



# Computing

## Curriculum Overview

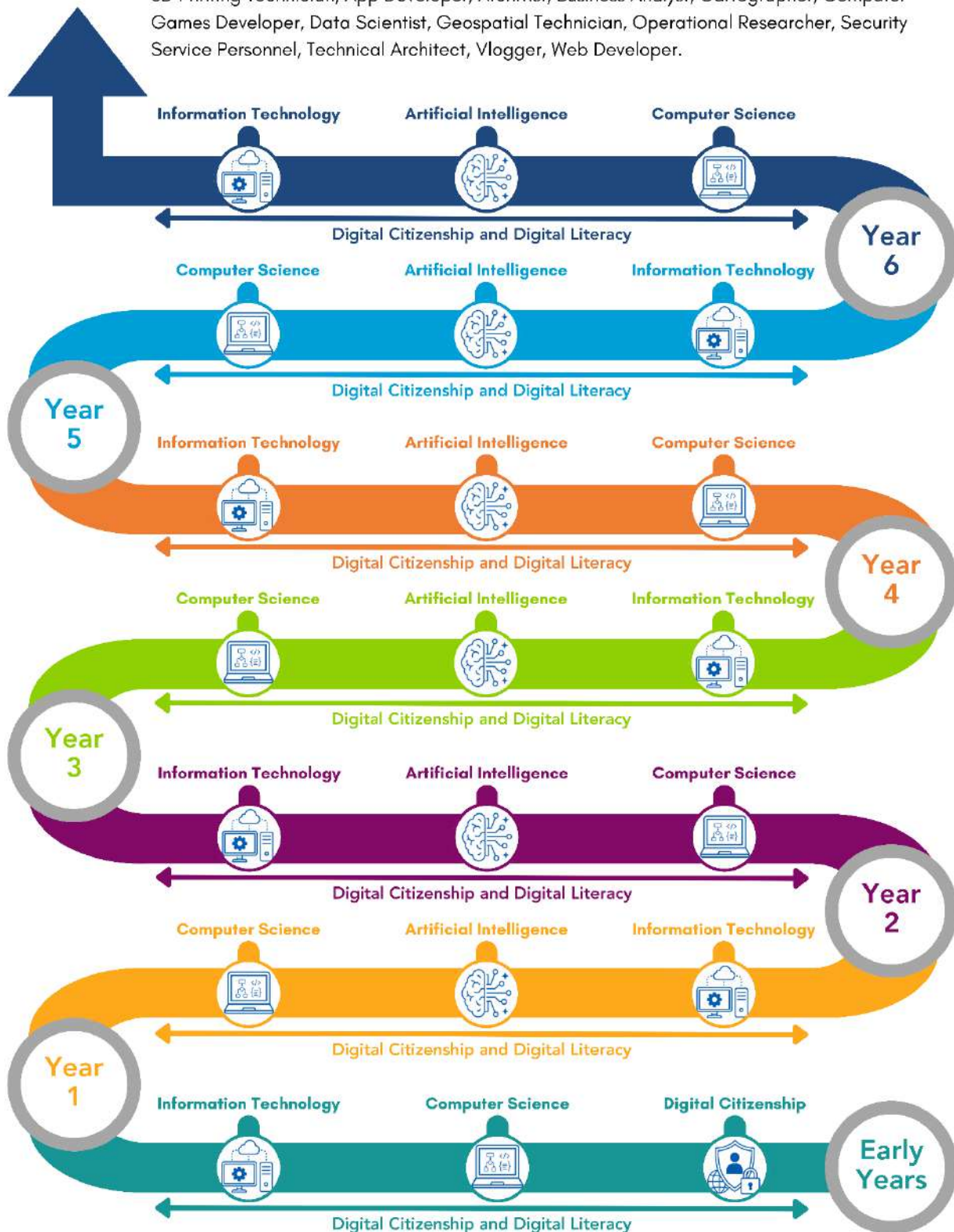
Masefield Primary School



# Computing

## Computing Careers

3D Printing Technician, App Developer, Archivist, Business Analyst, Cartographer, Computer Games Developer, Data Scientist, Geospatial Technician, Operational Researcher, Security Service Personnel, Technical Architect, Vlogger, Web Developer.



"Computers themselves, and software yet to be developed, will revolutionise the way we learn,"

- Steve Jobs

# Computing National Curriculum in England

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

## Aims

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

## Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

## Subject content

### Key stage 1

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

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.

# Statement of Intent for Computing

At Masefield, we believe that high-quality Computing education equips pupils with the knowledge, skills and understanding to participate confidently, creatively and responsibly in an increasingly digital world. Our curriculum is built around four complementary disciplines: Computer Science, Information Technology, Digital Literacy and Artificial Intelligence (AI), with Digital Citizenship embedded throughout.

Through a carefully sequenced curriculum, pupils develop computational thinking, problem-solving skills and confidence in using technology purposefully. They learn how computers and digital systems work, how technology can be used to create and communicate, and how to navigate the digital world safely, critically and responsibly.

We recognise that AI is increasingly shaping our lives. Pupils will develop an age-appropriate understanding of AI, including how it is used, its benefits and limitations, and how to use AI safely, critically and ethically.

At Masefield, our aim is that:

- Children enjoy Computing and approach technology with curiosity, confidence and creativity.
- Children develop practical Computing skills and use technology purposefully across the curriculum.
- Children develop computational thinking, learning to solve problems logically and creatively.
- Children become digitally literate and responsible digital citizens, understanding online safety, privacy, security, respectful communication and the impact of their digital choices.
- Children develop an understanding of AI, learning to question, evaluate and use AI responsibly.
- Children become critical users of technology, recognising that digital information and AI-generated content may not always be accurate or reliable.
- Computing is valued across the school, supported by appropriate resources, staff development and a clear progression of knowledge and skills.
- Children are prepared for their future, developing the confidence, adaptability and responsible attitudes needed to thrive in a rapidly changing technological world.

# Knowing More and Remembering More in Computing

At Masefield, we recognise the importance of retrieval practice in making learning more efficient. Retrieval practice allows our teachers to identify and address gaps in knowledge and check for misunderstandings, whilst simultaneously allowing children to make and strengthen connections between their knowledge and providing firmer foundations for future learning. In Computing, all teachers follow these agreed procedures to support the consolidation of prior learning and the incremental development of new learning:

## The beginning of every unit

In order to assess prior knowledge, the teacher will present the children with the previous years' LbQ question set for that topic where applicable.

This low stakes quiz allows children the opportunity to recall and strengthen relevant prior knowledge which then can be built upon over the upcoming lessons. This also allows teachers the opportunity to identify and address any gaps in prior knowledge or misconceptions so that they can accurately adapt their teaching to ensure that children build a strong knowledge of the required content.

## The beginning of every lesson

At the beginning of every lesson, the teacher will refer back to the previous lessons within the sequence of learning. This provides children the opportunity to recall prior knowledge and make connections between this and the new learning in the current lesson.

## The end of each unit

At the end of each unit, the teacher will present the children with the LbQ question set for that unit. This is a low stakes quiz which will assess the children's knowledge of the required content in each unit.

This allows children yet another opportunity to recall and strengthen their learning from this unit. It also provides teachers with a clear picture of children's understanding, which will inform their summative assessments for the unit. This allows the teacher another opportunity to address gaps in knowledge or misconceptions.

## Friday Flashbacks

Through Friday Flashbacks, the teacher will present the children with the LbQ question sets for all the units taught so far that year. These are low stakes quizzes will assess the children's knowledge of the required content in each unit.

This allows children multiple further opportunities to recall and strengthen their learning from previous units. It also provides teachers with a clear picture of children's understanding and how their knowledge and skills are developing incrementally. It allows them multiple further opportunities to address gaps in knowledge or misconceptions.

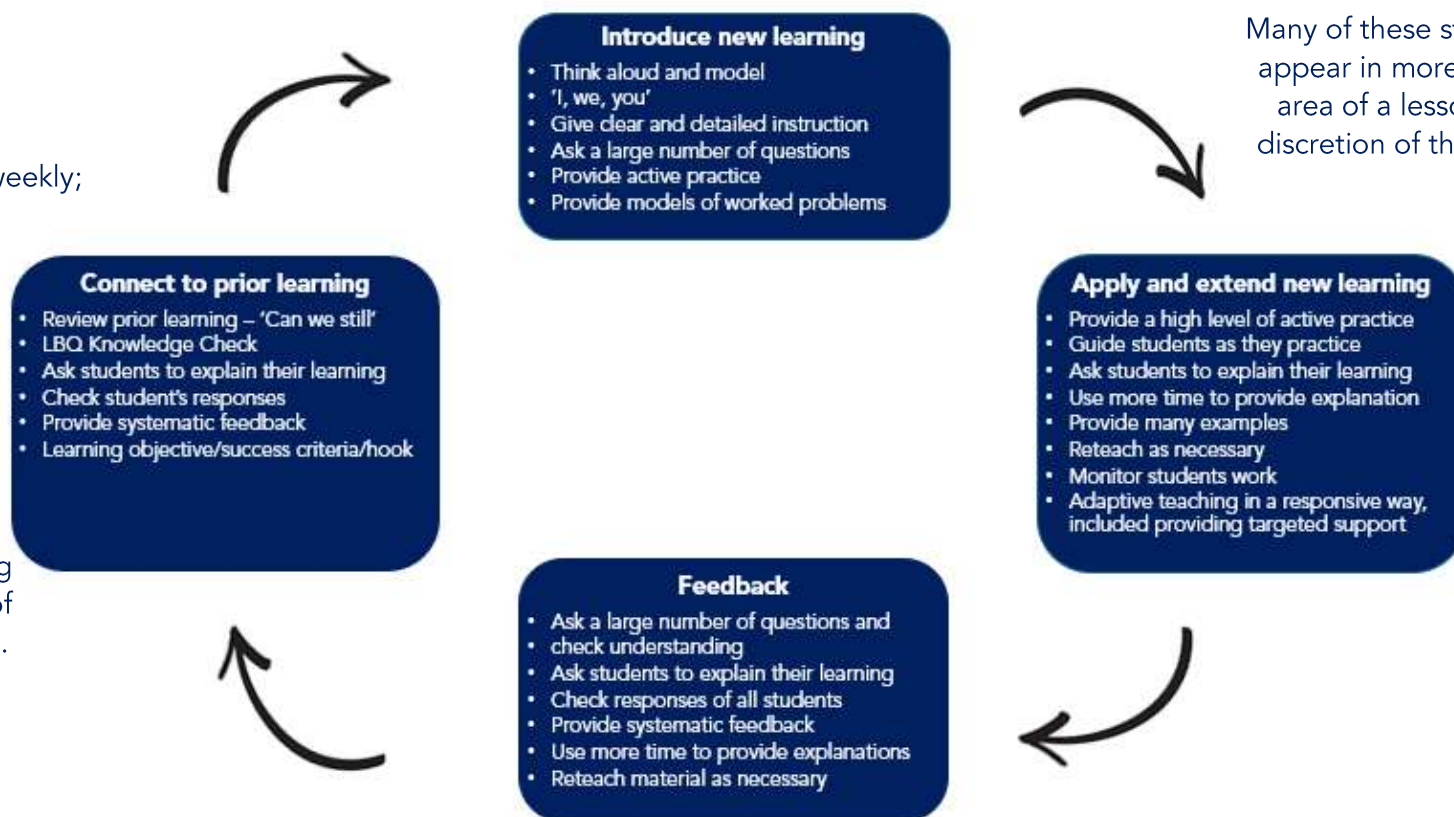
# Teaching and Learning Delivery Model: Building Knowledge through Challenge

| Teachers                                                                                                                                                                                                                                                                                                                                                                                          | Lessons                                                                                                                                                                                                                                                                     | Learning Opportunities                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>✓ Have high expectations for all groups of children</li> <li>✓ Have strong subject knowledge</li> <li>✓ Promote independence</li> <li>✓ Promote confidence</li> <li>✓ Offer praise and encouragement</li> <li>✓ Are enthusiastic and positive about learning</li> <li>✓ Model good learning</li> <li>✓ Offer high quality conversation and talk</li> </ul> | <ul style="list-style-type: none"> <li>✓ Have a distinct knowledge base</li> <li>✓ Are purposeful</li> <li>✓ Are memorable</li> <li>✓ Are active</li> <li>✓ Are engaging</li> <li>✓ Are focussed</li> <li>✓ See children and teachers working as a learning team</li> </ul> | <ul style="list-style-type: none"> <li>✓ Increase knowledge</li> <li>✓ Develop basic skills</li> <li>✓ Meet children's individual learning needs</li> <li>✓ Broaden and extend experiences</li> <li>✓ Offer an opportunity to try new things</li> <li>✓ Are cross curricular if appropriate</li> <li>✓ Offer first hand experiences through trips or visitors</li> </ul> |

There shall be no bad books!

- Vocabulary lesson;
- Regular foundation lessons – weekly;
- New page for each lesson;
- Marking grid for Seesaw work.

Each lesson may not be a complete cycle of the learning sequence but over a period of time all areas will be covered.



Many of these steps would appear in more than one area of a lesson at the discretion of the teacher.

# Adaptive Teaching

"We are what we repeatedly do. Excellence, then, is not an act, but a habit."

## What is Adaptive Teaching and why do we do it?

With adaptive teaching, all pupils are given one explicit instructional goal. They all access the same ambitious curriculum. The teacher teaches to the top and scaffolds pupils who need support to reach that level. When not needed, the teacher removes scaffolds or fades them out.

This approach promotes high achievement for all and doesn't cap opportunities or aspirations.



Explicit  
Instruction

Adaptive practice:  
Pre-teach or TA support during modelling.

Shared  
Instruction

Check:  
Use this section to check pupils' understanding. Can they do it with the structure in place?

Independent  
Practice

Reflect and Respond:  
Allow students who have successfully completed the 'We Do' to move on independently. Group together those who are still struggling and complete work with adult support.

## Before the lesson...

| Lower ability pupils                                               | Pupils with a low reading age                                                                                                                  | SEND pupils                                                                                                                                                                                  | EAL pupils                                  |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Do they need a pre-teach? Can they complete this when they arrive? | Do they need a keyword and definition list? Are they having 1:1 reading – could this be part of a foundation subject lesson or reading lesson? | What resources will they need to support them in successfully completing the task (task sheet, checklists, mind maps etc.)? Communicate with TA beforehand to co-ordinate effective support. | Do they need translated resources? Laptops? |

## During the lesson...

|                             |                                                                                                                                                                  |                                                                                                                                      |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| CHECK<br>REFLECT<br>RESPOND | ENOUGH CORRECT                                                                                                                                                   | Practise, consolidate, move on                                                                                                       |
|                             | NOT ENOUGH CORRECT                                                                                                                                               | Re-explain, more questioning, further chunking, modelling, further scaffolding, check your question then re-check for understanding. |
| Further support...          | Refer to Adaptive Teaching booklet, mini-whiteboards, LBQ, targeted support, additional practice, modelling (I do, we do, you do), breakdown content (chunking). |                                                                                                                                      |



## SEND – Adaptive Teaching Strategies to support and scaffold

- Adjust the level of challenge – e.g. provide sentence stems and question prompts to support thinking, allow children to present their work in different ways (mind maps, collaborative work).
- Clarify/simplify a task or provide numbered steps with visual representations (objects, pictures, signs, photos).
- Use bold essential content from curriculum document.
- Re-explain a concept or explain it in a different way.
- Give additional (or revisit) examples.
- Use peer tutoring/collaborative learning (everyone must participate – give them roles).
- Provide additional scaffolds - e.g. – pre-teach vocabulary, 'I do, we do, you', chunk learning into smaller chunks and break learning down into key knowledge, provide worked examples, provide sentence starters for writing, use media (photographs, film) and hands on resources, where possible.
- Set clear targets/expectations.
- Provide prompts/sentence stems – e.g. provide/develop with children steps to success for children to work from, question prompts to support with thinking and reduce cognitive overload.
- Improve accessibility (e.g. proximity to speaker, visibility of whiteboard, read a text to the pupil) – e.g. – child-friendly texts/media, where possible. When researching, use child appropriate websites.
- Consider pace - (extra time for responses to questions, contributing to class discussions and to complete activities).
- Provide vocabulary with visual images – e.g. - explicitly teach vocabulary at the beginning of a unit alongside a picture of the key word, use photographs to represent the word when using it during the unit.
- Check understanding and reinforcing as needed through repetition, rephrasing, explaining and demonstration – e.g. use of mini-plenaries to check understanding (quick quizzes).
- Have alternative ways to record learning, e.g. oral, photographic, video, highlighting text, mind maps, etc. – e.g. give children a variety of ways to record their work (recording themselves, use of technology, mind maps), allow children to be creative in the ways that they present their work – they do not all have to be the same.
- Pre-teach vocabulary, key content etc.



## More Able – Adaptive Teaching Strategies to stretch and challenge

- Identify and account for prior knowledge – a child who has extensive prior knowledge could be asked to present some of the knowledge they have to the class; explain something they understand easily to a child who doesn't 'get it' so quickly – e.g. – peer modelling, a more able child could present interesting facts that they already know to the children, more able children given more challenging enquiry based questions to extend their learning.
- Build on interests to extend - read widely around a subject outside of lesson time by providing them with information about suitable material, e.g. give them suitable higher-level texts to read – e.g. – Use of History Pupil Leaders to develop love of History, questions to research for home learning, projects to complete for home learning.
- Depth of content - consider what you can add to create depth, e.g. digging into an area more deeply, going laterally with a concept, or asking pupils to use more complex terminology to describe abstract ideas.
- Use questioning techniques to boost thinking – ask open-ended questions which require higher-order thinking - e.g. – How.....Why.....What does this source tell us?
- Consider learner roles – ensure they are appropriately challenged through the role they are given so they can make an effective contribution; argue in favour of a viewpoint that is different to their own, e.g. argue the opposite position to that which they actually hold, during a class debate, take on a more supportive 'tutor' role during group work.
- Mastery - more intensive teaching, tutoring, peer-assisted learning, small group discussions, or additional homework. e.g. - analyse and interpret sources (questions – what's this? What can we say for certain? What can we infer? Does this new source strengthen, amend or completely change our thinking? What doesn't the source tell us?
- Adapted success criteria/choice of task – offer a choice of tasks with a different level of challenge.
- Feedback – framing feedback so pupils must take responsibility for improving their own learning – e.g. extend more able learners through open-ended questions when providing feedback.

# Learning by Questions – Using EdTech to support Teaching and Learning

## What is Learning by Questions?

Pupils' use iPads and progress at their own pace and level through high quality Question Sets and receive immediate automatic feedback as they answer. Teachers receive live analysis and results are saved to support assessment and planning. Data is stored automatically to support lesson planning.

## Why do we use it?

Learning by Questions (LbQ) is fully embedded into Masefield's curriculum journey. This evidence based and award-winning teaching and learning tool has been fundamental in the significantly above average results at Masefield over the last few years. All teachers and pupils have accounts that allow access to all resources.

## What support do I get?

- Tracked classes set up in the first week of the academic year.
- Every member of staff (teachers and TAs) will receive regular CPD on LbQ, including meeting updates, 1:1 CPD, in class coaching and observations.
- Question Sets are ready made for all subjects, including every foundation subject unit from Year 1 to Year 6.

## Using LbQ in Maths

- 3 tasks completed daily as morning maths - LBQ tasks that start with 'practise'. Basic skills and previous learning only.
- Used as a teaching and learning tool – not assessment.
- Intervention screen should be used regularly to assess pupils understanding and address misconceptions immediately.
- Green button (play) should be used regularly to involve and engage all learners in the lesson.
- Pupils should not get an incorrect answer more than 3 times. The teacher or TA should intervene before this or the pupil must ask for support.
- LbQ to be used as part of the deeper learning within lessons.
- An application of the learning within the lesson must be shown in maths book (usually reasoning and problem solving).

## Using LbQ in Reading

- Used for intervention sessions.
- Used as part of reading in foundation subjects.



