Sheffield SEND Computing Progression Framework

Sheffield City Council | Sheffield ILS eLearning Service
Improving outcomes . Embracing technology

This progression framework has been created to accompany the Sheffield SEND Computing Scheme of Work, to indicate the progression of skills and knowledge in the computing curriculum from P5 to KS1 level. The following documents show a general overview of progression in the 4 strands of the scheme of work, plus the online safety and digital literacy themes that are embedded across the scheme:

Strand 1	**Key Skills: What is a Computer?**
Strand 2	**Communication: Multimedia**
Strand 3	**Communication: Data**
Strand 4	**Programming & Algorithms**
Online Safety & Digital Literacy	

The bands of progression are as follows:

P5-6 Pupils working at P5 to P6 level

P7-8 Pupils working at P7 to P8 level

NC1-2 Pupils working at KS1 level, previously NC levels 1 and 2

The statements reference two documents, with additional elements relating directly to the content of the Sheffield Scheme of Work:

- The Revised P Scales for Computing by Elliott, Galloway, Medhurst & Paveley – an attempt by educators across the country to create a set of P Scales statements that better reflect the Computing programs of study. This is reflected in the FS2 statements.

- The Computing Progression Pathways document by Mark Dorling & Matthew Walker © 2014, showing progress for pupils working at KS1 and above.

STRAND 1

Key Skills: What is a Computer?

Pupils:

P5-6

- Explore technology
- Recognise different digital devices, e.g. computer, camera, tablet
- Access content using an appropriate access device
- Choose appropriate technology from a limited selection to fulfil a familiar task

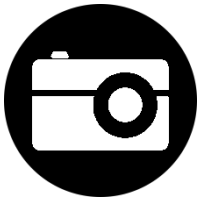
P7-8

- Understand that you can access content on a digital device
- Use a mouse, touchscreen or appropriate access device to target and select options on screen
- Recognise and use a range of digital devices
- Recognise the basic parts of a computer, e.g. mouse, screen, keyboard
- Recognise basic parts of a keyboard, e.g. spacebar, numbers and letters
- Understand that you can access the same content on different devices
- Add text to a document using the keyboard or appropriate access device
- Understand that information and media can be stored on a digital device, e.g. they ask to view a photo that has been taken on a tablet

NC1-2

- Identify and name a range of digital devices and technologies
- Explain what the basic parts of a computer are used for, e.g. mouse, screen, keyboard
- Understand that you can find information from a website
- Use a simple password when logging on, where relevant
- Understand that you can share digital content
- Recognise and use a range of input devices, e.g. mouse, keyboard, touchscreen
- Recognise and use a range of output devices, e.g. printer, speakers, monitor/screen
- Recognise that a range of devices contain computers, e.g. washing machine, car, laptop
- Know where to save and open work
- Understand that the Internet is made up of computers from all around the world connected together
- Understand that you can use a search engine to find information using keyword searches

STRAND 2



Communication: Multimedia

Pupils:

P5-6

- Access a range of multimedia content
- Demonstrate a preference for digital content from a selection, e.g. choose a video to watch
- Use technology to explore and access digital content
- Create simple digital content, e.g. mark making in a paint program
- Operate a digital device with support to fulfil a task, e.g. take a photograph
- Understand you can control multimedia content, e.g. play and stop video and audio

P7-8

- Choose media from a selection to convey information, e.g. image for a poster
- Operate a digital device independently to fulfil a task
- Select basic options in a familiar application, e.g. colour of pen
- Choose a digital device from a selection to complete a specific task
- Present information using appropriate software with support

NC1-2

- Select media (e.g. images, video, sound) to present information on a topic
- Understand that you can edit and change digital content
- Select tools or options to change the appearance of digital content
- Plan out digital content
- Present ideas and information by combining media independently
- Edit digital content to achieve a particular effect or improve it
- Talk about what makes digital content good or bad

STRAND 3

Communication: Data

Pupils:

P5-6

- Access content in different formats, e.g. image, video, audio
- Choose between media in different formats
- Identify objects of a single category
- Count 1 or more in a digital resource
- Sort familiar objects into 2 given categories with support

P7-8

- Recognise content in a range of formats, e.g. text, image, video, audio
- Sort familiar objects into 1 or more categories
- Answer basic questions about information displayed in images, e.g. more or less
- Can distinguish between text, image, video and audio content
- Collect simple data (e.g. likes/dislikes) on a topic
- Can present simple data using images, e.g. number of animals

NC1-2

- Identify an object by asking yes/no questions
- Recognise charts, tables or branching databases and understand why we use them
- Explain information shown in a simple chart, pictogram, infographic or database
- Use specific software to create simple charts
- Collect data on a topic (eye colour, pets etc.)
- Present data in a pictogram independently
- Identify an object using a branching database
- Create a branching database using pre-prepared images and questions
- Recognise an error in a branching database.
- Find out similar information in different formats, e.g. text, video, audio
- Explain how different formats communicate information and their benefits
- Independently plan out and create a branching database
- Evaluate a given branching database and suggest improvements
- Understand that the questions you ask are important, when collecting data

STRAND 4

Programming & Algorithms

Pupils:

P5-6

- Explore technology
- Make something happen with technology
- Expect an outcome from an action
- Repeat an action with technology to trigger a specific outcome
- Control technology for a purpose
- Recognise the success or failure of an action

P7-8

- Follow simple instructions to control a digital device
- Understand that we control computers
- Identify the steps of a known task
- Try alternative approaches to achieve a goal
- Input a short sequence of instructions to control a device
- Can order two or three steps of a known task
- Recognise patterns in groups of objects

NC1-2

- Identify and list the steps of a known task in order
- Understand that we control computers by giving them instructions
- Create a simple program e.g. to control a floor robot
- Understand what an algorithm is
- Create a simple algorithm
- Identify and explain patterns in groups of objects
- Debug an error in a simple algorithm or program e.g. for a floor robot
- Predict the outcome of a simple algorithm or program
- Understand that computers have no intelligence and we have to program them to do things
- Understand that the order of instructions in an algorithm is important
- Understand that instructions in an algorithm need to be clear and unambiguous
- Plan out an algorithm or program and evaluate its success
- Identify and correct errors in a given algorithm or program (debugging)
- Use the language *if… then* to describe the relationship between two actions

Online Safety & Digital Literacy

Please note that these are the main themes that fit in Computing, but may also be covered in PSHE. This is not the complete progression in Online Safety – please also see the Sheffield Safeguarding Children Board Online Safety Curriculum.

Pupils:

P5-6

- Access digital content online
- Choose content to watch or listen to on a familiar web page

P7-8

- Are aware that some online content is inappropriate
- Are aware that information can be public or private
- Recognise inappropriate content and know to tell an appropriate adult
- Can describe what makes a good friend

NC1-2

- Understand that you can share digital content online
- Understand what personal information is and the need to keep it private
- Know who to tell if concerned about content or contact online
- Understand that digital content belongs to the person who first created it
- Save and reuse digital content found online
- Understand why we use passwords
- Can remember a simple password and know not to tell anyone
- Understand what makes a good online friend and the need to be kind and thoughtful online as in the real world
- Can identify rules to add to an acceptable use policy for the class
- Understand that spending a long time in front of a computer screen can be unhealthy
- Understand that when we share content online, we might not be able to delete it
- Know that not all information found online is true
- Understand that the digital content we make belongs to us and others need to ask permission to use it