Reception
Computing (Computer Science – Discrete Lessons)

- Use probots or beebots to get from one place to another.
- Give instructions to my friend and follow their instructions to move around.
- Describe what happens when I press buttons on a robot.
- Press the buttons in the correct order to make my robot do what I want
- Plan a route using written or pictorial symbols
- Make choices about the buttons and icons I press, touch or click on.
- Use a range of ICT tools and recognise key symbols i.e. play/pause/rec.
- Recognise the ways we use technology in our classroom.
- Recognise ways that technology is used in my home and community.
- Can operate simple equipment.

ICT

(Digital Literacy, Information Technology – taught across the year in any subject)

- Using technology
- Turn computers on and off
- Log on and off
- Save using the icon in a range of programs
- Resize windows using minimise, close, resize down
- Print using icon in a range of programs
- Take own photos
- Record sounds
- Presenting Information
- Create pictures using paint programs selecting a range of tools for specific purposes
- Type words and phrases using the keyboard or word bank
- Know how to use space bar
- Move objects on a screen.
- Create shapes and text on a screen.
- Finding Information
- Talk about different kinds of information such as pictures, video, text and sound
- Use ICT to listen to stories

E-Safety
Previous year objectives should be revisited

- Protecting Devices
- Know how to handle ICT equipment carefully
- Know about pop ups and app purchases and know how to close these
- Online Etiquette
- Be kind to my friends.
- Staying Safe
- Know to limit their time on ICT equipment
- Know to turn off the monitor and tell an adult if they see something uncomfortable
- Tell an adult when something worrying or unexpected happens while I am using the Internet.
- Talk about the amount of time I spend using a computer / tablet / game device.

Greenholm Primary School   Programme of Study for ICT

Year One
Computing
(Computer Science – Discrete Lessons)

- Use probots/beebots to get from one place to another.
- Describe what actions I will need to do to make something happen and begin to use the word algorithm.
- Begin to predict what will happen for a short sequence of instructions.
- Begin to use software/apps to create movement and patterns on a screen.
- Use the word debug when I correct mistakes when I program
- Predict what will happen from a given set of instructions
- Give instructions to my friend (using forward, backward and turn)
- Using right angles and the language of turn
- Identify ICT equipment in their environment and understand that these all have a set of instructions to work (i.e. washing machine, microwave)
- Begin to identify some of the benefits of using technology.

ICT

(Digital Literacy, Information Technology – taught across the year in any subject)

- Using technology
- Take own photos with control over framing and upload these with help
- Record selected sounds for purpose
- Know how to save into a specific folder using save as and retrieve saved work
- Print specific pages to a specific printer
- Presenting Information
- Add detail to photos using a paint package
- Type sentences using full stops, space, enter and backspace
- Use the keyboard or a word bank on my device to enter text.
- Insert photos or pictures into a program

- Construct simple pictograms, tally charts, block diagrams and simple tables using ICT
- Use the computer to present work in a range of forms i.e. simple graphs and tables, photo flipcharts
- Finding Information
- Use links to websites to find information.
- Use ICT to listen to and read online stories

E-Safety
Previous year objectives should be revisited

- Protecting Devices
- Know to keep passwords private.
- Know what personal information is.
- Online Etiquette
- Talk about why it's important to be kind and polite.
- Staying Safe
- Have an awareness of the SMART rules and acceptable user policy
- Know to tell an adult when I see something unexpected or worrying online.
- Recognize an age appropriate website.
- Agree and follow sensible e-Safety rules.