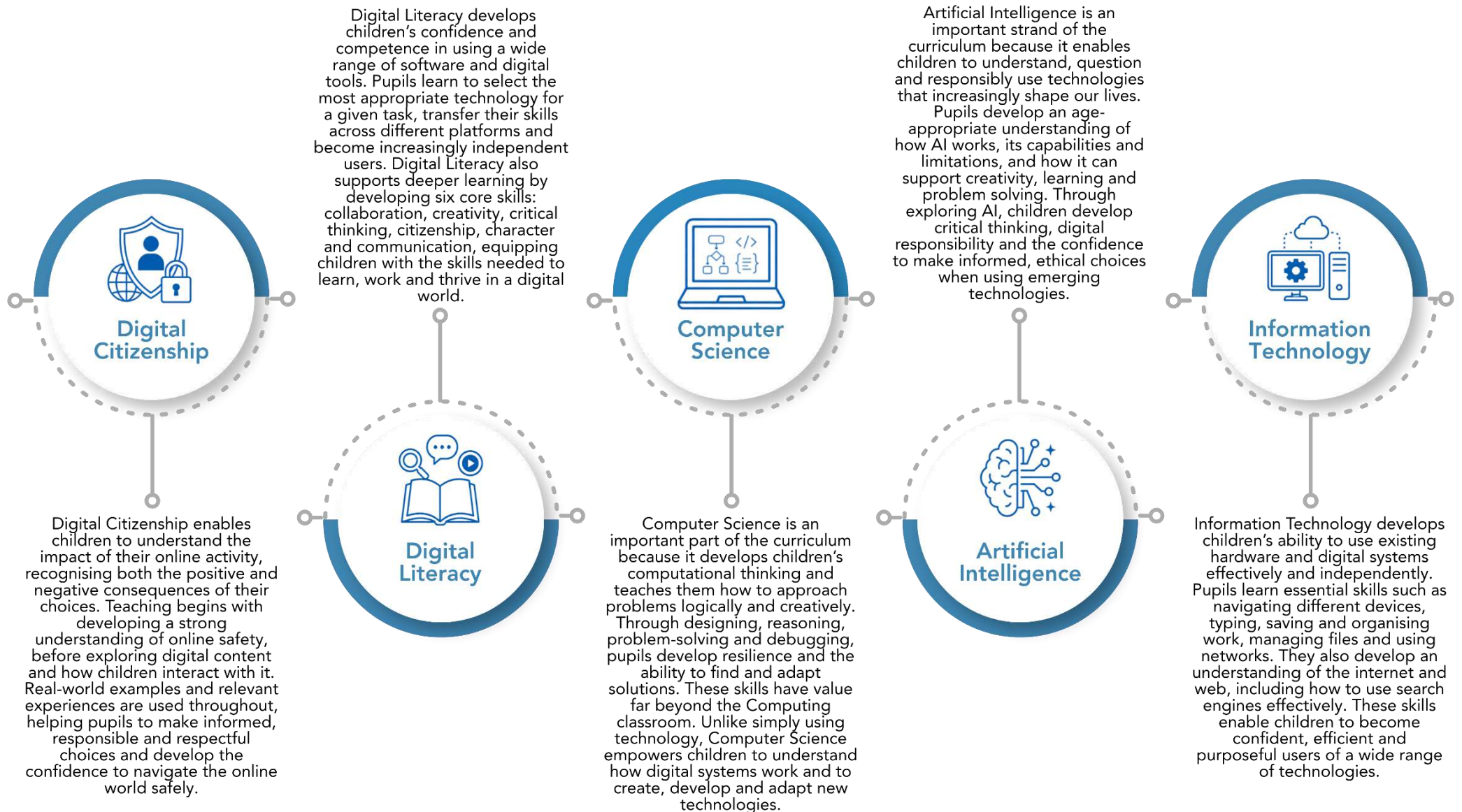
## Using LbQ in Science

- Vocabulary question set to be completed before Science Unit.
- Previous topic (if appropriate) to be completed before Science Unit (e.g Year 4 Light question set to be completed before teaching of Year 6 Light topic).
- Investigation question set available to support teaching of fair testing.
- Knowledge Review question set to be used at end of topic – or once teaching sequence completed.

## Using LbQ in Foundation Subjects

- Question Sets to be completed at the end of learning and during knowledge days.
- Refer to Knowledge Day Overview document for Question Set Record.

# Strands within our Computing Curriculum



# Digital Citizenship

Digital Citizenship is a fundamental element of our Computing curriculum and is embedded throughout every Computing lesson. We believe it is essential that children learn to use technology safely, responsibly, respectfully and confidently. Rather than teaching online safety as a standalone topic, our curriculum provides regular opportunities for pupils to apply digital citizenship principles in meaningful, authentic contexts as they develop their understanding and use of technology.

Our curriculum is based on an adapted version of the Be Internet Legends framework, providing a clear and progressive approach to developing digital citizenship knowledge and behaviours across the school. The framework has been adapted by the Computing Subject Leader to reflect emerging online safety trends and the needs of our pupils, while continuing to meet National Curriculum expectations.

Each term has a specific focus: Autumn 1 – Be Internet Sharp; Autumn 2 – Be Internet Alert; Spring 1 – Be Internet Secure; Spring 2 – Be Internet Kind; Summer 1 – Be Internet Brave. Summer 2 provides opportunities to consolidate, revisit and apply learning.



# Curriculum Progression at a Glance



## Digital Citizenship



## Digital Literacy



## Computer Science

|            | Digital Citizenship                                                                                         | Digital Literacy                                                                                                                             | Computer Science                                                                                                                                  |
|------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Reception  | Recognise safe behaviours, identify trusted adults and begin to make simple safe choices.                   | Develop basic mouse and keyboard control and begin to create simple digital content.                                                         | Follow simple instructions, recognise that actions have outcomes and begin to create and correct simple algorithms.                               |
| Year One   | Follow basic online safety rules and recognise when to ask for help.                                        | Use laptops and iPads with growing confidence to navigate, type, capture media and create simple digital content.                            | Create and follow ordered algorithms, use directional commands, predict outcomes and begin to break problems into smaller parts.                  |
| Year Two   | Make simple independent choices and recognise unreliable or unsafe situations.                              | Create and organise digital content using text, images, tables and presentations across different devices.                                   | Create simple programs using precise sequences and events, predict outcomes and independently identify and fix errors.                            |
| Year Three | Understand consequences, evaluate information and respond appropriately to online problems.                 | Edit, format and combine digital content with increasing independence, including documents, presentations and animation.                     | Create and adapt sequences, apply logical reasoning, decompose problems and debug programs systematically.                                        |
| Year Four  | Apply safety strategies and consider the impact of digital choices on themselves and others.                | Create and manipulate more complex digital content, including video, spreadsheets, graphs and layered media.                                 | Use repetition confidently to make programs more efficient, combine sequences and repeats and independently debug errors.                         |
| Year Five  | Critically evaluate information, understand digital risks and make informed decisions.                      | Select and use appropriate digital tools to create, organise, analyse and communicate information for different purposes.                    | Use selection and conditions to create interactive programs, combining sequence, repetition and selection to solve increasingly complex problems. |
| Year Six   | Independently apply the five pillars to complex situations and demonstrate responsible digital citizenship. | Independently select, combine and evaluate digital tools to create sophisticated multimedia content and communicate information effectively. | Independently combine events, repetition, selection and variables, decompose complex problems and evaluate and improve programming solutions.     |



## Artificial Intelligence

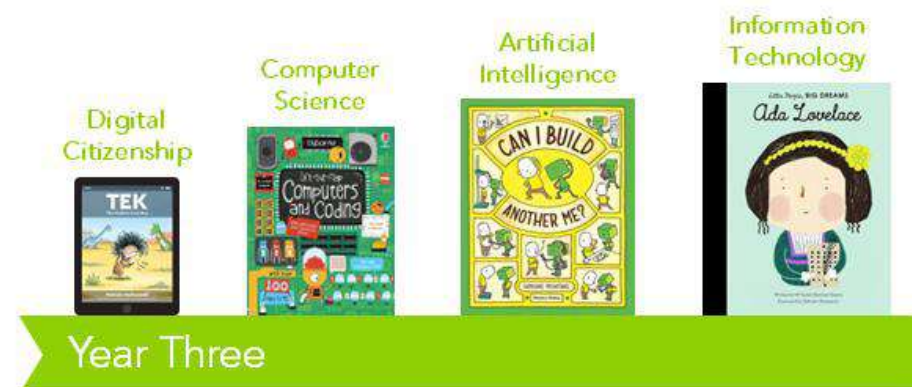
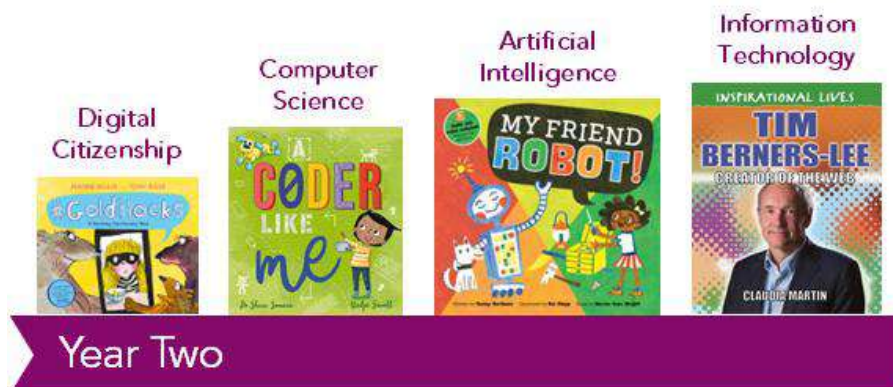


## Information Technology

|            | Artificial Intelligence                                                                                                       | Information Technology                                                                                                                                                           |
|------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reception  | N/A                                                                                                                           | Recognise different digital devices, understand that the internet can help us find information and begin to identify personal information and digital ownership.                 |
| Year One   | Recognise AI in everyday life and understand that it can help people but can also make mistakes.                              | Use simple search technologies, recognise how technology helps us find information and develop early understanding of privacy and ownership.                                     |
| Year Two   | Identify how AI is used in everyday life and understand that AI uses information and patterns to make decisions.              | Search using keywords, navigate webpages independently and begin to distinguish between real, useful and made-up online information.                                             |
| Year Three | Understand how AI learns from data and recognise how the quality of training data can affect its predictions.                 | Search more effectively, distinguish between facts, opinions and beliefs and develop understanding of privacy, security and copyright.                                           |
| Year Four  | Evaluate AI-generated information, recognise bias and understand that AI-generated content is not always reliable or real.    | Evaluate the probable accuracy of online information, recognise fake news and develop understanding of internet standards, privacy, consent and copyright.                       |
| Year Five  | Use generative AI purposefully and responsibly, creating effective prompts while considering accuracy, privacy and copyright. | Understand computer systems and hardware, critically evaluate the validity and reliability of digital information and make informed decisions about permissions and reuse.       |
| Year Six   | Critically evaluate the benefits, risks and wider impact of AI and make informed, ethical decisions about its use.            | Understand how search engines select and rank information, critically evaluate influence and manipulation, manage digital security and independently acknowledge online sources. |

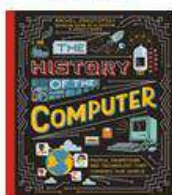
# Computing Literature Spine

To support the teaching of Computing here at Masfield, we have developed a collection of books that all children in our school are to experience and enjoy. We aim to immerse our children in a range of texts, specifically chosen by our staff to ensure that children hear the best stories read aloud to them by their teachers for pleasure, to excite and inspire our children and support the development of knowledge and skills in Computing.

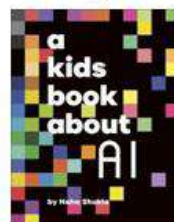




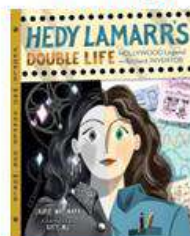
Digital  
Citizenship



Computer  
Science

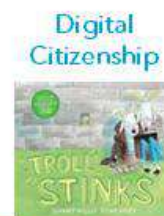


Artificial  
Intelligence

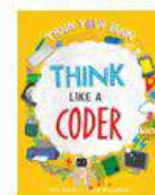


Information  
Technology

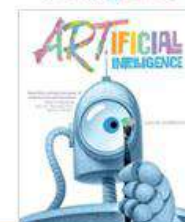
Year Four



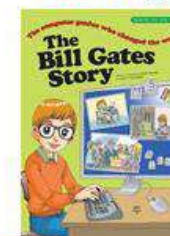
Digital  
Citizenship



Computer  
Science

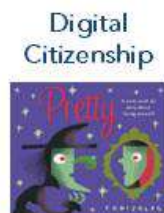


Artificial  
Intelligence



Information  
Technology

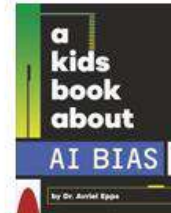
Year Five



Digital  
Citizenship



Computer  
Science



Artificial  
Intelligence



Information  
Technology

Year Six

# Long-term Overview for Computing

|            | Autumn 1                                 | Autumn 2                                 | Spring 1                                 | Spring 2                                        | Summer 1                                       | Summer 2                                       |
|------------|------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Reception  | Digital Citizenship and Computer Science |                                          | Digital Citizenship and Digital Literacy |                                                 | Digital Citizenship and Information Technology |                                                |
| Year One   | Digital Citizenship and Digital Literacy | Digital Citizenship and Computer Science | Digital Citizenship and Digital Literacy | Digital Citizenship and Artificial Intelligence | Digital Citizenship and Digital Literacy       | Digital Citizenship and Information Technology |
| Year Two   | Digital Citizenship and Digital Literacy | Digital Citizenship and Computer Science | Digital Citizenship and Digital Literacy | Digital Citizenship and Artificial Intelligence | Digital Citizenship and Digital Literacy       | Digital Citizenship and Information Technology |
| Year Three | Digital Citizenship and Digital Literacy | Digital Citizenship and Computer Science | Digital Citizenship and Digital Literacy | Digital Citizenship and Artificial Intelligence | Digital Citizenship and Digital Literacy       | Digital Citizenship and Information Technology |
| Year Four  | Digital Citizenship and Digital Literacy | Digital Citizenship and Computer Science | Digital Citizenship and Digital Literacy | Digital Citizenship and Artificial Intelligence | Digital Citizenship and Digital Literacy       | Digital Citizenship and Information Technology |
| Year Five  | Digital Citizenship and Digital Literacy | Digital Citizenship and Computer Science | Digital Citizenship and Digital Literacy | Digital Citizenship and Artificial Intelligence | Digital Citizenship and Digital Literacy       | Digital Citizenship and Information Technology |
| Year Six   | Digital Citizenship and Digital Literacy | Digital Citizenship and Computer Science | Digital Citizenship and Digital Literacy | Digital Citizenship and Artificial Intelligence | Digital Citizenship and Digital Literacy       | Digital Citizenship and Information Technology |

# Computing Curriculum

## Digital Citizenship and Computer Science



### Context for study:

In this unit, pupils begin to develop the behaviours and computational thinking that underpin later study of Computer Science. Through the Be Internet Sharp and Be Internet Alert learning, children learn to think before sharing, recognise that some information should remain private and understand that not everything seen on a screen is necessarily real. Alongside this, they explore how buttons, switches and on-screen controls cause actions, before learning that an algorithm is a set of instructions that must be placed in the correct order. They then create simple algorithms to control programmable toys and begin to recognise when instructions need changing. This supports Understanding the World by encouraging children to explore how technology works, Communication and Language through giving and explaining instructions, and Personal, Social and Emotional Development through safe decision-making. It provides the foundation for Year 1 Computer Science, where pupils create ordered algorithms, use directional commands, predict outcomes and begin to decompose longer problems.

## Autumn Term – Reception

### EYFS Statutory Framework/Development Matters:

Computing is thoughtfully embedded within the EYFS curriculum, supporting children to develop the knowledge, skills and behaviours needed to become confident, capable and responsible users of technology. While Computing is not identified as a separate area of learning, its foundations are developed through the EYFS Statutory Framework and Development Matters, particularly through Understanding the World, alongside Communication and Language, Physical Development, Literacy and Personal, Social and Emotional Development. Development Matters supports practitioners in providing opportunities for children to explore technology, solve problems, communicate, create and develop their understanding of the world around them. Through carefully planned experiences, children develop foundational digital literacy, computational thinking and digital citizenship skills. These experiences provide meaningful opportunities to use technology purposefully within play and learning, ensuring pupils develop the confidence and understanding needed for progression into the Computing curriculum at Key Stage 1.

### Vocabulary:

- Algorithm – a set of instructions that tells us how to complete a task.
- Instruction – something that tells a person or device what to do.
- Order – the sequence in which things should happen.
- Control – to make something do what we want using buttons, switches or instructions.
- Private – something that should only be shared with people we trust.
- Trusted adult – a grown-up we know we can ask for help.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Sharp: I can think before I share.

- Know that we should stop and think carefully before sharing anything online.
- Know that some information should be kept private.
- Know how to make safe choices about what information and pictures we should or should not share.

## Step 2

Learning Objective: I can recognise and use controls on everyday technology.

- Be Internet Sharp: What should we think about before sharing something online?
- Know that we can control some items in our everyday environment using buttons, switches or controls.
- Know that technology can be used to help us complete different tasks.
- Know that we should ask a trusted adult if we are unsure about using technology.

## Step 3

Learning Objective: I can explore what happens when I click on things on screen.

- Be Internet Sharp: Is it always okay to share a picture?
- Know that clicking an item on screen can make something happen.
- Know that different buttons or objects can cause different actions.
- Know that we can explore and learn by trying different actions on screen.

# Sequence of Learning

## Step 4

Learning Objective: Be Internet Alert: I can check if something is real.

- Know that pictures, videos and information seen on a screen are not always real or true.
- Know that we should stop, look carefully and think before believing something we see online.
- Know that a trusted adult can help us check whether something online is real or trustworthy.

## Step 5

Learning Objective: I can understand that an algorithm is a set of instructions.

- Be Internet Alert: Is everything we see on a screen real?
- Know that an algorithm is a set of instructions that can solve a problem.
- Know that instructions need to be in the correct order.
- Know that we can give instructions to make something happen.

## Step 6

Learning Objective: I can create a simple algorithm for a programmable toy.

- Be Internet Alert: How could we check if something is real?
- Know that we can create a set of instructions for a device or toy to follow.
- Know that instructions can make a Bee-Bot or remote-control toy move in a particular direction.
- Know that we can check and change our instructions if they do not work.

# Computing Curriculum

## Digital Citizenship and Digital Literacy

### Context for study:

In this unit, pupils develop the basic physical and digital skills needed to interact confidently with a computer. Through Be Internet Secure and Be Internet Kind, they learn that personal information should sometimes remain private, that passwords help protect information and that people should communicate kindly and respectfully when using technology. Pupils then learn to move, click, double-click and drag using a mouse and identify important keyboard keys, including letters, numbers, Space, Enter and Backspace. They use these skills to type simple words and phrases, create digital pictures using a paint package and follow instructions to complete online activities. This supports Physical Development through increasingly controlled mouse use, Literacy through keyboard recognition and typing, Communication and Language through following instructions, and Personal, Social and Emotional Development through respectful behaviour. It provides the foundation for Year 1 Digital Literacy, where pupils independently log in, navigate online services, save work and later create and format digital text and images.



## Spring Term – Reception

### EYFS Statutory Framework/Development Matters:

Computing is thoughtfully embedded within the EYFS curriculum, supporting children to develop the knowledge, skills and behaviours needed to become confident, capable and responsible users of technology. While Computing is not identified as a separate area of learning, its foundations are developed through the EYFS Statutory Framework and Development Matters, particularly through Understanding the World, alongside Communication and Language, Physical Development, Literacy and Personal, Social and Emotional Development. Development Matters supports practitioners in providing opportunities for children to explore technology, solve problems, communicate, create and develop their understanding of the world around them. Through carefully planned experiences, children develop foundational digital literacy, computational thinking and digital citizenship skills. These experiences provide meaningful opportunities to use technology purposefully within play and learning, ensuring pupils develop the confidence and understanding needed for progression into the Computing curriculum at Key Stage 1.

### Vocabulary:

- Mouse – a device used to move and select things on a computer screen.
- Keyboard – a set of keys used to type letters, numbers and other information.
- Click – to press a mouse button to select or choose something.
- Drag – to hold down the mouse button while moving an object on the screen.
- Password – a secret code that helps protect information.
- Respectful – behaving in a kind and considerate way towards other people.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Secure: I can keep my personal information safe.

- Know that some things about ourselves should be kept private.
- Know that we should ask a trusted adult before sharing things online.
- Know that passwords help to keep information about us safe.

## Step 2

Learning Objective: I can use a mouse purposefully.

- Be Internet Secure: What things should we keep secret to keep ourselves safe?
- Know that the mouse helps us interact with things on a computer screen.
- Know how to move, click, double-click and drag using the mouse.
- Know how to use the mouse to select objects and complete simple activities.

## Step 3

Learning Objective: I can identify important keys on the keyboard.

- Be Internet Secure: Who can we talk to if we are unsure about sharing something?
- Know that the keyboard can be used to enter letters, numbers and other information.
- Know where to find important keys, including letters, numbers, Space, Enter/Return and Backspace.
- Know how to use the keyboard to type simple words, their name and short phrases.

# Sequence of Learning

## Step 4

Learning Objective: Be Internet Kind: I can be kind and respectful when using technology.

- Know that people should be kind and respectful when using technology.
- Know that our words and actions can affect how other people feel.
- Know that we should tell a trusted adult if something online makes us feel worried or upset.

## Step 5

Learning Objective: I can use a paint package to draw a picture.

- Be Internet Kind: How can we be kind when we use technology?
- Know that a paint package can be used to create and edit digital pictures.
- Know how to use simple drawing tools, colours, brushes and shapes to create a picture.

## Step 6

Learning Objective: I can follow instructions to complete an online activity.

- Be Internet Kind: What can we do if something makes us feel sad or worried?
- Know that instructions help us complete a task correctly and in the right order.
- Know how to follow simple instructions to complete an online activity.
- Know how to use the mouse and keyboard to follow instructions and solve simple problems.

# Computing Curriculum

## Digital Citizenship and Information Technology

### Context for study:

In this unit, pupils begin to understand how technology can be used to find information and how people should behave responsibly when using digital content. Through Be Internet Brave, they learn to tell a trusted adult when something online makes them worried or unsure and recognise that asking for help is an important safety strategy. Pupils identify devices that can access the internet and understand that the internet can be used to find information. They also identify examples of personal information, learn that some information should remain private and understand that work they create belongs to them and should not be used by others without permission. The unit concludes by bringing together the five Be Internet Legends pillars: Sharp, Alert, Secure, Kind and Brave. This supports Understanding the World through exploring connected technology, Personal, Social and Emotional Development through safety and responsibility, and Communication and Language through discussing choices. It prepares pupils for Year 1 Information Technology, where they use search technologies, develop knowledge of privacy and passwords and explore digital ownership in greater depth.

## Summer Term – Reception

### EYFS Statutory Framework/Development Matters:

Computing is thoughtfully embedded within the EYFS curriculum, supporting children to develop the knowledge, skills and behaviours needed to become confident, capable and responsible users of technology. While Computing is not identified as a separate area of learning, its foundations are developed through the EYFS Statutory Framework and Development Matters, particularly through Understanding the World, alongside Communication and Language, Physical Development, Literacy and Personal, Social and Emotional Development. Development Matters supports practitioners in providing opportunities for children to explore technology, solve problems, communicate, create and develop their understanding of the world around them. Through carefully planned experiences, children develop foundational digital literacy, computational thinking and digital citizenship skills. These experiences provide meaningful opportunities to use technology purposefully within play and learning, ensuring pupils develop the confidence and understanding needed for progression into the Computing curriculum at Key Stage 1.

