# Computing Skills Progression

**Subject area:** Computing

**Curriculum leader:** Kate Bartlett

<table>
<thead>
<tr>
<th>Year</th>
<th>Foundation</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
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</table>
| **Generic skills** | Most children will:  
- be aware that pressing buttons will make a device respond e.g. remote control toy
- use the mouse and the keyboard to explore programs
- be aware that moving the mouse moves the pointer on the screen
- be aware of the effect of pressing the mouse buttons
- have experience of a range of ICT equipment and software
- talk about what they are doing with ICT
- use appropriate ICT vocabulary  
Most children will:  
- be able to print work using the Print icon
- use both hands on the keyboard
- load programs with support
- know that work can be saved and retrieved
- save work with support
- retrieve work with support
- have experience of a range of ICT equipment and software
- talk about what they are doing with ICT  
Most children will:  
- use appropriate ICT vocabulary
- load programs independently
- save work independently
- retrieve work independently
- plan what they are going to do
- make simple modifications to their work (edit)
- practise keyboard skills using both hands, try to use more than two fingers, and try to use the thumb on the spacebar.
- have experience of a range of ICT equipment and software
- describe their work and how they have used ICT  
Most children will:  
- be aware that work can be saved in different places e.g. network, writeable CD ROM, PenDrive
- be aware of folders and, with support, create and name new folders
- print work using the drop down menu
- use Print Preview
- make changes to their work (edit)
- select items and use cut, copy and paste as necessary
- have experience of a range of ICT equipment and software
- describe their work and how they have used ICT  
Most children will:  
- with support, be able to choose an appropriate program to perform a task
- plan what they are going to do and evaluate the results
- understand that work can be saved in different places e.g. network, writeable CD ROM, PenDrive
- understand the use of folders and be able to create and name new folders
- understand and use the hierarchical file system
- consolidate keyboard skills - possibly using typing tutor software
- have experience of a range of ICT equipment and software
- describe their work and explain how and why they have used ICT  
Most children will:  
- be able to choose an appropriate program to perform a task
- be able to combine and refine information from various sources.
- interpret and question the plausibility of information.
- have experience of a range of ICT equipment and software
- describe and discuss their work and explain how and why they have used ICT  
Most children will:  
- annotate their work samples using prompt questions
- use appropriate ICT vocabulary  
Most children will:  
- be able to choose and combine the use of appropriate ICT tools to complete a task
- be able to critically evaluate the fitness for purpose of work as it progresses
- have experience of a range of ICT equipment and software
- describe and discuss their work and explain how and why they have used ICT  
Most children will:  
- annotate their work samples using prompt questions
- use appropriate ICT vocabulary  
Most children will:  
- use appropriate ICT vocabulary

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## Graphics and Digital Video

Most children will:
- experiment with an art package trying different tools and effects, as one of a range of media available
- begin to be use an art package as medium to convey their ideas, as one of a range of media available
- with support, use a digital camera or digital video camera to take pictures be aware that digital pictures and video can be displayed on a computer
- use music software with music sounds eg own voice, others voices experiment with music software

Most children will:
- be able to use an art package as medium to convey their ideas, as one of a range of media available
- be aware of a wider range of tools in the art package
- use a digital camera or digital video camera to take pictures
- be aware that digital pictures and video can be saved on a computer
- use a digital camera or digital video camera to take pictures
- use a digital camera or digital video camera to take appropriate pictures or video for a specific purpose
- do simple manipulation of images using an art package or other software eg the digital camera's software

Most children will:
- be able to use an art package as an alternative medium
- use a digital camera or digital video camera to take appropriate pictures or video for a specific purpose
- add captions or sound to digital pictures or video with support, be able to do simple manipulation of images using an art package or other software eg the digital camera's software

Most children will:
- use a wider range of tools within an art package as necessary
- manipulate images using an art package or other software
- continue to use a digital camera or digital video camera to take appropriate pictures or video for a specific purpose

Most children will:
- use a wider range of tools within an art package as necessary
- manipulate images using an art package or other software
- continue to use a digital camera or digital video camera to take appropriate pictures or video for a specific purpose

Most children will:
- use a wider range of tools within an art package as necessary
- continue to manipulate images using an art package or other software
- begin to evaluate when it is appropriate to use an art package and when another medium would be more suitable
- continue to use a digital camera or digital video camera to take appropriate pictures or video for a specific purpose

