Computing Subject Overview

ROUTE 1 - COMPUTING

	AUTUMN HALF TERM 1	AUTUMN HALF TERM 2	SPRING HALF TERM 1	SPRING HALF TERM 2	SUMMER HALF TERM 1	SUMMER HALF TERM 2
Year 7	**E Safety Focus** *Identify opportunities within the EYFS framework to integrate ICT and computin g.* *Integrate a range of media.* *How to be safe online.*	*Identify opportunities within the EYFS framework to integrate ICT and computing.* *Integrate a range of media.*	**E Safety Focus** *Identify opportunities within the EYFS framework to integrate ICT and computing.* *Integrate a range of media.* *How to be safe online.*	*Identify opportunities within the EYFS framework to integrate ICT and computing.* *Integrate a range of media.*	**E Safety Focus** *Identify opportunities within the EYFS framework to integrate ICT and computing.* *Integrate a range of media.* *How to be safe online.*	*Identify opportunities within the EYFS framework to integrate ICT and computing.* *Integrate a range of media.*
Year 8	**E Safety Focus** *Identify opportunities within the EYFS framework to integrate ICT and computin g.* *Integrate a range of media.* *How to be safe online.*	*Identify opportunities within the EYFS framework to integrate ICT and computing.* *Integrate a range of media.*	**E Safety Focus** *Identify opportunities within the EYFS framework to integrate ICT and computing.* *Integrate a range of media.* *How to be safe online.*	*Identify opportunities within the EYFS framework to integrate ICT and computing.* *Integrate a range of media.*	**E Safety Focus** *Identify opportunities within the EYFS framework to integrate ICT and computing.* *Integrate a range of media.* *How to be safe online.*	*Identify opportunities within the EYFS framework to integrate ICT and computing.* *Integrate a range of media.*
Year 9	**E Safety Focus** *Build on opportunities visited within the EYFS Framework.* *Recognise which media is required.* *How to be safe online.*	*Build on opportunities visited within the EYFS Framework.* *Recognise which media is required.*	**E Safety Focus** *Build on opportunities visited within the EYFS Framework.* *Recognise which media is required.* *How to be safe online.*	*Build on opportunities visited within the EYFS Framework.* *Recognise which media is required.*	**E Safety Focus** *Build on opportunities visited within the EYFS Framework.* *Recognise which media is required.* *How to be safe online.*	*Build on opportunities visited within the EYFS Framework.* *Recognise which media is required.*

Year 10	**E Safety Focus** *Build on opportunities visited within the EYFS Framework. Recognise which media is required. How to be safe online.*	*Build on opportunities visited within the EYFS Framework. Recognise which media is required.*	**E Safety Focus** *Build on opportunities visited within the EYFS Framework. Recognise which media is required. How to be safe online.*	*Build on opportunities visited within the EYFS Framework. Recognise which media is required.*	**E Safety Focus** *Build on opportunities visited within the EYFS Framework. Recognise which media is required. How to be safe online.*	*Build on opportunities visited within the EYFS Framework. Recognise which media is required.*
Year 11	**E Safety Focus** **Functional Skills** *Build on opportunities visited within the EYFS Framework. Recognise which media is required. How to be safe online.*	**Functional Skills** *Build on opportunities visited within the EYFS Framework. Recognise which media is required.*	**E Safety Focus** **Functional Skills** *Build on opportunities visited within the EYFS Framework. Recognise which media is required. How to be safe online.*	**Functional Skills** *Build on opportunities visited within the EYFS Framework. Recognise which media is required.*	**E Safety Focus** **Functional Skills** *Build on opportunities visited within the EYFS Framework. Recognise which media is required. How to be safe online.*	**Functional Skills** *Build on opportunities visited within the EYFS Framework. Recognise which media is required.*

Curriculum Overview

- Route 1 Pupils undertake tasks to DISCOVER, EXPLORE and EXPERIENCE knowledge and understanding through themes and opportunities within the context of the topics.
- Bespoke curriculum guided by DAPA S9-S12 and National Curriculum KS1.
- A spiralling curriculum allows for key skills to be revisited, gaps in knowledge to be addressed and learning to be embedded.
- Much of the delivery is embedded in other subjects, where IT is utilised, opportunities are identified to develop skills.