### Vocabulary:

- Internet – a worldwide network that allows devices to find and share information.
- Device – a piece of technology such as a computer, tablet or phone.
- Personal information – information that tells somebody something about us.
- Ownership – knowing that something belongs to a particular person.
- Permission – being allowed to do or use something.
- Internet Legend – someone who uses technology safely, responsibly, kindly and bravely.



# Sequence of Learning

## Step 1

Learning Objective: Be Internet Brave: I can tell a trusted adult when something online makes me worried or unsure.

- Know that it is important to tell a trusted adult if something online makes them feel worried or unsure.
- Know that they should stop and ask for help if they do not know what to do online.
- Know who they can talk to if they have a problem or concern when using technology.

## Step 2

Learning Objective: I can identify devices I could use to access information on the internet and talk about how to use the internet as a way of finding information online.

- Be Internet Brave: What can you do if you see something online that you don't understand?
- Know that the internet can be used to find information.
- Know that different devices can be used to access the internet.
- Know that they can ask a trusted adult for help when using the internet.

## Step 3

Learning Objective: I can identify some simple examples of my personal information and describe who would be trustworthy to share this information with.

- Be Internet Brave: Who can you talk to if someone online asks you for information?
- Know that personal information includes things such as their name, age, birthday, address and location.
- Know that some personal information should be kept private.
- Know that trusted adults can help them decide what information is safe to share.

# Sequence of Learning

## Step 4

Learning Objective: I know that work I create belongs to me and I can name my work so that others know this.

- **Be Internet Brave: Who can you ask if you are not sure what you can use online?**
- Know that things they create belong to them.
- Know that adding their name helps others know who created their work.
- Know that they should ask before using or sharing someone else's work.

## Step 5

Learning Objective: I can remember ways to be safe, kind and responsible online.

- Know the five Be Internet pillars: Sharp, Alert, Secure, Kind and Brave.
- Know that the five pillars help them make safe, kind and responsible choices online.
- Know that being an Internet Legend means using technology safely, responsibly and respectfully.

## Step 6

Learning Objective: I can show how to be an Internet Legend when using technology.

- Know that they can make safe and responsible choices when using technology.
- Know that they can use the five pillars to help them decide what to do online.
- Know that they can talk to a trusted adult when they are unsure or need help.

# Computing Curriculum

**Be  
Internet  
Sharp**

**Think  
Before You  
Share**



**Be  
Internet  
Legends.**

## Digital Citizenship and Digital Literacy

### Context for study:

In Reception Digital Citizenship, pupils learn to stop and think before sharing, recognise that some information should remain private and make simple safe choices about pictures and information. In Year 1 Digital Citizenship, pupils build on this Be Internet Sharp knowledge by thinking more carefully before sharing words, pictures or information online and recognising that they should ask a trusted adult when unsure. This provides the foundation for Year 2 Digital Citizenship, where pupils make more independent decisions about what personal information is safe to share and recognise that personal information can identify them.

In Reception Digital Literacy, pupils learn to use a mouse purposefully and identify important keyboard keys. In Year 1 Digital Literacy, pupils build on these laptop skills by learning how usernames and passwords provide access to accounts, independently logging in, navigating Purple Mash and saving, retrieving and naming digital work. They also learn to log out securely. This prepares pupils for future learning in Year 1 Digital Literacy, where they use the keyboard and mouse with greater control to create, edit and format digital content.

## Autumn 1 – Year One

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Username – a name that identifies who is using an account.
- Password – secret information used to help protect an account.
- Login – the details used to enter a computer or online account.
- Private – information that should only be known or seen by certain people.
- Save – to store digital work so it can be used again.
- Log out – to safely leave an account when you have finished using it.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Sharp: I can think carefully before sharing information online.

- Know that some information about themselves should be kept private.
- Know that they should think before sharing words, pictures or information online.
- Know that they can ask a trusted adult if they are unsure about sharing something.

## Step 2

Learning Objective: I can explain why we use a username and password to log in to a computer or online service.

- Be Internet Sharp: What kinds of information about ourselves should we keep private, and why?
- Know that a login allows us to access a computer or online service.
- Know that a username helps identify who is using an account.
- Know that a password helps keep an account private and secure.
- Know that passwords should not be shared with friends.

## Step 3

Learning Objective: I can log in to a computer or online service using my own login details.

- Be Internet Sharp: What should you think about before you share a picture or some information online?
- Know that they should use their own login details to access their account.
- Know that passwords should be entered carefully and kept private.
- Know that they should ask a trusted adult for help if they cannot log in.
- Know that they should not use another person's account without permission.

# Sequence of Learning

## Step 4

Learning Objective: I can find and use simple features within an online service.

- Be Internet Sharp: Why is it important to stop and think before sharing something online?
- Know that an online service can provide different tools and activities.
- Know that Purple Mash is an online service that can be used for learning.
- Know that icons, buttons and menus can help us find different activities.
- Know that they should only access activities and websites that their teacher has asked them to use.

## Step 5

Learning Objective: I can save my work and find it again using Purple Mash.

- Be Internet Sharp: What could you do if you were not sure whether something was safe to share?
- Know that digital work can be saved so that it can be used again.
- Know that saved work can be found in my online account.
- Know that giving work a suitable name can help us identify it.
- Know that they should check that their work has saved before leaving an activity.

## Step 6

Learning Objective: I can log out of a computer or online service safely when I have finished.

- Be Internet Sharp: How could a trusted adult help you make a safe choice about sharing information?
- Know that logging out helps keep their account and information safe.
- Know that they should log out when they have finished using an online service.
- Know that they should not leave their account open for someone else to use.
- Know that they should tell a trusted adult if they think someone has accessed their account.

# Computing Curriculum

## Be Internet Alert

Check it's  
For Real



Be  
Internet  
Legends.

## Digital Citizenship and Computer Science

### Context for study:

In Reception Digital Citizenship, pupils learn that pictures, videos and information on a screen are not always real or true and that a trusted adult can help them check uncertain information. In Year 1 Digital Citizenship, pupils build on this Be Internet Alert knowledge by recognising that online information can be misleading and should not automatically be believed. This prepares pupils for Year 2 Digital Citizenship, where they use simple checking strategies and reliable sources to make increasingly independent judgements about online information.

In Reception Computer Science, pupils learn that an algorithm is a set of ordered instructions and create simple algorithms to control programmable toys. In Year 1 Computer Science, pupils develop this by creating sequences of directional commands, planning algorithms, predicting outcomes and breaking longer algorithms into smaller parts. This prepares pupils for Year 2 Computer Science, where algorithms are implemented as programs using precise commands and events and pupils independently identify and debug errors.

## Autumn 2 – Year One

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Algorithm – a set of instructions for completing a task.
- Command – an instruction telling a person or device what to do.
- Sequence – instructions placed in the order they should happen.
- Predict – to use what you know to say what you think will happen.
- Outcome – what happens when instructions are followed.
- Decompose – to break a problem into smaller, easier parts.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Alert: I can check information with a trusted adult before I believe it.

- Know that not everything they see online is true.
- Know that pictures and information online can sometimes be misleading.
- Know that they can ask a trusted adult if they are unsure whether something is real.

## Step 2

Learning Objective: I can explain what an algorithm is and follow a simple set of instructions.

- Be Internet Alert: Is everything we see or read online true? How do you know?
- Know that an algorithm is a set of instructions to complete a task.
- Know that algorithms can be used by people and computers.
- Know that clear instructions help us complete a task successfully.

## Step 3

Learning Objective: I can give and follow simple commands to move from one place to another.

- Be Internet Alert: What does it mean if a picture or piece of information is misleading?
- Know that a command tells someone or something what to do.
- Know that commands can tell a person or device to move forwards, backwards or turn.
- Know that commands need to be given in the correct order.
- Know that one command can be followed by another to create a sequence.

# Sequence of Learning

## Step 4

Learning Objective: I can plan a simple algorithm using a sequence of commands.

- **Be Internet Alert:** Why should we think carefully before believing something we see online?
- Know that an algorithm can be planned before it is carried out.
- Know that commands can be represented using words, symbols or pictures.
- Know that the order of commands affects the outcome.
- Know that a planned algorithm should have a clear starting point and goal.

## Step 5

Learning Objective: I can predict what will happen when a simple algorithm is followed.

- **Be Internet Alert:** Who could help you if you were unsure whether something online was real?
- Know that an algorithm produces an outcome when its instructions are followed.
- Know that the order and direction of commands affect the outcome.
- Know that we can follow an algorithm in our head or on paper to predict where it will finish.
- Know that an algorithm may not produce the expected outcome if a command is incorrect.

## Step 6

Learning Objective: I can break a longer algorithm into smaller parts to make it easier to follow.

- **Be Internet Alert:** What should you do before believing some information online if you are not sure about it?
- Know that a long algorithm can be split into smaller sections.
- Know that breaking a problem into smaller parts can make it easier to solve.
- Know that each smaller part should have a clear purpose.
- Know that the smaller parts can be joined together to complete the whole algorithm.

# Computing Curriculum

## Digital Citizenship and Digital Literacy

**Be  
Internet  
Secure**

**Protect  
Your Stuff**



**Be  
Internet  
Legends.**

### Context for study:

In Reception Digital Citizenship, pupils learn that some personal information should remain private, that they should ask a trusted adult before sharing and that passwords help keep information safe. In Year 1 Digital Citizenship, pupils build on this Be Internet Secure knowledge by understanding that passwords protect accounts and information, should remain private and should be discussed with a trusted adult if they think somebody else knows them. This prepares pupils for Year 2 Digital Citizenship, where they consider how the strength and secrecy of passwords help protect accounts.

In Year 1 Digital Literacy, pupils begin the school's formal iPad progression. They learn to use the Camera app to take clear photographs and videos, considering focus, light, positioning and stability. They also use Voice Memos to record sound and learn that planning, reducing background noise and listening back can improve recordings. This establishes essential touchscreen, camera and recording knowledge for Year 2 Digital Literacy, where pupils move from capturing media to creating, formatting and organising digital documents in Pages.

## Spring 1 – Year One

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Secure – protected from people who should not have access.
- Photograph – a still picture taken using a camera.
- Focus – making the main subject of a photograph appear clear.
- Video – a recording of moving pictures and sound.
- Microphone – the part of a device that records sound.
- Voice Memo – a digital recording of somebody speaking or another sound.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Secure: I can help keep my information and devices safe.

- Know that passwords help protect accounts and information.
- Know that passwords should be kept private.
- Know that they should tell a trusted adult if they think someone knows their password.

## Step 2

Learning Objective: I can use the Camera app to take a clear photograph.

- Be Internet Secure: What does a password help to protect?
- Know that the Camera app can be used to take photographs.
- Know that we should hold the iPad carefully and keep it still when taking a photograph.
- Know that we should look at the whole screen before taking a photograph to make sure our subject is in the picture.
- Know that tapping the shutter button takes a photograph.

## Step 3

Learning Objective: I can make choices to improve the photographs I take.

- Be Internet Secure: Why should a password be kept private?
- Know that moving closer or further away changes what appears in a photograph.
- Know that tapping an object or person on the screen can help the camera focus on it.
- Know that light and the position of the iPad can affect how clear a photograph looks.
- Know that we can review a photograph and take another one if it does not look as intended.

# Sequence of Learning

## Step 4

Learning Objective: I can use the Camera app to record a short video.

- **Be Internet Secure: Who is it not sensible to share your password with?**
- Know that video records moving pictures and sound.
- Know that we press Record once to begin filming and again to stop.
- Know that keeping the iPad steady helps make a video easier to watch.
- Know that photographs and videos can be viewed again in the Photos app.

## Step 5

Learning Objective: I can record and play back my voice using Voice Memos.

- **Be Internet Secure: What should you do if you think somebody else knows your password?**
- Know that Voice Memos records sound using the iPad's microphone.
- Know that the Record button starts a recording and the Stop button ends it.
- Know that speaking clearly and staying close enough to the iPad helps produce a clear recording.
- Know that a recording can be played back so we can listen to it.

## Step 6

Learning Objective: I can record, review and improve a short voice recording.

- **Be Internet Secure: How does keeping your password private help to keep your information safe?**
- Know that planning what we want to say can help us make a clearer recording.
- Know that background noise can make speech harder to hear.
- Know that listening back helps us decide whether our recording needs to be recorded again.
- Know that giving a recording a useful name can help us find it later.

# Computing Curriculum

**Be  
Internet  
Kind**

**Respect Each  
Other**



**Be  
Internet  
Legends.**

## Digital Citizenship and Artificial Intelligence

### Context for study:

In Reception Digital Citizenship, pupils learn that people should be kind and respectful when using technology and that words and actions can affect how other people feel. In Year 1 Digital Citizenship, pupils build on this Be Internet Kind knowledge by considering how different feelings and opinions may be expressed online, recognising that unkind messages can hurt others and knowing to tell a trusted adult when somebody behaves unkindly. This prepares pupils for Year 2 Digital Citizenship, where they consider the impact of their own words before sending messages and learn to report repeated unkind behaviour.

In Year 1 Artificial Intelligence, pupils encounter the curriculum's first dedicated AI strand. They learn that AI can perform tasks that usually require human thinking, recognise examples in familiar devices and understand that AI can recognise voices, faces, pictures and patterns. They also learn that AI can help people but can make mistakes and should be used safely. This prepares pupils for Year 2 Artificial Intelligence, where they explore how AI uses information and patterns to make predictions and decisions.

## Spring 2 – Year One

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Artificial intelligence – technology that can perform some tasks that usually need human thinking.
- Pattern – something with features that can be recognised or repeated.
- Recognise – to identify something from its features.
- Device – a piece of electronic technology used for a task.
- Responsible – behaving sensibly and making safe choices.
- AI tool – technology that uses artificial intelligence to complete a task.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Kind: I can use kind and respectful words when communicating online.

- Know that people can have different feelings and opinions online.
- Know that unkind messages can hurt people's feelings.
- Know that they should tell a trusted adult if someone is unkind online.

## Step 2

Learning Objective: I can recognise examples of artificial intelligence in everyday life.

- Be Internet Kind: Can two people have different opinions online and still be kind to each other?
- Know that artificial intelligence (AI) is technology that can perform tasks that usually need human thinking.
- Know that AI is used in some of the technology we use every day.
- Know that not all computers or digital devices use AI.

## Step 3

Learning Objective: I can identify examples of AI that I might use or see.

- Be Internet Kind: How might an unkind message make another person feel?
- Know that AI can be found in phones, tablets, games and other devices.
- Know that some AI can recognise voices, faces, pictures or patterns.
- Know that AI can help people complete different tasks.

# Sequence of Learning

## Step 4

Learning Objective: I can explain how AI can help people.

- Be Internet Kind: What should we remember about other people's feelings when we communicate online?
- Know that AI can help people find information or complete tasks.
- Know that AI can be used to help people with different needs.
- Know that AI is a tool designed and used by people.

## Step 5

Learning Objective: I can explain that AI does not always get things right.

- Be Internet Kind: What should you do if somebody is unkind to you online?
- Know that AI can sometimes make mistakes.
- Know that AI does not think and feel in exactly the same way as a person.
- Know that we should ask a trusted adult if we are unsure about something produced by AI.

## Step 6

Learning Objective: I can make safe choices when using technology that uses AI.

- Be Internet Kind: Why is telling a trusted adult a sensible thing to do when somebody is unkind online?
- Know that AI tools should be used safely and responsibly.
- Know that personal information should not be shared with AI tools without permission.
- Know that a trusted adult can help them decide whether an AI tool is safe to use.

# Computing Curriculum

## Be Internet Brave

When in Doubt, Discuss



Be Internet Legends.

## Digital Citizenship and Digital Literacy

### Context for study:

In Reception Digital Citizenship, pupils learn that they should stop and tell a trusted adult when something online makes them worried or unsure. In Year 1 Digital Citizenship, pupils build on this Be Internet Brave knowledge by recognising when something makes them uncomfortable and understanding that asking a trusted adult for help is both brave and sensible. This prepares pupils for Year 2 Digital Citizenship, where pupils learn that they can stop, close, leave or block something that makes them uncomfortable and seek support from a trusted adult.

In prior Year 1 Digital Literacy, pupils learn to log in, navigate Purple Mash and save and retrieve work. In this Year 1 Digital Literacy learning, pupils develop their laptop skills by typing sentences, navigating and correcting text, formatting font and alignment and using keyboard shortcuts. They then combine text and images to create a formatted digital page. This prepares pupils for Year 2 Digital Literacy, where laptop use expands to spell checking, image retrieval, page layout, tables and presentation software.

## Summer 1 – Year One

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Trusted adult – a grown-up you know you can ask for help.
- Cursor – the marker showing where text will appear or be changed.
- Format – to change how digital content looks.
- Shortcut – a quicker way of telling a computer to perform an action.
- Font – the design or style of written text.
- Undo – a command that reverses the previous action.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Brave: I can tell a trusted adult when something online worries me.

- Know that they should stop if something online makes them uncomfortable.
- Know that they should tell a trusted adult about things that worry them.
- Know that asking for help is a brave and sensible thing to do.

## Step 2

Learning Objective: I can type a simple sentence in Purple Mash using the keyboard and a word bank.

- Be Internet Brave: What should you do first if something online makes you feel uncomfortable?
- Know that the keyboard is used to enter letters, numbers and symbols.
- Know that the space bar creates a space between words.
- Know that Shift can be used to type a capital letter.
- Know that the full stop is used to end a sentence.

## Step 3

Learning Objective: I can move around my text and correct mistakes using the keyboard and mouse.

- Be Internet Brave: Who should you tell if something you see online worries you?
- Know that the arrow keys can move the cursor to different places in text.
- Know that the mouse can be used to select and move to different parts of text.
- Know that text can be changed after it has been typed.
- Know that the Undo icon can be used to reverse an action and fix a mistake.

# Sequence of Learning

## Step 4

Learning Objective: I can change the style and position of my text to make it clear and interesting.

- Be Internet Brave: Why should we not keep an online worry to ourselves?
- Know that text can be changed in size, colour and font.
- Know that text can be made bold or italic.
- Know that text can be aligned in different ways.
- Know that formatting can make important words stand out.
- Know that formatting should make work easier to read.

## Step 5

Learning Objective: I can use simple keyboard shortcuts to change the style of my text.

- Be Internet Brave: Why is asking somebody for help a brave thing to do?
- Know that keyboard shortcuts can help us carry out actions quickly.
- Know that Ctrl + B can make selected text bold.
- Know that Ctrl + I can make selected text italic.
- Know that Ctrl + U can underline selected text.

## Step 6

Learning Objective: I can create and format a digital page using text and images in Purple Mash.

- Be Internet Brave: What could you do if you were using technology and saw something that made you worried?
- Know that a publishing program such as Purple Mash can be used to combine text and images.
- Know that sentences should include capital letters, spaces and full stops.
- Know that text can be formatted to make a page clear and attractive.
- Know that mistakes can be corrected using tools such as Undo.
- Know that keyboard shortcuts can be used to change the style of text.

# Computing Curriculum



## Digital Citizenship and Information Technology

### Context for study:

In Reception Digital Citizenship, pupils learn the five Be Internet pillars and begin applying them to simple choices about safety, kindness, responsibility and seeking help. In Year 1 Digital Citizenship, pupils consolidate this knowledge by applying Sharp, Alert, Secure, Kind and Brave across familiar online situations. This prepares pupils for Year 2 Digital Citizenship, where they explain how the five pillars can work together and recognise their own responsibility for making safe, kind and sensible choices.

In Reception Information Technology, pupils identify devices that access the internet, recognise the internet as a source of information, identify examples of personal information and understand that work they create belongs to them. In Year 1 Information Technology, pupils build on this by using search engines, web browsers and voice searching, developing their understanding of passwords and privacy and recognising digital ownership. They also learn how Jack Kilby and Robert Noyce contributed to computing. This prepares pupils for Year 2 Information Technology, where searching becomes more purposeful through keywords and webpage navigation.

## Summer 2 – Year One

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Search engine – a tool that helps us find information on the internet.
- Web browser – software used to visit and view websites.
- Privacy – keeping information protected from people who should not see it.
- Personal information – information that tells somebody something about you.
- Digital work – something created using digital technology.
- Ownership – knowing who something belongs to.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Legends: I can use the five pillars to make safe and kind choices online.

- Know the five Be Internet Legends pillars.
- Know that the pillars can help them make good choices online.
- Know that being an Internet Legend means being safe, kind, responsible and brave.

## Step 2

Learning Objective: I can explain how influential people have contributed to the development of computing and modern technology.

- Be Internet Sharp: What should you do before sharing words, pictures or information online, and what should you do if you are unsure?
- Know that Jack Kilby and Robert Noyce were people who helped develop an important part of computer technology.
- Know that their work helped make computers and other electronic devices smaller and more powerful.
- Know that people have continued to improve their ideas, helping us have the small computers and devices we use today.

## Step 3

Learning Objective: I can use different ways to find information using technology.

- Be Internet Alert: Why should we not believe everything we see online, and who can help us check whether something is real?
- Know that we can use technology to help us find information.
- Know that a search engine can help us find information on the internet.
- Know that a web browser is used to visit websites and view information.
- Know that we can sometimes use voice searching to ask a device to find information.

# Sequence of Learning

## Step 4

Learning Objective: I can tell a trusted adult if something online makes me feel worried or uncomfortable.

- Be Internet Secure: Why should passwords be kept private, and what should you do if you think somebody else knows yours?
- Know that not everything we see online is suitable for children.
- Know that something online might make us feel sad, uncomfortable, worried or frightened.
- Know that we should stop and tell a trusted adult if something makes us feel this way.
- Know that asking for help is a safe and sensible thing to do.

