

Computing

Our TRUST Curriculum Principles

A Kaleidoscope Schools curriculum has been designed to enable children to develop wide knowledge/ skills and become well rounded and confident individuals who are curious and want to learn. Schools design and develop their own curriculums but encapsulate the following which are linked to the Kaleidoscope 5C's.



Intent

Christ Church's Computing Curriculum aims to equip pupils with the skills and knowledge to thrive in an increasingly digital world. We strive to foster computational thinking and creativity, enabling students to understand and change the world around them. Our curriculum is designed to:

- **Develop Fundamental Principles:** Ensure pupils understand and apply the core concepts of computer science, including abstraction, logic, algorithms, and data representation.
- **Enhance Problem-Solving Skills:** Encourage pupils to analyse problems in computational terms and gain practical experience in writing computer programs to solve these problems.
- **Promote Digital Literacy:** Equip pupils to use information technology effectively, creatively, and responsibly, preparing them for the future workplace and active participation in a digital society.
- **Ensure Safe and Respectful Use:** Teach pupils to use technology safely and respectfully, understanding the importance of keeping personal information private and knowing where to seek help for online concerns.

By the end of each key stage, pupils will be confident, competent, and creative users of information and communication technology, ready to tackle the challenges of the digital age

Implementation

Impact

Assessment sheets

Computing National Curriculum Milestones (Trust Milestones)

Key Theme	Reception	KS1 (Y1–Y2)	KS2 (Y3–Y4)	KS2 (Y5–Y6)
Computer Science: Programming		<p>To understand and implement algorithms to execute instructions</p> <p>To create and debug simple programs, using logical reasoning to predict their behaviour</p>	<p>To design, write and debug programs, using logical reasoning to explain how algorithms work</p> <p>Controlling or simulating physical systems</p> <p>To explore sequencing, repetition and loops in programs</p>	<p>To design, write and debug programs, using logical reasoning to explain how algorithms work</p> <p>Controlling or simulating physical systems</p> <p>To explore selection and variables</p>
Digital Literacy: Being an effective and safe user of computing systems		<p>Use technology safely and respectfully: keep personal information private and know where to go for help about content and contact</p> <p>Use technology with a purpose: create, organise, store, manipulate and retrieve digital content: Photography & word processing</p>	<p>Use technology safely, respectfully and responsibly: recognise unacceptable behaviour and how to report concerns about content and contact</p> <p>Use software to purposefully create content: Word and PowerPoint</p>	<p>Use technology safely, respectfully and responsibly: recognise unacceptable behaviour and how to report concerns about content and contact</p> <p>Use software to purposefully create content: Excel, Word and PowerPoint</p>
Information Technology: Practice and Application		<p>Recognise uses of IT inside and outside of school: How technology and IT benefit our lives</p>	<p>Understanding computer networks: How computers connect through input, process and outputs and the internet as a network of networks known as the WWW</p>	<p>Understanding computer networks: Using search technologies and understanding how data is transferred</p>

	Autumn	Spring	Summer
Reception	Project Evolve: Self Image and Identity	Project Evolve: Online relationships Programming Bee Bots	Project Evolve: Online Bullying Data Handling: Introduction to Data
Year 1	Computing systems and networks – Technology Around Us Technology around us (Y1)	Programming and Algorithms (P&A): Create a simple program – Moving a Robot PROJECT EVOLVE: E SAFETY	Programming and Algorithms (P&A): Implementing Algorithms - Programming B Programming Animations Programming animations (Y1) Scratch Jr
Year 2	Computing Systems and Networks (S&N) – IT around us Information and technology around us (Y2)	Creating Media (CM) - Digital Photography Digital Photography (Y2) PROJECT EVOLVE: E SAFETY	Programming and Algorithms (P&A): Programming Quizzes (Y2) Scratch Jr
Year 3	Computing systems and networks (S&N) - Connecting computers Connecting computers (Y3)	Data and Information (D&I) - Branching Databases Branching databases (Y3) J2 Data PROJECT EVOLVE: E SAFETY	Programming and Algorithms (P&A): Sequencing Programming B - Programming Events and Actions in Programs Events and actions in programming (Y3) Scratch
Year 4	Computing systems and networks (S&N) - The Internet The internet (Y4)	Creating Media - Audio production Audio production (Y4) PROJECT EVOLVE: E SAFETY	Programming and Algorithms (P&A): Repetition & Loops Programming A- in Shapes Repetition in shapes (Y4) Logo
Year 5	Computing systems and networks (S&N) - Systems and Searching Systems and searching (Y5)	Creating Media - Video Production Video production (Y5) PROJECT EVOLVE: E SAFETY	Programming and Algorithms (P&A): Selection - Programming B - Selection in quizzes Selection in quizzes (Y5)
Year 6	Variables in Games Variables in games (Y6) Scratch	Creating Media - webpage creation Webpage creation (Y6) PROJECT EVOLVE: E SAFETY	Creating Media (CM) - 3D Modelling 3D modelling (Y6)



