
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| [**National curriculum links**](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239033/PRIMARY_national_curriculum_-_Computing.pdf)* 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.

[**Education for a Connected World links**](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/683895/Education_for_a_connected_world_PDF.PDF)Health, well-being and lifestyle* I can identify rules that help keep us safe and healthy in and beyond the home when using technology.
* I can give some simple examples.

**Unit objectives:**1. To recognise the uses and features of information technology
2. To identify information technology in the home
3. To identify information technology beyond school
4. To explain how information technology benefits us
5. To show how to use information technology safely
6. To recognise that choices are made when using information technology
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| **Autumn 2** [**Creating media** **A**](https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-photography)[Digital photography](https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-photography)[(2.2)](https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-photography)* Capturing and changing digital photographs for different purposes
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| [**National curriculum computing links**](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239033/PRIMARY_national_curriculum_-_Computing.pdf)**Computing*** 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

[**Further national curriculum links**](https://www.gov.uk/government/publications/national-curriculum-in-england-art-and-design-programmes-of-study)**Art and design*** To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form, and space

[**Education for a Connected World links**](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/683895/Education_for_a_connected_world_PDF.PDF)* To identify that some images are not real (fake)

**Unit objectives:**1. To use a digital device to take a photograph
2. To make choices when taking a photograph
3. To describe what makes a good photograph
4. To decide how photographs can be improved
5. To use tools to change an image
6. To recognise that photos can be changed
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| **Spring 1** [**Programming A** Robot algorithms](https://teachcomputing.org/curriculum/key-stage-1/programming-a-robot-algorithms) [(2.3)](https://teachcomputing.org/curriculum/key-stage-1/programming-a-robot-algorithms)* Creating and debugging programs and using logical reasoning to make predictions
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| [**National curriculum links**](https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study/national-curriculum-in-england-computing-programmes-of-study)* 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
* 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.

**Unit objectives:**1. To describe a series of instructions as a sequence
2. To explain what happens when we change the order of instructions
3. To use logical reasoning to predict the outcome of a program (series of commands)
4. To explain that programming projects can have code and artwork
5. To design an algorithm
6. To create and debug a program that I have written
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| **Spring 2** [**Data and information** Pictograms](https://teachcomputing.org/curriculum/key-stage-1/data-and-information-pictograms)[(2.4)](https://teachcomputing.org/curriculum/key-stage-1/data-and-information-pictograms)* Collecting data in tally charts and using attributes to organise and present data on a computer
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| [**National curriculum links**](https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study/national-curriculum-in-england-computing-programmes-of-study)**Computing*** 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

**Maths**Building on Year 1 number and place value: * Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: ‘equal to’, ‘more than’, ‘less than’ (‘fewer’), ‘most’, ‘least’

Year 2: * interpret and construct simple pictograms, tally charts, block diagrams and simple tables
* ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
* ask and answer questions about totalling and comparing categorical data
* Notes and guidance: Pupils record, interpret, collate, organise and compare information (for example, using many-to-one correspondence in pictograms with simple ratios 2, 5, 10).

[**Education for a Connected World links**](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/683895/Education_for_a_connected_world_PDF.PDF)Self-image and identity* I can recognise that I can say ‘no’/‘please stop’/‘I’ll tell’/‘I’ll ask’ to somebody who asks me to do something that makes me feel sad, embarrassed or upset
* I can explain how this could be either in real life or online
* If something happens that makes me feel sad, worried, uncomfortable, or frightened I can give examples of when and how to speak to an adult I can trust

Health, wellbeing and lifestyle* I can identify rules that help keep us safe and healthy in and beyond the home when using technology
* I can give some simple examples

**Privacy and security*** I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location)
* I can describe the people I can trust and can share this with; I can explain why I can trust them
* I can recognise more detailed examples of information that is personal to me (e.g. where I live, my family’s names, where I go to school)

**Unit objectives:** 1. To recognise that we can count and compare objects using tally charts
2. To recognise that objects can be represented as pictures
3. To create a pictogram
4. To select objects by attribute and make comparisons
5. To recognise that people can be described by attributes
6. To explain that we can present information using a computer
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| **Summer 1** [**Creating media** **B** Making music](https://teachcomputing.org/curriculum/key-stage-1/creating-media-making-music) [(2.5)](https://teachcomputing.org/curriculum/key-stage-1/creating-media-making-music)* Using a computer as a tool to explore rhythms and melodies before creating a musical composition
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| [**Computing national curriculum links**](https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study/national-curriculum-in-england-computing-programmes-of-study)* Use technology purposefully to create, organise, store, manipulate and retrieve digital content

[**Music national curriculum links**](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239037/PRIMARY_national_curriculum_-_Music.pdf)* Play tuned and untuned instruments musically
* Listen with concentration and understanding to a range of high-quality live and recorded music
* Experiment with, create, select and combine sounds using the inter-related dimensions of music

[**Education for a Connected World links**](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/683895/Education_for_a_connected_world_PDF.PDF)Copyright and ownership* I know that work I create belongs to me.

**Unit objectives:**1. To say how music can make us feel
2. To identify that there are patterns in music
3. To describe how music can be used in different ways
4. To show how music is made from a series of notes
5. To create music for a purpose
6. To review and refine our computer work
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| **Summer 2** [**Programming B** Programming quizzes](https://teachcomputing.org/curriculum/key-stage-1/programming-b-an-introduction-to-quizzes) [(2.6)](https://teachcomputing.org/curriculum/key-stage-1/programming-b-an-introduction-to-quizzes)* Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz
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| [**National curriculum links**](https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study/national-curriculum-in-england-computing-programmes-of-study)* 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

**Unit objectives:**1. To choose a command for a given purpose
2. To show that a series of commands can be joined together
3. To identify the effect of changing a value
4. To explain that each sprite has its own instructions
5. To design the parts of a project
6. To use my algorithm to create a program
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