## Step 5

Learning Objective: I can explain how passwords and privacy help to keep information safe.

- Be Internet Kind: How can an unkind online message affect another person's feelings, and what should you do if somebody is unkind online?
- Know that a password can help protect information and devices.
- Know that passwords should be kept private and not shared with friends.
- Know that personal information can include things such as where I live, my family's names and where I go to school.
- Know that I should always ask a trusted adult before sharing personal information online.
- Know that someone else's personal information should also be kept private.

## Step 6

Learning Objective: I can explain why my digital work belongs to me and save it with my name.

- Be Internet Brave: What should you do when something online makes you uncomfortable or worried, and why is asking for help brave?
- Know that work I create using technology belongs to me because I created it.
- Know that other people's work belongs to them.
- Know that putting my name on my work helps others know who created it.
- Know that a suitable filename can help identify who created a piece of digital work.
- Know that I should ask before using or copying someone else's work.

# Computing Curriculum

**Be  
Internet  
Sharp**

**Think  
Before You  
Share**



**Be  
Internet  
Legends.**

## Digital Citizenship and Digital Literacy

### Context for study:

In Year 1 Digital Citizenship, pupils learn to think carefully before sharing and recognise information that should remain private. In Year 2 Digital Citizenship, pupils build on this Be Internet Sharp knowledge by recognising that personal information can identify them, deciding what is safe to share and understanding that information should not be shared with unknown people online. This prepares pupils for Year 3 Digital Citizenship, where they consider who might see shared information and recognise that once content has been shared, control over it can be lost.

In Year 1 Digital Literacy, pupils develop fundamental iPad camera, video and audio-recording skills. In Year 2 Digital Literacy, pupils build on these iPad skills by creating and saving Pages documents, selecting and formatting text, inserting and resizing images and organising text and images into effective page layouts. Pupils review their documents and make improvements according to purpose. This prepares pupils for future learning in Year 2 Digital Literacy, where the same iPad progression moves into Keynote and the organisation of information across multiple slides.

## Autumn 1 – Year Two

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Personal information – information that can identify you or tell somebody about you.
- Pages – an iPad application used to create digital documents.
- Document – a piece of digital work containing information.
- Format – to change the appearance of digital content.
- Layout – the way information is arranged on a page.
- Alignment – how text or other content is lined up on a page.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Sharp: I can decide what information is safe to share online.

- Know that personal information can identify them or tell others about them.
- Know that they should not share personal information with people they do not know online.
- Know that they should check with a trusted adult before sharing something they are unsure about.

## Step 2

Learning Objective: I can create and save a document in Pages.

- Be Internet Sharp: What is personal information, and how could it tell somebody something about you?
- Know that Pages is used to create digital documents containing text and other content.
- Know that the keyboard can be used to enter letters, words, sentences and punctuation.
- Know that a document should be given a useful name so that it can be identified later.
- Know that digital work should be saved so that it can be opened again.

## Step 3

Learning Objective: I can edit and format text to make my document clear.

- Be Internet Sharp: Why should you not share personal information with somebody you do not know online?
- Know that text can be selected before it is changed.
- Know that font, size, colour and style can change the appearance of text.
- Know that bold text can be used to make important information stand out.
- Know that deleting, inserting and replacing text can be used to correct or improve writing.

# Sequence of Learning

## Step 4

Learning Objective: I can add and arrange images in a Pages document.

- Be Internet Sharp: What should you think about before sharing information about yourself?
- Know that photographs and other images can be inserted into a document.
- Know that an image can be moved and resized to fit the page.
- Know that images should support the information in a document rather than distract from it.
- Know that text and images need to be positioned so that the page remains easy to read.

## Step 5

Learning Objective: I can organise text and images to create an effective page layout.

- Be Internet Sharp: What should you do if you are not sure whether a piece of information is safe to share?
- Know that a layout is the way information is arranged on a page.
- Know that headings can help organise information into clear sections.
- Know that spacing and alignment can help make a document easier to read.
- Know that different layouts may be suitable for different purposes.

## Step 6

Learning Objective: I can create, review and improve a Pages document for a purpose.

- Be Internet Sharp: How can a trusted adult help you decide whether personal information is safe to share?
- Know that a finished document should combine appropriate text, images and formatting.
- Know that we should review our work for mistakes before considering it finished.
- Know that formatting should help communicate information clearly.
- Know that we can make changes after reviewing our work to improve the final document.

# Computing Curriculum

## Digital Citizenship and Computer Science

### Be Internet Alert

Check it's For Real



Be Internet Legends.

### Context for study:

In Year 1 Digital Citizenship, pupils learn that online information may be misleading and should be checked with a trusted adult. In Year 2 Digital Citizenship, pupils build on this Be Internet Alert knowledge by recognising that online information is not always accurate and using a trusted adult or another reliable source to check it. This prepares pupils for Year 3 Digital Citizenship, where they consider the source of information, compare information and use clues to judge whether online content is reliable.

In Year 1 Computer Science, pupils create ordered algorithms, use directional commands, predict outcomes and decompose longer algorithms. In Year 2 Computer Science, pupils develop this knowledge by distinguishing programs from algorithms and understanding events as triggers. They create programs containing precise sequences, predict outcomes using logical reasoning and identify and correct commands or events when programs fail. This prepares pupils for Year 3 Computer Science, where Scratch is used to create, adapt and systematically debug increasingly sophisticated sequences.

## Autumn 2 – Year Two

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Program – instructions that tell a computer what to do.
- Event – something that causes part of a program to start.
- Precise – exact and clear.
- Command – an instruction given to a computer.
- Debug – to find and correct an error in a program.
- Logical reasoning – using what you know to work out what will happen.

# Sequence of Learning

## Step 1

Learning Objective: I can use simple ways to check whether information online is trustworthy.

- Know that information online is not always accurate.
- Know that they can check information with a trusted adult or another reliable source.
- Know that a picture or message does not automatically mean something is true.

## Step 2

Learning Objective: I can explain what a program and an event are and how an event starts a program.

- **Be Internet Alert: Does seeing something written online mean that it must be true? Why not?**
- Know that a program is a set of instructions that tells a computer what to do.
- Know that an event is something that makes a program start.
- Know that a program needs an event to begin.
- Know that different events can be used to start different programs.

## Step 3

Learning Objective: I can give and follow a sequence of precise commands to control a device.

- **Be Internet Alert: Does seeing a picture of something prove that it really happened?**
- Know that computers need precise instructions to work correctly.
- Know that instructions can include directions and turning commands.
- Know that commands need to be in the correct order.
- Know that unclear or incorrect instructions can cause an unexpected result.

# Sequence of Learning

## Step 4

Learning Objective: I can plan a sequence of instructions and predict what will happen when it runs.

- **Be Internet Alert:** What could you do to check whether some online information is accurate?
- Know that a program can be planned before it is created.
- Know that logical reasoning can help us predict what a program will do.
- Know that the order of commands affects the outcome of a program.
- Know that precise instructions make it easier to predict the outcome.

## Step 5

Learning Objective: I can create a program using several commands and an event to control a device or software program.

- **Be Internet Alert:** What is a reliable source, and how could it help you check information?
- Know that programs can contain several commands.
- Know that an event can be used to start a program.
- Know that different events can start a program, such as a click, button press or timer.
- Know that commands need to be arranged in the correct order to achieve the desired outcome.

## Step 6

Learning Objective: I can find and fix a mistake in my program when it does not work as expected.

- **Be Internet Alert:** Why is it useful to check uncertain information somewhere else before believing it?
- Know that a program may not always produce the outcome we expect.
- Know that debugging means finding and fixing mistakes in a program.
- Know that we can check the commands and events in a program to find where something has gone wrong.
- Know that changing an incorrect command or its position can make a program work correctly.

# Computing Curriculum

## Digital Citizenship and Digital Literacy

**Be  
Internet  
Secure**

**Protect  
Your Stuff**



**Be  
Internet  
Legends.**

### Context for study:

In Year 1 Digital Citizenship, pupils learn that passwords protect accounts and should remain private. In Year 2 Digital Citizenship, pupils build on this Be Internet Secure knowledge by explaining how passwords protect accounts and personal information and recognising that effective passwords should be difficult for other people to guess. This prepares pupils for Year 3 Digital Citizenship, where pupils create strong passwords, recognise the benefit of using different passwords and take greater responsibility for protecting login information.

In Year 1 Digital Literacy, pupils develop laptop skills by creating and formatting digital pages containing text and images. In Year 2 Digital Literacy, pupils build on this by using spell checking thoughtfully, finding and saving suitable online images, changing page orientation and borders, organising information into tables and applying accumulated skills to PowerPoint. This prepares pupils for Year 3 Digital Literacy, where they create increasingly sophisticated Microsoft Word documents and use more efficient methods to edit, organise and format information.

## Spring 1 – Year Two

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Password – secret information used to protect an account.
- Spell checker – a digital tool that identifies words that may be misspelt.
- Orientation – whether a digital page is positioned portrait or landscape.
- Table – information organised into rows and columns.
- PowerPoint – software used to create presentations.
- Presentation – information organised to be shown to an audience.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Secure: I can explain how passwords help keep my accounts safe.

- Know that passwords protect accounts and personal information.
- Know that passwords should not be shared with friends.
- Know that they should choose passwords that are difficult for other people to guess.

## Step 2

Learning Objective: I can use digital tools to check and improve my written work.

- Be Internet Secure: What do passwords help to protect?
- Know that a spell checker can identify words that may be spelt incorrectly.
- Know that a spell checker does not always know which word I intended to use.
- Know that the Enter/Return key can be used to start a new line or paragraph.
- Know that line breaks can make digital writing easier to read.

## Step 3

Learning Objective: I can find and save a suitable image from the internet to use in my work.

- Be Internet Secure: Why should you not share your password with your friends?
- Know that images can be found using an internet search.
- Know that an image can be saved to a device so it can be used later.
- Know that saving an image is different from using copy and paste.
- Know that they should use images appropriately and ask a trusted adult if they are unsure whether an image can be used.

# Sequence of Learning

## Step 4

Learning Objective: I can use page layout tools to make my work clear.

- Be Internet Secure: What would make a password difficult for somebody else to guess?
- Know that a page border can be added to a document.
- Know that page borders can help make a page look organised.
- Know that pages can be displayed in portrait or landscape orientation.
- Know that the orientation should be chosen to suit the content of the page.

## Step 5

Learning Objective: I can organise information clearly using a basic table.

- Be Internet Secure: Why is an easy-to-guess password less secure?
- Know that a table can organise information into rows and columns.
- Know that information in a table should be placed in the correct row or column.
- Know that tables can make information easier to read and compare.
- Know that page orientation can be changed if it helps a table fit more effectively on a page.

## Step 6

Learning Objective: I can use my digital literacy skills to create and improve a PowerPoint presentation.

- Be Internet Secure: What three things can you remember about using passwords safely?
- Know that PowerPoint can be used to create a presentation using slides.
- Know that digital skills such as inserting images, checking spelling and organising information can be used in PowerPoint.
- Know that text and images should be arranged clearly so that information is easy to understand.
- Know that different digital tools can be used to present information in different ways.

# Computing Curriculum

**Be  
Internet  
Kind**

**Respect Each  
Other**



**Be  
Internet  
Legends.**

## Digital Citizenship and Artificial Intelligence

### Context for study:

In Year 1 Digital Citizenship, pupils recognise that unkind online messages can hurt people's feelings and should be reported to a trusted adult. In Year 2 Digital Citizenship, pupils build on this Be Internet Kind knowledge by considering how their own words may make somebody feel before sending them and recognising repeated unkind behaviour as something that should be reported. This prepares pupils for Year 3 Digital Citizenship, where pupils respond appropriately to online behaviour as well as taking responsibility for their own communication.

In Year 1 Artificial Intelligence, pupils recognise familiar examples of AI, understand that it can help people and know that AI can make mistakes. In Year 2 Artificial Intelligence, pupils build on this by learning that AI recognises patterns in data, can recognise speech, images and objects and can make recommendations and predictions. They also learn that AI responses should be checked rather than automatically trusted. This prepares pupils for Year 3 Artificial Intelligence, where they investigate how examples and training data enable AI systems to learn patterns.

## Spring 2 – Year Two

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Data – information that can be collected and used.
- Pattern – features or information that can be recognised or repeated.
- Prediction – what an AI system suggests may happen based on data.
- Recommend – to suggest something that may be suitable.
- Reliable – something that can usually be trusted to be correct.
- AI system – technology using artificial intelligence to perform a task.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Kind: I can show kindness and respect when communicating online.

- Know that online communication can affect people's feelings.
- Know that they should think about how their words might make someone feel before sending them.
- Know that they should report or tell an adult about repeated unkind behaviour online.

## Step 2

Learning Objective: I can describe some tasks that artificial intelligence can do.

- Be Internet Kind: How can something we write online affect another person's feelings?
- Know that artificial intelligence (AI) can recognise patterns and respond to information.
- Know that AI can be used to recognise speech, images and objects.
- Know that different AI systems are designed to do different jobs.

## Step 3

Learning Objective: I can identify ways AI is used in everyday life.

- Be Internet Kind: What should you think about before sending a message to somebody?
- Know that AI is used in some games, apps, websites and devices.
- Know that AI can recommend things such as videos, music or products.
- Know that AI can help people complete tasks more quickly.

# Sequence of Learning

## Step 4

Learning Objective: I can explain that AI uses information and patterns to help it make decisions.

- Be Internet Kind: How could you change a message if you thought your words might upset somebody?
- Know that AI needs information, often called data, to work.
- Know that AI can look for patterns in data.
- Know that patterns can help an AI system make a prediction or decision.

## Step 5

Learning Objective: I can explain why I should not always trust an AI response.

- Be Internet Kind: What should you do if somebody is repeatedly unkind to you or another person online?
- Know that AI can give an incorrect answer.
- Know that AI does not always understand information in the same way people do.
- Know that important information should be checked with a trusted adult or reliable source.

## Step 6

Learning Objective: I can make sensible choices about when and how to use AI.

- Be Internet Kind: Why is it important to tell an adult about repeated unkind online behaviour?
- Know that AI should be used to help people rather than replace sensible decision-making.
- Know that personal information should be protected when using AI.
- Know that people are responsible for checking information produced by AI.

# Computing Curriculum

## Be Internet Brave

When in Doubt, Discuss



Be Internet Legends.

## Digital Citizenship and Digital Literacy

### Context for study:

In Year 1 Digital Citizenship, pupils learn to stop and seek trusted adult support when something online makes them uncomfortable. In Year 2 Digital Citizenship, pupils build on this Be Internet Brave knowledge by recognising that they can stop, not respond, block, close or leave uncomfortable content and seek help. This prepares pupils for Year 3 Digital Citizenship, where they recognise that different online problems may require support from different trusted adults and that worrying experiences should not be kept secret.

In prior Year 2 Digital Literacy, pupils create Pages documents containing purposefully organised text and images. In this Year 2 Digital Literacy learning, pupils transfer these iPad skills to Keynote, creating presentations containing ordered slides, formatted text, images and shapes. They use transitions appropriately and recognise that slides act as visual aids for an audience. This prepares pupils for Year 3 Digital Literacy, where the iPad progression develops into planning, capturing and editing sequences of photographs to create stop-motion animation.

## Summer 1 – Year Two

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Block – to prevent unwanted online contact or content.
- Keynote – an iPad application used to create presentations.
- Slide – one page of a digital presentation.
- Transition – an effect used when moving between slides.
- Visual aid – something the audience can see that helps explain information.
- Audience – the people for whom something is created or presented.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Brave: I can explain what I should do if something online makes me uncomfortable.

- Know that they should stop and not respond to something that worries them.
- Know that they can block, close or leave something that makes them uncomfortable.
- Know that a trusted adult can help them deal with online problems.

## Step 2

Learning Objective: I can create and organise a simple Keynote presentation.

- Be Internet Brave: What should you do first if something online makes you uncomfortable?
- Know that Keynote is used to create presentations made from slides.
- Know that each slide can contain different information.
- Know that a presentation can contain several slides arranged in an order.
- Know that a presentation should be given a meaningful name.

## Step 3

Learning Objective: I can add and format text on a Keynote slide.

- Be Internet Brave: Why might it be better not to respond to something that worries you?
- Know that text boxes can be used to position writing on a slide.
- Know that headings should be larger or clearer than supporting text.
- Know that text can be resized, repositioned and formatted.
- Know that slides should not contain so much text that they become difficult to read.

# Sequence of Learning

## Step 4

Learning Objective: I can use images and shapes to communicate information on a slide.

- Be Internet Brave: What could blocking, closing or leaving help you to do?
- Know that images can support or explain information.
- Know that images and shapes can be moved and resized.
- Know that shapes can be used to highlight or organise information.
- Know that the position of objects affects the overall layout of a slide.

## Step 5

Learning Objective: I can organise slides and add simple transitions to my presentation.

- Be Internet Brave: Who could help you deal with an online problem?
- Know that slides should be placed in a logical order.
- Know that slides can be rearranged if the sequence does not make sense.
- Know that a transition controls how one slide changes to the next.
- Know that transitions should support the presentation rather than distract the audience.

## Step 6

Learning Objective: I can present and evaluate a Keynote presentation.

- Be Internet Brave: If something online made you uncomfortable, what safe choices could you make?
- Know that a presentation is created for an audience.
- Know that slides are visual aids and do not need to contain everything the presenter says.
- Know that speaking clearly helps an audience understand the presentation.
- Know that feedback can help us identify how a presentation could be improved.

# Computing Curriculum



## Digital Citizenship and Information Technology

### Context for study:

In Year 1 Digital Citizenship, pupils consolidate the five Be Internet pillars and apply them to familiar situations. In Year 2 Digital Citizenship, pupils build on this by explaining what each pillar means and recognising that several pillars may apply to the same situation. They also recognise their personal responsibility for safe and sensible choices. This prepares pupils for Year 3 Digital Citizenship, where they use the five pillars to explain and justify their choices across a wider range of online situations.

In Year 1 Information Technology, pupils use basic search technologies and develop early knowledge of privacy and ownership. In Year 2 Information Technology, pupils build on this by selecting keywords, navigating webpages using links, buttons and tabs and distinguishing real information from made-up content. They also develop knowledge of connected devices, permissions and the World Wide Web through Tim Berners-Lee. This prepares pupils for Year 3 Information Technology, where searches are refined further and online content is analysed as fact, opinion or belief.

## Summer 2 – Year Two

### National Curriculum Objectives:

#### Key stage 1

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.

### Vocabulary:

- Keyword – an important word used to help find information.
- World Wide Web – the collection of linked webpages accessed using the internet.
- Webpage – one page of information on a website.
- Link – something that can be selected to move to another webpage or location.
- Source – where information comes from.
- Permission – agreement allowing somebody to do or use something.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Legends: I can explain how the five pillars help me use technology responsibly.

- Know what each of the five pillars means.
- Know that different online situations may involve more than one pillar.
- Know that they are responsible for making safe, kind and sensible choices online.

## Step 2

Learning Objective: I can explain how influential people have contributed to the development of computing and modern technology.

- **Be Internet Sharp: What is personal information, and why should you be careful about sharing it with people you do not know?**
- Know that Tim Berners-Lee is a computer scientist who invented the World Wide Web.
- Know that the World Wide Web allows people to access and share information using connected computers.
- Know that websites and web pages are part of the World Wide Web.
- Know that Tim Berners-Lee created the first website and helped develop the systems that allow web pages to connect to each other.

## Step 3

Learning Objective: I can use simple keywords to find information using a search engine.

- **Be Internet Alert: How can you check online information rather than assuming that a picture or message must be true?**
- Know that a search engine helps us find information on the internet.
- Know that keywords are important words that describe what we are looking for.
- Know that using specific keywords can help us find more useful results.
- Know that search results may include information that is not suitable or useful.

# Sequence of Learning

## Step 4

Learning Objective: I can navigate a webpage to find the information I need.

- **Be Internet Secure:** What makes a password safer, and why should it not be shared with friends?
- Know that a webpage can contain different sections, links, images and information.
- Know that links can take us to another webpage or section of a website.
- Know that buttons such as back, forward and home help us move around webpages.
- Know that tabs can allow us to have more than one webpage open.

## Step 5

Learning Objective: I can explain the difference between information that is real and information that is made up.

- **Be Internet Kind:** What should you think about before sending an online message, and what should you do about repeated unkind behaviour?
- Know that some things we see online are real or true.
- Know that some things online are imaginary, pretend or made up.
- Know that pictures, videos and stories can sometimes make something imaginary look real.
- Know that we should check information with a trusted adult or reliable source if we are unsure.

## Step 6

Learning Objective: I can explain how to keep my information safe and respect other people's work online.

- **Be Internet Brave:** What actions can you take if something online makes you uncomfortable, and who can help you?
- Know that passwords help protect information, accounts and devices and should be kept private.
- Know that private means something that should only be seen or known by certain people.
- Know that some devices in our homes can connect to the internet, such as televisions, lights, toys and fridges.
- Know that content on the internet may belong to another person.
- Know that we should ask permission before using someone else's work.

# Computing Curriculum

## Digital Citizenship and Digital Literacy

**Be  
Internet  
Sharp**

**Think  
Before You  
Share**



**Be  
Internet  
Legends.**

### Context for study:

In Year 2 Digital Citizenship, pupils decide what personal information is safe to share. In Year 3 Digital Citizenship, pupils build on this Be Internet Sharp knowledge by recognising that information can be copied, saved or passed on and that they may lose control of content after sharing it. This prepares pupils for Year 4 Digital Citizenship, where they explore digital footprints and consider audience, purpose, privacy and possible consequences before sharing.