Computing Curriculum Year 1

Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
1 and 2 Computing systems and networks – Technology Around Us	Technology in our classroom	Using computer technology	Developing mouse skills	Using a computer keyboard	Developing keyboard skills	Using a computer responsibly
3 and 4 Programming and Algorithms (P&A): Create a simple program – Moving a Robot	Buttons	Directions	Forward and backwards	Four directions	Getting there	Routes
5 and 6 Programming and Algorithms (P&A): Programming animations (Y1) Scratch Jr	Comparing tools	Moving blocks	Make a change	Adding sprites	Project design	Follow my design

Computer Curriculum Year 2

Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
1 and 2 Computing Systems and Networks (S&N) Information and technology around us (Y2)	What is IT	IT is school	IT in the world	The benefits of IT	Using IT safely	Using IT in different ways
3 and 4 Creating Media (CM) - Digital Photography Digital Photography (Y2)	Taking photographs	Landscape or Portrait	What makes a good photograph?	Lighting	Effects	Is it real?
5 and 6 Programming and Algorithms (P&A): Programming Quizzes (Y2) Scratch Jr	Scratch Jr Recap	Outcomes	Using a design	Changing a design	Designing and creating a program	Evaluating

Computing Curriculum Year 3

Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
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<p>1 and 2 Computing systems and networks (S&N) - Connecting computers Connecting computers (Y3)</p>	<p>How does a digital device work?</p>	<p>What parts make up a digital device?</p>	<p>How do digital devices help us?</p>	<p>How am I connected?</p>	<p>How are computers connected?</p>	<p>What does our school network look like?</p>
<p>3 and 4 Data and Information (D&I) - Branching Databases Branching databases (Y3) J2 Data</p>	<p>Yea or no questions</p>	<p>Making groups</p>	<p>Creating a branching database</p>	<p>Structuring a branching database</p>	<p>Planning a branching database</p>	<p>Two ways of presenting information</p>
<p>5 and 6 Programming and Algorithms (P&A): Sequencing Events and actions in programming (Y3) Scratch</p>	<p>Moving a sprite</p>	<p>Maze movement</p>	<p>Drawing lines</p>	<p>Adding a feature</p>	<p>Debugging movement</p>	<p>Making a project</p>

Computing Curriculum Year 4

Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
<p>1 and 2 Computing systems and networks (S&N)</p>	<p>Connecting networks</p>	<p>What is the internet made of?</p>	<p>Sharing information</p>	<p>What is a website?</p>	<p>Who owns the web?</p>	<p>Can I believe what I read?</p>

- The Internet The internet (Y4)						
3 and 4 Creating Media - Audio production Audio production (Y4)	Recording sound	Editing audio	Planning a podcast	Creating a podcast	Behind the scenes	Evaluating podcasts
5 and 6 Programming and Algorithms (P&A): Repetition in shapes (Y4) Logo	Programing a screen turtle	Programing letters	Patterns and repeats	Using loops to create shapes	Breaking things down	Creating a program

Computing Curriculum Year 5

Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
1 and 2 Computing systems and networks (S&N) - Systems and Searching Systems and searching (Y5)	Systems	Computer systems and us	Searching the web	Selecting search results	How search results are ranked	How are searches influenced
3 and 4	What is a video?	Filming techniques	Using a storyboard	Planning a video	Importing and editing video	Video evaluation

Creating Media - Video Production Video production (Y5)						
5 and 6 Programming and Algorithms (P&A): Selection in quizzes (Y5)	Exploring conditions	Selecting outcomes	Asking questions	Planning a quiz	Testing a quiz	Evaluating a quiz

Computing Curriculum Year 6

Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
1 and 2 Variables in Games Variables in games (Y6) Scratch	Introducing variables	Variables in programming	Improving a game	Becoming a game designer	Design to code	Improving and sharing
3 and 4 Creating Media - webpage creation Webpage creation (Y6)	What makes a good website?	Becoming a web designer	Copyright or copywrong?	How does it look?	Follow the breadcrumbs	Think before you link
5 and 6 Creating Media (CM) - 3D Modelling 3D modelling (Y6)	Introduction to modelling	Modifying 3D objects	Make your own name badge	Making a desk tidy	Planning a 3D model	Making a 3D model



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