

Computing Skills and Knowledge Coverage 2025-2026

Computing is taught explicitly and in-depth in Autumn 1, Spring 1 and Summer 1

Year 3/4
Autumn 1 – Creating media – Desktop publishing
Lesson 1: Words and pictures <i>This unit of work builds upon the skills and knowledge children acquired during their unit on Digital Writing in KS1. The same principles of text manipulation in Microsoft Word will now be applied to the Canva application with the addition of image manipulation and templates.</i> In this lesson, children will become familiar with the terms ‘text’ and ‘images’ and understand that text and images need to be used carefully to communicate messages clearly. Children will be able to give advantages and disadvantages of using text, images, or both text and images to communicate messages effectively. Learning objectives: To recognise how text and images convey information: ✓ I can explain the difference between text and images ✓ I can recognise that text and images can communicate messages clearly ✓ I can identify the advantages and disadvantages of using text and images Key vocabulary: Text, images, advantages, disadvantages, communicate 
Lesson 2: Can you edit it? This lesson will build on lesson 1, in which children looked at using images and text to communicate a message effectively. In this lesson children will focus on desktop publishing. Children will think about how to make careful choices regarding font size, colour, and type in an invitation. The use of the Return, Backspace, and Shift keys will be explored and children will be taught how to type age-appropriate punctuation marks. This will build on the typing skills learned in KS1 ‘Digital Writing’ unit. Children will understand that once content has been added, it can be rearranged on the page. Learning objectives: To recognise that text and layout can be edited: ✓ I can change font style, size, and colours for a given purpose ✓ I can edit text ✓ I can explain that text can be changed to communicate more clearly Key vocabulary: Font, font style, communicate, template 

Lesson 3: Great templates

In this lesson, children will look at the role of an editorial designer, being the person who is responsible for putting content together. Children will be introduced to the terms 'templates', 'orientation', and 'placeholders' within desktop publishing software. The children will create their own magazine template, which they will add content to during the next lesson. Children will learn that other software such as Microsoft Publisher could also be used in a similar way.

Learning objectives:

To choose appropriate page settings:

- ✓ I can define the term 'page orientation'
- ✓ I can recognise placeholders and say why they are important
- ✓ I can create a template for a particular purpose

Key vocabulary:

Landscape, portrait, orientation, placeholder, template, layout, content

**Lesson 4: Becoming a designer**

In this lesson, children will add their own content (text and images) to the magazine templates they created in lesson 3. They will copy the information for the front of their magazine from a prewritten document and paste it into the chosen place on their magazine cover. Images will be added from within the search facility in Canva. Children will recap the role of an editorial designer (introduced to them in lesson three) exploring elements of the job role in more detail.

Learning objectives:

To add content to a desktop publishing publication:

- ✓ I can choose the best locations for my content
- ✓ I can paste text and images to create a magazine cover
- ✓ I can make changes to content after I've added it

Key vocabulary:

Desktop publishing, copy, paste

**Lesson 5: Lay it out**

In this lesson, children will think about the different ways information can be laid out on a page. They will look at a range of page layouts such as letters and newspapers, and begin to think about the purpose of each of these.

Learning objectives:

To consider how different layouts can suit different purposes

- ✓ I can identify different layouts
- ✓ I can match a layout to a purpose
- ✓ I can choose a suitable layout for a given purpose

Key vocabulary:

Layout, purpose

Lesson 6: Why desktop publishing?

In this lesson, children will explain what desktop publishing means in their own words. They will think about how desktop publishing is used in the wider world and consider the benefits of using desktop publishing applications.

Learning objectives

To consider the benefits of desktop publishing

- ✓ I can identify the uses of desktop publishing in the real world
- ✓ I can say why desktop publishing might be helpful
- ✓ I can compare work made on desktop publishing to work created by hand

Key vocabulary:

Desktop publishing, benefits

Lesson 7: Internet Safety Focus – Password Power-Up - How can a strong password help protect your privacy?

Children will learn that stronger, more secure online passwords are a good idea for everyone. Children will gain knowledge of how we can create better passwords and remember them. This lesson builds on children's experience of using applications, such as Canva, which often require an email address and strong password to sign-up.

