# Computing SKILLS LADDER FROM NATIONAL CURRICULUM 2014

| | Understand and apply fundamental principles and concepts of computer Science | Analyse problems in computational terms with experiences of writing programs to solve these problems | Evaluate and apply Information Technology | Responsible, competent, confident and creative users of ICT. |
|---|---|---|---|---|
| **By the end of KS1** | Understand what algorithms are | Create simple programs<br><br>Debug simple programs | Use technology to create, organise, store, manipulate and retrieve digital content<br><br>Recognise common use of information technology | Use technology safely and respectfully, keeping personal information private |
| | Understand algorithms are implemented as programs on digital devices and are executed by following precise/unambiguous instructions | Use logical reasoning to predict the behavior of simple programs | Use technology purposefully to create, organise, store, manipulate and retrieve digital content<br><br>Recognise common use of information technology beyond school. | Identify where to go for help and support when they have concerns. |
| | Use logical reasoning to explain how simple algorithms work | Understand computer networks (including the internet)<br><br>Use sequence, selection and repetition in programs<br><br>Design, write and debug programs to accomplish specific goal | Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content<br><br>Use search technologies effectively | Use technology safely, respectfully and responsibly. |
| | Detect errors in algorithms and programs | Understand how computer networks can provide multiple services<br><br>Work with programs variables and various forms of input and output<br><br>Design, write and debug programs including controlling or simulating physical systems | Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content to accomplish a given goal<br><br>Appreciate how search results are selected and ranked | Recognise acceptable and unacceptable behaviours |

| By the end of KS2 | Correct errors in algorithms and programs | Know the opportunities computer networks offer for communication and collaboration<br><br>Work with various forms of program input and output<br><br>Solve problems by decomposing into smaller parts | Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content to accomplish a given goal, including collecting, analysing, evaluating and presenting data and information<br><br>Be discerning in evaluating digital content from search results | Identify a range of ways to report concerns about content and contact. |
|---|---|---|---|---|