The Ryde School Yearly overview

Computer science and Information technology

https://teachcomputing.org/

	Programming Unit **A** must be done before **B**.	Networks/Data	Media
Nursery	Barefoot computing		
Reception	Barefoot computing	1.1Technology around us (Summer term)	Barefoot computing
Year 1 essential units	1.3 (A) Moving a robot 1.6 (B) Programming animations	1.1 Technology around us	1.2 Digital painting
Cover **key objectives** through cross-curricular opportunities		1.4 Grouping data (will become essential in 2024/25 as technology around us will have been done in YR).	1.5 Digital writing
Year 2 essential units	2.3 (A) Robot algorithms 2.6 (B) Programming quizzes	2.1 Information technology around us	2.2 Digital photography
Cover **key objectives** through cross-curricular opportunities		2.4 Pictograms	2.5 Digital music
Year 3 essential units	3.3 (A) Sequencing sounds 3.6 (B) Events and actions in programs	3.4 Branching databases	3.2 Stop-frame animation
Cover **key objectives** through cross-curricular opportunities		3.1 Connecting computers	3.5 Desktop publishing

Year 4 essential units	4.3 (A) Repetition in shapes 4.6 (B) Repetition in games	4.1 The internet	4.2 Audio production
Cover **key objectives** through cross-curricular opportunities		4.4 Data logging	4.5 Photo editing
Year 5 essential units	5.3 (A) Selection in physical computing 5.6 (B) Selection in quizzes	5.4 Flat-file databases	5.5 Introduction to vector graphics
Cover **key objectives** through cross-curricular opportunities		5.1 Systems and searching	5.2 Video production
Year 6 essential units	6.3 (A) Variables in games 6.6 (B) Sensing movement	6.1 Communication and collaboration	6.5 3D modelling
Cover **key objectives** through cross-curricular opportunities		6.4 Introduction to spreadsheets	6.2 Webpage creation

National Curriculum coverage (from Teach Computing Teacher Guides https://teachcomputing.org/curriculum)

National Curriculum Coverage — Years 1 and 2	1.1 Technology around us	1.2 Digital painting	1.3 Moving a robot	1.4 Grouping data	1.5 Digital writing	1.6 Programming animations	2.1 Information technology around us	2.2 Digital photography	2.3 Robot algorithms	2.4 Pictograms	2.5 Digital music	2.6 Programming quizzes
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 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	✓			✓	✓		✓	✓	✓	✓		

National curriculum coverage - Years 3 and 4	3.1 Connecting computers	3.2 Stop-frame animation	3.3 Sequencing sounds	3.4 Branching databases	3.5 Desktop publishing	3.6 Events and actions in programs	4.1 The internet	4.2 Audio production	4.3 Repetition in shapes	4.4 Data logging	4.5 Photo editing	4.6 Repetition in games
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			✓			✓			✓			✓
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	✓						✓					
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content					✓		✓	✓			✓	
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		✓		✓			✓	✓			✓	

National curriculum coverage - Years 5 and 6	5.1 Systems and searching	5.2 Video production	5.3 Selection in physical computing	5.4 Flat-file databases	5.5 Introduction to vector graphics	5.6 Selection in quizzes	6.1 Communication and collaboration	6.2 Webpage creation	6.3 Variables in games	6.4 Introduction to spreadsheets	6.5 3D modelling	6.6 Sensing movementz
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			✓			✓			✓			✓
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	✓						✓					
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content		✓		✓				✓				
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	✓	✓						✓	✓		✓	