## Sound

Most children will:
- with support, use cassette recorders / CD players to listen to pre-recorded sound
- with support, use cassette recorders / Dictaphones/sound buttons to record and playback sounds eg own voice, others voices experiment with music software

Most children will:
- use cassette recorders / CD players independently to listen to pre-recorded sound
- use cassette recorders / dictaphones to record and playback sounds eg own voice, others voices
- know that sound can be recorded and played back
- with support, use music software to experiment, create and play their own compositions

Most children will:
- continue to use cassette recorders / dictaphones independently to record and playback sounds eg own voice, others voices
- with support, be able to record sound on the computer and be able to use the sound files in other applications
- use music software to experiment, create and play their own compositions with support, evaluate and modify (edit) their own compositions

Most children will:
- continue to use cassette recorders / dictaphones independently to record and playback sounds eg own voice, others voices
- be able to record and edit sound on the computer
- be able to use the sound files in other applications
- use more sophisticated music software to plan, create, evaluate, edit and play their own compositions

Most children will:
- continue to use cassette recorders / Dictaphones/sound buttons as appropriate
- continue to use the sound files in other applications
- use more sophisticated music software to plan, create, evaluate, edit and play their own compositions

Most children will:
- continue to use cassette recorders / Dictaphones/sound buttons as appropriate
- continue to use the sound files in other applications
- use more sophisticated music software to plan, create, evaluate, edit and play their own compositions

Most children will:
- use a wider range of tools within an art package as necessary
- manipulate images using an art package or other software
- continue to use a digital camera or digital video camera to take appropriate pictures or video for a specific purpose
<table>
<thead>
<tr>
<th>Multimedia</th>
<th>Most children will:</th>
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<tbody>
<tr>
<td><strong>Word Processing and email</strong></td>
<td>Most children will:</td>
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<tr>
<td>- with support, add captions or sound to digital pictures or video</td>
<td>- use the keyboard to enter letters strings (play writing)</td>
<td>- begin to use the space bar to break letter strings into groups of letters</td>
<td>- use the Back Space key to delete a wordbank or word list to enter text eg to match with pictures</td>
<td>- with support, send a picture or document as an attachment</td>
<td>- use and practise their word processing skills in a range of contexts</td>
<td>- use email as a communication tool to collaborate with other pupils</td>
</tr>
<tr>
<td>- with support, use a storyboard to do simple editing of a sequence of digital pictures or video eg change sequence, add transitions</td>
<td>- use the Scroll bar to view different parts of the document justify / align text</td>
<td>- import graphics and add text</td>
<td>- print their work using the Print icon</td>
<td>- logon to an email account</td>
<td>- logon to an email account</td>
<td>- be aware that computer viruses can be sent via email</td>
</tr>
<tr>
<td>- with support, use a storyboard to edit a sequence of digital pictures or video eg change sequence, add transitions, effects, and sound</td>
<td>- use the Print Preview button to print using the menu</td>
<td>- print a simple table</td>
<td>- send a picture or document as an attachment</td>
<td>- use email as a communication tool to collaborate with other pupils</td>
<td>- be aware that email can be sent or copied to more than one person</td>
<td></td>
</tr>
<tr>
<td>- with support, be able to create a simple presentation or digital film eg to show year 2 pupils what KS2 is like</td>
<td>- learn how to insert and use a simple table</td>
<td>- know that email can be sent or copied to more than one person</td>
<td>- modify the presentation to make it more suitable for a different audience eg parents</td>
<td>- begin to be aware that computer viruses can be sent via email</td>
<td>- know that email can be forwarded to another person</td>
<td>- be aware of email safety rules</td>
</tr>
<tr>
<td>- most children will begin to be aware of email safety rules</td>
<td>- know that mail can be sent all over the world electronically via computers (email)</td>
<td>- know that email can be sent or copied to more than one person</td>
<td>- be aware of email safety rules</td>
<td>- create hyperlinks for resources made or found.</td>
<td>- know that email can be sent or copied to more than one person</td>
<td></td>
</tr>
<tr>
<td>- most children will be able to design and create a presentation or digital film eg to show other pupils what they did on a school trip</td>
<td>- logon to an email account</td>
<td>- know that mail can be sent or copied to more than one person</td>
<td>- modify the presentation to make it more suitable for a different audience eg parents</td>
<td>- use email as a communication tool to collaborate with other pupils</td>
<td>- know that email can be forwarded to another person</td>
<td>- be aware of email safety rules</td>
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<td>- most children will design and create a presentation or digital film eg to show other pupils what they did on a school trip</td>
<td>- evaluate the suitability of the presentation for the given audience</td>
<td>- evaluate the suitability of the presentation for the given audience</td>
<td>- be aware that email can be sent or copied to more than one person</td>
<td>- begin to be aware that computer viruses can be sent via email</td>
<td>- be aware of email safety rules</td>
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<tr>
<td>- most children will evaluate the suitability of the presentation for the given audience</td>
<td>- make changes to the presentation to make it more suitable for the audience</td>
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<td>- use email as a communication tool to collaborate with other pupils</td>
<td>- begin to be aware that computer viruses can be sent via email</td>
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<td>- most children will make changes to the presentation to make it more suitable for the audience</td>
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### Control and Logo