Learning objectives:

- ✓ Define the term "password" and describe a password's purpose
- ✓ Understand why a strong password is important
- ✓ Practice creating a memorable and strong password

Key vocabulary

Password, phrase, symbol, username



Year 3/4**Spring 1 – Programming - Events and actions in programs****Lesson 1: Moving a sprite**

This unit of work builds upon the skills and knowledge children acquired during their unit on Programming in KS1 and, specifically, the knowledge and skills they developed using Scratch Junior.

In this lesson, children will investigate how characters can be moved using 'events'. They will analyse and improve an existing project, and then apply what they have learned to their own projects. They will then extend their learning to control multiple sprites in the same project.

Learning objectives:

To explain how a sprite moves in an existing project

- ✓ I can explain the relationship between an event and an action
- ✓ I can choose which keys to use for actions and explain my choices
- ✓ I can identify a way to improve a program

Key vocabulary:

Motion, event, sprite, algorithm, logic

**Lesson 2: Maze movement**

In this lesson, children will program a sprite to move in four directions: up, down, left, and right. They will begin by choosing a sprite and sizing it to fit in with a given background. Children will then create the code to move the sprite in one direction before duplicating and modifying it to move in all four directions. Finally, they will consider how their project could be extended to prove that their sprite has successfully navigated a maze.

Learning objectives:

To create a program to move a sprite in four directions

- ✓ I can choose a character for my project
- ✓ I can choose a suitable size for a character in a maze
- ✓ I can program movement

Key vocabulary:

Move, resize, algorithm

**Lesson 3: Drawing lines**

This lesson will introduce children to extension blocks in Scratch using the Pen extension. Children will use the pen down block to draw lines, building on the movement they created for their sprite in Lesson 2. Children will then decide how to set up their project every time it is run.

Learning objectives

To adapt a program to a new context:

- ✓ I can use a programming extension
- ✓ I can consider the real world when making design choices
- ✓ I can choose blocks to set up my program

Key vocabulary:

Extension block, pen up, set up

**Lesson 4: Adding features**

In this lesson, children will be given the opportunity to use additional Pen blocks. They will predict the functions of new blocks and experiment with them, before designing features to add to their own projects. Finally, they will add these features to their projects and test their effectiveness.

Learning objectives:

To develop my program by adding features:

- ✓ I can identify additional features (from a given set of blocks)
- ✓ I can choose suitable keys to turn on additional features
- ✓ I can build more sequences of commands to make my design work

Key vocabulary:

Pen, design, event, action, algorithm

**Lesson 5: Debugging movement**

This lesson explores the process of debugging, specifically looking at how to identify and fix errors in a program. Children will review an existing project against a given design and identify bugs within it. They will then correct the errors, gaining independence as they do so. Children will also develop their projects by considering which new setup blocks to use.

Learning objectives:

To identify and fix bugs in a program:

- ✓ I can test a program against a given design
- ✓ I can match a piece of code to an outcome
- ✓ I can modify a program using a design

Key vocabulary:

Debugging, errors, setup

**Lesson 6: Making a project**

In this lesson, children will design and create their own projects. Using a template (which can be blank or partially completed), learners will complete projects to move a sprite around a

maze, with the option to leave a pen trail showing where the sprite has moved. Ideally, projects will include setup blocks to position the sprite at the start of the maze and clear any lines already on the screen.

Learning objectives:

To design and create a maze-based challenge

- ✓ I can make design choices and justify them
- ✓ I can implement my design
- ✓ I can evaluate my project

Key vocabulary:

Design, code, setup, test, debug, actions, events

**Lesson 7: Internet Safety Focus – Our Digital Citizenship Pledge - What makes a strong online community?**

Children will learn that belonging to various communities is important for their development. But some online communities can be healthier than others. This lesson will focus on how children can strengthen both online and in-person communities by creating norms that everyone pledges to uphold.

Learning objectives:

- ✓ Define what a community is, both in person and online.
- ✓ Explain how having norms helps people in a community achieve their goals.
- ✓ Create and pledge to adhere to shared norms for being in an online community.

