

Computing

At Normanby Primary school, we aim to deliver computing in a way which allows pupils to think creatively and promote independent learning behaviours by harnessing the power of technology as a learning tool. We maximise learning potential by creating confident, resilient digital citizens who have the transferable skills they need to be successful in an increasingly technology focused world. Using technology to enhance learning is an integral part of all learning across all subject areas. Our delivery and organisation of computing is in such a way that we do not exclusively restrict its use to a time or location but deliver the required skills 'at the point of learning,' where they become relevant and meaningful. Learners are therefore empowered to make choices about the relevance of the technology and apply it effectively.

	Foundation Stage	
	FS1	FS2
Computing	<p>Knows how to operate simple equipment. Turns on CD player, uses iPad, uses remote control. Shows an interest in technological toys with knobs or pulleys/real objects e.g. cameras or mobile phones. Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. Knows that information can be retrieved from computers. Talks about why things happen and how things work.</p>	<p>Completes a simple program on a computer and ipad. Uses ICT hardware to interact with age-appropriate computer software. Respond to being given responsibility and independence with equipment. Show initiative in using equipment. Test out their experiences of using equipment at home or in other settings. Role-play things that they have seen adults do. Apply things they know into a different context. Begin to understand the processes involved in finding information from a computer, or how a piece of technology can help to complete a task. Evidence of using prior knowledge of different devices, gaining confidence and ability as they gain exposure to equipment.</p>

Computer Science including Programming		Information Technology including Digital Agency		Digital Literacy including Online safety		
	AUT 1	AUT 2	SPR 1	SPR 2	SUM 1	SUM 2
Year 1	<p>Technology around us Recognising technology in school and using it responsibly. Unit 1.9 Purple Mash</p> <p>Online Safety - See Project Evolve ▷ Health Wellbeing & Lifestyle</p>	<p>Online Safety See Project Evolve Online Reputation Privacy & Security</p>	<p>Online Safety Project Evolve ▷ Self Image & Identity</p> <p>Safer Internet Day Online Safety Project Evolve ▷ Online Relationships ▷ Online Bullying</p>	<p>Moving a robot writing short algorithms and programs for floor robots, and predicting program outcomes. (Algorithms to write numbers)</p> <p>See Programming Progression Document</p>	<p>Online Safety Project Evolve ▷ Managing Online Information ▷ Copywrite & Ownership</p>	<p>Programming animations Designing and programming the movement of a character on screen to tell stories.</p> <p>Animex Academy</p>
Blended Learning	<p>Digital Agency Develop key skills on a device to support learning</p> <ul style="list-style-type: none"> • Can take photos and videos effectively • Can find videos and photos in the Photo app • Can take a screen shot • Can find and use an app requested by an adult <p>General Login to a Chromebook successfully develop typing skills</p>	<p>Art Digital painting Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.</p>	<p>Science Grouping data digitally Exploring object labels, then using them to sort and group objects by properties. Purple Mash Unit 1.2</p> <p>English</p> <ul style="list-style-type: none"> • Can use templates to create a document • Paddington Bear Email 	<p>Maths Directions using Beebots to support learning in maths positional language.</p>	<p>Digital Agency Digital writing Using a device to create and format text, before comparing to writing non-digitally. (Email to Paddington Bear)</p> <p>Pages</p> <ul style="list-style-type: none"> • Can open a new document, name it and add text • Can format text • Can use templates to create a document 	<p>English Story Writing Using Scratch Jr to create an animation based on a fairy tale or story from topic.</p>
		<p>Science Children use the iPads during a science lesson to take photos and videos during a nature walk around the school grounds</p>	<p>Unplugged Activities English Algorithms for recipes instructional writing</p>	<p>Digital Agency Create a short video and upload to Seesaw explain how the Beebots are used to support positional language to help FS children</p>		