Skills and Knowledge Progression Year 7 & Year 8

KNOWLEDGE

- Identify opportunities within the EYFS framework to integrate ICT and computing into play, communication, learning and social development
- Integrate a range of media through cross curricular activities
- How to be safe online

SKILLS

- Be aware of different types of devices
- Remember rules without adult guidance
- Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
- Explore how things work

SPIRAL

- To continue to embed computing skills gained via the pathways of EYFS learning;
- Personal, Social and Emotional Development, Physical Development, Understanding the World and Expressive Arts and Design

Skills, Knowledge Progression and Destinations Year 9, Year 10 and Year 11

KNOWLEDGE

- Build on opportunities visited within the EYFS Framework developing knowledge of ICT and computing through a more structured kinaesthetic learning environment
- Recognise which media is required within a given situation through cross curricular pathways
- Build knowledge around Functional Skills ICT.

SKILLS

- Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Explain the reasons for rules, know right from wrong and try to behave accordingly

SPIRAL

- To continue to embed computing skills gained via the pathways of foundation learning; Personal, Social and Emotional Development, Physical Development, Understanding the World and Expressive Arts and Design

DESTINATION

- Pearson Functional Skills - ICT computing Entry level 1 – 3
- By the end of KS4 some pupils will be ready for formal assessment (Ends August 2024)

ROUTE 2 - COMPUTING

	AUTUMN HALF TERM 1	AUTUMN HALF TERM 2	SPRING HALF TERM 1	SPRING HALF TERM 2	SUMMER HALF TERM 1	SUMMER HALF TERM 2
Year 7	**E-Safety Focus** **Digital Writing** *Safety and Security* *Effective use of tools*	**IT around us** *Networks* *Effective use of tools*	**E-Safety Focus** **Digital Photography** *Safety and Security* *Creating Media*	**Robot Algorithms** *Algorithms*	**E-Safety Focus** **Pictograms** *Data*	**Programming Quizzes** *Programming*
Year 8	**E-Safety Focus** **Connecting Computers** *Safety and Security* *Networks*	**Stop Frame animation** *Creating Media* *Algorithms*	**E-Safety Focus** **Branching databases** *Safety and Security* *Data*	**Desktop Publishing** *Creating Media*	**E-Safety Focus** **The Internet** **Connecting networks.** *Safety and Security* *Networks*	**Introduction to Spreadsheets** *Data*
Year 9	**E-Safety Focus** **Connecting Computers** *Safety and Security* *Networks* *Computing Systems* **ICT FS**	**Sharing Information** *Data and Information* **ICT FS**	**E-Safety Focus** **Desktop Publishing** *Safety and Security* *Creating Media* *Effective use of Tools* **ICT FS**	**Digital Photography** *Creating Media* **ICT FS**	**E-Safety Focus** **Introduction to Spreadsheets** *Safety and Security* *Data and Information* *Design and Development* **ICT FS**	**The Internet** *Networks* *Computing Systems* **ICT FS**
Year 10	**E-Safety Focus** **Connecting Computers** *Safety and Security* *Networks* *Computing Systems* **ICT FS**	**Sharing Information** *Data and Information* **ICT FS**	**E-Safety Focus** **Desktop Publishing** *Safety and Security* *Creating Media* *Effective use of Tools* **ICT FS**	**Digital Photography** *Creating Media* **ICT FS**	**E-Safety Focus** **Introduction to Spreadsheets** *Safety and Security* *Data and Information* **ICT FS**	**The Internet** *Networks* *Computing Systems* **ICT FS**

Year 11	**E-Safety Focus** **Connecting Computers** *Safety and Security* *Networks* *Computing Systems* **ICT FS**	**Sharing Information** *Data and Information* **ICT FS**	**E-Safety Focus** **Desktop Publishing** *Safety and Security* *Creating Media* *Effective use of Tools* **ICT FS**	**Digital Photography** *Creating Media* **ICT FS**	**E-Safety Focus** **Introduction to Spreadsheets** *Safety and Security* *Data and Information* **ICT FS**	**The Internet** *Networks* *Computing Systems* **ICT FS**

Curriculum Overview

- Route 2 Pupils undertake tasks to ENHANCE, DEVELOP and DEEPEN knowledge and understanding through themes and opportunities within the context of the topics.
- Delivery utilises the NCCE Teach Computing curriculum for KS1, KS2 and KS3.
- A spiralling curriculum allows for key skills to be revisited, gaps in knowledge to be addressed and learning to be embedded.
- Opportunities to gain EL1-3 Functional Skills ICT in Year 9, Year 10 and Year 11.
- 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.

