



HAREWOOD JUNIOR SCHOOL KEY KNOWLEDGE, SKILLS & UNDERSTANDING: COMPUTING

Purpose of study

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study:

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- 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
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

			T1 & T2	T3 & T4	T5 & T6	
NC LINKS	YEAR GROUP					
<p>Design, write, and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in algorithms and programs</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing,</p>		Y3 – Programming 1 – LOGO – Sequencing				
	Y3	- Can I give and follow an algorithm to turn right or left?				
		- Can I write commands in the correct order?				
		- Can I create an algorithm to move or rotate a sprite?				
		- Can I check then debug an algorithm?				
		- Can I create an algorithm using a repeat command?				
		- Can I write a variable where required?				
			Y3 – Programming 2 – SCRATCH – Sequencing <i>Linked resources from Teach Computing – ‘Sequence in Music’ unit</i>			
	Y3	- Can I identify the objects in a Scratch project? (sprites, backdrops)				
		- Can I recognise that commands in Scratch are represented as blocks?				
		- Can I create a program following a design?				
		- Can I identify that each sprite is controlled by the commands I choose?				
		- Can I create a sequence of connected commands?				
		- Can I explain that the objects in a project will respond exactly to the code?				
- Can I start a program in different ways?						
		- Can I decide the actions for each sprite in a program?				

evaluating and presenting data and information		- Can I combine sound commands?			
		- Can I make design choices for my artwork?			
		- Can I identify and name the objects I will need for a project?			
		- Can I implement my algorithm as code?			
		- Can I relate a task description to a design?			

Y4 – Programming 1 – SCRATCH – Sequencing / Events & Actions				
<i>Linked resources from Teach Computing – ‘Events & Actions’ unit</i>				
<p>Design, write, and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in algorithms and programs</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p>	Y4	- Can I choose which keys to use for actions and explain my choices?		
		- Can I explain the relationship between an event and an action?		
		- Can I choose a suitable size for a character in a maze?		
		- Can I program movement of a sprite in four directions?		
		- Can I choose blocks to set up a program?		
		- Can I choose suitable keys to turn on additional features?		
		- Can I identify additional features (from a given set of blocks)?		
		- Can I use a programming extension?		
		- Can I match a piece of code to an outcome?		
		- Can I test a program against a given design?		
- Can I make design choices and justify them?				
- Can I evaluate a project?				
Y4 – Programming 2 – LOGO - Repetition				
<i>Linked resources from Teach Computing – ‘Repetition in Shapes’ unit</i>				
	Y4	- Can I program a computer by typing commands?		
		- Can I create a code snippet for a given purpose?		
		- Can I use a template to create a design for a program?		
		- Can I write an algorithm to produce a given outcome?		

		- Can I test my algorithm in a text-based language?			
		- Can I identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, dance moves?			
		- Can I identify patterns in a sequence?			
		- Can I use a count-controlled loop to produce a given outcome?			
		- Can I identify the effect of changing the number of times a task is repeated?			
		- Can I design a program that includes count-controlled loops?			
		- Can I develop a program by debugging it?			

Y5 – Programming 1 – SCRATCH - Repetition

Linked resources from Teach Computing – ‘Repetition in Games’ unit

Y5

Design, write, and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

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

Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

- Can I list an everyday task as a set of instructions including repetition?			
- Can I modify a snippet of code to create a given outcome?			
- Can I predict the outcome of a snippet of code?			
- Can I choose when to use a count-controlled and an infinite loop?			
- Can I modify loops to produce a given outcome?			
- Can I recognise that some programming languages enable more than one process to be run at once?			
- Can I choose which action will be repeated for each object?			
- Can I explain what the outcome of a repeated action should be?			
- Can I build a program that follows a design?			
- Can I refine the algorithm in a design?			
- Can I evaluate the use of repetition in a project?			

Y5 – Programming 2 – SCRATCH - Selection*Linked resources from Teach Computing – ‘Selection in Quizzes’ unit***Y5**

- Can I identify conditions in a program?

- Can I recall how conditions are used in selection?

- Can I modify a condition in a program?

- Can I create a program with different outcomes using selection?

- Can I identify the condition and outcomes in an 'if... then... else...' statement?

- Can I use selection in an infinite loop to check a condition?

- Can I design the flow of a program which contains 'if... then... else...'?