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Year 2	<p>Information technology around us Identifying IT and how its responsible use improves our world in school and beyond.</p> <p>Online Safety Project Evolve ⇒ Health Wellbeing & Lifestyle</p>	<p>Online Safety Project Evolve ⇒ Online Reputation ⇒ Privacy & Security</p> <p>Basics of how the internet works and effective searching</p> <p>Unit 2.5 Purple Mash Effect searching</p>	<p>Online Safety Project Evolve ⇒ Self Image & Identity</p> <p>Safer Internet Day Online Safety Project Evolve ⇒ Online Relationships ⇒ Online Bullying</p>	<p>Designing algorithms and programs Creating and debugging programs and using logical reasoning to make predictions.</p> <p>See Programming Progression Document</p>	<p>Online Safety Project Evolve ⇒ Managing Online Information ⇒ Copywrite & Ownership</p> <p>Spreadsheets To understand what a spreadsheet looks like. To be able to navigate around a spread sheet and enter data – Purple Mash</p>	<p>Programming animations Designing and programming the movement of a short animation</p> <p>Animex Academy</p>
Blended Learning	<p><u>General</u> Children can log into a Chrome book and access an online learning environment.</p> <p><u>Curriculum</u> Children can log into an online website to support with developing knowledge</p>	<p><u>Digital Agency</u> Develop key skills on a device to support learning</p> <ul style="list-style-type: none"> • Can take photos and videos effectively • Can find videos and photos in the Photo app • Can take a screen shot • Can find and use an app requested by an adult and understanding of other areas of the curriculum <p>Challenge Day Spark Tees Valley</p>	<p><u>Music</u> Creating a musical composition <u>Digital Agency</u> Garageband</p> <ul style="list-style-type: none"> • Can open an instrument choice and ‘play’ some music • Can record their composition • Can record their voice and add effects • Can choose variations of instruments to alter sound 	<p><u>Digital Agency</u> Keynote</p> <ul style="list-style-type: none"> • Can open a new document, name it and add text • Can format text • Can add images/photos to document 	<p><u>Maths</u> Purple Mash 2 graph</p> <ul style="list-style-type: none"> • Pictograms Collecting data in tally charts and using attributes to organise and present data on a computer. 	<p><u>Digital Agency</u> iMovie</p> <ul style="list-style-type: none"> • Can open a new movie and name it • Can add still images to the timeline using the Photo app • Can add a VoiceOver

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Year 3	<p>Connecting computers Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.</p> <p>2 Type on Purple Mash use to improve keyboard skills.</p>	<p>Online Safety Project Evolve ⇒ Online Reputation ⇒ Privacy & Security</p>	<p>Online Safety Project Evolve ⇒ Self Image & Identity</p> <p>Safer Internet Day Online Safety Project Evolve ⇒ Online Relationships ⇒ Online Bullying</p>	<p>Stop Frame Animation Capturing and editing digital still images to produce a stop-frame animation.</p> <p>Challenge Day Spark Tees Valley</p>	<p><u>Conditional events (selection)</u> Learn to code with 'if statements', which select different pieces of code to execute depending on what happens to other objects.</p> <p>See Programming Progression Document</p>	<p>Using email safety Unit 3.5 Purple Mash</p> <p>Preparation for own email addresses on iPads</p>
	<p>Online Safety Project Evolve ⇒ Health Wellbeing & Lifestyle</p>	<p>Introduction of 1:1 iPad Scheme Set standards and expectations</p>	<p><u>Maths</u> TT Rockstars independent logins English – Spelling Shed logins and Hive Games</p>	<p>Online Safety Project Evolve ⇒ Managing Online Information ⇒ Copywrite & Ownership</p>		<p>Animex Academy</p> <p>Independent coding to create own animation applying skills</p>
Blended Learning	<p><u>Maths</u> Purple Mash Children can access the maths area on Purple Mash to support learning and consolidate learning from maths lessons.</p>	<p><u>Digital Agency</u></p> <ul style="list-style-type: none"> Review photos in Photos/change filters and add markup Can use screen shot for purpose - such as evidence of work Can use accessibility tools to personalise for needs or support others <p>Can use iBooks to organise reading</p>	<p><u>English</u> Desktop publishing Creating documents by modifying text, images, and page layouts for a specified purpose</p> <p><u>Digital Agency</u> Pages</p> <ul style="list-style-type: none"> Can add an image from Photos Can add a shape/icon Can format a shape/icon <p>Can crop an image appropriately</p> <p><u>Digital Agency</u> <u>Keynote</u></p> <ul style="list-style-type: none"> Can add an image from Photos Can add additional slides Can add a shape/icon Can crop an image appropriately <p>Can format a shape/icon</p>	<p><u>Digital Agency</u> Clips</p> <ul style="list-style-type: none"> Create a new project and name it Use and manipulate text for effect on a selfie film <p>Use images, text and stickers effectively to support audience engagement in a presentation</p> <p><u>iMovie</u></p> <ul style="list-style-type: none"> Can format images and sounds in the timeline Can edit objects in the timeline using cuts, stretching and repositioning <p>Can add soundtracks/sounds/music/voiceover</p>	<p>Sequencing sounds Creating sequences in a block-based programming language to make music</p> <p><u>Digital Agency</u></p> <p><u>Garageband</u></p> <ul style="list-style-type: none"> Can create a new project and name it Can alter timing of a piece Can create a simple tune using smart instruments <p>Create a multitrack tune using instruments or loops</p>	<p><u>Digital Agency</u> Numbers</p> <ul style="list-style-type: none"> Collect data in a Numbers document and display as a chart Use a range of collection data techniques (numerical, rating, checklist)