Skills and Knowledge Progression Year 7 & Year 8

KNOWLEDGE

- Networks – Develop a basic understanding with associated risks
- Creating Media – Select and create a range of media to include text, sound and images
- Data – Develop and understanding of how information is stored
- Design & Development – Develop an understanding of how activities are planned
- Computing systems – Understand the parts of a computer and how it functions as a whole
- Algorithms – Know what an algorithm is
- Programming – Create software to solve problems
- Effective use of tools – Implement software to support computing work
- Safety and security – Understand the risks of technology and how to safeguard individuals.

SKILLS

- Have a basic understanding of what an algorithm is
- Create and debug simple programs
- Predict the behaviour of simple programs
- Use technology purposefully; organise, store, manipulate and retrieve digital content
- Use technology safely and respectfully

SPIRAL

- Build on what algorithms are
- Make simple programs
- Implement technology purposefully
- Respect the use of technology and implement safely

Skills, Knowledge Progression and Destinations Year 9, Year 10 and Year 11

KNOWLEDGE

- Networks – Reinforce an understanding of associated risks
- Creating Media – Select and create a range of media to include text, sound, images and video
- Data & Information - Understand how information is stored and used to represent real world scenarios
- Design & Development – Develop an understanding of how activities are planned and evaluate computing artefacts
- Computing systems – Understand the parts of a computer and how it's constituent parts function together as a whole
- Algorithms – Know what an algorithm is; design and create
- Programming – Build on skills and create software to solve problems
- Effective use of tools – Implement software to support computing work

- Safety and security – Understand the risks of technology and how to safeguard individuals.

SKILLS

- Have a deeper understanding of what an algorithm is
- Create and debug more sophisticated programs
- Predict the behaviour of more in depth programs
- Use technology purposefully; organise, store, manipulate and retrieve digital content independently
- Use technology safely and respectfully

SPIRAL

- KS3 and 4 is an opportunity to revisit, explore and build on new and existing skills. Progression to more advanced content, understanding an concepts is generally limited but not inaccessible.

DESTINATIONS

- Pearson Functional Skills - ICT computing Entry level 1 – 3 (Ends August 2024)

ROUTE 3 - COMPUTING

	AUTUMN HALF TERM 1	AUTUMN HALF TERM 2	SPRING HALF TERM 1	SPRING HALF TERM 2	SUMMER HALF TERM 1	SUMMER HALF TERM 2
Year 7	**E-Safety Focus** **Digital Writing** *Safety and Security* *Effective use of Tools*	**IT around us** *Networks* *Computing Systems*	**E-Safety Focus** **Digital Photography** *Safety and Security* *Creating Media*	**Robot Algorithms** *Algorithms*	**E-Safety Focus** **Pictograms** *Safety and Security* *Data*	**Programming Quizzes** *Data* *Design and Development*
Year 8	**E-Safety Focus** **Connecting Computers** *Safety and Security* *Networks*	**Stop Frame animation** *Creating Media* *Programming*	**E-Safety Focus** **Branching databases** *Safety and Security* *Data*	**Desktop Publishing** *Creating Media* *Design and Development*	**E-Safety Focus** **The Internet Connecting networks.** *Safety and Security* *Computing Systems* *Networks*	**Introduction to Spreadsheets** *Data* *Effective use of Tools*
Year 9	**E-Safety Focus** **The Internet & networks.** *Safety and Security* *Networks* **ICT F Skills**	**Sharing Information & Systems.** *Safety and Security* *Computing Systems* **ICT F Skills**	**E-Safety Focus** **Desktop Publishing** *Effective use of Tools* **ICT F Skills**	**Internet Communication** *Safety and Security* *Networks* **ICT F Skills**	**E-Safety Focus** **Introduction to Spreadsheets** *Safety and Security* *Data* **ICT F Skills**	**Video Production** *Creating Media* **ICT F Skills**
Year 10	**E-Safety Focus** **The Internet & networks.** *Safety and Security* *Networks* **ICT F Skills**	**Sharing Information & Systems.** *Safety and Security* *Computing Systems* **ICT F Skills**	**E-Safety Focus** **Desktop Publishing** *Effective use of Tools* **ICT F Skills**	**Internet Communication** *Safety and Security* *Networks* **ICT F Skills**	**E-Safety Focus** **Introduction to Spreadsheets** *Safety and Security* *Data* **ICT F Skills**	**Video Production** *Creating Media* **ICT F Skills**