In Year 2 Digital Literacy, pupils develop laptop skills across written documents, images, tables and presentations. In Year 3 Digital Literacy, pupils build on this by using Microsoft Word with greater independence. They distinguish Save from Save As, use cut, copy and paste, keyboard shortcuts and indentation, organise information with bullet points and text boxes, manipulate images and WordArt and create more sophisticated tables. This prepares pupils for future learning in Year 3 Digital Literacy, where these laptop skills are transferred to increasingly independent PowerPoint creation for a specific audience and purpose.

## Autumn 1 – Year Three

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Save As – to save a new copy of a file or change its name or location.
- Indent – to move text in from the edge of a page.
- WordArt – decorative text that can be formatted in different ways.
- Text wrapping – controlling how text sits around an image or object.
- Cell – one box within a table.
- Digital footprint – the information left by somebody's activities online.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Sharp: I can make sensible choices about what I share online.

- Know that information shared online can be copied, saved or passed on.
- Know that they should consider who might see something before sharing it.
- Know that once something is shared, they may not be able to control where it goes.

## Step 2

Learning Objective: I can create, name and save a Microsoft Word document.

- Be Internet Sharp: What could happen to information after you share it online?
- Know that I can use a keyboard to type and edit a number of sentences.
- Know that a file should have a clear and meaningful name so that it can be easily identified.
- Know that Save updates an existing file, while Save As creates a new copy or allows me to change its name or location.

## Step 3

Learning Objective: I can edit and reorganise text efficiently.

- Be Internet Sharp: Why should you think about who might see something before you share it?
- Know that Tab can be used to indent text and help organise paragraphs.
- Know that cut, copy and paste allow me to move or duplicate text without retyping it.
- Know that keyboard shortcuts such as Ctrl+C, Ctrl+X and Ctrl+V can help me edit text more efficiently.

# Sequence of Learning

## Step 4

Learning Objective: I can use different tools to organise and present information clearly.

- Be Internet Sharp: Can you always control where something goes after you have shared it? Why not?
- Know that bullet points can organise information into an easy-to-read list.
- Know that text boxes, speech bubbles and shapes can be used to position and present information in different ways.
- Know that the layout and position of text and objects should be chosen to make a document clear and appropriate for its purpose.

## Step 5

Learning Objective: I can format images, shapes and WordArt to enhance my document.

- Be Internet Sharp: How could somebody else copy, save or pass on something you have shared?
- Know that images and shapes can be moved, resized and rotated to change their position and appearance.
- Know that text wrapping and layout options control how text is positioned around an image or text box.
- Know that the Format tools can change the appearance of WordArt, images and shapes to enhance a document.

## Step 6

Learning Objective: I can use table tools to organise and present information effectively.

- Be Internet Sharp: What questions should you ask yourself before deciding whether to share something online?
- Know that tables organise information into rows, columns and cells.
- Know that cells can be merged and rows and columns can be added or changed to suit the information being presented.
- Know that formatting tools, including fill, borders and alignment, can make a table clearer and easier to understand.

# Computing Curriculum

## Digital Citizenship and Computer Science

**Be  
Internet  
Alert**

**Check it's  
For Real**



**Be  
Internet  
Legends.**

### Context for study:

In Year 2 Digital Citizenship, pupils use simple checking strategies and reliable sources to judge information. In Year 3 Digital Citizenship, pupils build on this Be Internet Alert knowledge by recognising that people can create false information and that the source of information is an important clue to reliability. This prepares pupils for Year 4 Digital Citizenship, where author, source and date are considered when evaluating potentially inaccurate or deliberately misleading information.

In Year 2 Computer Science, pupils create programs from precise sequences and events and independently find and fix errors. In Year 3 Computer Science, pupils transfer this knowledge into Scratch, where blocks control sprites. They use logical reasoning to predict outcomes, decompose problems, edit existing programs and debug by identifying causes, making changes and retesting. This prepares pupils for Year 4 Computer Science, where repetition is introduced and pupils combine sequences and repeat structures to produce more efficient programs.

## Autumn 2 – Year Three

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Scratch – a block-based programming language.
- Sprite – an object or character that can be programmed in Scratch.
- Decomposition – breaking a problem into smaller, manageable parts.
- Bug – an error that causes a program to behave unexpectedly.
- Debugging – finding, correcting and testing errors in a program.
- Sequence – instructions arranged in a particular order.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Alert: I can use clues to decide whether information online is reliable.

- Know that people can create and share false information online.
- Know that the source of information can help us decide whether to trust it.
- Know that they should compare information or ask someone they trust when they are unsure.

## Step 2

Learning Objective: I can create a sequence of instructions in Scratch.

- Be Internet Alert: Can people create and share false information online? Why is that important to remember?
- Know that a sequence is a list of instructions arranged in a particular order.
- Know that Scratch uses blocks as instructions to tell a sprite what to do.
- Know that changing the order of instructions can change the outcome of a program.

## Step 3

Learning Objective: I can use logical reasoning to predict what a program will do.

- Be Internet Alert: What does the source of a piece of information tell us?
- Know that I can examine a sequence of blocks before running a program to predict its outcome.
- Know that logical reasoning means using what I know about each instruction to explain what I think will happen.
- Know that changing, adding or removing an instruction may change the outcome of a program.

# Sequence of Learning

## Step 4

Learning Objective: I can decompose a problem into smaller parts to help me create a program.

- **Be Internet Alert:** How can knowing where information came from help you decide whether to trust it?
- Know that decomposition means breaking a problem or task into smaller, more manageable parts.
- Know that each smaller part can be planned and programmed separately before being combined.
- Know that thinking about the required outcome first can help me decide which instructions and sequences I need.

## Step 5

Learning Objective: I can edit and debug an existing Scratch program.

- **Be Internet Alert:** What could you compare uncertain information with to help check it?
- Know that I can change a pre-written program by adding, removing, reordering or editing blocks.
- Know that a bug is an error in a program that causes an unexpected outcome.
- Know that debugging involves identifying the cause of a problem, making a change and testing the program again.

## Step 6

Learning Objective: I can adapt a Scratch program to achieve a specific outcome.

- **Be Internet Alert:** What should you do if you are still unsure whether online information is reliable?
- Know that I can decompose a desired outcome into smaller steps before changing a program.
- Know that I should predict how my changes will affect the program before testing them.
- Know that programmers continually plan, test, identify problems and debug their programs until they achieve the intended outcome.

# Computing Curriculum

## Digital Citizenship and Digital Literacy

**Be  
Internet  
Secure**

**Protect  
Your Stuff**



**Be  
Internet  
Legends.**

### Context for study:

In Year 2 Digital Citizenship, pupils learn that passwords should be difficult to guess and kept private. In Year 3 Digital Citizenship, pupils build on this Be Internet Secure knowledge by creating stronger passwords, recognising that different accounts should use different passwords where possible and protecting their login information. This prepares pupils for Year 4 Digital Citizenship, where security broadens beyond passwords to include privacy controls and other strategies for protecting accounts and personal information.

In Year 2 Digital Literacy, pupils create and evaluate multi-slide Keynote presentations on iPad. In Year 3 Digital Literacy, pupils build on their ability to organise sequences of digital content by creating stop-motion animation. They learn that small movements between still photographs create the illusion of movement, plan an animation, capture an ordered sequence and use iMovie to assemble and edit the finished outcome. This prepares pupils for Year 4 Digital Literacy, where iPad media production develops into planning, filming and editing live-action video tutorials for a specific audience.

## Spring 1 – Year Three

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Strong password – a password designed to be difficult for somebody else to guess.
- Stop-motion – animation created from a sequence of still photographs.
- Animation – images shown in sequence so that they appear to move.
- Frame – one individual image within an animation.
- Sequence – a set of items arranged in a particular order.
- iMovie – an application used to organise and edit video.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Secure: I can create and use strong passwords responsibly.

- Know that strong passwords help protect accounts from other people.
- Know that different accounts should have different passwords where possible.
- Know that passwords and login information should be kept private.

## Step 2

Learning Objective: I can explain how a sequence of photographs can create an animation.

- Be Internet Secure: Why is a strong password better at protecting an account?
- Know that stop motion is created from a sequence of still photographs.
- Know that an object is moved a small amount between each photograph.
- Know that displaying photographs quickly one after another creates the illusion of movement.
- Know that smaller movements between photographs usually create smoother animation.

## Step 3

Learning Objective: I can plan a short stop-motion animation.

- Be Internet Secure: Why is it useful to have different passwords for different accounts?
- Know that a storyboard can show the important stages of an animation before filming begins.
- Know that a stop-motion animation needs a clear beginning, middle and end.
- Know that the camera should remain in the same position while a scene is photographed.
- Know that objects should be moved gradually and carefully between photographs.

# Sequence of Learning

## Step 4

Learning Objective: I can capture a consistent sequence of photographs for a stop-motion animation.

- **Be Internet Secure: What information should you keep private when logging in?**
- Know that the iPad should remain steady and in the same position between photographs.
- Know that changes in lighting or camera position can make an animation appear uneven.
- Know that many photographs may be required to show a short movement smoothly.
- Know that photographs should be checked during production so errors can be corrected early.

## Step 5

Learning Objective: I can import and edit a sequence of photographs in iMovie.

- **Be Internet Secure: What might happen if somebody else found out your login information?**
- Know that photographs can be arranged on the iMovie timeline in the order they should appear.
- Know that the timeline shows the sequence of media in a film.
- Know that changing how long photographs appear affects the speed of the animation.
- Know that titles or simple sound can be added to support an animation.

## Step 6

Learning Objective: I can edit and evaluate my stop-motion animation.

- **Be Internet Secure: What three rules would you give somebody for using passwords responsibly?**
- Know that an animation can be improved by changing the order or timing of images.
- Know that missing or misplaced photographs can cause unexpected jumps.
- Know that sound and titles should support the animation rather than distract from it.
- Know that reviewing the finished animation helps identify improvements.

# Computing Curriculum

## Digital Citizenship and Artificial Intelligence

**Be  
Internet  
Kind**

**Respect Each  
Other**



**Be  
Internet  
Legends.**

### Context for study:

In Year 2 Digital Citizenship, pupils consider how online communication affects people's feelings and report repeated unkind behaviour. In Year 3 Digital Citizenship, pupils build on this Be Internet Kind knowledge by taking greater responsibility for respectful communication and selecting appropriate responses when they encounter unkind behaviour. This prepares pupils for Year 4 Digital Citizenship, where they identify harmful behaviours such as exclusion or deliberate embarrassment and consider reporting and supporting others.

In Year 2 Artificial Intelligence, pupils learn that AI uses information and patterns to make predictions and decisions. In Year 3 Artificial Intelligence, pupils develop this by investigating how AI is trained using examples and how training data allows a system to learn patterns. They recognise that missing or unbalanced data can create unfair results and that AI predictions can be tested against real examples. This prepares pupils for Year 4 Artificial Intelligence, where pupils critically evaluate AI-generated information, recognise bias and check AI outputs against reliable sources.

## Spring 2 – Year Three

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Training data – examples and information used to help an AI system learn.
- Prediction – an AI system's suggested result based on patterns.
- Bias – an unfair influence that can affect a result.
- Balanced data – data containing suitable examples from the groups being considered.
- Train – to provide an AI system with examples from which it can learn.
- Test – to check how successfully something works.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Kind: I can communicate respectfully and respond appropriately to unkind behaviour online.

- Know that written messages can sometimes be misunderstood.
- Know that they should not join in with or forward unkind messages.
- Know that they can save evidence and tell a trusted adult about serious or repeated online unkindness.

## Step 2

Learning Objective: I can explain how data helps an AI system learn.

- Be Internet Kind: Why can a written online message sometimes be misunderstood?
- Know that data is information that can be collected and used by computers.
- Know that AI systems can use large amounts of data.
- Know that AI can use data to identify patterns.

## Step 3

Learning Objective: I can identify patterns in data that could help an AI system make a decision.

- Be Internet Kind: What should you do if somebody sends you an unkind message about another person?
- Know that patterns can be found in words, pictures, sounds and numbers.
- Know that AI systems can use patterns to make predictions.
- Know that the patterns an AI finds depend on the data it is given.

# Sequence of Learning

## Step 4

Learning Objective: I can explain that AI systems can be trained using examples.

- Be Internet Kind: Why should you not forward an unkind message?
- Know that AI systems can be trained using examples.
- Know that training data helps an AI learn patterns.
- Know that an AI system can improve at a task when it is given useful examples.

## Step 5

Learning Objective: I can explain how the data used to train AI can affect its decisions.

- Be Internet Kind: What does saving evidence of online unkindness mean, and why might it be useful?
- Know that AI learns from the examples and data it is given.
- Know that missing or unbalanced data can lead to unfair results.
- Know that an AI system can make mistakes because of the data used to train it.

## Step 6

Learning Objective: I can test an AI system and explain whether it has made a good prediction.

- Be Internet Kind: When should serious or repeated online unkindness be shown to a trusted adult?
- Know that AI predictions can be tested against real examples.
- Know that an AI can make correct and incorrect predictions.
- Know that testing helps us understand how well an AI system is working.

# Computing Curriculum

## Be Internet Brave

When in Doubt, Discuss



Be Internet Legends.

### Digital Citizenship and Digital Literacy

#### Context for study:

In Year 2 Digital Citizenship, pupils learn that they can leave, block or close uncomfortable online situations and seek help. In Year 3 Digital Citizenship, pupils build on this Be Internet Brave knowledge by recognising that different problems may require different trusted adults and that unsafe, upsetting or inappropriate experiences should be reported rather than kept secret. This prepares pupils for Year 4 Digital Citizenship, where reporting tools, blocking tools and trusted support become part of a broader strategy for responding to online concerns.

In prior Year 3 Digital Literacy, pupils use Microsoft Word to edit, organise and format increasingly complex documents. In this Year 3 Digital Literacy learning, pupils transfer these laptop skills to PowerPoint, organising files and slides, efficiently editing text and formatting images, shapes, WordArt and tables. They independently create for an audience and evaluate how effectively their presentation communicates information. This prepares pupils for Year 4 Digital Literacy, where laptop learning develops into spreadsheet organisation, calculation, graph creation and data interpretation.

## Summer 1 – Year Three

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Folder – a digital place used to organise and store files.
- PowerPoint – software used to create presentations.
- Visual aid – something shown to help an audience understand information.
- Purpose – the reason something has been created.
- Evaluate – to judge how successful something is.
- Feedback – information from others that can help improve work.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Brave: I can choose an appropriate person to talk to about an online problem.

- Know that different online problems may need help from different trusted adults.
- Know that they should tell someone if they see something unsafe, upsetting or inappropriate.
- Know that keeping a worrying online experience secret can make the problem harder to solve.

## Step 2

Learning Objective: I can create, name and organise a PowerPoint presentation.

- Be Internet Brave: Why might different online problems need help from different trusted adults?
- Know that a clear file name helps us identify our work.
- Know that folders help us organise and find our files.
- Know that Save updates a file, while Save As can create a new copy, change its name or save it somewhere different.

## Step 3

Learning Objective: I can enter and edit text efficiently in PowerPoint.

- Be Internet Brave: What should you do if you see something online that is unsafe, upsetting or inappropriate?
- Know that text boxes, bullet points and indentation can organise information clearly.
- Know that cut, copy and paste can be used to move, duplicate and reorganise text.
- Know that keyboard shortcuts such as Ctrl+C, Ctrl+X and Ctrl+V help us edit more efficiently.

# Sequence of Learning

## Step 4

Learning Objective: I can format text, images and other objects to communicate information clearly.

- Be Internet Brave: Why is it important to tell somebody about a worrying online experience?
- Know that images and shapes can be moved, resized and rotated to improve a slide's layout.
- Know that WordArt, shapes, speech bubbles and text boxes can be formatted to emphasise important information.
- Know that tables organise information into rows and columns and can be changed using tools such as merge cells, fill and adding rows or columns.

## Step 5

Learning Objective: I can independently create and improve a PowerPoint presentation for an audience.

- Be Internet Brave: How could keeping an online problem secret make it harder to solve?
- Know that a good presentation combines text, images and other features to communicate information effectively.
- Know that formatting choices should make information clear and easy for an audience to understand.
- Know that we should review, edit and save our work as we create it to make improvements and avoid losing changes.

## Step 6

Learning Objective: I can present my PowerPoint and evaluate how effectively it communicates information.

- Be Internet Brave: How would you decide which trusted adult to speak to about an online problem?
- Know that a presentation is created for an audience and purpose, and our choices should reflect these.
- Know that a presenter can use their slides as a visual aid to support what they say rather than simply reading all the text from the screen.
- Know that feedback and evaluation help us identify what has worked well and what we could improve next time.

# Computing Curriculum

## Digital Citizenship and Information Technology

**Be  
Internet  
Sharp**

**Be  
Internet  
Alert**

**Be  
Internet  
Secure**

**Be  
Internet  
Kind**

**Be  
Internet  
Brave**

Be  
Internet  
Legends.

### Context for study:

In Year 2 Digital Citizenship, pupils explain how the five Be Internet pillars work together. In Year 3 Digital Citizenship, pupils build on this by applying the pillars to different situations and using them to explain and justify their online choices. This prepares pupils for Year 4 Digital Citizenship, where the pillars support decisions that take account of consequences for themselves and others.

In Year 2 Information Technology, pupils use keywords, navigate webpages and distinguish real information from made-up content. In Year 3 Information Technology, pupils build on this by learning how Ada Lovelace and Charles Babbage contributed to the early development of computing, refining key words and phrases to produce more relevant searches and distinguishing facts, opinions and beliefs in videos, memes, posts and news stories. They also strengthen their knowledge of passwords, personal information, permissions and digital ownership. This prepares pupils for Year 4 Information Technology, where they evaluate probable accuracy, identify fake news and develop their understanding of internet standards, privacy, consent and copyright.

## Summer 2 – Year Three

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Fact – something that can be checked and supported by evidence.
- Opinion – what somebody thinks or feels.
- Belief – something somebody accepts as true.
- Search term – a word or phrase entered when looking for information.
- Accurate – correct and supported by reliable information.
- Creator – the person who made a piece of work or content.

# Sequence of Learning

## Step 1

Learning Objective: I can apply the five pillars to different online situations.

- Know that the five pillars provide guidance for different online situations.
- Know that safe and responsible online behaviour involves thinking before acting.
- Know that they can use the pillars to explain and justify their online choices.

## Step 2

Learning Objective: I can explain how influential people have contributed to the development of computing and modern technology.

- **Be Internet Sharp:** What can happen to information after it is shared online, and why should you consider who might see it?
- Know that Ada Lovelace wrote an algorithm for Charles Babbage's Analytical Engine and is often described as the first computer programmer.
- Know that Charles Babbage designed the Analytical Engine, an early computer.

## Step 3

Learning Objective: I can use key words and phrases to find accurate information online.

- **Be Internet Alert:** How can the source of online information help you judge whether it is reliable, and what else could you do to check?
- Know that a search engine helps us find information on the internet.
- Know that choosing specific key words and phrases can make search results more relevant.
- Know that changing or refining our search terms can help us find more accurate and useful information.

# Sequence of Learning

## Step 4

Learning Objective: I can identify facts, opinions and beliefs in online content.

- **Be Internet Secure:** Why should different accounts have different strong passwords where possible, and what login information should remain private?
- Know that a fact is something that can be checked and supported by evidence.
- Know that an opinion is what someone thinks or feels, while a belief is something a person accepts as true.
- Know that facts, opinions and beliefs can appear in different online content, including videos, memes, posts and news stories.

## Step 5

Learning Objective: I can make safe choices to protect my personal information online.

- **Be Internet Kind:** Why should you avoid forwarding an unkind message, and what could you do with evidence of serious or repeated unkindness?
- Know that strong passwords help protect accounts and should be difficult for other people to guess.
- Know that passwords and personal information are private and should only be shared with people we choose and trust.
- Know that if anyone pressures us to share private information, we should stop and tell a trusted adult.

## Step 6

Learning Objective: I can explain why I should respect other people's work online.

- **Be Internet Brave:** Why should worrying online experiences not be kept secret, and how would you decide who to speak to?
- Know that creators own the work they make, including images, writing, video and music.
- Know that copying someone else's work and pretending it is ours is unfair.
- Know that we should check permission and acknowledge the creator when appropriate.

# Computing Curriculum

## Digital Citizenship and Digital Literacy

**Be  
Internet  
Sharp**

**Think  
Before You  
Share**



**Be  
Internet  
Legends.**

### Context for study:

In Year 3 Digital Citizenship, pupils recognise that shared information can be copied and passed on. In Year 4 Digital Citizenship, pupils build on this Be Internet Sharp knowledge by understanding digital footprints and considering the audience, purpose and possible consequences of sharing. They also recognise that sharing somebody else's information or image can affect that person's privacy. This prepares pupils for Year 5 Digital Citizenship, where they make informed decisions about sharing by considering privacy, audience, intention, permanence and potential consequences.

In Year 3 Digital Literacy, pupils develop iPad media skills through planning, capturing and editing stop-motion animation. In Year 4 Digital Literacy, pupils build on these skills by planning live-action video tutorials using storyboards or shot lists, filming purposeful footage and considering framing and lighting. They trim, split and rearrange clips and combine titles, narration and video in iMovie. This prepares pupils for future learning in Year 4 Digital Literacy, where they extend their video-production knowledge through green-screen effects and layered digital media.

## Autumn 1 – Year Four

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Digital footprint – the lasting record created by someone's online activity.
- Tutorial – a guide designed to teach somebody how to complete a task.
- Storyboard – a visual plan showing what will happen in a video.
- Framing – deciding what appears within a camera shot.
- Timeline – the area where video clips are placed and organised when editing.
- Voiceover – recorded speech played over video.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Sharp: I can consider the possible consequences before sharing content online.