- Can I show that a condition can direct program flow in one of two ways?

- Can I implement my algorithm to create the first section of a program?

- Can I test a program?

- Can I share a program with others?

- Can I extend a program further?

- Can I identify the setup code I need in a program?

- Can I identify ways a program could be improved?

Y6 – Programming 1 – SCRATCH - Variables

Linked resources from Teach Computing – ‘Variables in Games’ unit

		<p>Y6 – Programming 1 – SCRATCH - Variables <i>Linked resources from Teach Computing – ‘Variables in Games’ unit</i></p>			
<p>Design, write, and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in algorithms and programs</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p>	<p>Y6</p>	<p>- Can I identify examples of information that is variable?</p>			
		<p>- Can I identify that variables can hold numbers or letters?</p>			
		<p>- Can I explain that a variable has a name and a value?</p>			
		<p>- Can I recognise that the value of a variable can be changed?</p>			
		<p>- Can I decide where in a program to change a variable?</p>			
		<p>- Can I make use of an event in a program to set a variable?</p>			
		<p>- Can I recognise that the value of a variable can be used by a program?</p>			
		<p>- Can I create algorithms for a project?</p>			
		<p>- Can I choose a name that identifies the role of a variable?</p>			
		<p>- Can I test the code that I have written?</p>			
		<p>- Can I extend a game further using more variables?</p>			
		<p>- Can I identify ways that a game could be improved?</p>			
<p>- Can I share a game with others?</p>					

		Y6 – Programming 2 – CRUMBLE - Selection (Physical Programming) <i>Linked resources from Teach Computing – ‘Selection in Physical Computing’</i>	C		
<p>Design, write, and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in algorithms and programs</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p>	Y6	- Can I create a simple circuit and connect it to a microcontroller?			
		- Can I explain what an infinite loop does?			
		- Can I program a microcontroller to make an LED switch on?			
		- Can I connect more than one output component to a microcontroller?			
		- Can I design sequences that use count-controlled loops?			
		- Can I design a conditional loop?			
		- Can I explain that a condition is either true or false?			
		- Can I program a microcontroller to respond to an input?			
		- Can I explain that a condition being met can start an action?			
		- Can I identify a condition and an action in my project?			
		- Can I use selection (an ‘if...then...’ statement) to direct the flow of a program?			
		- Can I identify a real-world example of a condition starting an action?			
		- Can I test and debug a project?			
- Can I write an algorithm that describes what a model will do?					

Online Safety

RESOURCES FOR ALL OBJECTIVES ARE AVAILABLE ON BOTH PROJECT EVOLVE AND DIGITAL FUTURES 2021-22

T1 & T2	T3 & T4	T5 & T6
---------------	---------------	---------------

NC LINKS	YEAR GROUP	KEY SKILLS, KNOWLEDGE & UNDERSTANDING			
<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p>	Y3	<p>INTRODUCTORY SESSION:</p> <ul style="list-style-type: none"> - Do I know how to get help using the school's reporting concerns flowchart? - Do I know my responsibilities as an ICT user at school and home and understand the school's acceptable use policy? 			
		<p align="center">SELF-IMAGE & IDENTITY</p> <ul style="list-style-type: none"> - Can I explain what is meant by the term identity? - Can I explain how people can represent themselves in different ways online? 			
		<p align="center">ONLINE RELATIONSHIPS</p> <ul style="list-style-type: none"> - Can I explain how my and other people's feelings can be hurt by what is said or written online? - Can I explain what it means to 'know someone' online and why this might be different from knowing someone offline? 			
		<p align="center">ONLINE REPUTATION</p> <ul style="list-style-type: none"> - Do I know who I should ask if I am not sure if I should put something online? - Can I recognise that I need to be careful before I share anything about myself or others online? 			
		<p align="center">ONLINE BULLYING</p> <ul style="list-style-type: none"> - Can I describe rules about how to behave online and how I follow them? 			
		<p align="center">MANAGING ONLINE INFORMATION</p> <ul style="list-style-type: none"> - Can I demonstrate how to navigate a simple webpage to get to the information I need? (e.g home, forward, back buttons; links, tabs and sections) - Can I demonstrate how to use key phrases in search engines to gather accurate information online? 			
		<p align="center">HEALTH WELL-BEING & LIFESTYLE</p> <ul style="list-style-type: none"> - Can I explain why spending too much time using technology can sometimes have a negative impact on anyone? 			
		<p align="center">PRIVACY & SECURITY</p> <ul style="list-style-type: none"> - Can I explain that if I am not sure or I feel pressured, I should ask a trusted adult? - Can I identify what social media, games and apps are age appropriate and seek parental consent when I am not sure? - Can I understand and give reasons why passwords are important? 			
		<p align="center">COPYRIGHT & OWNERSHIP</p> <ul style="list-style-type: none"> - Can I explain why copying someone else's work from the internet without permission isn't fair? 			