<table>
<thead>
<tr>
<th>Most children will:</th>
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</thead>
<tbody>
<tr>
<td>• be aware that many everyday devices respond to commands</td>
<td>• control a programmable robot, with a purpose (defined by either teacher or child)</td>
<td>• plan, write, evaluate, and edit a sequence of instructions to move a programmable robot,</td>
<td>• begin to experiment with on-screen control software to control outputs</td>
<td>• use on-screen control software to plan, create and run a set of instructions to make eg change the traffic lights</td>
</tr>
<tr>
<td>• learn to switch on a programmable toy to activate movement</td>
<td>• understand that, once programmed a programmable robot can repeat the same instructions</td>
<td>• attach a pen to programmable robot to record movements eg shapes</td>
<td>• be aware that the computer can be used to control external devices (outputs) eg lights, buzzers, motors and that these can be simulated by pictures on screen</td>
<td>• use information from a sensor (input) to initiate parts of the control program</td>
</tr>
<tr>
<td>• begin to follow simple instructions eg playing at robots, country dancing (pre-Logo activities)</td>
<td>• plan and create a sequence of instructions to a move a programmable robot</td>
<td>• be aware that Logo is a computer language</td>
<td>• with support, use on-screen control software to plan, create and run a simple set of instructions to make eg a light flash</td>
<td>• plan and create a control system to answer a task</td>
</tr>
<tr>
<td>• play with remote control toys</td>
<td>• control a programmable robot in linear scenarios, using Forward and Backward commands (arrows) and the Go command</td>
<td>• be aware that Logo is a computer language</td>
<td>• evaluate and edit the instructions</td>
<td>• know when it would be appropriate to use a control system</td>
</tr>
<tr>
<td>• play with programmable robots be aware that pressing buttons makes the toy or robot respond</td>
<td>• use trial and error to create a sequence of instructions to a move a programmable robot</td>
<td>• plan, write, evaluate, and edit a simple Logo procedure for a specific purpose (a set of Logo instructions that can be saved, retrieved, and edited)</td>
<td>• test and modify Logo procedure, predict the outcome of a Logo procedure</td>
<td>• create more complex patterns using repeated simple procedures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• use the Repeat command eg to create simple shapes</td>
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### Data logging

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>• be aware that digital devices eg thermometers can be used to measure external changes eg temperature</td>
<td>• be aware of other sensors that can be used eg light sensor, sound sensor, pulse monitor</td>
<td>• know when it would be appropriate to use a sensing device eg in a science experiment</td>
<td>• know when it would be appropriate to use a sensing device as appropriate</td>
<td></td>
</tr>
<tr>
<td>• with support, use a temperature sensor to record changes in temperature eg as ice melts</td>
<td>• be able to interpret the data from the sensing device</td>
<td>• be able to use a range of sensors as appropriate</td>
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<tr>
<td></td>
<td>• know that the computer can be used to display the results from either a remote sensing device or a sensing device attached to the computer</td>
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</table>

Most children will:

