Computing Progression Grid Year 1



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|  | **Unit iAlgorithms- computing unplugged** |  |
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| **Knowledge**  | **Skills**  | **National Curriculum**   |
| \*I can tell you about something I do every day that needs to be done in order \*I can follow instructions \*I can make a set of instructions for others to follow \*I can change instructions if they are wrong \*I can follow instructions to do something depending if something is true or false \*I can read instructions and usually can tell you what I think will happen \*I can tell you what an algorithm is  | \*Read a set of instructions and sometimes predict the correct outcome. \*Produce instructions but sequence them incorrectly or make assumptions. \*Understand that humans and computers follow instructions  \*Read a set of instructions and usually predict the correct outcome. \*Produce a set of instructions that others can usually follow. \*Understand that computers follow instructions given in a precise way.  \*Read a set of instructions and predict the correct outcome. \*Produce an accurate set of instructions using agreed language that others can follow. \*Understand that computers have no intelligence  | \*Understand what algorithms are; how they are how \*Implemented as programs on digital devices \*Understand that programs execute by following precise and unambiguous instructions \*Use logical reasoning to predict the behaviour of simple programs \*Create and debug simple programs  |
| **Vocab** Algorithm, Instruction, Sequence, forward, back, turn, up, down program, debug, repeat, predict, pattern, if, true, false  | **Key Questions** What is an algorithm? A set of instructions that are followed to achieve a task How do we give computers instruction? In ‘code’ instructions given in a language computers can understand What does debug mean? Fixing problems in computer programs  |
| **Cross Curricular Links:** English, PE, Mathematics, Design Technology, Music |
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|  | **Unit: iSafe e- safety** |  |  |
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| **Knowledge**  | **Skills**  | **National Curriculum**  |
| \*I can tell you about the information that only belongs to me \*I can talk about who I can and should not share personal information with \*I can talk about people I can and can’t trust \*I can identify someone I can trust (E.g. police officer or teacher) \*I can tell you about a risky situation when I might need the help of a trusted adult \*I can talk about how emotions and sensations can make me feel safe or unsafe \*I can talk about which information is personal to me and whom they should/should not give it to  | \*Know that some information is personal ( e.g name + address) \*Identify some characteristics of trustworthy/untrustworthy people but given appropriate justification (e.g trust worthy because they are being nice). \*Understand that personal information should only be given to trustworthy people but the trust can be misplaced.  \*Understand that various information is personal (e.g hobbies) \*Usually identify characteristics of trustworthy people. \*Know that personal information should only be given to trusted people.  \*Understand that a wider range of information is personal ( e.g regular attendance at a s specific place) \*Identify a variety of characteristics of trustworthy people and justifies opinions appropriately know that personal information should only be given to trusted people  | 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   |
| **Vocab** Personal information, trusted adult, permission, cyber bullying  | **Key Questions** What is personal information? *Name, address, phone number, photographs, hobbies, username, password etc* Which adult do you trust?  When would it be okay to share a picture of someone? *With permission*  |
| **Cross Curricular Links**  |  |
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|  | **iProgram: Algorithms. Programming physical and virtual toys** |  |  |
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| **Knowledge**  | **Skills**  | National Curriculum  |
| \*I can show you something that does something when you give it an instruction \*I can make a programmable toy go where I want it to go \*I can draw instructions that would move a toy \*I can tell you what I think a toy will do if it followed a set of instructions   | \*Read a set of instructions and sometimes predict the correct outcome. \*Produce instructions but sequence them incorrectly or make assumptions. \*Understand that humans and computers follow instructions  \*Read a set of instructions and usually predict the correct outcome. \*Produce a set of instructions that others can usually follow. \*Understand that computers follow instructions given in a precise way.  \*Read a set of instructions and predict the correct outcome. \*Produce an accurate set of instructions using agreed language that others can follow. \*Understand that computers have no intelligence  | Understand that programs execute by following precise and unambiguous instructions Use logical reasoning to predict the behaviour of simple programs Create and debug simple programs Use technology purposefully to create, organise, store, manipulate and retrieve digital content  |
| **Vocab**  | **Key Questions**  |  |