Y4	INTRODUCTORY SESSION: - Do I know how to get help using the school's reporting concerns flowchart? - Do I know my responsibilities as an ICT user at school and home and understand the school's acceptable use policy?			
	SELF-IMAGE & IDENTITY			
	- Can I explain how my online identity can be different to my offline identity?			
	- Can I explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this?			
	ONLINE RELATIONSHIPS			
	- Can I give examples of how to be respectful to others online?			
	ONLINE REPUTATION			
	- Can I explain how I am developing an online reputation which will allow other people to form an opinion of me?			
	- Can I explain ways that some of the information about anyone online could have been created, copied or shared by others?			
	ONLINE BULLYING			
	- Can I explain why I need to think carefully about how content I post might affect others, their feelings and how it may affect how others feel about them?			
	- Can I identify some online technologies where bullying might take place?			
	MANAGING ONLINE INFORMATION			
	- Can I describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy? (e.g. social media, image sites, video sites).			
	- Can I explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true?			
	HEALTH WELL-BEING & LIFESTYLE			
	- Can I identify times when I may need to limit my use of technology?			
	PRIVACY & SECURITY			
	- Can I describe strategies for keeping my personal information (including passwords) private, depending on context?			
	COPYRIGHT & OWNERSHIP			
- When searching on the internet for content to use, can I explain why I need to consider who owns it and whether I have the right to reuse it?				

Y5	INTRODUCTORY SESSION: - Do I know how to get help using the school's reporting concerns flowchart? - Do I know my responsibilities as an ICT user at school and home and understand the school's acceptable use policy?			
	SELF-IMAGE & IDENTITY			
	- Can I explain how my identity online can be copied, modified or altered?			
	ONLINE RELATIONSHIPS			
	- Can I explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my / our fault?			
	- Can I explain how someone can get help if they are having problems and identify when to tell a trusted adult?			
	ONLINE REPUTATION			
	- Can I describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect?			
	ONLINE BULLYING			
	- Can I explain how I would report online bullying on the apps and platforms that I use?			
	- Can I explain how to block abusive users?			
	MANAGING ONLINE INFORMATION			
	- Can I evaluate digital content and explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results?			
	- Can I describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful?			
	HEALTH, WELL-BEING & LIFESTYLE			
	- Can I describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively?			
	PRIVACY & SECURITY			
	- Can I create and use strong passwords to protect my information?			
	- Can I explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others?			
	COPYRIGHT & OWNERSHIP			
- Can I assess and justify when it is acceptable to use the work of others?				

Y6	INTRODUCTORY SESSION: - Do I know how to get help using the school's reporting concerns flowchart? - Do I know my responsibilities as an ICT user at school and home and understand the school's acceptable use policy?			
	SELF-IMAGE & IDENTITY			
	- Can I identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online?			
	ONLINE RELATIONSHIPS			
	- Can I show I understand my responsibilities for the well-being of others in my online social group? - Can I demonstrate ways of reporting problems online for both myself and my friends?			
	ONLINE REPUTATION			
	- Can I explain the ways in which anyone can develop a positive online reputation?			
	ONLINE BULLYING			
	- Can I describe how to capture bullying content as evidence (e.g. screengrab, URL, profile) to share with others who can help me? - Can I identify a range of ways to report concerns both in school and at home about online bullying?			
	MANAGING ONLINE INFORMATION			
	- Can I explain how to use search technologies effectively? - Can I explain how and why some people may present 'opinions' as 'facts'; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal?			
	HEALTH WELL-BEING & LIFESTYLE			
	- Can I describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose?			
	PRIVACY & SECURITY			
	- Can I describe effective ways people can manage passwords? (e.g. storing them securely or saving them in the browser). - Can I explain what app permissions are and can give some examples from the technology or services I use? - Can I explain why some apps may request or take payment for additional content and explain why I should seek permission from a trusted adult before purchasing?			
	COPYRIGHT & OWNERSHIP			
	- Can I demonstrate how to make references to and acknowledge sources I have used from the internet?			