Key vocabulary:

Community, digital citizen, norm, pledge



Year 3/4**Summer 1 – Computing systems and networks – Connecting computers**

This unit builds upon the children's prior learning, in KS1, on 'Computing systems and networks – Technology around us'. Through this unit, children are given the opportunity to develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. Children will begin by comparing digital and non-digital devices, before being introduced to computer networks that include network infrastructure devices like routers and switches.

Lesson 1: How does a digital device work?

This lesson introduces the concepts of input, process, and output. These concepts are fundamental to all digital devices.

Learning objectives:

To explain how digital devices function:

- ✓ I can explain that digital devices accept inputs
- ✓ I can explain that digital devices produce outputs
- ✓ I can follow a process

Key vocabulary:

Digital device, input, process, output, secure, password, cyber attack

Lesson 2: What parts make up a digital device?

In this lesson, children will develop their knowledge of input, process, and output and apply it to devices and parts of devices that they will be familiar with in their everyday surroundings.

Learning objectives:

To identify input and output devices:

- ✓ I can classify input and output devices
- ✓ I can design a digital device
- ✓ I can describe a simple process

Key vocabulary:

Digital device, input, process, output

Lesson 3: How do digital devices help us?

In this lesson, children will apply their learning from lessons 1 and 2 by using programs in conjunction with inputs and outputs on a digital device. They will create two pieces of work with the same focus, using digital devices to create one piece of work, and non-digital tools to create the other. Children will then compare and contrast the two approaches.

Learning objectives:

To recognise how digital devices can change the way we work

- ✓ I can explain how I use digital devices for different activities
- ✓ I can recognise similarities between using digital devices and non-digital tools
- ✓ I can suggest differences between using digital devices and non-digital tools

Key vocabulary:

Program, digital, non-digital

**Lesson 4: How am I connected?**

In this lesson, children will learn that many digital devices are now connected to other digital devices, e.g., computers through wires, tablets through Wi-Fi, and smartphones through mobile phone networks. The benefit of connecting digital devices is that it allows information to be shared between users and systems. This lesson introduces the concept of connections and moving information between connected devices. Children will learn to explain how and why computers are joined together to form networks.

Learning objectives:

To explain how a computer network can be used to share information

- ✓ I can recognise different connections
- ✓ I can explain how messages are passed through multiple connections
- ✓ I can discuss why we need a network switch

Key vocabulary:

Connection, network, network switch

Lesson 5: How are computers connected?

This lesson introduces key network components, including a server and wireless access points. Children will examine each device's functionality and look at the benefits of networking computers.

Learning objectives:

To explore how digital devices can be connected

- ✓ I can recognise that a computer network is made up of a number of devices
- ✓ I can demonstrate how information can be passed between devices
- ✓ I can explain the role of a switch, server, and wireless access point in a network

Key vocabulary:

Server, wireless access point

Lesson 6: What does our school network look like?

In this lesson, children will further develop their understanding of computer networks. They will see examples of network infrastructure in a real-world setting and relate them to the activities in the last lesson.

Learning objectives:

To recognise the physical components of a network

- ✓ I can identify how devices in a network are connected together
- ✓ I can identify networked devices around me
- ✓ I can identify the benefits of computer networks

Key vocabulary:

Network cables, network sockets

Lesson 7 – Internet Safety Focus – Keeping Games Fun and Friendly - How can I be positive and have fun while playing online games, and help others do the same?

This internet safety lessons builds on the children's acquired knowledge of how devices are connected and how they are used to connect with others. Children will learn that social interaction is part of what makes online gaming so popular and engaging for young people and some adults. They will explore how online communication can come with some risks. A key focus of the lesson is to teach the children how they can keep their gaming experiences fun, healthy, respectful and positive.

Learning objectives:

- ✓ Define "social interaction" and give an example
- ✓ Describe the positives and negatives of social interaction in online games
- ✓ Create an online video game cover that includes guidelines for positive social interaction

Key vocabulary:

Digital media, griefing, online video game, social interaction

