

Computing

Long-term plan

EYFS > Y6



Statutory guidance

Computer science
Information technology
Digital literacy

National curriculum
Key stages 1 & 2

EYFS

There is no statutory/non-statutory guidance around computing in the Development Matters document, however, as a school we believe in a whole-school approach and that fostering an enthusiasm for computing whilst developing a foundation of skills to be important. Early years students at Edale will;

- Develop an understanding of basic sequencing and buggy code.
- Use technology safely and respectfully.
- Begin to develop creative multimedia skills.
- Understand where to go for help and support should they have concerns around online content.

KS1

- 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.

KS2

- 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.

Statement

At Edale Rise, we strive to improve the life chances of every child and ensure that all children leave our school with a well rounded set of moral values. Our computing curriculum complements this with aims to instil a sense of enjoyment and appreciation for the capabilities of and opportunities provided by technology in our ever growing digital world. Children become responsible and respectful online citizens with an extensive set of transferable digital skills and a deep understanding of computer science and information technology whilst experimenting with creative ways to manage data, organise information, design and create multimedia outcomes and collaborate with others in a 'Take Care' manner.

Our scheme of work enables pupils to meet the end of Key Stage targets outlined in the [National curriculum](#) and goes above and beyond when delivered alongside our PSHE curriculum and Votes for Schools sessions. Our digital literacy offer also covers all outlined Aspects of the [Education for a Connected World framework \(2020\)](#).

Our curriculum is cumulative and spiralled, meaning that students revisit and build on skills and knowledge as they advance through the key stages of our school.



How is it organised?

Computer science

The study of computer systems and networks, coding and algorithms.

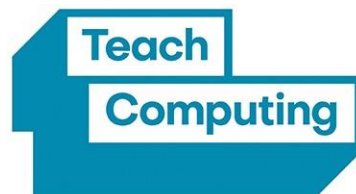
Every child has a subscription to Rodocodo, which will help to guide them through units of learning and provide opportunities to practise skills both in school and at home.



Information technology

The study of technology and its uses in storing, managing and manipulating data.

Children will learn about the technology around them both in and out of school and the ways in which they operate.



Digital literacy

The study of responsible, respectful and ethical ways in which to access a wide range of digital technology.

Children will also develop creative multimedia skills to be used in designing, producing and sharing content.



Digital literacy

This strand of our curriculum combines both creative media units and online safety. At Edale, we believe it to be essential that all children leave our school as responsible and respectful online citizens with the skills and understanding required to thrive in an ever growing digital world. Students therefore spend the majority of their time in computing at Edale focussed on digital literacy.

We have adapted the [Education for a Connected World framework \(2020\)](#) and assigned strands to year groups in a spiralled nature, meaning that children return to and build on strands on a bi-annual basis. More information about these strands of online safety can be found on the next slide.

In addition to this, key concepts in designing, creating, organising and managing media are studied in each year group in coordination with our humanities curriculum. Our students will be exposed to a range of tools and applications with the opportunity to create 'Take Care' cross-curricular outcomes with their newly polished skills.

Digital literacy is at the heart of our computing/digital curriculum offer here at Edale.



Digital literacy



Self-image and identity

This strand explores the differences between online and offline identity beginning with self-awareness, shaping online identities and media influence in propagating stereotypes. It identifies effective routes for reporting and support and explores the impact of online technologies on self-image and behaviour.



Online relationships

This strand explores how technology shapes communication styles and identifies strategies for positive relationships in online communities. It offers opportunities to discuss relationships, respecting, giving and denying consent and behaviours that may lead to harm and how positive online interaction can empower and amplify voice.



Online reputation

This strand explores the concept of reputation and how others may use online information to make judgements. It offers opportunities to develop strategies to manage personal digital content effectively and capitalise on technology's capacity to create effective positive profiles.



Online bullying

This strand explores bullying and other online aggression and how technology impacts those issues. It offers strategies for effective reporting and intervention and considers how bullying and other aggressive behaviour relates to legislation.



Managing online information

This strand explores how online information is found, viewed and interpreted. It offers strategies for effective searching, critical evaluation of data, the recognition of risks and the management of online threats and challenges. It explores how online threats can pose risks to our physical safety as well as online safety. It also covers learning relevant to ethical publishing.



Health, well-being and lifestyle

This strand explores the impact that technology has on health, well-being and lifestyle e.g. mood, sleep, body health and relationships. It also includes understanding negative behaviours and issues amplified and sustained by online technologies and the strategies for dealing with them.