Microsoft Office Key Skills – Word-Excel-Powerpoint

T1 & T2	T3 & T4	T5 & T6
---------------	---------------	---------------

NC LINKS	Y3	- The expectation is that the Microsoft Office key skills and laptop ‘fundamentals’ are taught through cross curricular work throughout the year; e.g using Word for publishing, creating a Powerpoint linked to topic research etc. - Y3 have an introductory unit to Powerpoint, all other year groups have a discrete unit on Excel to develop core skills.	T1 & T2	T3 & T4	T5 & T6
Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	Y3 WORD	- Can I use basic keyboard functions such as letter, numbers, punctuation keys, space bar and enter/return keys?			
		- Can I use bold, italics and underline function in Word?			
		- Can I Insert shapes and symbols?			
		- Can I change page layout from portrait to landscape?			
		- Can I use the zoom function to adjust page view?			
	Y3 EXCEL	- Can I enter data into different cells?			
		- Can I produce a chart with headed columns?			
	Y3 PPT	- Can I create a powerpoint?			
		- Can I add text to a single slide?			
		- Can I add an image (clip art or from the internet)?			
	Y3 LAPTOP FUNDAMENTALS	- Can I copy and paste pictures to specific documents?			
		- Can I log-on using log-on credentials?			
		- Can I restart the computer?			
		- Can I log off correctly?			
		- Can I Close down the computer?			
		- Can I launch and close a specific program?			
	- Can I print a piece of work?				

		- Can I save a piece of work?				
NC LINKS	Y4	- The expectation is that the Microsoft Office key skills and laptop 'fundamentals' are taught through cross curricular work throughout the year; e.g using Word for publishing, creating a Powerpoint linked to topic research etc. - Y3 have an introductory unit to Powerpoint, all other year groups have a discrete unit on Excel to develop core skills.				
Consolidate Y3 skills plus:						
Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	Y3	WORD	- Can I use shift key for a wider range of symbols and punctuation? e.g: (_ + @ : % £			
			- Can I change fonts, letter size and colour?			
			- Can I insert a table into word?			
			- Can I use spellcheck shortcut? (F7)			
			- Can I change print options on a piece of work? (colour, orientation)			
			- Can I use columns to organise text?			
			- Can I use return and delete keys to delete blank pages?			
	Y4	EXCEL	- Can I understand cells, rows and columns?			
			- Can I enter a range of data?			
			- Can I produce a range of graphs and charts appropriate to the data/task?			
	Y4	PPT.	- Can I create multiple slides as part of a slide-show?			
			- Can I add animations to slides?			
			- Can I understand and use transitions?			
	Y4	LAPTOP FUNDAMENTALS	- Can I copy and paste pictures to specific documents using shortcuts: Ctrl+C for copy / Ctrl+X for cut / Ctrl+V for paste			
			- Can I switch user on a device?			
			- Can I retrieve work from a specific folder?			
			- Can I create new folders?			
			- Can I use the 'snip' tool to snip part of a screen?			
			- Can I find programs using Microsoft search bar?			

NC LINKS	Y5	<p>- The expectation is that the Microsoft Office key skills and laptop 'fundamentals' are taught through cross curricular work throughout the year; e.g using Word for publishing, creating a Powerpoint linked to topic research etc.</p> <p>- Y3 have an introductory unit to Powerpoint, all other year groups have a discrete unit on Excel to develop core skills.</p>			
Consolidate Y4 skills plus:					
Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	Y5 WORD	- Can I add rows and columns into tables?			
		- Can I use bullet points and numbered lists in a Word document?			
		- Can I change print options on a piece of work? (stapling, pages per sheet, paper size, collation)			
		- Can I separate text into columns?			
		- Can I insert a text box?			
		- Can I add header/footer/page numbers to a document?			
	Y5 EXCEL	- Can I understand cell references? (eg A3)			
		- Can I use cell formatting including font and fill?			
		- Can I use further formulas such as $A3 + B3 = D3$			
		- Can I use formulas that use the four operations: +, -, * and / ?			
	Y5 PPT.	- Can I add music to slides?			
		- Can I insert hyperlinks?			
		- Can I understand and use the slideshow tab, including timings?			
		- Can I prepare and use Powerpoints to present to an audience?			
	Y5 LAPTOP FUNDAMENTALS	- Can I minimise and maximise windows?			
		- Can I resize, move and crop copied images?			
		- Can I use 'Save As' to save work in specific folders?			
- Can I use CTRL-ALT-DEL and task manager to close down specific programs when required?					