| Algorithm, instruction, sequence, program, debug, repeat, output, device, signal, instruction, response, forward, back, left, right, step, program, input, output, forward, debugging, command,  | What is an algorithm? *A set of instructions that are followed to achieve a task*. How do we give computers instructions? *In ‘code’ instructions given in a language computers can understand.* What does debug mean? *Finding and fixing problems in algorithms and computer programs.*  |  |
| **Cross Curriculum Links** Mathematics, English, Geography  |  |
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|  | **Iwrite: creating and manipulating digital text** |   |  |
| **Knowledge**  | **Skills**  | **National Curriculum**  |
| \*I can write a simple sentence using a keyboard \*I can print my work \*I can open a document and make a story using a word bank \*I can save my work \*I can tell you about when it would be useful to use a word processor  | \*Obtain simple information from the world wide web. \*Use digital drawing tools to express something. \*Use IT to create sentences that communicate meaning.  \*Find answers to simple questions using a website. \*Use drawing and text tools to impart information. \*Talk about how they have used the computer to create things.  \*Talk about how they found information in a website. \*Make choices about the kind of information they collect from website. \*Use a combination of text and drawing to make simple presentations.   | \*To use technology purposefully to create, organise, store, manipulate and retrieve digital content  |
| **Vocab** Text, word, processor, key, keyboard, save, print, backspace, return/enter, spacebar, scroll, mouse, click, computer, printer, shift, space, connected, user, word bank, open, save, cut, word processor, keys, font, centre, bold,   | **Key Questions** How can you correct mistakes using a word processor? *Backspace, delete or cut.* What are benefits of using a word processor? *You can quickly make changes to text* How can you get to your work later? *Saving or printing*  |  |
| **Cross Curricular Links** English  |  |
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|  | **iModel** An introduction to computer modelling |   |
| **Knowledge**  | **Skills**  | **National Curriculum**  |
| \*I can use a mouse \*I can investigate choices using software \*I can use an adventure game and make choices on screen \*I can recognise what is real and what is not real in an adventure game \*I can use drawing tools \* I can use a digital drawing tools to create a storyboard of a game or story.  | Have entered words using a keyboard Use a mouse to point, click and drag objects around a screen with help. Have created digital content using IT tools. Have saved a file with support. Have explored a limited range of tools. Access a website using desktop shortcuts. Navigate simple websites with support.  Enter simple sentences using a keyboard. Use a mouse to point, click and drag objects around a screen. Use the mouse to select icons and items. Print work. Save work with assistance. Navigate a website using buttons and image links.  Have created and saved different versions of their work. Be able to compare creating their work using IT with manual methods. Be able to explain why a particular tool has been chosen and its effects. Access a website by typing a simple url. Navigate a website using hyperlinks, buttons and image links.  | To use technology purposefully to create, organise, store, I can use a mouse manipulate and retrieve digital content  |
| **Vocab** Model, algorithm, instruction, choice, mouse, point, click, drag, instruction, drop, left click, chose, decide, point, decision, adventure, real/imaginary, fantasy, model  | **Key Questions** What does a computer model do? *Copies real or pretend situations and lets you make choices which changes what happens.*  |
| **Cross Curricular Links**  |  |  |
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|  | **Idata Introduction to data representation** |  |
| **Knowledge**  | **Skills**  | **National Curriculum**  |
| I can make a pictogram I can use pictograms to answer questions I can sort objects into an order I can make a graph I can tell you what I have learnt from graphs  | Collect simple data. Organise data into simple charts and graphs, sometimes with help. Answer questions using simple graphs. Use a graphing tool to select appropriate icons, recognise quantities and create a pictogram.  | Use technology purposefully to create, organise, store, manipulate and retrieve digital content.   |
|  |  Collect data and construct simple charts and graphs. Make observations about graphs. Answer simple questions using graphs. Make statements about the information simple graphs tell them. Ask questions about graphs. Enter information into graphing tool.  Collet data and construct charts with more sets of data. Use graphs to answer a range of questions. Create their own questions that can be answered using graph. Make comparisons between data on a graph, Make comparisons between data on a graph. Use a graphing tool to select appropriate icons, recognise quantities and create a pictogram, make comparisons, such as ‘twice as many’.  |  |
| **Vocab** Data, tally pictogram, survey, information, data, select, click, icon, graph, column, sort, print, classify. | **Key Questions** What is a pictogram? *A chart with pictures instead of numbers* What does this column on the pictogram tell us? How can a pictogram be useful? *A quick way of getting and comparing things*  |
| **Cross Curricular Links** **Mathematics**  |  |   |