Privacy and security

This strand explores how personal online information can be used, stored, processed and shared. It offers both behavioural and technical strategies to limit impact on privacy and protect data and systems against compromise.



Copyright and ownership

This strand explores the concept of ownership of online content. It explores strategies for protecting personal content and crediting the rights of others as well as addressing potential consequences of illegal access, download and distribution.



Curriculum coverage – EYFS

Below is an overview of units taught in each year group throughout the year. The expectation is that computing is taught fortnightly but it is left to the discretion of teaching staff as to when each unit is delivered.

Year Group	Computer science	Information technology	Digital literacy
F1			Self-image and identity Online relationships Online reputation Online bullying
F2	Rodocodo		Managing online information Health, wellbeing and lifestyle Privacy and security Copyright and ownership

Suggested overview – EYFS

Computer science
Information technology
Digital literacy

Below is an overview of units taught in each year group throughout the year. The expectation is that computing is taught fortnightly but it is left to the discretion of teaching staff as to when each unit is delivered.

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
F1	Self image and identity		Online reputation	Online relationships		Online bullying
F2	Rodocodo					
	Managing online information		Copyright and ownership	Privacy and security		Health, wellbeing and lifestyle

Curriculum coverage – KS1

Below is an overview of units taught in each year group throughout the year. The expectation is that computing is taught weekly but it is left to the discretion of teaching staff as to when each unit is delivered.

Year Group	Computer science	Information technology	Digital literacy
Y1	Rodocodo	Technology around us Grouping data	Self-image and identity Online relationships Online reputation Online bullying Digital painting Digital writing
Y2	Rodocodo	IT around us Pictograms	Managing online information Health, wellbeing and lifestyle Privacy and security Copyright and ownership Digital photography Digital music

Suggested overview – KS1

Computer science
Information technology
Digital literacy

Below is an overview of units taught in each year group throughout the year. The expectation is that computing is taught weekly but it is left to the discretion of teaching staff as to when each unit is delivered.

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y1	Rodocodo					
	Digital painting Self-image and identity	Technology around us	Online relationships	Online bullying	Grouping data	Digital writing Online reputation
Y2	Rodocodo					
	Managing online information	IT around us Privacy and security	Digital music	Health, wellbeing and lifestyle	Pictograms	Digital photography Copyright and ownership

Curriculum coverage– LKS2

Below is an overview of units taught in each year group throughout the year. The expectation is that computing is taught weekly but it is left to the discretion of teaching staff as to when each unit is delivered.

Year Group	Computer science	Information technology	Digital literacy
Y3	Rodocodo	Connecting computers Branching databases	Online relationships Self image and identity Online bullying Online reputation Stop-frame animation Digital publishing
Y4	Rodocodo	The internet Data logging	Managing online information Privacy and security Copyright and ownership Health, wellbeing and lifestyle Audio editing Photo editing

Suggested overview – LKS2

Computer science
Information technology
Digital literacy

Below is an overview of units taught in each year group throughout the year. The expectation is that computing is taught weekly but it is left to the discretion of teaching staff as to when each unit is delivered.

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y3	Rodocodo					
	Online relationships	Connecting computers Online reputation	Stop-frame animation	Self image and identity	Desktop publishing	Branching databases Online bullying
Y4	Rodocodo					
	Managing online information	The internet	Health, wellbeing and lifestyle Photo editing	Audio production	Copyright and ownership	Data logging Privacy and security

Curriculum coverage– UKS2

Below is an overview of units taught in each year group throughout the year. The expectation is that computing is taught weekly but it is left to the discretion of teaching staff as to when each unit is delivered.

Year Group	Computer science	Information technology	Digital literacy
Y5	Rodocodo	Systems and searching Flat-file databases	Privacy and security Online bullying Health, wellbeing and lifestyle Video production Vector graphics
Y6	Rodocodo	Communication and collaboration Introduction to spreadsheets	Self image and identity Copyright and ownership Online reputation 3D modelling Web page creation

Suggested overview – UKS2

Computer science
Information technology
Digital literacy

Below is an overview of units taught in each year group throughout the year. The expectation is that computing is taught weekly but it is left to the discretion of teaching staff as to when each unit is delivered.