Year Two
Computing (Computer Science – Discrete Lessons)
• Create a simple program (scratch) including a range of instructions • I can program a robot or software to do a particular task. • I can look at my friend's program and tell you what will happen. • I can use programming software to make objects move. • I can watch a program execute and spot where it goes wrong so that I can debug it. • I can tell you the order I need to do things to make something happen and talk about this as an algorithm. • Debugging • Plan and predict what will use online simulations to change variables and see their effect • Tell you why I use technology in the classroom • Tell you why I use technology in my home and community • Can identify benefits of using technology including finding information, creating and communicating
ICT (Digital Literacy, Information Technology – taught across the year in any subject)

- Using technology
- Navigate to the document libraries and know that these are actually folders within their home area.
- Create, rename, copy, paste and delete a folder.
- Distinguish between the hard disk (and solid state storage) inside the computer itself, the school's network server, USB disks or memory cards, and online storage via the internet.
- Save as using project 1 project 2 etc.
- Move work from one folder to another.
- Use computer search functions to find files
- Save in a range of specific folders with specific file names using save as
- Presenting Information
- Word process own work using bold, underline and center etc.
- Change fonts for purpose
- Use the keyboard on my device to add, delete and space text for others to read.
- Know how to use redo and undo
- Record sounds to use in a project
- Take own photos upload and manipulate using a simple program
- I can make and save a chart or graph using the data I collect
- talk about the data that is shown in my chart or graph
- Use technology to organize and present my ideas in different ways.

- Finding Information
- Find places using google maps and street view
- Use ICT to listen to and read online stories
- Talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder.

- Tell you what kind of information I could use to help me investigate a question.
- Add content from multiple programs i.e. copying sentences from one word document into another
- Talk about the differences between the Internet and things in the physical world.

E-Safety
Previous year objectives should be revisited

- Protecting Devices
- Have a good understanding of keeping passwords safe
- Online Etiquette
- Start to understand that other people have created the information I use
- Know who can see online work
- Understand chat room etiquette
- Staying Safe
- Know and use the SMART rules
- Recognise sensible amounts of time to spend online
- Be aware of the acceptable user policy and ensure they use technology in school in line with this
- Describe the things that happen online that I must tell an adult about.
- Know that not everyone is who they say they are on the Internet.

Greenholm Primary School   Programme of Study for ICT

Year Three

Computing

(Computer Science –discrete lessons)

- Break an open ended problem up into smaller parts.
- Put programming commands into a sequence to achieve a specific outcome
- Keep testing my program and can recognize when I need to debug it.
- Can use repeat commands.
- Can describe the algorithm I will need for a simple task.
- Can detect a problem in an algorithm which could result in unsuccessful programming.
- Control a physical system using an algorithm

ICT

(Digital Literacy, Information Technology – taught across the year in any subject)

- Using technology
- Save and retrieve work on the Internet, the school network or my own device.
- Talk about the parts of a computer.
- Resize windows, moving, minimizing and maximizing
- Create and adapt folders
- Use more complex printing strategies i.e. multiple pages on a sheet
- Spreadsheets and Databases
- Add to a database.
- Make a branching database.
- Talk about the different ways data can be organized.
- Search a readymade database to answer questions
- Presenting Information

- Use Ctrl Alt PrtScn (Print Screen) to take a picture of the whole screen and paste it into paint to adapt it.
- Use the snipping tool to take a picture of any part of the screen, drawing or annotating the image and saving it.
- Resize images without changing the proportions
- Use shift to access symbols on top of keys
- Delete using backspace and delete appropriately
- Highlight text efficiently i.e. click and drag, double click words or end of lines
- Use appropriate keyboard commands to amend text i.e. ctrl x
- Use spellchecker and thesaurus
- Create different effects with different technology tools.
- Combine a mixture of text, graphics and sound
- Edit digital content using one or more programs, such as word-processors, presentation software, or image-, audio- or video-editing packages.
- Use an appropriate tool to share my work online.
- Understand what e-mail is and how it works
- Create, send, forward and reply to emails
- Create an address book
- Organise email using folders and deleting
- Report spam
- Finding Information
- Collect data to help me answer a question.
- Use a data logger to monitor changes and talk about the information collected.

- Use search tools to find and use an appropriate website.
- Use the word kids to search
- Refine questions to search more efficiently

- Copy text from an internet page to an office document

E-Safety
Previous year objectives should be revisited

- Protecting Devices
- Know how to choose which files are safe to download and not
- Talk about what makes a secure password and why they are important
- Online Etiquette
- Know why it is important to name your source
- Understand the effect of comments they post
- Staying Safe
- Know how to protect personal information
- Know how to use the safety features of key websites
- Know when they are online on a range of equipment i.e. games consoles and phones
- Make good choices about time spent online
- understand how to keep their personal information safe
- Protect personal information when doing different things online.
- Recognize websites and games appropriate for my age.