- use information from a sensor (input) to initiate parts of the control program
- plan and create a control system to answer a task
- know when it would be appropriate to use a control system
- create more complex patterns using repeated simple procedures
| Research | Most children will:  
<table>
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<tbody>
<tr>
<td></td>
<td>• explore CD ROM resources eg Talking Books</td>
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</tbody>
</table>
|  | Most children will:  
|  | • with support, use CD ROMs to find information eg from a CD ROM encyclopaedia |
|  | Most children will:  
|  | • use CD ROMs to find information eg from a CD ROM encyclopaedia  
|  | with support (Favourites file, hyperlinks set up by the teacher) use the Internet to find information for a topic  
|  | Most children will:  
|  | • with support, use simple search tools to find information on CD ROMs and the Internet  
|  | eg child friendly Search Engine  
|  | • use a range of sources to find information eg CD ROMs, the Internet  
|  | • begin to be aware of Internet safety rules |
|  | Most children will:  
|  | • use simple search tools to find information on CD ROMs and the Internet  
|  | • be aware of Internet safety rules |
|  | Most children will:  
|  | • with support, use a more complex search engine to find information on CD ROMs and the Internet  
|  | • use AND and OR in their searches  
|  | • with support, check the accuracy of information  
|  | • begin to be aware of privacy and other issues related to using the Internet |
|  | Most children will:  
|  | • use a more complex search engine to find information on CD ROMs and the Internet  
|  | • check the accuracy of information  
|  | • be aware of privacy and other issues related to using the Internet |
| Data handling | Most children will:  
|---|---|
|  | • do practical sorting activities and discuss sorting criteria begin to develop simple classification skills  
|  | Most children will:  
|  | • develop simple classification skills based on practical sorting activities  
|  | • with support, use simple datalplotting/graphing programs to produce pictograms and other simple graphs |
|  | Most children will:  
|  | • independently plot data as a pictogram, block chart or bar graph  
|  | • be aware that graph types can be changed  
|  | • interpret the graphs – discuss the graphs and answer simple questions use the search tools in a prepared database to answer simple questions |
|  | Most children will:  
|  | • collect and enter data into a prepared database structure  
|  | • use the search tools to answer simple questions relevant to an investigation  
|  | • sort the data  
|  | • learn how to produce graphs from the data  
|  | • learn to amend errors  
|  | • know that libraries store data about all books and readers on computer and compare this with school’s library system  
|  | Most children will:  
|  | • begin to identify datahandling opportunities  
|  | • prepare a data collection form  
|  | • identify fields  
|  | • create a datafile and enter data  
|  | • use the database to carry out an investigation  
|  | • present data in different forms – graphs, tables  
|  | • amend errors  
|  | Most children will:  
|  | • carry out more complex searches on more complex prepared databases eg be able to answer complex questions such as – Did all the minibeasts in a particular habitat have the same diet?  
|  | • use AND and OR in their searches  
|  | • identify datahandling opportunities, set up a datafile and enter data  
|  | • check for validity and amend errors  
|  | • use the datafile to answer complex questions |
|  | Most children will:  
|  | • use a more complex database to explore patterns and relationships in data eg In a minibeasts database - Is there a relationship between habitat and diet?  
|  | • independently set up and use a datafile to carry out an investigation  
|  | • amend and delete data from records  
|  | • use editing tools to alter the design of a graph  
|  | • organise, refine and present information appropriate to the audience |
| Spreadsheets | Most children will:  
|---|---|
|  | • with support, use a spreadsheet to record data and produce graphs  
|  | • with support, enter data in a prepared spreadsheet  
|  | • with support, select data to produce a graph |
|  | Most children will:  
|  | • use a spreadsheet to record data and produce graphs  
|  | • enter data in a prepared spreadsheet  
|  | • select data to produce a graph  
|  | • use a spreadsheet to explore number patterns eg in a hundred square, multiplication table |
|  | Most children will:  
|  | • be able to set up a spreadsheet with appropriate headings  
|  | • be able to use a simple formula eg SUM  
|  | • use a spreadsheet to investigate eg cost of foods / drinks Which is the best value drink? |
|  | Most children will:  
|  | • be able to use formulae and functions in a spreadsheet  
|  | • alter the format of a spreadsheet  
|  | • change data to satisfy ‘What if’ queries  
|  | • use a spreadsheet to solve simple problems eg the relationship between the perimeter and area of a quadrilateral |