- Know that online posts can create a lasting digital footprint.
- Know that sharing someone else's information or image may affect their privacy.
- Know that they should consider the audience, purpose and possible consequences before sharing.

## Step 2

Learning Objective: I can plan a video tutorial for a specific audience.

- Be Internet Sharp: What is a digital footprint, and how can sharing something online add to it?
- Know that a tutorial teaches an audience how to complete a task.
- Know that instructions should be organised into a clear and logical sequence.
- Know that a storyboard or shot list can be used to plan what will be filmed.
- Know that the audience affects the language, pace and level of detail needed.

## Step 3

Learning Objective: I can record clear footage that demonstrates each stage of a process.

- Be Internet Sharp: How could sharing somebody else's photograph or information affect their privacy?
- Know that different camera positions can make an action easier to see.
- Know that each shot should have a clear purpose within the tutorial.
- Know that steady framing and suitable lighting improve the quality of footage.
- Know that it is useful to record more than one version of an important shot.

# Sequence of Learning

## Step 4

Learning Objective: I can edit video clips to create a clear instructional sequence.

- Be Internet Sharp: Why should you think about the audience before sharing content?
- Know that video clips can be trimmed to remove unwanted footage.
- Know that clips can be split and rearranged on the timeline.
- Know that unnecessary footage can make instructions harder to follow.
- Know that the pace of editing should give the viewer enough time to understand each step.

## Step 5

Learning Objective: I can combine video, titles and spoken explanation in iMovie.

- Be Internet Sharp: Why does the purpose of a post matter when deciding whether it should be shared?
- Know that titles can identify stages or emphasise important instructions.
- Know that a voiceover can explain actions that may not be obvious from the video alone.
- Know that narration should be clear, concise and matched to what appears on screen.
- Know that the volume of different audio should be balanced so speech can be heard clearly.

## Step 6

Learning Objective: I can review and improve a tutorial for its intended audience.

- Be Internet Sharp: What possible consequences should you consider before posting or sharing something online?
- Know that an effective tutorial should be accurate, logically ordered and easy to follow.
- Know that reviewing the film can reveal unclear instructions or unnecessary footage.
- Know that audience feedback can help identify useful improvements.
- Know that editing choices should always support the purpose of teaching the viewer.

# Computing Curriculum

## Digital Citizenship and Computer Science

**Be  
Internet  
Alert**

**Check it's  
For Real**



**Be  
Internet  
Legends.**

### Context for study:

In Year 3 Digital Citizenship, pupils use sources and comparisons to judge whether information is reliable. In Year 4 Digital Citizenship, pupils build on this Be Internet Alert knowledge by considering author, source and date and recognising that websites and social media can contain inaccurate or deliberately misleading information. This prepares pupils for Year 5 Digital Citizenship, where they distinguish misinformation from deliberate disinformation and examine how headlines, images and videos can influence people's thinking.

In Year 3 Computer Science, pupils create and adapt Scratch sequences, decompose problems and systematically debug programs. In Year 4 Computer Science, pupils build on this by introducing repetition. They use repeat blocks to make code shorter and more efficient, combine sequences and repeats and recognise errors caused by commands being incorrectly placed inside repetition structures. This prepares pupils for Year 5 Computer Science, where selection and conditions are introduced alongside pupils' established understanding of sequence and repetition.

## Autumn 2 – Year Four

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Repeat – an instruction that runs other instructions more than once.
- Repetition – making instructions happen repeatedly in a program.
- Efficient – achieving the intended result without unnecessary instructions.
- Repeat block – a programming block containing instructions that run several times.
- Debug – to identify and correct an error.
- Trustworthy – deserving confidence because there is good reason to believe it.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Alert: I can evaluate whether online information is trustworthy.

- Know that websites and social media can contain inaccurate or deliberately misleading information.
- Know that the author, source and date can help us judge information.
- Know that they should check important information using reliable sources.

## Step 2

Learning Objective: I can explain what a repeat is and why it is useful in a program.

- Be Internet Alert: Why should we not assume information is trustworthy just because it appears on a website?
- Know that a repeat is used to run the same instruction or group of instructions more than once.
- Know that using a repeat can make a program shorter and more efficient.
- Know that the number in a repeat block tells Scratch how many times to repeat the instructions inside it.

## Step 3

Learning Objective: I can use repeats confidently to control a sprite.

- Be Internet Alert: How can knowing who the author is help you judge a piece of information?
- Know that instructions placed inside a repeat block will run multiple times.
- Know that changing the number of repeats will change the outcome of the program.
- Know that movement, turns, sounds and other commands can be combined within a repeat to create repeated actions or patterns.

# Sequence of Learning

## Step 4

Learning Objective: I can combine sequences and repeats to create an efficient program.

- Be Internet Alert: Why is the source of online information important?
- Know that a sequence is a set of instructions arranged in a particular order.
- Know that repeats should be placed around only the instructions that need to happen more than once.
- Know that choosing the correct position for a repeat can make a program more efficient while keeping the intended outcome.

## Step 5

Learning Objective: I can detect and debug errors in a Scratch program.

- Be Internet Alert: How could the date of a webpage or post affect whether its information is useful or trustworthy?
- Know that a bug is an error in an algorithm or program that causes an unexpected outcome.
- Know that debugging involves identifying the problem, making a change and testing the program again.
- Know that errors can occur because instructions are missing, incorrect, in the wrong order or placed incorrectly within a repeat.

## Step 6

Learning Objective: I can independently create and debug a program using sequences and repeats.

- Be Internet Alert: What could you do to check important information before using or sharing it?
- Know that programmers can plan an algorithm before creating their program in Scratch.
- Know that we should select sequence and repeat code purposefully according to what we want our program to do.
- Know that effective programmers run, test and debug their programs, explaining why repeats have been used in particular places.

# Computing Curriculum

## Digital Citizenship and Digital Literacy

**Be  
Internet  
Secure**

**Protect  
Your Stuff**



**Be  
Internet  
Legends.**

### Context for study:

In Year 3 Digital Citizenship, pupils create and use strong passwords responsibly. In Year 4 Digital Citizenship, pupils build on this Be Internet Secure knowledge by recognising that strong, unique passwords, privacy controls and security settings can work together to protect accounts and personal information. This prepares pupils for Year 5 Digital Citizenship, where security develops further through multi-factor authentication and recognising suspicious links, messages and requests for information.

In Year 3 Digital Literacy, pupils independently create and evaluate laptop presentations containing formatted text, images, shapes and tables. In Year 4 Digital Literacy, pupils extend their laptop knowledge into Excel. They organise information in rows, columns and cells, format different types of data, use mathematical formulas and cell references, apply the SUM function and choose appropriate graphs. Pupils then interpret graphs to identify patterns and changes. This prepares pupils for Year 5 Digital Literacy, where spreadsheet knowledge supports the creation and analysis of databases and larger collections of structured data.

## Spring 1 – Year Four

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Spreadsheet – a digital tool for organising and working with data.
- Cell – one box in a spreadsheet.
- Formula – an instruction that tells a spreadsheet to perform a calculation.
- Function – a ready-made spreadsheet instruction used to perform a task.
- Cell reference – the name used to identify a particular spreadsheet cell.
- Graph – a visual representation of data.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Secure: I can use different strategies to protect my accounts and personal information.

- Know that strong, unique passwords provide better protection.
- Know that personal information should be protected from people who do not need access to it.
- Know that security settings and privacy controls can help protect accounts and information.

## Step 2

Learning Objective: I can organise and format data effectively in a spreadsheet.

- Be Internet Secure: Why is a strong, unique password safer than an easy or reused password?
- Know that a spreadsheet organises information into rows, columns and cells.
- Know that rows and columns can be inserted, deleted and resized to organise data effectively.
- Know that cells can be formatted using text styles, colour and number formats, including currency and date, to make information clear and appropriate.

## Step 3

Learning Objective: I can use basic mathematical formulas to calculate values in Excel.

- Be Internet Secure: Who should be allowed to access your personal information, and who should not?
- Know that a formula tells Excel to perform a calculation using values in the spreadsheet.
- Know that formulas in Excel begin with an equals sign (=) and can use mathematical operators such as +, -, \* and /.
- Know that formulas can use cell references so that calculations update automatically when the data in those cells changes.

# Sequence of Learning

## Step 4

Learning Objective: I can use the SUM function to calculate totals efficiently.

- Be Internet Secure: What do privacy controls help you manage?
- Know that a function is a predefined instruction that tells Excel to perform a particular calculation.
- Know that the SUM function adds together numbers from a selected range of cells.
- Know that a cell range identifies a group of cells, for example A1:A5, and can be used within a formula or function.

## Step 5

Learning Objective: I can create an appropriate graph to represent data.

- Be Internet Secure: How can security settings help to protect an account?
- Know that spreadsheet data can be displayed visually using different types of graphs and charts.
- Know that different graphs are suitable for different purposes, such as bar/column charts for comparing values and line graphs for showing change over time.
- Know that we should consider the data and what we want to communicate when deciding which type of graph to use.

## Step 6

Learning Objective: I can interpret data and use Excel to communicate my findings.

- Be Internet Secure: What different strategies could you use together to keep an account and personal information safer?
- Know that we can interpret a graph by examining its title, labels, axes and values.
- Know that graphs can help us identify patterns, comparisons and changes within a set of data.
- Know that an effective spreadsheet combines accurate data, formulas, appropriate formatting and suitable graphs to communicate information clearly.

# Computing Curriculum

## Digital Citizenship and Artificial Intelligence

**Be  
Internet  
Kind**

**Respect Each  
Other**



**Be  
Internet  
Legends.**

### Context for study:

In Year 3 Digital Citizenship, pupils learn to communicate respectfully and respond appropriately to unkind behaviour. In Year 4 Digital Citizenship, pupils build on this Be Internet Kind knowledge by recognising that exclusion, embarrassment and deliberate upsetting behaviour can cause harm online. They learn both to report harmful behaviour and to support somebody who is being treated unkindly. This prepares pupils for Year 5 Digital Citizenship, where they consider their own responsibility for contributing positively to digital spaces.

In Year 3 Artificial Intelligence, pupils learn how AI systems are trained and how training data can influence predictions. In Year 4 Artificial Intelligence, pupils build on this by evaluating AI-generated text, images, audio and video. They recognise that generated content may be inaccurate, made up or biased and use reliable sources and evidence to check it. This prepares pupils for Year 5 Artificial Intelligence, where they become responsible users of generative AI and learn to create prompts, evaluate responses and consider privacy, accuracy and ownership.

## Spring 2 – Year Four

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- AI-generated – created by an artificial intelligence system.
- Bias – an unfair preference or influence that can affect a result.
- Reliable source – a source that there is good reason to trust.
- Critical thinking – carefully questioning and evaluating information.
- Evidence – information used to support or check a claim.
- Generated content – text, images, audio or video created by a computer system.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Kind: I can recognise and respond appropriately to different forms of online behaviour.

- Know that online behaviour can have positive or negative effects on others.
- Know that excluding, embarrassing or deliberately upsetting someone online can be harmful.
- Know that they can report harmful behaviour and support someone who is being treated unkindly.

## Step 2

Learning Objective: I can identify information that has been produced by AI.

- Be Internet Kind: How can somebody's online behaviour have a positive effect on another person?
- Know that AI can generate text, images, audio and other content.
- Know that AI-generated content can look and sound convincing.
- Know that it is not always easy to tell whether something has been created by a person or AI.

## Step 3

Learning Objective: I can check information produced by AI against reliable sources.

- Be Internet Kind: How can online behaviour have a negative effect on another person?
- Know that AI can produce inaccurate or made-up information.
- Know that information from AI should be checked before it is trusted.
- Know that reliable websites, books and trusted adults can help us check information.

# Sequence of Learning

## Step 4

Learning Objective: I can explain how AI can produce unfair results.

- Be Internet Kind: Why can excluding or embarrassing somebody online be harmful?
- Know that bias means having an unfair preference or viewpoint.
- Know that AI can reflect bias found in its training data.
- Know that biased data can lead to unfair predictions or decisions.

## Step 5

Learning Objective: I can explain why AI-generated images and videos should not always be believed.

- Be Internet Kind: What could you do if you saw somebody being deliberately upset online?
- Know that AI can create realistic images and videos that never happened.
- Know that some AI-generated media can be difficult to distinguish from real media.
- Know that images and videos should be checked before we believe or share them.

## Step 6

Learning Objective: I can use critical thinking to decide whether AI-generated content can be trusted.

- Be Internet Kind: How could you both report harmful behaviour and support the person being treated unkindly?
- Know that AI-generated content may contain mistakes or bias.
- Know that the source and evidence should be considered when evaluating information.
- Know that we should check before we believe or share AI-generated content.

# Computing Curriculum

## Be Internet Brave

When in Doubt, Discuss



Be Internet Legends.

## Digital Citizenship and Digital Literacy

### Context for study:

In Year 3 Digital Citizenship, pupils learn to choose an appropriate trusted person when they experience an online problem. In Year 4 Digital Citizenship, pupils build on this Be Internet Brave knowledge by recognising that some online situations should not be handled alone and that trusted adults, reporting tools and blocking tools can all help resolve concerns. This prepares pupils for Year 5 Digital Citizenship, where they independently select appropriate responses to risks involving content, contact and behaviour.

In prior Year 4 Digital Literacy, pupils plan, film and edit live-action tutorials using iMovie. In this Year 4 Digital Literacy learning, pupils extend their iPad media-production knowledge by learning how green-screen technology combines foreground and background layers. They design purposeful backgrounds in Keynote, capture suitable footage and combine media to create and evaluate a special-effects sequence. This prepares pupils for Year 5 Digital Literacy, where iPad media production progresses from visual compositing to planning, recording, editing and mixing sophisticated audio in GarageBand.

## Summer 1 – Year Four

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Green screen – a technique that replaces a coloured background with other digital media.
- Foreground – the part of an image or video closest to the viewer.
- Background – the scene or image behind the main subject.
- Layer – one piece of digital media placed in front of or behind another.
- Special effect – a technique used to alter or enhance digital media.
- Reporting tool – an online feature used to tell a service about a problem.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Brave: I can explain when and how to seek help with an online concern.

- Know that some online situations should not be dealt with alone.
- Know that trusted adults, reporting tools and blocking tools can help resolve online problems.
- Know that speaking up about unsafe or harmful behaviour can protect themselves and others.

## Step 2

Learning Objective: I can explain how green-screen effects combine different layers of video.

- Be Internet Brave: What kinds of online situations might be difficult to deal with by yourself?
- Know that green-screen technology can replace a coloured background with another image or video.
- Know that the person or object being filmed should be clearly visible against the background.
- Know that even lighting helps a green-screen effect work more effectively.
- Know that foreground and background media are combined to create one finished scene.

## Step 3

Learning Objective: I can create a purposeful background in Keynote for use in a video.

- Be Internet Brave: How could a trusted adult help with an online concern?
- Know that Keynote can be used to combine shapes, text and images into a designed background.
- Know that the background should suit the setting and purpose of the scene.
- Know that objects should be positioned with the foreground subject in mind.
- Know that visual elements should be clear and appropriately sized when used in a video.

# Sequence of Learning

## Step 4

Learning Objective: I can record footage suitable for a green-screen effect.

- Be Internet Brave: What is the difference between using a reporting tool and using a blocking tool?
- Know that Keynote can be used to combine shapes, text and images into a designed background.
- Know that the background should suit the setting and purpose of the scene.
- Know that objects should be positioned with the foreground subject in mind.
- Know that visual elements should be clear and appropriately sized when used in a video.

## Step 5

Learning Objective: I can combine foreground footage and a digital background to create a special effect.

- Be Internet Brave: Why is speaking up about unsafe or harmful behaviour important?
- Know that Keynote can be used to combine shapes, text and images into a designed background.
- Know that the background should suit the setting and purpose of the scene.
- Know that objects should be positioned with the foreground subject in mind.
- Know that visual elements should be clear and appropriately sized when used in a video.

## Step 6

Learning Objective: I can independently create and evaluate a short special-effects sequence.

- Be Internet Brave: How could reporting an online concern protect somebody other than yourself?
- Know that Keynote can be used to combine shapes, text and images into a designed background.
- Know that the background should suit the setting and purpose of the scene.
- Know that objects should be positioned with the foreground subject in mind.
- Know that visual elements should be clear and appropriately sized when used in a video.

# Computing Curriculum

## Digital Citizenship and Information Technology

**Be  
Internet  
Sharp**

**Be  
Internet  
Alert**

**Be  
Internet  
Secure**

**Be  
Internet  
Kind**

**Be  
Internet  
Brave**

Be  
Internet  
Legends.

### Context for study:

In Year 3 Digital Citizenship, pupils apply the five pillars to different situations and justify their choices. In Year 4 Digital Citizenship, pupils build on this by using the pillars together to make responsible decisions and recognising that digital choices can have consequences for themselves and other people. This prepares pupils for Year 5 Digital Citizenship, where critical thinking is increasingly required alongside safe behaviour when evaluating digital choices.

In Year 3 Information Technology, pupils refine searches and distinguish facts, opinions and beliefs. In Year 4 Information Technology, pupils build on this by learning how internet standards and protocols support communication, evaluating information through source, author, evidence and purpose and recognising fake news. They also explore privacy, digital consent, copyright and licences and learn about Hedy Lamarr and Radia Perlman's contributions to technology. This prepares pupils for Year 5 Information Technology, where they examine computer hardware and systems and make increasingly informed judgements about validity, reliability, permissions and reuse.

## Summer 2 – Year Four

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Protocol – an agreed rule that helps digital systems communicate.
- URL – the web address used to identify an online resource.
- Fake news – false or misleading information presented as though it were true.
- Consent – permission for something to happen.
- Copyright – protection given to work created by somebody.
- Licence – rules explaining how somebody else's work may be used.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Legends: I can use the five pillars to make responsible decisions about my digital behaviour.

- Know that the five pillars are connected and can be used together.
- Know that online choices can have consequences for themselves and other people.
- Know that responsible digital citizens consider safety, truth, privacy, kindness and help-seeking.

## Step 2

Learning Objective: I can explain how influential people have contributed to the development of computing and modern technology.

- Be Internet Sharp: What is a digital footprint, and what should you consider about audience, purpose and consequences before sharing?
- Know that Hedy Lamarr co-invented a frequency-hopping communication system, ideas from which contributed to the development of later wireless technologies.
- Know that Radia Perlman developed the Spanning Tree Protocol, which helped computer networks communicate reliably and efficiently.
- Know that the technologies we use today have developed over time through the ideas, inventions and problem-solving of many different people.

## Step 3

Learning Objective: I can explain how internet standards help us find and access information online.

- Be Internet Alert: How can the author, source and date help you decide whether online information is trustworthy?
- Know that internet standards and protocols are agreed rules that allow devices and systems to communicate.
- Know that a URL (Uniform Resource Locator) is the address used to identify the location of a resource on the web (a web address)
- Know that HTTP is a set of rules that helps web browsers and websites send and receive information across the internet.

# Sequence of Learning

## Step 4

Learning Objective: I can evaluate online information and make a judgement about whether it is likely to be accurate.

- **Be Internet Secure:** How can strong, unique passwords, security settings and privacy controls work together to protect your information?
- Know that information found online is not always accurate or trustworthy, so it should be questioned and checked.
- Know that we can compare information across websites, social media, images and videos and consider the source, author, evidence and purpose.
- Know that fake news is false or misleading information presented as if it were true, and that images, videos and stories can be altered or created to influence what people believe.

## Step 5

Learning Objective: I can make informed choices about protecting my personal information online.

- **Be Internet Kind:** Why are exclusion and deliberate embarrassment harmful online, and how could you support somebody affected by them?
- Know that different types of personal information may need different levels of protection depending on the situation and who is asking for it.
- Know that privacy strategies include using privacy settings, limiting what we share and checking with a trusted adult when we are unsure.
- Know that the digital age of consent affects when children can give their own consent for online services to use their personal data, and that services may need permission from a parent or carer below this age.

## Step 6

Learning Objective: I can explain how to use other people's digital content responsibly.

- **Be Internet Brave:** When should an online concern not be dealt with alone, and how can trusted adults, reporting and blocking help?
- Know that online content such as images, music, videos and written work belongs to its creator and may be protected by copyright.
- Know that finding something through an internet search does not automatically give us permission to copy, change or reuse it.
- Know that we should check who owns content and whether we have permission or a suitable licence to use it before including it in our own work.

# Computing Curriculum

**Be  
Internet  
Sharp**

**Think  
Before You  
Share**



**Be  
Internet  
Legends.**

## Digital Citizenship and Digital Literacy

### Context for study:

In Year 4 Digital Citizenship, pupils consider digital footprints, audience, privacy and consequences before sharing. In Year 5 Digital Citizenship, pupils build on this Be Internet Sharp knowledge by making informed decisions about both what they share and who they share it with. They recognise that digital content may remain accessible even after deletion and consider audience, intention and potential consequences. This prepares pupils for Year 6 Digital Citizenship, where they critically evaluate consent, reputation, permanence and the effects of sharing on themselves and others.

In Year 4 Digital Literacy, pupils use Excel to organise data, perform calculations and create and interpret graphs. In Year 5 Digital Literacy, pupils build on these laptop skills by designing database structures, selecting appropriate fields, creating data-collection forms and entering accurate and consistently formatted data. They create suitable graphs and interpret patterns, trends, similarities and differences. This prepares pupils for future learning in Year 5 Digital Literacy, where they independently select and combine Word, PowerPoint and Excel according to purpose and audience.

## Autumn 1 – Year Five

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Database – an organised collection of information that can be searched and analysed.
- Field – a category of information within a database.
- Record – one complete set of information within a database.
- Data collection – gathering information for a particular purpose.
- Interpret – to examine information and explain what it shows.
- Trend – a pattern of change that can be seen in data.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Sharp: I can make informed decisions about what I share and who I share it with.