Greenholm Primary School   Programme of Study for ICT

Year Four
Computing (Computer Science –discrete lessons)
• 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 • Use logical thinking to solve an open-ended problem by breaking it up into smaller parts. • Use an efficient procedure to simplify a program. • Use a sensor to detect a change which can select an action within my program. • Know that I need to keep testing my program while I am putting it together. • Use a variety of tools to create a program. • Recognise an error in a program and debug it. • Recognise that an algorithm will help me to sequence more complex programs • Recognise that using algorithms will also help solve problems in other learning
ICT (Digital Literacy, Information Technology – taught across the year in any subject))
• Using technology • explain whether a resource I am using is on the Internet, the school network or my own device

- Spreadsheets and Databases
- Organize data in different ways.
- Collect data and identify where it could be inaccurate.
- Plan, create and search a database to answer questions.
- Choose the best way to present data
- Presenting Information
- Use a keyboard confidently and make use of a spellchecker to write and review my work
- Insert a table adding new columns or rows and merging cells
- Insert a table and adjust its formatting
- Resize, rotate and format a text box
- Move a text box around a page
- Insert a picture from a file
- Understand that programs like PowerPoint are primarily about presenting information in manageable chunks
- Add slides and change their layout
- Add text and modify using formatting tools
- Know how to use presentation mode
- Reorder slides
- Be able to talk alongside a presentation cycling slides as required
- Add sound files and video to a slide
- Animate and add slide transitions
- Investigate transitions and animations that enhance a viewer's enjoyment and which distract from the information presented
- Can use photos, video and sound to create an atmosphere when presenting to different audiences
- Create a hyperlink to a resource on the World Wide Web

- Be confident to explore new media to extend what I can achieve change the appearance of text to increase its effectiveness create, modify and present documents for a particular purpose.
- Use an appropriate tool to share my work and collaborate online.
- Give constructive feedback to my friends to help them improve their work and refine my own work.
- Finding Information
- Use a data logger to record and share readings.
- Identify key words to use when searching safely on the World Wide Web.
- Think about the reliability of information I read on the World Wide Web.
- Tell you how to check who owns photos, text and clipart.
- Recognize that websites use different methods to advertise products. Bookmark a web page by creating a favorite

E-Safety
Previous year objectives should be revisited

- Protecting Devices
- Choose a secure password and an appropriate screen name when I am using a website
- Talk about why I need to ask a trusted adult before downloading files and games from the Internet
- Online Etiquette
- Comment positively and respectfully online and through text messages know that anything I share online can be seen by others
- Staying Safe
- Can talk about the ways I can protect myself and my friends from harm online
- Use the safety features of websites as well as reporting concerns to an adult.
- Help others make good choices about the time they spend online.
- Can discuss the importance of choosing an age-appropriate website, app or game.

Year Five
Computing **(Computer Science –discrete lessons)**
• To decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program. • To refine a procedure using repeat commands to improve a program. • To use a variable to increase programming possibilities. • To change an input to a program to achieve a different output. • To use 'if' and 'then' commands to select an action. • To talk about how a computer model can provide information about a physical system. • To use logical reasoning to detect and debug mistakes in a program. • To use logical thinking, imagination and creativity to extend a program.
ICT **(Digital Literacy, Information Technology – taught across the year in any subject)**

- Using a computer
- Use the skills I have already developed to create content using unfamiliar technology
- Use different online communication tools for different purposes.
- Spread sheets and databases
- Use a spreadsheet and database to collect and record data.
- Choose an appropriate tool to help collect data.
- Present data in an appropriate way.
- Talk about mistakes in data and suggest how it could be checked.
- To search a database using different operators to refine my search.
- Understand what a spreadsheet does
- Identify key elements of a spreadsheet (cells, columns, rows and formula's)
- Know how to manipulate rows and columns
- Adapt a previously created graph to add axis and titles
- Know how to create a graph from prepared spread sheet data
- Know how to format the graph including choosing the correct graph type, filling in title and axis details
- Presenting Information
- Select, copy, paste objects and groups of objects
- Layer objects
- Group and ungroup objects
- Use text, photo, sound and video editing tools to refine my work.
- Select, use and combine the appropriate technology tools to create effects that will have an impact on others.