NC LINKS	Y6	<p>- The expectation is that the Microsoft Office key skills and laptop 'fundamentals' are taught through cross curricular work throughout the year; e.g using Word for publishing, creating a Powerpoint linked to topic research etc.</p> <p>- Y3 have an introductory unit to Powerpoint, all other year groups have a discrete unit on Excel to develop core skills.</p>			
Consolidate Y5 skills as required plus:					
Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	Y6 WORD	- Can I use data in a table to create a graph.			
		- Can I change text direction in a table			
		- Can I use 'find and replace' for editing			
		- Can I add page numbers and titles using header and footer tool			
		- Can I use the layout tool to adjust document margins			
		- Can I use carefully chosen text boxes to enhance clarity of a document			
		- Can I change the size, outline and fill of a text box			
	Y6 EXCEL	- Can I use simple formula? (including SUM, MIN, MAX and Average)			
		Can I understand and use conditional formatting?			
		- Can I sort and filter data for a given purpose?			
		- Can I use cell formatting? (including number, alignment, font, border and fill)			
	Y3 PPT	- Can I choose animations, transitions and music to enhance presentations?			
	Y6 LAPTOP FUNDAME	- Can I change the size of windows?			
		- Can I work between two applications?			

Computer Networks – Creating & Publishing

T1 & T2	T3 & T4	T5 & T6
---------------	---------------	---------------

NC LINKS	YEAR GROUP				
Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information					
		Y3 – Animation – Stop Motion			
		<i>Linked resources from Teach Computing – ‘Creating Media – Animation’ unit</i>			
	Y3	L1 - Can I explain how an animation works?			
		L1 - Can I create my own flip-book animation?			
		L2 - Can I explain why little changes are needed for each frame?			
		L2 - Can I create an effective stop frame animation?			
		L3 - Can I plan an animation that is achievable on screen using a story board? (Link outcome to Egyptian topic)			
		L4 - Can I record a stop motion animation?			
		L5 – Can I review a sequence of frames to check my work?			
		L5 – Can I evaluate the quality of my animation?			
		Y4 – Podcasts – Audacity			
		<i>Linked resources from Teach Computing – ‘Creating Media – Audio Editing’ unit</i>			
	Y4	L1 – Can I identify digital devices that can record sound and play it back?			
		L2 – Can I use a device to record audio and play back sound?			
	L3 – Can I plan the content for a podcast? (Link outcome to ‘Romans’ topic rather than the suggested ‘school news’)				
	L4 – Can I effectively record a podcast?				
	L5 – Can I use editing tools to arrange sections of a podcast?				

	L6 – Can I evaluate and suggest improvements to a digital recording?			
Y5 – 3D Modelling– Tinkercad				
<i>Linked resources from Teach Computing – ‘3D Modelling’</i>				
Y5	L1 – Can I select, move and delete a digital 3D shape?			
	L2 – Can I resize and change the colour of a 3D object?			
	L3 – Can I rotate and position 3D objects?			
	L4 – Can I identify the 3D shapes needed to create a model of a real-world object?			
	L4 – Can I create digital 3D objects of an appropriate size?			
	L5 – Can I plan a 3D model using 3D objects? (Link completed model outcome to Vikings topic rather than the suggested photo frame)			
	L6 – Can I construct a 3D model based on a plan?			
	L6 – Can I evaluate a 3D model against a given criteria?			
Y6 – Movie Making – iMovie				
<i>Linked to House of Wisdom history Session 6 - ‘analyse and digitally present the legacy of a significant historical figure’</i>				
Y6	- Can I sequence information chronologically?			
	- Can I create transitions between frames?			
	- Can I trim frames as required?			
	- Can I add text to a screen?			
	- Can I add carefully selected audio for effect?			