- Know that sharing personal information can affect privacy and safety.
- Know that digital content can remain accessible even after it has been deleted.
- Know that they should consider their audience, intention and potential consequences before sharing.

## Step 2

Learning Objective: I can create a database structure to organise information.

- Be Internet Sharp: How could sharing personal information affect both your privacy and your safety?
- Know that a database is an organised collection of information that can be searched, sorted and analysed.
- Know that fields are the categories of information we collect, such as name, age or favourite sport.
- Know that a well-designed database uses appropriate fields so that information can be entered consistently and compared easily.

## Step 3

Learning Objective: I can design a data collection form and use it to gather quality information.

- Be Internet Sharp: Why might deleting something online not make it disappear completely?
- Know that a data collection form helps us gather information in a consistent and organised way.
- Know that questions and response options should be clear and specific so that the data collected is useful.
- Know that quality data should be relevant, accurate and entered consistently into the correct fields.

# Sequence of Learning

## Step 4

Learning Objective: I can enter and organise collected data in an Excel database.

- Be Internet Sharp: Who could still have access to digital content after the original post has been deleted?
- Know that each column represents a field and each row contains a record in our database.
- Know that data should be entered using a consistent format so that it can be accurately analysed.
- Know that checking and correcting our data helps prevent errors that could affect our results.

## Step 5

Learning Objective: I can select and create an appropriate graph to represent my data.

- Be Internet Sharp: Why should you consider your intended audience before sharing something?
- Know that Excel can use information stored in a database to create different types of graphs and charts.
- Know that different types of graphs are suitable for different types of data and purposes.
- Know that we should select a graph that communicates our data clearly and be able to justify why it is appropriate.

## Step 6

Learning Objective: I can interpret graphs and use them to explain what the data shows.

- Be Internet Sharp: How could thinking about your intention and the possible consequences change your decision about whether to share?
- Know that graphs allow us to identify patterns, trends, similarities and differences within data.
- Know that we should use the title, labels, axes, scale and values to interpret a graph accurately.
- Know that comparing graphs created from different sources can help us draw conclusions and ask further questions about the data.

# Computing Curriculum

## Digital Citizenship and Computer Science

**Be  
Internet  
Alert**

**Check it's  
For Real**



**Be  
Internet  
Legends.**

### Context for study:

In Year 4 Digital Citizenship, pupils consider author, source and date when evaluating information. In Year 5 Digital Citizenship, pupils build on this Be Internet Alert knowledge by distinguishing misinformation shared accidentally from disinformation created deliberately and recognising how headlines, images and videos may influence what people think. This prepares pupils for Year 6 Digital Citizenship, where they critically evaluate manipulation and cross-check information using multiple reliable and authoritative sources.

In Year 4 Computer Science, pupils use repetition to create efficient Scratch programs containing sequences and repeats. In Year 5 Computer Science, pupils build on this by introducing selection and conditions. They use if...then structures to make programs respond to inputs and create interactive games in which sequence, repetition and selection work together. Pupils plan, test and debug increasingly complex solutions. This prepares pupils for Year 6 Computer Science, where variables are added and all four programming concepts are combined within increasingly sophisticated solutions.

## Autumn 2 – Year Five

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Selection – programming that chooses what happens according to a condition.
- Condition – something a program checks to decide what to do.
- If...then – a programming structure that performs an action when a condition is met.
- Input – information or an action given to a computer.
- Interactive – able to respond to actions made by a user.
- Disinformation – false information deliberately created to mislead people.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Alert: I can identify signs that online information may be unreliable or misleading.

- Know that misinformation can be shared accidentally and disinformation can be created deliberately.
- Know that headlines, images and videos can be designed to influence what people think.
- Know that reliable information can be checked against trustworthy sources.

## Step 2

Learning Objective: I can explain how selection and conditions are used in a program.

- Be Internet Alert: What is the difference between misinformation and disinformation?
- Know that selection allows a program to make a choice about what happens next.
- Know that a condition is something that can be checked to decide whether an action should happen.
- Know that an 'if...then' command tells a program to perform an action if a particular condition is met.

## Step 3

Learning Objective: I can use selection to make different things happen in a Scratch program.

- Be Internet Alert: How could a headline be designed to influence what somebody thinks?
- Know that an 'if...then' block checks whether a condition is true before running the commands inside it.
- Know that conditions can respond to different inputs, such as touching an object, pressing a key or answering a question.
- Know that selection makes programs interactive because their behaviour can change depending on what happens.

# Sequence of Learning

## Step 4

Learning Objective: I can use selection to create a game in which the player makes choices.

- Be Internet Alert: How can an image or video influence somebody even if it does not tell the whole story?
- Know that selection can be used to make a game respond differently to the choices made by the player.
- Know that sequence, repetition and selection can work together within the same program.
- Know that conditions can be used to control features such as scores, movement, questions, rewards or consequences.

## Step 5

Learning Objective: I can plan and debug a program that uses selection.

- Be Internet Alert: Why is it important to check questionable information against another trustworthy source?
- Know that an algorithm is a planned sequence of steps that can be turned into a program.
- Know that planning where to use sequence, repetition and selection can help us create more complex programs successfully.
- Know that debugging involves identifying the cause of an unexpected outcome, changing the code and testing it again.

## Step 6

Learning Objective: I can independently create and debug a Scratch game using selection.

- Be Internet Alert: What clues might make you stop and question whether online information is reliable or misleading?
- Know that an effective program can combine commands, sequences, repetition and selection to achieve a planned outcome.
- Know that selection can be used in different ways and in different parts of a program to respond to the user.
- Know that programmers continually test, evaluate and debug their code to ensure their program works as intended.

# Computing Curriculum

## Digital Citizenship and Digital Literacy

**Be  
Internet  
Secure**

**Protect  
Your Stuff**



**Be  
Internet  
Legends.**

### Context for study:

In Year 4 Digital Citizenship, pupils learn that strong, unique passwords, security settings and privacy controls can protect accounts. In Year 5 Digital Citizenship, pupils build on this Be Internet Secure knowledge by selecting appropriate security measures, recognising the additional protection provided by multi-factor authentication and identifying suspicious links, messages and requests for information. This prepares pupils for Year 6 Digital Citizenship, where phishing and other scams are examined as deliberate attempts to obtain information or encourage access to malicious links.

In Year 4 Digital Literacy, pupils develop iPad video-production skills using live footage, digital backgrounds and green-screen compositing. In Year 5 Digital Literacy, pupils transfer their media planning and editing knowledge to audio production. They plan podcasts for a defined audience, record clear speech in GarageBand, trim and rearrange audio and combine speech, music and sound effects. They balance audio levels and evaluate the finished programme. This prepares pupils for Year 6 Digital Literacy, where iPad creation broadens into multimedia composition using Freeform.

## Spring 1 – Year Five

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Multi-factor authentication – using more than one check to prove who you are when logging in.
- Podcast – an audio programme created for people to listen to.
- GarageBand – an application used to create and edit audio.
- Audio region – one section of recorded audio that can be edited.
- Mix – to combine and balance different pieces of audio.
- Sound effect – a sound added to help communicate meaning or atmosphere.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Secure: I can use appropriate security measures to protect my digital accounts and information.

- Know that passwords should be strong, unique and kept private.
- Know that multi-factor authentication can provide additional account security.
- Know that suspicious links, messages and requests for information may be attempts to access an account.

## Step 2

Learning Objective: I can plan a podcast for a specific purpose and audience.

- Be Internet Secure: What three qualities should a secure password have?
- Know that a podcast is an audio programme created for listeners.
- Know that podcasts can include speech, music, interviews and sound effects.
- Know that a script or running order helps organise an episode.
- Know that the intended audience affects vocabulary, tone and content.

## Step 3

Learning Objective: I can record clear spoken audio in GarageBand.

- Be Internet Secure: What is multi-factor authentication, and why can it make an account more secure?
- Know that the quality of a recording depends on microphone position and background noise.
- Know that speaking clearly and at a consistent volume improves a recording.
- Know that separate sections can be recorded as different audio regions.
- Know that listening through headphones can help identify unwanted sounds and mistakes.

# Sequence of Learning

## Step 4

Learning Objective: I can edit recorded audio to improve its quality and structure.

- **Be Internet Secure: What might make a link or message seem suspicious?**
- Know that audio regions can be trimmed, split, moved and deleted.
- Know that mistakes and long unwanted pauses can be removed during editing.
- Know that different recordings can be arranged in a planned order.
- Know that careful editing should make the finished programme sound natural rather than disjointed.

## Step 5

Learning Objective: I can combine speech, music and sound effects appropriately.

- **Be Internet Secure: Why should you be cautious if a message asks you for personal or account information?**
- Know that music can be used to create an introduction, ending or change of section.
- Know that sound effects can support meaning when used appropriately.
- Know that audio tracks need balanced volume levels so that speech remains clear.
- Know that music and sounds should be used responsibly and with consideration of ownership and permission.

## Step 6

Learning Objective: I can mix, evaluate and publish a finished podcast.

- **Be Internet Secure: What different security measures could you use together to protect an important account?**
- Know that mixing means balancing different audio elements to create a finished recording.
- Know that a podcast should have a clear structure and consistent audio quality.
- Know that listening to the complete episode helps identify final improvements.
- Know that feedback should be considered in relation to the intended audience and purpose.

# Computing Curriculum

## Digital Citizenship and Artificial Intelligence

**Be  
Internet  
Kind**

**Respect Each  
Other**



**Be  
Internet  
Legends.**

### Context for study:

In Year 4 Digital Citizenship, pupils recognise harmful online behaviour and learn to report it and support others. In Year 5 Digital Citizenship, pupils build on this Be Internet Kind knowledge by considering how tone can be misunderstood and how liking, commenting on or forwarding harmful content can contribute to its impact. This prepares pupils for Year 6 Digital Citizenship, where they consider their responsibility to contribute positively to online communities and challenge, report or seek help about harmful behaviour.

In Year 4 Artificial Intelligence, pupils critically evaluate AI-generated information and recognise that it can contain inaccuracies and bias. In Year 5 Artificial Intelligence, pupils build on this by using generative AI purposefully. They learn how generative AI creates content from patterns in data, construct clear prompts, evaluate and improve responses and protect private information. They also consider copyright and understand that AI should support rather than replace their own thinking. This prepares pupils for Year 6 Artificial Intelligence, where they critically evaluate AI's wider benefits, risks, privacy implications and ethical use.

## Spring 2 – Year Five

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Generative AI – artificial intelligence that can create new digital content.
- Prompt – an instruction or question given to an AI system.
- Output – information or content produced by a digital system.
- Copyright – protection given to work somebody has created.
- Original – created independently rather than copied from somebody else.
- Evaluate – to judge something carefully using evidence.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Kind: I can communicate responsibly and positively in digital spaces.

- Know that tone and meaning can be misunderstood in digital communication.
- Know that forwarding, liking or commenting on harmful content can contribute to its impact.
- Know that respectful digital citizens challenge harmful behaviour appropriately and support others.

## Step 2

Learning Objective: I can explain how generative AI can create new content.

- Be Internet Kind: Why can the tone of an online message be harder to understand than the tone of somebody speaking?
- Know that generative AI can create new content such as text, images, music and video.
- Know that generative AI creates content based on patterns learned from data.
- Know that AI-generated content is not necessarily accurate or original.

## Step 3

Learning Objective: I can create a clear instruction, or prompt, for an AI tool.

- Be Internet Kind: How could liking harmful content contribute to the harm it causes?
- Know that a prompt is an instruction or question given to an AI system.
- Know that clear and specific prompts can help an AI produce more useful results.
- Know that changing a prompt can change the AI's response.

# Sequence of Learning

## Step 4

Learning Objective: I can evaluate and improve an AI-generated response.

- Be Internet Kind: Why might forwarding or commenting on harmful content make a situation worse?
- Know that an AI response may not be exactly what we need.
- Know that AI responses can be checked, edited and improved.
- Know that humans remain responsible for the final content they choose to use

## Step 5

Learning Objective: I can use AI while protecting personal information and respecting ownership.

- Be Internet Kind: What does it mean to challenge harmful online behaviour appropriately?
- Know that personal or private information should not be entered into an AI tool without permission.
- Know that content created by other people may be protected by copyright.
- Know that AI should not be used to copy or reproduce someone else's work unfairly.

## Step 6

Learning Objective: I can use AI responsibly to support my own ideas and learning.

- Be Internet Kind: How can a responsible digital citizen support somebody affected by harmful online behaviour?
- Know that AI should support their thinking rather than replace it.
- Know that AI-generated content should be checked for accuracy and suitability.
- Know that people are responsible for the content they create or share using AI.
- Know that safe, respectful and honest use of AI is important.

# Computing Curriculum

## Be Internet Brave

When in Doubt, Discuss



Be Internet Legends.

## Digital Citizenship and Digital Literacy

### Context for study:

In Year 4 Digital Citizenship, pupils learn how trusted adults, blocking and reporting tools can help resolve online concerns. In Year 5 Digital Citizenship, pupils build on this Be Internet Brave knowledge by recognising risks involving inappropriate content, contact and behaviour and selecting reporting, blocking or trusted help as appropriate responses. This prepares pupils for Year 6 Digital Citizenship, where they independently distinguish between risks involving content, contact, conduct and commercial pressure and choose appropriate responses.

In prior Year 5 Digital Literacy, pupils create and analyse databases using Excel. In this Year 5 Digital Literacy learning, pupils broaden their laptop independence by selecting Word, PowerPoint or Excel according to purpose rather than simply availability. They use formatting and visual elements to emphasise information, make and justify choices for an audience and review and edit work. They also combine content produced in different applications. This prepares pupils for Year 6 Digital Literacy, where they combine applications more independently and justify software, layout and formatting choices when communicating increasingly complex information.

## Summer 1 – Year Five

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Digital tool – software or technology selected to help complete a task.
- Emphasis – making important information stand out.
- Audience – the person or group for whom digital work is created.
- Purpose – what a piece of digital work is intended to achieve.
- Justify – to give reasons explaining a decision.
- Review – to examine work carefully to identify possible improvements.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Brave: I can choose appropriate ways to respond to online risks or concerns.

- Know that online risks can include inappropriate content, contact and behaviour.
- Know that reporting, blocking and seeking trusted help are appropriate responses to many online concerns.
- Know that they should never feel responsible for dealing with a serious online problem alone.

## Step 2

Learning Objective: I can select appropriate digital tools for a purpose.

- Be Internet Brave: What is the difference between an online risk involving content and one involving contact?
- Know that Word, PowerPoint and Excel have different strengths and are suited to different types of task.
- Know that digital tools such as headings, images, tables, charts, shapes and formatting can be used to communicate information effectively.
- Know that we should choose tools because they help us achieve a purpose, rather than simply because they are available.

## Step 3

Learning Objective: I can use formatting to add appropriate emphasis and effect to my work.

- Be Internet Brave: What kind of online behaviour might create a risk or concern?
- Know that formatting choices such as font, size, headings, alignment and colour can draw attention to important information.
- Know that images, shapes, tables and charts can be used to support and communicate information visually.
- Know that effective formatting should make information clearer and easier to understand, rather than distract the reader.

# Sequence of Learning

## Step 4

Learning Objective: I can make and explain design choices that are appropriate for my audience.

- Be Internet Brave: When might blocking somebody be an appropriate response?
- Know that the audience is the person or group of people our work is intended for.
- Know that our choice of layout, language, images and formatting should be influenced by our audience and purpose.
- Know that we should be able to justify our design decisions, explaining how they make our work suitable for its intended audience.

## Step 5

Learning Objective: I can review and edit my work to make it more effective.

- Be Internet Brave: When might reporting something be more appropriate than simply ignoring it?
- Know that reviewing means looking carefully at our work to identify strengths and areas for improvement.
- Know that editing may involve changing content, layout, formatting or the digital tools used.
- Know that we should be able to explain what we changed and why the change improved our work.

## Step 6

Learning Objective: I can create and evaluate digital work for a specific purpose and audience.

- Be Internet Brave: Why should somebody seek trusted help rather than trying to deal with a serious online problem alone?
- Know that effective digital work combines appropriate software, content, layout and formatting to communicate a clear message.
- Know that different software can be combined purposefully, such as creating a graph in Excel and using it within Word or PowerPoint.
- Know that evaluating our finished work involves explaining why our choices are suitable for the audience and how our work could be improved further.

# Computing Curriculum



## Digital Citizenship and Information Technology

### Context for study:

In Year 4 Digital Citizenship, pupils use the five pillars together to make responsible decisions and consider how their actions affect others. In Year 5 Digital Citizenship, pupils build on this by applying critical thinking alongside the five pillars and recognising that online actions can affect both their reputation and other people's wellbeing. This prepares pupils for Year 6 Digital Citizenship, where the five pillars are applied independently to complex situations requiring informed, ethical and safe decisions.

In Year 4 Information Technology, pupils evaluate online accuracy and develop knowledge of protocols, privacy, consent and copyright. In Year 5 Information Technology, pupils build on this by understanding how operating systems, processors, RAM, storage and motherboards work together. They evaluate validity and reliability by considering source, author and evidence, examine app permissions and make informed decisions about licences and reuse. This prepares pupils for Year 6 Information Technology, where they investigate search-engine ranking, influence and manipulation, digital security and independent acknowledgement of sources.

## Summer 2 – Year Five

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Operating system – the main software that manages a computer and allows programs to run.
- Processor – the part of a computer that carries out instructions.
- RAM – temporary memory holding information a computer is currently using.
- Storage – where files and programs are kept for future use.
- Permission – access that a person or application has been allowed.
- Validity – whether information is sound and suitable for its intended purpose.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Legends: I can apply the five pillars to make informed and responsible digital choices.

- Know that being a responsible digital citizen requires critical thinking as well as safe behaviour.
- Know that online actions can affect their own reputation and the wellbeing of others.
- Know that the five pillars can be used to evaluate and improve their digital choices.

## Step 2

Learning Objective: I can explain how influential people have contributed to the development of computing and modern technology.

- Be Internet Sharp: Why should you consider privacy, audience, intention and possible consequences before sharing, even if you could delete the content later?
- Know that Bill Gates co-founded Microsoft and helped make computer software and operating systems widely available for personal computers.
- Know that Steve Wozniak co-founded Apple and designed early personal computers, helping computers become more accessible for people to use at home and work.

## Step 3

Learning Objective: I can explain how the key parts of a computer work together.

- Be Internet Alert: What is the difference between misinformation and disinformation, and how can trustworthy sources help you check both?
- Know that an operating system is the main software that manages a computer's hardware and allows us to run programs and interact with the device.
- Know that the processor (CPU) carries out instructions, while RAM temporarily holds information that the computer is currently using.
- Know that storage keeps files and programs for future use, while the motherboard connects the computer's main components so they can work together.

# Sequence of Learning

## Step 4

Learning Objective: I can evaluate digital content and decide whether information is trustworthy.

- **Be Internet Secure:** How do strong unique passwords and multi-factor authentication protect accounts, and what should you do with suspicious requests for information?
- Know that being sceptical means questioning information rather than immediately accepting that it is true.
- Know that we can judge the validity and reliability of online information by considering its source, author, evidence and whether it can be confirmed elsewhere.
- Know that facts, opinions, beliefs, reviews and adverts serve different purposes, and recognising these helps us make informed decisions about online content.

## Step 5

Learning Objective: I can make informed choices to protect my information and devices.

- **Be Internet Kind:** How can liking, forwarding or commenting on harmful content increase its impact, and what should a responsible digital citizen do instead?
- Know that a strong password should be long, difficult to guess and different from passwords used for other important accounts.
- Know that app permissions allow an app to access particular features or information on a device, such as its camera, microphone or location.
- Know that we should consider why an app needs particular permissions and ask a trusted adult if we are unsure whether access should be allowed.

## Step 6

Learning Objective: I can decide when and how I can responsibly reuse digital content.

- **Be Internet Brave:** How would you decide whether to block, report or seek trusted help when faced with an online risk?
- Know that finding content online does not automatically mean we have permission to copy or reuse it.
- Know that some creators give permission for their work to be reused through licences, which may include rules about how the content can be used or credited.
- Know that we can search for content that is permitted to be reused, and we should check its licence, acknowledge the creator when required and be able to justify why our use is acceptable.

# Computing Curriculum

## Digital Citizenship and Digital Literacy

**Be  
Internet  
Sharp**

**Think  
Before You  
Share**



**Be  
Internet  
Legends.**

### Context for study:

In Year 5 Digital Citizenship, pupils make informed decisions about what they share, their audience and potential consequences. In Year 6 Digital Citizenship, pupils build on this Be Internet Sharp knowledge by critically evaluating risks to privacy and reputation and considering consent, audience, permanence and consequences before sharing. This completes the primary Be Internet Sharp progression and prepares pupils to manage their digital identities and online communication with increasing independence at Key Stage 3.

In Year 5 Digital Literacy, pupils develop sophisticated iPad audio-production skills through planning, recording, editing and mixing podcasts. In Year 6 Digital Literacy, pupils broaden their multimedia knowledge through Freeform, combining text, images, shapes and drawings on a flexible digital canvas. They manipulate scale, spacing, position, layers and visual hierarchy and justify how their choices support purpose and audience. This prepares pupils for future learning in Year 6 Digital Literacy, where their accumulated iPad media skills are combined in the planning, filming, editing and evaluation of a documentary.

## Autumn 1 – Year Six

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Consent – permission given for something to happen.
- Freeform – an iPad application providing a flexible digital canvas.
- Composition – the way visual elements are arranged.
- Visual hierarchy – arranging content so important information attracts attention first.
- Layer – an object positioned in front of or behind another digital object.
- Refine – to make careful changes that improve a piece of work.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Sharp: I can evaluate the risks and consequences of sharing content online.