- Review and improve my own work and support others to improve their work.
- Select an appropriate online or offline tool to create and share ideas.
- Finding Information
- Choose an appropriate tool to help collect data.
- Present data in an appropriate way.
- Talk about mistakes in data and suggest how it could be checked.

- To use a search engine to find appropriate information and check its reliability, have an understanding of bias and authority
- Evaluate different types of information I find on the World Wide Web. Find out who the information on a webpage belongs to.
- Know which resources on the Internet I can download and use. describe the ways in which websites advertise their Products Know that some results are sponsored
- Understand the order of results returned
- To use a range of search techniques to improve results i.e. synonym search, using OR and AND, using a – (minus) to Exclude words, Using an (*) to get search engine to fill in the blank

E-Safety
Previous year objectives should be revisited

- Protecting Devices
- To explain the need to protect computer or device from harm.

- Online Etiquette
- Know that anything posted online can be seen, used and may affect others.
- Can explain the importance of communicating kindly and respectfully.
- Can tell you about copyright and acknowledge the sources of information that I find online.

- Staying Safe
- Know that websites can use my data to make money and target their advertising
- Can choose a secure password and screen name
- Protect passwords and other personal information.
- Can explain the need to protect self and friends and know the best ways to do this, including reporting concerns to an adult.
- Can talk about the dangers of spending too long online or playing a game.

Greenholm Primary School   Programme of Study for ICT

Year Six
Computing (Computer Science –discrete lessons)

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- To deconstruct a problem into smaller steps, recognising similarities to solutions used before.
- To explain and program each of the steps in an algorithm.
- to evaluate the effectiveness and efficiency of an algorithm
- To continually test the programming of an algorithm. To recognise when I need to use a variable to achieve a required output.
- to use a variable and operators to stop a program
- To use different inputs (including sensors) to control a device or onscreen action and predict what will happen. to use logical reasoning to detect and correct errors in algorithms and programs

ICT

(Digital Literacy, Information Technology – taught across the year in any subject)

- Using a computer
- Confidently identify the potential of unfamiliar technology to increase creativity.
- Explain why I select a particular online tool for a specific purpose
- Spread sheets and databases
- Use and create basic addition formulas including using Auto sum
- Understand the parts of a formula
- Know how to extend a series of numbers
- Create formula to subtract, multiply and divide
- Know how to copy similar formulas
- Presenting Information

- Present information in an appropriate way.
- Talk about audience, atmosphere and structure when planning a particular outcome
- Combine a range of media, recognising the contribution of each to achieve a particular outcome
- Evaluate the effectiveness of my own work and the work of others.
- Select an appropriate tool to communicate and collaborate online
- Know how to record a commentary to go with a presentation
- Investigate the similarities and differences of presentation tools i.e. PowerPoint and online tools
- Finding Information
- Plan the process needed to investigate the world around me.
- Select the most effective tool to collect data for my investigation
- Check the data I collect for accuracy and plausibility.
- Interpret the data I collect.
- Use the skills I have developed to interrogate a database.
- Can talk about the way search results are selected and ranked.
- Check the reliability of a website.

E-Safety
Previous year objectives should be revisited

- Protecting Devices
- To be able to make choices to protect computers or devices from harm on the Internet.
- Online Etiquette
- Explain the consequences to myself and others of not communicating kindly and respectfully.

- Staying Safe
- Protect my password and other personal information.
- Explain the consequences of sharing too much about myself online.
- Support friends to protect themselves and make good choices online, including reporting concerns to an adult.

- Explain the consequences of spending too much time online or on a game.