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Year 4	Online Safety Project Evolve ⇒ Health Wellbeing & Lifestyle	Online Safety Project Evolve ⇒ Online Reputation ⇒ Privacy & Security Challenge Day Spark Tees Valley	Online Safety Project Evolve ⇒ Self Image & Identity Safer Internet Day Online Safety Project Evolve ⇒ Online Relationships ⇒ Online Bullying	Recognising the internet as a network of networks including the WWW, and why we should evaluate online content. Understand how the school network works. (Network Walk)	Online Safety Project Evolve ⇒ Managing Online Information ⇒ Copywrite & Ownership Repetition and loops Learn how computers use repetition and loops to do things over and over again (and again!).	Animex Academy Independent coding to create own animation applying skills
	1:1 iPad Scheme Summary Expectations and digital identity at school and home standards of conduct Reinforce procedures including 'spot checks'	<u>Introduction to Variables</u> Learn how computers use variables to count things and keep track of what is going on, then create simple games which use a score variable. See Programming Progression Document	Use of Dot and Dash Robots to support programming. learn about robotics and develop fundamental coding and problem-solving skills.	Challenge Day Spark Tees Valley	<u>English</u> Production of class blog to share with parents/carers on an event in Year 4 linked with curriculum. Via Seesaw	3D modelling Planning, developing, and evaluating 3D computer models of physical objects.
Blended Learning	<u>Art</u> Photo editing Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled. Nature walk inspiration for Van Gough artwork <u>Digital Agency Pages</u> • Can use Instant alpha Can layer objects • Can use assets from other apps within a document	<u>Digital Agency iMovie</u> • Can add titles to a movie • Can alter transitions • Can alter speed of clips for specific audience effect • Can use green screen function for effect Clips • Use soundtracks/music to improve a presentation • Use live titles for effect Use scenes to create a narrative or effect Use the Green Screen effectively as part of a project	<u>Science</u> Data logging Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	<u>Maths</u> <u>Links with Data Handling</u> <u>Digital Agency</u> Numbers • Use basic formatting tools for objects and text • Use multiple ways of presenting information on the same sheet • Export 'assets' to be used in other apps - such as tables	<u>Digital Agency Keynote</u> • Can use instant alpha effectively on a page layout • Can layer objects • Can animate objects using clicks and timings Can create transitions using clicks and timings <u>Digital Agency</u> • Add notes to texts in iBooks • Use screen record to demonstrate an idea as a movie • Can retrieve information effectively in Safari Can identify images and text online that they can use in their own work (copyright)	<u>DT</u> <u>Digital Agency Reality Composer</u> • Create a new project and rename • Add new objects from gallery and manipulate to position and size effectively • Format objects to add colour • Add actions to objects • Add and format labels Export effectively

