NEWHAM BRIDGE PRIMARY SCHOOL FOUNDATION SUBJECTS

CURRICULUM AND ASSESSMENT DOCUMENT

INSPIRE ENJOY ACHIEVE

NEWHAM BRIDGE PRIMARY SCHOOL

COMPUTING

Y1 Computing Curriculum

Computing	• Understand that an algorithm is a set of instructions and use programs such as: Codable, Robot friend and Beebot. • Read through a simple program and use logical reasoning to predict the outcome. • Create a simple program and test it. • Debug a simple program by checking the sequence of instructions.
Digital Literacy	• Agree class rules for using the computer. • Use equipment and technology safely. • Know that user names/passwords should be kept private. • Recognise where to go for help if they ever feel worried online.
Information Technology	• Recognise a range of technology both in and out of school. • Understand that technology can be stored in different ways (sound, video, text, images). • Use technology to create content, such as posters, animations and videos. • Save digital content appropriately. • Be able to retrieve, edit and re-save digital work.

Y1 Computing A.R.E

A Y1 computer user can….

- log on independently

- understand that an algorithm is a set of instructions

- create a simple program with at least 3 steps

- check a program for mistakes (debug)

- store and retrieve digital work

- use websites to collect information

- describe what to do if they feel worried online

- keep their password and personal log-ins safe

- recognise the use of technology in and beyond school

Y2 Computing Curriculum

Computing	• Know that digital devices are operated by algorithms. • Understand algorithms and how they are used to program. • Create and debug simple programs. • Use logical reasoning to predict the outcome of a program. • Explain how an algorithm may be incorrect.
Digital Literacy	• Agree class rules for using the computer. • Use technology respectfully and know where to go for help if they feel unsafe or worried online. • Know that personal information should be stored safely and not to share passwords, usernames or personal information.
Information Technology	• Explain how a range of technology, both in and out of school, is used. • Use technology to create digital content, organise, store and retrieve. • Represent information in different digital formats. • Select appropriate tools for a task. • Use the internet to search for facts and images safely. • Understand different methods of digital communication (e.g. e-mail, blog, messaging, Skype)

Y2 Computing A.R.E

A Y2 computer user can….

- use a range of instructions within an algorithm

- find programming errors and amend

- predict the behaviour of simple programs using logical reasoning

- save, store, retrieve and edit digital work

- use websites to research and answer questions

- explain what to do if they feel worried online

- keep their password and personal log-ins safe

- explain the use of technology in and beyond school

- use technology respectfully

Y3 Computing Curriculum

Computing	• Design and write programs with specific outcomes. • Predict outcomes, test and evaluate. • Understand and explore a range of commands. • Debug programs successfully. • Design a sequence of instructions including repetition (loop). • Understand programs can use various input/output devices.
Digital Literacy	• Agree class rules for using the computer. • Understand how devices can be networked together. • Know the difference between the school network and the internet. • Understand how to keep information safe and private. • Know how to report online problems and discuss cyber-bullying. • Recognise the need to choose age appropriate online sites.
Information Technology	• Research, collect and present information using different APPs and software. • Evaluate their creations and identify how they could be improved. • Use technology purposefully to create digital content, organise, store and retrieve. • Manipulate and improve digital images.

Y3 Computing A.R.E

A Y3 computer user can....

• design a sequence of instructions

• debug an algorithm successfully

• identify various input and output devices

• keep their personal information safe online

• explain what is meant by 'cyber-bullying'

• discuss what computer networks do

• search for information on the internet in different ways

• manipulate and improve digital images

• use technology respectfully and responsibly

	Y4 Computing Curriculum
Computing	• Design, write and debug programs with specific outcomes. • Design, write and debug programs with two algorithms running simultaneously. • Solve problems by decomposing them into smaller parts. • Use logical reasoning to predict and explain what a variety of algorithms will do. • Design a sequence of instructions including repetition (loop). • Design programs which use various input/output devices. • Experiment with variables to control models/programs.
Digital Literacy	• Agree class rules for using the computer. • Explain the difference between the school network and the internet. • Understand how to keep information safe and private. • Know how/who to report online problems and identify cyber-bullying. • Recognise the need to choose age appropriate online sites.
Information Technology	• Research, collect and present information using appropriate APPs and software. • Evaluate their creations and identify how they could be improved. • Use technology purposefully to create digital content, organise, store and retrieve. • Collect and present data in different ways.

Y4 Computing A.R.E
A Y4 computer user can….
• design a sequence of instructions including loops
• design, write and debug programs with specific outcomes
• design programs with various input and output devices
• discuss what constitutes cyber-bullying
• recognise acceptable and unacceptable online behaviour
• use software to collect, analyse, evaluate and present data in different ways (spreadsheets, charts, graphs)
• evaluate their creations and identify how they could be improved.
• use technology respectfully and responsibly

	Y5 Computing Curriculum
Computing	• Understand a program can have several parts. • Decompose a problem into smaller parts. • Work with variables to control models/programs. • Use a variety of commands to create an algorithm. • Write a program which simulates a real life system. • Know the difference between an algorithm and a program. • Identify and label different hardware components in the computer system.
Digital Literacy	• Agree class rules for using the computer. • Understand that you have to make choices when using technology and that not everything is true or safe. • Can choose and use relevant and appropriate websites for resources and research. • Understand they are responsible for all their online actions and conduct. • Know how to report unacceptable online behaviour and content.
Information Technology	• Use technology purposefully to create digital content for a specific goal. • Create a podcast. • Analyse and evaluate digital creations. • Understand how search results are selected and ranked. • Explain the opportunities networks offer for communication and collaboration.

Y5 Computing A.R.E
A Y5 computer user can….
• use a variety of commands to create an algorithm
• work with variables to control models/programs
• identify and label different hardware components in the computer system
• solve problems by decomposing code into smaller parts
• use software to collect, analyse, evaluate and present data in different ways (spreadsheets, charts, graphs)
• can choose and use relevant and appropriate websites for resources and research
• know how to report unacceptable online behaviour and content
• create a podcast in a small group

	Y6 Computing Curriculum
Computing	• Design a solution by decomposing a problem into smaller parts. • Recognise that a problem can have many different solutions. • Incorporate a variety of commands to create complex algorithms. • Use logical reasoning to detect errors in algorithms. • Use variables within an algorithm. • Explore 'what if' questions by planning different scenarios.
Digital Literacy	• Agree class rules for using the computer. • Use alternative sources to check online information. • Understand they are responsible for all their online actions and conduct. • Know how to report unacceptable online behaviour and content. • Identify ways to minimise risks.
Information Technology	• Create a video which includes titles, audio & transitions • Use technology purposefully to create digital content for a specific target audience. • Select, use and combine APPs and software on a range of digital devices. • Analyse and evaluate digital creations. • Explain how the school's computers are networked.

Y6 Computing A.R.E

A Y6 computer user can….

• design complex algorithms which incorporate variables

• use logical reasoning to detect errors in algorithms

• explore 'what if' questions

• use alternative sources to check the validity of online information

• identify ways to minimise risks online

• create a video which includes titles, audio & transitions

• use technology purposefully to create digital content for a specific target audience

• analyse and evaluate digital creations