- Know that digital footprints can influence how others perceive them.
- Know that sharing content can affect their privacy, reputation and the privacy of others.
- Know that they should consider consent, audience, permanence and consequences before sharing.

## Step 2

Learning Objective: I can use Freeform to organise different types of digital content.

- Be Internet Sharp: How could your digital footprint affect the way another person perceives you?
- Know that Freeform provides a flexible digital canvas rather than a fixed page.
- Know that images, text, shapes, drawings and other objects can be placed together on a board.
- Know that objects can be moved and resized according to the composition.
- Know that a digital collage should have a clear purpose or visual idea.

## Step 3

Learning Objective: I can use scale, position and spacing to create an effective composition.

- Be Internet Sharp: How could sharing content affect both your own privacy and somebody else's privacy?
- Know that composition describes how visual elements are arranged.
- Know that changing the size of an object changes how much attention it receives.
- Know that spacing and position can help group related ideas or images.
- Know that visual balance can make a collage easier and more interesting to explore.

# Sequence of Learning

## Step 4

Learning Objective: I can combine and layer digital content to communicate an idea.

- Be Internet Sharp: Why is consent important before sharing information or images involving another person?
- Know that objects can overlap to create depth and connections between ideas.
- Know that the order of overlapping objects determines which appear in front or behind.
- Know that text can add context or meaning to visual content.
- Know that every element should contribute to the overall message rather than simply fill space.

## Step 5

Learning Objective: I can make and justify design choices for a digital collage.

- Be Internet Sharp: What does permanence mean when we are talking about online content?
- Know that colour, scale, imagery, typography and spacing influence how an audience interprets a composition.
- Know that visual hierarchy guides the audience towards the most important information first.
- Know that design choices should reflect both purpose and audience.
- Know that designers should be able to explain why they have selected and positioned particular elements.

## Step 6

Learning Objective: I can independently refine and evaluate a digital composition.

- Be Internet Sharp: How should audience, consent, permanence and possible consequences influence a decision about whether to share something?
- Know that refinement involves removing, replacing, repositioning or resizing elements.
- Know that feedback can reveal whether the intended message is clear to other people.
- Know that successful compositions balance visual impact with clear communication.
- Know that evaluation should explain how specific design decisions support the intended outcome.

# Computing Curriculum

## Digital Citizenship and Computer Science

**Be  
Internet  
Alert**

**Check it's  
For Real**



**Be  
Internet  
Legends.**

### Context for study:

In Year 5 Digital Citizenship, pupils distinguish misinformation from disinformation and recognise techniques used to influence audiences. In Year 6 Digital Citizenship, pupils build on this Be Internet Alert knowledge by recognising that algorithms and platforms can influence the information they encounter and that manipulated content can appear convincing. They cross-check claims using multiple reliable and authoritative sources. This prepares pupils for the increasingly independent critical evaluation of online information required at Key Stage 3.

In Year 5 Computer Science, pupils combine sequence, repetition and selection to create interactive programs. In Year 6 Computer Science, pupils build on this by introducing variables as named places where changing information can be stored. They combine events, repetition, selection and variables, decompose complex problems and methodically create, test and adapt programs. They evaluate solutions for accuracy, logic and efficiency. This prepares pupils for Key Stage 3 Computer Science, where they will design increasingly complex algorithms and programs and evaluate the effectiveness of computational solutions.

## Autumn 2 – Year Six

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Variable – a named place where a program stores information that can change.
- Selection – choosing what happens according to whether a condition is met.
- Event – something that triggers an action in a program.
- Decomposition – breaking a complex problem into manageable parts.
- Efficient – achieving an intended result without unnecessary instructions.
- Authoritative source – a source with strong knowledge or expertise that can be relied upon.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Alert: I can critically evaluate the reliability of online information.

- Know that algorithms and online platforms can influence the information they see.
- Know that misinformation, disinformation and manipulated content can appear convincing.
- Know that information should be cross-checked using multiple reliable and authoritative sources.

## Step 2

Learning Objective: I can explain and use variables in a Scratch program

- Be Internet Alert: How can an algorithm influence the information somebody sees online?
- Know that a variable is a named place where a program can store information that may change.
- Know that variables can store different values, such as a score, timer, number or answer.
- Know that a variable can be set, changed and used while a program is running.

## Step 3

Learning Objective: I can combine events, repeats, selection and variables in a Scratch program.

- Be Internet Alert: Why might two people using the same platform be shown different information?
- Know that events trigger actions, repeats run instructions multiple times and selection allows a program to make decisions.
- Know that variables allow information to change and be remembered while a program runs.
- Know that combining different programming concepts allows us to create more complex and interactive programs.

# Sequence of Learning

## Step 4

Learning Objective: I can decompose a problem and plan a program to solve it.

- **Be Internet Alert: Why can misinformation, disinformation or manipulated content still appear convincing?**
- Know that decomposition means breaking a complex problem into smaller, more manageable parts.
- Know that each part of a problem can be considered separately before being combined into a complete program.
- Know that planning which events, repeats, selection and variables are needed helps us create an effective solution.

## Step 5

Learning Objective: I can methodically create, test and adapt a Scratch program.

- **Be Internet Alert: What makes a source reliable and authoritative?**
- Know that complex programs are best developed in stages, testing each part before adding more code.
- Know that testing involves comparing the actual outcome with the intended outcome to identify problems.
- Know that programmers continually debug and adapt their code, changing their approach when a solution does not work as intended.

## Step 6

Learning Objective: I can evaluate and improve the effectiveness of my Scratch program.

- **Be Internet Alert: Why is cross-checking information with several reliable sources stronger than checking only one?**
- Know that evaluating a program involves considering how well it meets its intended purpose.
- Know that effective code should be accurate, logical and efficient, using programming constructs purposefully.
- Know that programmers use testing, feedback and evaluation to identify and justify improvements to their programs.

# Computing Curriculum

## Digital Citizenship and Digital Literacy

**Be  
Internet  
Secure**

**Protect  
Your Stuff**



**Be  
Internet  
Legends.**

### Context for study:

In Year 5 Digital Citizenship, pupils use strong, unique passwords, multi-factor authentication and awareness of suspicious links to protect accounts. In Year 6 Digital Citizenship, pupils build on this Be Internet Secure knowledge by applying these strategies to their digital identity and recognising phishing and other scams designed to trick people into revealing information or accessing malicious links. This prepares pupils for the greater responsibility for personal accounts, information and security that accompanies increasing digital independence at Key Stage 3.

In Year 5 Digital Literacy, pupils independently select and combine Word, PowerPoint and Excel according to purpose and audience. In Year 6 Digital Literacy, pupils build on this laptop knowledge by choosing applications according to their particular strengths, transferring content between software and combining written information, images, graphs and data. They interpret data, create visual hierarchies and justify software, layout and formatting decisions before redrafting and evaluating their outcomes. This culminates Masfield's laptop Digital Literacy progression and prepares pupils to independently select, combine and evaluate digital tools across the Key Stage 3 curriculum.

## Spring 1 – Year Six

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Phishing – a scam designed to trick somebody into revealing information or following a harmful link.
- Multi-factor authentication – using more than one method to prove who you are when logging in.
- Application – a computer program designed for a particular purpose.
- Transfer – to move digital content between locations or applications.
- Visual hierarchy – organising content so its importance is clear to the audience.
- Redraft – to change and reorganise work to improve it.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Secure: I can apply effective strategies to protect my digital identity and information.

- Know that digital accounts can contain valuable personal information.
- Know that strong passwords, multi-factor authentication and privacy settings improve security.
- Know that phishing and other scams can be designed to trick people into revealing information or accessing malicious links.

## Step 2

Learning Objective: I can choose and combine different software to communicate information effectively.

- Be Internet Secure: What valuable personal information might a digital account contain?
- Know that different applications have different strengths, such as Word for written documents, PowerPoint for presentations and Excel for organising and representing data.
- Know that content can be created in one application and transferred to another to produce a more effective outcome.
- Know that software should be selected according to the purpose, content and intended audience, rather than simply personal preference.

## Step 3

Learning Objective: I can interpret data and present my findings using appropriate digital tools.

- Be Internet Secure: How do strong passwords and multi-factor authentication protect an account in different ways?
- Know that graphs can be interpreted by examining their title, axes, scale, labels and values.
- Know that graphs can reveal patterns, trends, comparisons and unusual results within data.
- Know that information and graphs created or analysed in Excel can be combined with Word or PowerPoint to communicate findings to an audience.

# Sequence of Learning

## Step 4

Learning Objective: I can make and justify design choices for a specific purpose and audience.

- **Be Internet Secure: What do privacy settings allow you to control?**
- Know that tools such as headings, images, charts, text formatting and layout can be used to add emphasis and communicate meaning.
- Know that effective design creates a clear visual hierarchy, helping an audience recognise the most important information first.
- Know that we should be able to justify our layout and formatting choices by explaining how they support the purpose and audience.

## Step 5

Learning Objective: I can review and redraft digital work to improve its effectiveness.

- **Be Internet Secure: What is phishing trying to persuade or trick somebody into doing?**
- Know that drafting and redrafting involves deleting, inserting, replacing and reorganising content to improve it.
- Know that reviewing digital work should consider both the quality of the content and the effectiveness of its presentation.
- Know that changes should be made for a clear reason, and we should be able to explain how our edits improve the final outcome.

## Step 6

Learning Objective: I can independently create, evaluate and improve digital work for a specific audience.

- **Be Internet Secure: What warning signs might make you question a message or link before clicking it or sharing information?**
- Know that an effective digital outcome can combine written content, images and data from different applications.
- Know that decisions about software, tools, layout and formatting should all contribute to communicating a clear message to the intended audience.
- Know that effective digital creators continually review, edit and evaluate their work and can justify the decisions they have made.

# Computing Curriculum

## Digital Citizenship and Artificial Intelligence

**Be  
Internet  
Kind**

**Respect Each  
Other**



**Be  
Internet  
Legends.**

### Context for study:

In Year 5 Digital Citizenship, pupils communicate responsibly and recognise that forwarding, liking or commenting on harmful content can contribute to its impact. In Year 6 Digital Citizenship, pupils build on this Be Internet Kind knowledge by considering their contribution to whole online communities. They recognise the effect of digital communication on wellbeing, understand that anonymity does not remove responsibility and know that harmful behaviour may need to be challenged, reported or shared with somebody who can help. This prepares pupils for increasingly independent and responsible participation in digital communities at Key Stage 3.

In Year 5 Artificial Intelligence, pupils learn to use generative AI responsibly through effective prompts, evaluation and consideration of privacy and ownership. In Year 6 Artificial Intelligence, pupils build on this by evaluating AI's impact across healthcare, education, transport, entertainment and science. They examine bias, privacy and personal data and decide when AI is helpful, unnecessary or inappropriate. This prepares pupils to engage critically with automated systems and the ethical implications of emerging technologies at Key Stage 3.

## Spring 2 – Year Six

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Online community – a group of people who communicate or interact using the internet.
- Anonymity – when a person's identity is hidden or not easily known.
- Bias – an unfair influence that can affect information or decisions.
- Ethical – relating to decisions about what is fair and responsible.
- Privacy – control over personal information and how it is used.
- Impact – the effect something has on people, society or the world.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Kind: I can contribute positively and respectfully to online communities.

- Know that digital communication can have a significant impact on people's wellbeing.
- Know that online anonymity does not remove responsibility for behaviour.
- Know that they have a responsibility to challenge, report or seek help about harmful online behaviour.

## Step 2

Learning Objective: I can explain how artificial intelligence is changing different areas of life.

- Be Internet Kind: How can digital communication have a significant effect on somebody's wellbeing?
- Know that AI is used in areas such as healthcare, education, transport, entertainment and science.
- Know that AI can help people solve problems and complete tasks.
- Know that AI can create both opportunities and challenges.

## Step 3

Learning Objective: I can evaluate how bias in data can affect an AI system.

- Be Internet Kind: Why are people still responsible for their behaviour when they are anonymous online?
- Know that AI systems learn from data created or collected by people.
- Know that data can contain gaps, errors or bias.
- Know that biased data can lead to unfair or inaccurate outcomes.
- Know that AI decisions should be questioned rather than automatically accepted.

# Sequence of Learning

## Step 4

Learning Objective: I can explain how AI can affect privacy and personal information.

- **Be Internet Kind: What does it mean to challenge harmful online behaviour responsibly?**
- Know that AI systems can process large amounts of personal and other data.
- Know that information shared with digital services can have privacy implications.
- Know that privacy settings, permissions and careful choices can help protect personal information.
- Know that they should consider what information they share with AI systems.

## Step 5

Learning Objective: I can decide when using AI is helpful, unnecessary or inappropriate.

- **Be Internet Kind: When might reporting harmful behaviour be the most appropriate response?**
- Know that AI is a tool and is not always the best solution to a problem.
- Know that some tasks require human judgement, creativity, empathy or responsibility.
- Know that using AI does not remove a person's responsibility for the outcome.
- Know that AI should be used ethically and appropriately.

## Step 6

Learning Objective: I can evaluate the benefits and risks of AI and explain how I can use it responsibly.

- **Be Internet Kind: How would you decide whether to challenge something yourself, report it or seek help from somebody else?**
- Know that AI can provide significant benefits but can also create risks and challenges.
- Know that humans are responsible for how AI is designed, used and governed.
- Know that responsible AI use includes considering accuracy, bias, privacy, copyright, safety and fairness.
- Know that they can make informed decisions about AI based on evidence rather than simply trusting it.

# Computing Curriculum

## Be Internet Brave

When in Doubt, Discuss



Be Internet Legends.

## Digital Citizenship and Digital Literacy

### Context for study:

In Year 5 Digital Citizenship, pupils choose appropriate ways to respond to risks involving content, contact and behaviour. In Year 6 Digital Citizenship, pupils build on this Be Internet Brave knowledge by recognising that concerns can involve content, contact, conduct or commercial pressure and independently selecting responses such as blocking, reporting or seeking trusted support. This completes the primary Be Internet Brave progression and prepares pupils to seek appropriate support while using technology with greater independence at Key Stage 3.

In prior Year 6 Digital Literacy, pupils use Freeform to create purposeful multimedia compositions and justify their design decisions. In this Year 6 Digital Literacy learning, pupils draw together the iPad knowledge developed throughout the primary curriculum to produce documentaries. They plan for purpose and audience, use wide, medium and close-up shots, record interviews and B-roll and organise footage into coherent sequences. Audio, titles, captions and credits are then used purposefully. This culminates Masfield's iPad Digital Literacy progression and prepares pupils to independently create, edit and critically evaluate sophisticated multimedia outcomes at Key Stage 3.

## Summer 1 – Year Six

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Documentary – a factual film created to inform an audience about a subject.
- B-roll – extra footage used to illustrate or support what is being discussed.
- Footage – video material that has been recorded.
- Narration – spoken information added to a film.
- Credits – information identifying contributors and sources used in a production.
- Coherent – organised so that all the parts fit together and make sense.

# Sequence of Learning

## Step 1

**Learning Objective: Be Internet Brave: I can confidently respond to online risks and seek appropriate support.**

- Know that online safety concerns can involve content, contact, conduct or commercial pressure.
- Know that different concerns may require different responses, such as blocking, reporting or seeking trusted support.
- Know that asking for help is an important part of staying safe and protecting others.

## Step 2

**Learning Objective: I can plan a documentary for a specific purpose and audience.**

- **Be Internet Brave: What is an example of an online safety concern involving content?**
- Know that a documentary uses factual material to inform an audience about a subject.
- Know that documentaries can combine interviews, narration, archive material, photographs and filmed footage.
- Know that a clear structure helps develop information and ideas logically.
- Know that a production plan can identify scenes, interview questions, locations, contributors and required footage.

## Step 3

**Learning Objective: I can use different shot types and filming techniques to communicate information.**

- **Be Internet Brave: How is a concern involving contact different from one involving conduct?**
- Know that wide, medium and close-up shots communicate different information to the audience.
- Know that framing, camera position and lighting affect how footage is understood.
- Know that interviews should be recorded so that both speech and the speaker can be clearly understood.
- Know that B-roll is additional footage used to illustrate or support what is being discussed.

# Sequence of Learning

## Step 4

Learning Objective: I can organise different types of footage into a coherent documentary sequence.

- Be Internet Brave: What might commercial pressure look like when somebody is using an online service?
- Know that editing determines the order in which an audience receives information.
- Know that interviews can be trimmed to retain the most relevant sections.
- Know that B-roll can be placed alongside spoken information to provide visual evidence or context.
- Know that transitions and cuts should help the documentary flow without distracting the audience.

## Step 5

Learning Objective: I can use audio, titles and credits to enhance a documentary.

- Be Internet Brave: Why might different online concerns need different responses?
- Know that narration can connect different sections and provide information that is not shown visually.
- Know that music and background sound influence the mood and interpretation of a scene.
- Know that titles and captions can identify people, locations and important information.
- Know that credits and acknowledgements should identify contributors and sources used in the production.

## Step 6

Learning Objective: I can independently edit and evaluate a documentary for its intended audience.

- Be Internet Brave: How would you decide whether blocking, reporting or seeking trusted support was the most appropriate response?
- Know that a successful documentary should communicate factual information clearly and coherently.
- Know that editing choices can influence how an audience interprets people, events and information.
- Know that factual filmmaking should represent information responsibly and avoid deliberately misleading an audience.
- Know that evaluating the final production involves considering accuracy, structure, technical quality, audience and purpose.

# Computing Curriculum



## Digital Citizenship and Information Technology

### Context for study:

In Year 5 Digital Citizenship, pupils apply the five pillars using critical thinking and recognise that digital choices can affect reputation and wellbeing. In Year 6 Digital Citizenship, pupils build on this by independently applying Sharp, Alert, Secure, Kind and Brave to complex situations. They recognise that responsible digital citizenship requires informed, ethical and safe choices and that their actions can affect safety, reputation, relationships and the wider online community. This culminates Masfield's Digital Citizenship progression and prepares pupils to take increasing responsibility for their digital behaviour at Key Stage 3.

In Year 5 Information Technology, pupils develop knowledge of computer systems, hardware, validity, reliability, permissions and responsible reuse. In Year 6 Information Technology, pupils build on this by examining how search engines discover and rank webpages and recognising that the first result is not necessarily the most useful or trustworthy. They critically examine influence, persuasion and manipulation, manage security risks and acknowledge sources used in their work. This prepares pupils for Key Stage 3 by moving them from finding digital information to critically questioning how it reaches them, why it appears and whether it should be trusted or reused.

## Summer 2 – Year Six

### National Curriculum Objectives:

#### Key stage 2

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.

### Vocabulary:

- Ranking – the order in which search-engine results are displayed.
- Algorithm – a set of rules or instructions used to complete a task.
- Influence – affecting what somebody thinks, feels or does.
- Manipulation – deliberately shaping information to influence somebody.
- Reference – information that identifies the original source used in a piece of work.
- Acknowledge – to state clearly where information, images or ideas came from.

# Sequence of Learning

## Step 1

Learning Objective: Be Internet Legends: I can independently apply the five pillars to complex digital situations.

- Know that responsible digital citizenship involves making informed, ethical and safe choices.
- Know that the five pillars can be applied together when responding to challenging digital situations.
- Know that their digital choices can affect their safety, reputation, relationships and the wider online community.

## Step 2

Learning Objective: I can explain how influential people have contributed to the development of computing and modern technology.

- **Be Internet Sharp: How should consent, audience, permanence and consequences influence what you decide to share online?**
- Know that Alan Turing was a mathematician and computing pioneer whose ideas helped establish important foundations of modern computer science and artificial intelligence.
- Know that Turing played a significant role in codebreaking during the Second World War, including work connected with breaking German Enigma messages.
- Know that Elon Musk is a technology entrepreneur whose companies have contributed to developments in areas including electric vehicles, space technology and artificial intelligence.

## Step 3

Learning Objective: I can explain how search engines find and rank information and use them effectively.

- **Be Internet Alert: How can algorithms influence what information you encounter, and why should convincing information still be cross-checked against authoritative sources?**
- Know that search engines use automated programs to discover and organise web pages so that information can be found when we search.
- Know that search engines use algorithms to rank results according to different factors, and the first result is not necessarily the most useful or trustworthy.
- Know that effective searching involves choosing specific key words and phrases and refining searches to find relevant and reliable information.

# Sequence of Learning

## Step 4

Learning Objective: I can critically evaluate how online information may influence what people think.

- **Be Internet Secure:** How do strong passwords, multi-factor authentication and privacy settings protect digital accounts, and how can phishing threaten them?
- Know that an opinion expresses what somebody thinks or believes, whereas a fact should be supported by evidence that can be checked.
- Know that influence, persuasion and manipulation are different ways that online content may attempt to affect our thoughts, feelings or actions.
- Know that the popularity of information or the fame of the person sharing it does not make it true, and advertising, targeted content and fake news may be designed to influence particular audiences.

## Step 5

Learning Objective: I can recognise online security risks and take steps to protect my information.

- **Be Internet Kind:** Why does anonymity not remove responsibility for online behaviour, and what responsibilities do you have when you encounter harmful behaviour?
- Know that keeping software and apps up to date can fix security weaknesses and help protect devices and information.
- Know that privacy settings can help us control who can see our information and how apps and online services use it.
- Know that scams and phishing may use convincing messages, links or offers to trick people into giving away money or personal information, so we should check carefully and seek help when unsure.

## Step 6

Learning Objective: I can research online and acknowledge the sources I use.

- **Be Internet Brave:** How can you distinguish concerns involving content, contact, conduct and commercial pressure, and how would that help you choose an appropriate response?
- Know that information, images and ideas found online have a source, and we should acknowledge where information used in our own work came from.
- Know that a simple reference should provide enough information to identify and find the original source, such as the author or organisation, page title and web address.
- Know that acknowledging sources shows respect for other people's work, helps avoid presenting their work as our own and allows others to check the information we have used.