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Year 5	<p>Online Safety Project Evolve ⇒ Health Wellbeing & Lifestyle</p>	<p>Online Safety Project Evolve ⇒ Online Reputation ⇒ Privacy & Security</p> <p>Challenge Day Spark Tees Valley</p>	<p>Online Safety Project Evolve ⇒ Self Image & Identity</p> <p>Safer Internet Day Online Safety Project Evolve ⇒ Online Relationships ⇒ Online Bullying</p>	<p><u>Coding - Speed, direction and coordinates</u> Learn how computers use numbers to represent things such as how fast things are moving, and where they are.</p> <p>Challenge Day Spark Tees Valley</p>	<p>Online Safety Project Evolve ⇒ Managing Online Information ⇒ Copywrite & Ownership</p>	<p>Animex Academy</p> <p>Independent coding to create own animation applying skills</p>
	<p>1:1 iPad Scheme Summary Expectations and digital identity at school and home standards of conduct Reinforce procedures including 'spot checks'</p>	<p>Systems and searching Recognising IT systems around us and how they allow us to search the internet.</p>	<p><u>Coding - Random numbers and simulations</u> Learn how computers can generate random numbers and how these can be used in simulations. See Programming Progression Document</p>	<p><u>Use Sphero Robots</u> to execute the appropriate robot control procedures to accomplish a specific goal. identify and explore careers that utilise robots, or the skills required to program and operate them.</p>	<p>Video production Planning, capturing, and editing video to produce a short film</p> <p>Use of Green Screen to support video production</p>	<p>Introduction to spreadsheets Answering questions by using spreadsheets to organise and calculate data.</p>
Blended Learning	<p><u>Digital Agency Pages</u></p> <ul style="list-style-type: none"> • Can use a table in a document and format it appropriately • Produce an ebook • Can create a template from own design • Can use a template and adapt it to own design 	<p><u>Digital Agency Keynote</u></p> <ul style="list-style-type: none"> • Can create a template from own design • Can use assets from other apps within a presentation <p>Can create a short movie to present an idea using slides and VoiceOver</p>	<p><u>Digital Agency Reality Composer</u></p> <ul style="list-style-type: none"> • Create a new project and rename • Add new objects from gallery and manipulate to position and size effectively • Format objects to add colour • Add actions to objects • Add and format labels <p>Export effectively</p>	<p><u>Digital Agency Garageband</u></p> <ul style="list-style-type: none"> • Export music to use in another app from Garageband • Create a short 'podcast' with a range of sections (voice/music/recording) • Can 'jam' with other players 	<p><u>Digital Agency iMovie</u></p> <ul style="list-style-type: none"> • Can alter transitions • Use trailer effectively (such as for a plot overview) • Can use assets made in other apps in a short film - such as a title page from Pages <p>Digital Agency Clips</p> <ul style="list-style-type: none"> • Export movie to be used in other app 	<p><u>Digital Agency Numbers</u></p> <ul style="list-style-type: none"> • Use basic formulae • Create simple forms to organise data • Export 'assets' to be used in other apps - such as tables/graphs

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Year 6	Online Safety Project Evolve ⇒ Health Wellbeing & Lifestyle	Online Safety Project Evolve ⇒ Online Reputation ⇒ Privacy & Security	Online Safety Project Evolve ⇒ Self Image & Identity Safer Internet Day Online Safety Project Evolve ⇒ Online Relationships ⇒ Online Bullying	Online Safety Project Evolve ⇒ Managing Online Information	Online Safety Project Evolve ⇒ Copywrite & Ownership	Animex Academy Independent coding to create own animation applying skills
	1:1 iPad Scheme Summary Expectations and digital identity at school and home standards of conduct Reinforce procedures including ‘spot checks’	Digital Agency Skills showcase	More complex variables Learn to use variables in more complex ways, and to manipulate inputs to create useful outputs. Object properties Learn more about how computers use property values and parameters to store information about objects See Programming Progression Document	I can explain how to use search technologies effectively. I can define the terms ‘influence’, ‘manipulation’ and ‘persuasion’ and explain how I might encounter these online (e.g. advertising and ‘ad targeting’)	Digital Agency Skills Showcase	Blog Creation designed to help children learn the basic principles of creating and maintaining a blog in a controlled and safe environment. Purple Mash Unit 6.4 Seesaw Blog Padlet Webpage creation Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation. I understand what HTML is and recognize HTML tags.
	Communication and collaboration Identifying and exploring how data is transferred and information is shared online. Sir Tim Berners-Lee Unit 6.6 Purple Mash – Computer Networks					
Blended Learning	See Digital Agency Progression document: All skills developed so far to be employed as and when required in a range of projects and pieces of work that combine the best features of one app to enhance another (e.g., creating a Keynote to play in a movie). Pages, Keynote, iMovie, GarageBand, Clips, Numbers & Reality Composer					