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y5	Rodocodo					
	Online bullying	Systems and searching Health, wellbeing and lifestyles	Video production	Flat-file databases	Privacy and security	Vector graphics
Y6	Rodocodo					
	Self image and identity	Communication and collaboration Copyright and ownership	Web page creation	Online reputation	3D modelling	Introduction to spreadsheets

Progression of skills

These map out the skills learnt and developed throughout the year as per the suggested termly overviews above. Skills are revisited and built upon as children progress through the key stages. Progress is evident and easily trackable through the RodoCodo admin panel, Showbie learning journeys and pupil voice.

Progression of skills – Y1

Term	Computer science	Information technology	Digital literacy
Autumn	<ul style="list-style-type: none"> I can use movement commands to create coherent sequences of code I can use rotation to create coherent sequences of code 	<ul style="list-style-type: none"> I am familiar with different technological devices in my classroom and can use a keyboard/touchscreen to complete simple tasks 	<ul style="list-style-type: none"> I recognise that there may be people online that could make someone feel sad or embarrassed I can give examples of when and how I might speak to a trusted adult if I ever feel sad, worried, uncomfortable or frightened I can use a range of tools to point online and conclude whether paintings are better with or without the use of digital devices
Spring	<ul style="list-style-type: none"> I can use the 'tick up' function to create coherent sequences of code I can debug simple sequences of code 	<ul style="list-style-type: none"> I can explain why it is important to be considerate and kind to people online and to respect their choices I can explain why things one person finds funny or sad online may not always be seen in the same way by others and give examples of when I should ask for permission before I do something online I can describe how to behave online in ways that do not upset others and can give examples 	<ul style="list-style-type: none"> I know that information put online can be copied and can describe what information I should not put online without asking a trusted adult first I can type on a keyboard and begin to make changes to text using a variety of tools
Summer	<ul style="list-style-type: none"> I can begin to use loops in efficient sequences of code I can begin to use functions in efficient sequences of code 	<ul style="list-style-type: none"> I can sort, label and group objects based on different properties I can answer questions about data using groups of code 	

Progression of skills – Y2

Term	Computer science	Information technology	Digital literacy
Autumn	<ul style="list-style-type: none"> I can use a variety of movement commands to create efficient sequences of code I can debug basic sequences of code 	<ul style="list-style-type: none"> I understand how technology is used for good in my life as well as public places like shops, hospitals and libraries I understand how to use these forms of technology safely and responsibly 	<ul style="list-style-type: none"> I can use keywords in search engines and know how to navigate a simple webpage I can explain why some information that I find online may not be real or true I know that passwords can be used to protect information, accounts or devices and understand how to keep this personal information safe
Spring	<ul style="list-style-type: none"> I can utilise looped movement in an efficient sequence of code I can include functions in efficient sequences of code 	<ul style="list-style-type: none"> I can create music with both percussion instruments and digital tools and compare both I can create themed music digitally and share my creations with others I can explain simple guidance for using technology in different settings 	<ul style="list-style-type: none"> I can create music with both percussion instruments and digital tools and compare both I can create themed music digitally and share my creations with others I can explain simple guidance for using technology in different settings
Summer	<ul style="list-style-type: none"> I can utilise basic loops throughout efficient sequences of code I can debug sequences of code of ranging complexity 	<ul style="list-style-type: none"> I understand what data is and some examples of how people can collect it I can present a simple set of data in the form of a pictogram and answer questions based on it 	<ul style="list-style-type: none"> I know that different devices can capture photographs and have experienced capturing, editing and improving photos I understand that digital photographs can be edited or created and that some may not be real I recognise that content on the internet may belong to other people and that permission is sometimes needed to use it

Progression of skills – Y3

Term	Computer science	Information technology	Digital literacy
Autumn	<ul style="list-style-type: none"> I can use loops in coherent sequences of code I can use functions in coherent sequences of code 	<ul style="list-style-type: none"> I can identify digital devices and consider the processes they are capable of I know that devices receive inputs and generate outcomes I understand network infrastructure devices like routers and switches 	<ul style="list-style-type: none"> I can explain what it means to "know someone" online and why that might be different to knowing them offline I understand why it is important to be careful about who you trust online as well as the information and content that you trust them with I can explain why giving or gaining permission before sharing things online is important I can explain how to search for information about others online
Spring	<ul style="list-style-type: none"> I can spot patterns in code and use loops in order to create efficient sequences of code I can debug faulty code 		<ul style="list-style-type: none"> I can explain the meaning of identity and explain why people might change their identity online depending on the platform I can create a story-based animation using stop-frame animation
Summer	<ul style="list-style-type: none"> I can create more complex functions in order to create coherent sequences of code I can use loops in trickier sequences of code 	<ul style="list-style-type: none"> I can create physical and digital branching databases using yes/no questions 	<ul style="list-style-type: none"> I can give examples of what bullying behaviour might look like online and how someone could get support I can publish my writing using Keynote or Pages and consider choices in layout, templates and photographs

