



COMPUTING

EXPECTATIONS:

Early Learning Goals which link to the Curriculum

Personal, Social And Emotional Development (Self-Regulation)

- Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate;
- Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions

Personal, Social And Emotional Development (Managing Self)

- Be confident to try new activities and show independence, resilience and perseverance in the face of challenge;
- Explain the reasons for rules, know right from wrong and try to behave accordingly;

Key Stage 1 National Curriculum Expectations

Pupils should be taught to:

- 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.

Key Stage 2 National Curriculum Expectations

Pupils should be taught to:

- 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.



STATEMENTS OF:

INTENT

Computing should be a creative opportunity for pupils to explore and learn about the digital world. The curriculum has been organised to ensure that the skills required to meet the National Curriculum Aims are covered. It focuses on the progression and development of those skills from EYFS to Year 6 and beyond. There is opportunity for consolidation, challenge and variety within all aspects of our curriculum. The pupils build their resilience and problem-solving skills during their lessons; broadening their ability to explore and learn about different technology and programs. They are able to apply information technology they have learnt. Our curriculum gives them the skills to become responsible, confident, and creative when using information technology.

IMPLEMENTATION

Pupils participate in six computing lessons during each half term. Each lesson builds on both their prior learning from the previous year and from the previous lessons in that unit. During lessons, children have the opportunity to use the Computing suit, laptops and iPads; exploring a wide range of programs for many different purposes. During their time in Computing, they will explore Computer Science, Information Technology and Digital Literacy in increasing depth. There are plenty of opportunities during Computing to apply knowledge and skills from one area of information technology to another. In KS1 and KS2 the pupils explore Computer Science, throughout both key stages they learn about algorithms, programming and coding; they learn how identify errors and debug their code. As the pupils reach KS2, they begin to use alternative coding programs that allow them to apply their skills in different ways. During Digital Literacy, they develop their understanding on how to keep themselves safe whilst using technology, in age appropriate ways. Eventually they build an understanding of how to be a positive technology user, who is responsible, aware and safe. These lessons are supported by PSHE lessons which build upon the themes explored. Within information technology lessons, the pupils will use a range of devices and programs building their skill and confidence for each one. They will have opportunities to explore and discover the benefits to each device and program so they are confident in identifying the one best suited to the task. In addition to the in-class lessons, the pupils are all given a laptop when they join Riverside, they are able to use it both in and out of school. This ensures that all our pupils have equal access to technology and are able to develop their technical skills at home too.

IMPACT

The pupils at Riverside thoroughly enjoy computing lessons. The pupils will use accurate technological vocabulary and show progression in their skills. They will have experience and show confidence with using a range of software and hardware to produce purposeful projects. The teachers use the pupils' passion and in-depth knowledge of particular technologies and encourage them to apply it to more broad and challenging areas of computing. They have high expectations and quality evidence of the pupils' work in Computing. Technology is all around pupils, both in and out of school, they will understand how to be safe and respectful online; forming a positive relationship with technology.



SUBJECT OVERVIEW

PROGRESSION:				
	EYFS	KS1	LKS2	UKS2
COMPUTER SCIENCE		<p>Pupils can</p> <ul style="list-style-type: none"> • Understand what algorithms are [a list of instructions in a program] • Create simple programs • Understand that algorithms are implemented as programs on digital devices • Understand that programs execute by following precise and unambiguous instructions • Debug simple programs [fix a simple program e.g. bee-bots] • Use logical reasoning to predict the behaviour of simple programs 	<p>Pupils can</p> <ul style="list-style-type: none"> • Write programs that accomplish specific goals • Use sequence in programs • Work with various forms of input • Work with various forms of output • Design programs that accomplish specific goals • Design and create programs • Debug programs that accomplish specific goals • Use repetition in programs • Control or simulate physical systems [using iPad] • Use logical reasoning to detect and correct errors in programs • Understand how computer networks can provide multiple services [such as World Wide Web] • Appreciate how search results are selected 	<p>Pupils can</p> <ul style="list-style-type: none"> • Solve problems by decomposing them into smaller parts • Use selection in programs • Work with variables [changing numbers within a program] • Use logical reasoning to explain how some simple algorithms work • Use logical reasoning to detect and correct in algorithms • Understand computer networks, including the internet • Appreciate how search results are ranked



SUBJECT OVERVIEW

	EYFS	KS1	LKS2	UKS2
INFORMATION TECHNOLOGY	Pupils can: <ul style="list-style-type: none"> • Select and use technology for particular purposes. 	Pupils can: <ul style="list-style-type: none"> • Use technology purposefully to create digital content • Use technology purposefully to store digital content [save work] • Use technology purposefully to retrieve digital content [locate work] • Use technology purposefully to organise digital content [create folder] • Use technology purposefully to manipulate digital content [font style, font size, image size] 	Pupils can: <ul style="list-style-type: none"> • Use search technologies effectively • Use a variety of software to accomplish given goals • Collect information • Design and create content • Present information • Select variety of software to accomplish given goals • Select, use and combine internet services • Analyse information • Evaluate information • Collect data • Present data 	Pupils can: <ul style="list-style-type: none"> • Combine a variety of software to accomplish given goals • Select, use and combine software on a range of digital devices • Analyse data • Evaluate data • Design and create systems • Design and create programs in order to solve problems • Evaluate/apply information technology analytically to solve problems
DIGITAL LITERACY	Pupils can: <ul style="list-style-type: none"> • Begin to use technology safely, knowing rules to follow to stay safe online • Recognise that a range of technology is used in the home. 	Pupils can: <ul style="list-style-type: none"> • Use technology safely • Keep personal information private • Recognise common uses of information technology beyond school • Use technology respectfully • Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies 	Pupils can: <ul style="list-style-type: none"> • Use technology responsibly • Identify a range of ways to report concerns about contact • Understand opportunities computer networks offer for communication • Identify a range of ways to report concerns about content • Recognise acceptable/unacceptable behaviour 	Pupils can: <ul style="list-style-type: none"> • Understand the opportunities computer networks offer for collaboration [access shared resources] • Use technology safely and respectfully • Be discerning in evaluating digital content [identifying appropriate web content/ trustworthy sites]