Year 11	**E-Safety Focus** **The Internet & networks.** *Safety and Security Networks* **ICT F Skills**	**Sharing Information & Systems.** *Safety and Security Computing Systems* **ICT F Skills**	**E-Safety Focus** **Desktop Publishing** *Effective use of Tools* **ICT F Skills**	**Internet Communication** *Safety and Security Networks* **ICT F Skills**	**E-Safety Focus** **Introduction to Spreadsheets** *Safety and Security Data* **ICT F Skills**	**Video Production** *Creating Media* **ICT F Skills**

Curriculum Overview

- Route 3 Pupils undertake tasks to EMBED, DEMONSTRATE and APPLY knowledge and understanding through themes and opportunities within the context of the topics.
- Delivery utilises the NCCE Teach Computing curriculum for KS1, KS2 and KS3.
- A spiralling curriculum allows for key skills to be revisited, gaps in knowledge to be addressed and learning to be embedded.
- Opportunities to gain EL1-3 Functional Skills ICT in Year 9, Year 10 and Year 11.
- 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.

Skills and Knowledge Progression Year 7 & Year 8

KNOWLEDGE

- Networks – Understand how to retrieve and share information across networks
- Creating Media – Select and create a range of media to include text, sound and images
- Data – Develop and understanding of how information is stored and utilised in real world situations
- Design & Development – Develop an understanding of how activities are planned; evaluating computer artefacts
- Computing systems – Understand the parts of a computer and how it functions as a whole
- Algorithms – Develop and create an algorithm an evaluate its effectiveness
- Programming – Create software to solve problems
- Effective use of tools – Implement software to support computing work
- Safety and security – Understand the risks of technology and how to safeguard individuals and systems

SKILL

- Design, write and debug simple programs including controlling physical systems and their problems
- Sequence and repeat in programs with various forms of input and output
- Use logical reasoning to detect and correct errors
- Understand computer networks and how they can provide multiple services and opportunities for communication
- Select use and combine a variety of software and accomplish given goals by presenting data and information
- Recognise acceptable/unacceptable behaviour with technology

SPIRAL

- Build on problem solving skills
- Work with variables and various forms of input and output
- Implement search technologies
- Design and create software evaluating and presenting data
- Use technology safely and consistently

Skills, Knowledge Progression and Destinations Year 9, Year 10 and Year 11

KNOWLEDGE

- Networks – Understand how to retrieve and share information across networks and how they come with associated risks
- Creating Media – Select and create a range of media to include text, sound, images and possible video/podcast production
- Data – Embed an understanding of how information is stored and utilised in real world situations
- Design & Development – Develop an understanding of how activities are planned and created; evaluating computer artefacts
- Computing systems – Recognise the parts of a computer and how its constituent parts function together as a whole

- Algorithms – Develop and create an algorithm and evaluate its effectiveness independently
- Programming – Create software to solve problems independently on a range of media
- Effective use of tools – Continue to implement software to support computing work independently
- Safety and security – Understand the risks of technology and how to safeguard individuals and systems without prompting

SKILL

- Design, write and debug simple programs including controlling physical systems and their problems
- Sequence and repeat in programs with various forms of input and output
- Use logical reasoning to detect and correct errors independently
- Understand computer networks and how they can provide multiple services and opportunities for communication
- Select use and combine a variety of software and accomplish given goals by presenting data and information
- Recognise acceptable/unacceptable behaviour with technology

SPIRAL

- KS3 and 4 is an opportunity to revisit, explore and build on new and existing skills. Progression to more advanced content, understanding and concepts is generally limited but not inaccessible.

DESTINATION

- Pearson Functional Skills - ICT computing Entry level 1 – 3 (Ends August 2024)