Progression of skills – Y4

Term	Computer science	Information technology	Digital literacy
Autumn	<ul style="list-style-type: none"> I can spot patterns in code and use loops to most efficiently create coherent sequences I can create more complex functions in order to create the most efficient sequences of code 	<ul style="list-style-type: none"> I understand that the internet is one huge network of networks and that the world wide web is part of that I can evaluate online content, considering how honest, accurate or reliable it is 	<ul style="list-style-type: none"> I can search for information using a variety of platforms and analyse this for probably that I can explain some of the digital methods used to encourage people to buy things online I know that lots of people sharing the same opinion or belief online does not make it true I know that technology can be designed to impersonate a living thing and understand the benefits and risks of this
Spring	<ul style="list-style-type: none"> I can use loops in trickier sequences of code I can debug horribly faulty code 		<ul style="list-style-type: none"> I can identify times or situations where someone might need to limit the amount of technology they use I understand the ways in which photos can be changed/edited and the impact on effectiveness that this can have I can plan, record and edit a podcast
Summer	<ul style="list-style-type: none"> I can use nested loops within coherent sequences of code I can use 'if' statements in coherent sequences of code 	<ul style="list-style-type: none"> I understand that computers use sensors to capture data I can collect data to be stored digitally I can analyse data collected over long periods of time 	<ul style="list-style-type: none"> I understand that I cannot use and reshare some content without permission from the owner I know that some online services may seek to store information about me but understand the digital age of consent and how this impacts me

Progression of skills – Y5

Term	Computer science	Information technology	Digital literacy
Autumn	<ul style="list-style-type: none"> I can correct 'horrible bugs' in code in order to create a coherent sequence I can utilise functions and loops in a sequence 	<ul style="list-style-type: none"> I understand how my input can influence the output of a computer system I understand how search results are ranked and how to most efficiently search a variety of web browsers 	<ul style="list-style-type: none"> I can describe ways in which people can be bullied using a range of media and explain why everybody should think carefully about the content they share online I understand that technology use can be a distraction from other things in both a positive and negative way
Spring	<ul style="list-style-type: none"> I can utilise nested loops in a sequence I understand 'if' statements and can use them in coherent sequences 	<ul style="list-style-type: none"> I can use a digital database to order and answer questions about data I can create graphs and charts using data from a digital database 	<ul style="list-style-type: none"> I can plan, capture, edit and manipulate video in creating short films including the use of green screen
Summer	<ul style="list-style-type: none"> I can use repeated loops within a sequence I can track changes and use variables in coherent sequences 	<ul style="list-style-type: none"> I can use repeated loops within a sequence I can track changes and use variables in coherent sequences 	<ul style="list-style-type: none"> I can describe strategies to keep personal information safe online but understand that internet use is never fully private and is monitored I can use different digital drawing tools to help me create vector graphics

Progression of skills – Y6

Term	Computer science	Information technology	Digital literacy
Autumn	<ul style="list-style-type: none"> I can create custom solutions using functions and loops to solve problems I can utilise the 'repeat until' loop in creating efficient sequences 	<ul style="list-style-type: none"> I understand what a data packet is and can work collaboratively online with others 	<ul style="list-style-type: none"> I understand why representation is important online I know where to get help both off/online if I or somebody I know felt sad, worried, uncomfortable or frightened I can demonstrate the use of search tools to find content which can be reused and reference this
Spring	<ul style="list-style-type: none"> I can track variables like the score in a game using code I can utilise 'if' statements in creating coherent sequences of code 		<ul style="list-style-type: none"> I can explain ways in which someone can build either a positive or negative online reputation I can evaluate, design and create an effective web page whilst considering copyright, fair use of media, aesthetics and navigation paths
Summer	<ul style="list-style-type: none"> I can utilise 'while loops' tools in order to create efficient sequences of code I can debug variable sequences of code using all of my existing skills 	<ul style="list-style-type: none"> I can use spreadsheets to organise and efficiently format data I can use formulas to create calculated data 	<ul style="list-style-type: none"> I can create a variety of digital 3D models