Computing rolling programme

Computer science

Information technology

Digital literacy

Year A	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	General computing *See attached document.*	**Expressive art** • Invent, adapt and recount narratives and stories with peers and their teacher. • Sing a range of well-known nursery rhymes and songs. • Perform songs, rhymes, poems and stories with others, and – when appropriate – try to move in time with music. **Creating with materials** • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used. • Make use of props and materials when role playing characters in narratives and stories.	**Maths** • Have a deep understanding of number to 10, including the composition of each number. • Subsidise (recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. **PSED** • Work and play cooperatively and take turns with others.	**Communication and language** • Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions. • Make comments about what they have heard and ask questions to clarify their understanding. • Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. • Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. • Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. • Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with	**Understanding the world** • Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps. • Know some similarities and differences between different religious and cultural communities in this country, drawing on their experiences and what has been read in class. • Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and – when appropriate – maps. • Talk about the lives of the people around them and their roles in society. • Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class. • Understand the past through settings, characters and events encountered	**Literacy** • Say a sound for each letter in the alphabet and at least 10 digraphs. • Read words consistent with their phonic knowledge by sound-blending. • Read aloud simple sentences and books that are consistent with their phonic knowledge, including some common exception words. • Write recognisable letters, most of which are correctly formed. • Spell words by identifying sounds in them and representing the sounds with a letter or letters. • Write simple phrases and sentences that can be read by others. • Demonstrate understanding of what has been read to them by retelling stories and narratives using their own words and recently introduced vocabulary. • Anticipate – where appropriate – key events in stories. • Use and understand recently introduced

			• Form positive attachments to adults and friendships with peers. • Show sensitivity to their own and to others' needs. • Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explain the reasons for rules, know right from wrong and try to behave accordingly. • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. • Show an understanding of their own feelings and those of others and begin to regulate their behaviour accordingly. • Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate. • Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions	modelling and support from their teacher.	in books read in class and storytelling. • Explore the natural world around them, making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter	vocabulary during discussions about stories, non-fiction, rhymes and poems and during role-play **PD** • Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases. • Use a range of small tools, including scissors, paint brushes and cutlery. Begin to show accuracy and care when drawing. • Negotiate space and obstacles safely, with consideration for themselves and others. • Demonstrate strength, balance and coordination when playing. • Move energetically, such as running, jumping, dancing, hopping, skipping and climbing.

1/2	**Online safety 1.1** • To log in safely. • To learn how to find saved work in the Online Work area and find teacher comments. • To learn how to search Purple Mash to find resources. • To become familiar with the icons and types of resources available in the Topics section. • To start to add pictures and text to work. • To explore the Tools and Games section of Purple Mash. • To learn how to open, save and print. To understand the importance of logging out. o **Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.** **Effective searching 2.5** • To understand the terminology associated with searching. • To gain a better understanding of searching on the Internet. • To create a leaflet to help someone search for information on the Internet • use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school	**Lego builder 1.4** • To compare the effects of adhering strictly to instructions to completing tasks without complete instructions. • To follow and create simple instructions on the computer. • To consider how the order of instructions affects the result **Technology outside school 1.9** • To walk around the local community and find examples of where technology is used. • To record examples of technology outside school **Recognise common uses of technology beyond school**	**Grouping and sorting 1.2** • To sort items using a range of criteria. To sort items on the computer using the 'Grouping' activities in Purple Mash.	**Creating pictures 2.6** • To learn the functions of the 2Paint a Picture tool. • To learn about and recreate the Impressionist style of art (Monet, Degas, Renoir). • To recreate Pointillist art and look at the work of pointillist artists such as Seurat. • To learn about the work of Piet Mondrian and recreate the style using the lines template. • To learn about the work of William Morris and recreate the style using the patterns template. • To explore surrealism and eCollage • **use technology purposefully to create, organise, store, manipulate and retrieve digital content** **Spreadsheets 1.8** • To know what a spreadsheet program looks like. • To locate 2Calculate in Purple Mash. • To enter data into spreadsheet cells. • To use 2Calculate image tools to add clipart to cells. • To use 2Calculate control tools: lock, move cell, speak and count. • **use technology purposefully to create, organise, store, manipulate and retrieve digital content**	**Coding 1.7** • To understand what instructions are and predict what might happen when they are followed. • To use code to make a computer program. • To understand what object and actions are. • To understand what an event is. • To use an event to control an object. • To begin to understand how code executes when a program is run. • To understand what backgrounds and objects are. • To plan and make a computer program. • **use technology purposefully to create, organise, store, manipulate and retrieve digital content**	**Coding 2.1** • To understand what an algorithm is. • To create a computer program using an algorithm. To create a program using a given design. • To understand the collision detection event. • To understand that algorithms follow a sequence. • To design an algorithm that follows a timed sequence. • To understand that different objects have different properties. • To understand what different events do in code. • To understand the function of buttons in a program. • To understand and debug simple programs • understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions • create and debug simple programs Use logical reasoning to predict the behaviour of simple programmes.

3/4	**3.1 coding** • To understand what a flowchart is and how flowcharts are used in computer programming. • To understand that there are different types of timers and select the right type for purpose. • To understand how to use the repeat command. • To understand the importance of nesting. • To design and create an interactive scene. ○ 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	**3.2 online safety** • To know what makes a safe password. • To learn methods for keeping passwords safe. • To understand how the Internet can be used in effective communication. • To understand how a blog can be used to communicate with a wider audience. • To consider the truth of the content of websites. • To learn about the meaning of age restrictions symbols on digital media and devices. ○ use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. **3.3 spreadsheets** • To use the symbols more than, less than and equal to, to compare values. • To use 2Calculate to collect data and produce a variety of graphs. • To use the advanced mode of 2Calculate to learn about cell references. 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	**3.4 touch typing** • To introduce typing terminology. • To understand the correct way to sit at the keyboard. • To learn how to use the home, top and bottom row keys. • To practise typing with the left and right hand. 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	**3.5 email (including email safety)** ○ To think about different methods of communication. ○ To open and respond to an email using an address book. ○ To learn how to use email safely. ○ To add an attachment to an email. ○ To explore a simulated email scenario. ○ 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.	**3.6 branching databases** • To sort objects using just 'yes' or 'no' questions. • To complete a branching database using 2Question. • To create a branching database of the children's choice 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	**3.7 simulations** • • To consider what simulations are. • To explore a simulation. • To analyse and evaluate a simulation ○ 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 **3.8 graphing** • To enter data into a graph and answer questions. • To solve an investigation and present the results in graphic form 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
5/6	**5.1 Coding** • To begin to simplify code. • To create a playable game.	**5.2 online safety** • To gain a greater understanding of the impact that sharing digital content can have. • To review sources of support when using technology and	**5.3 spreadsheets** • To use formulae within a spreadsheet to convert measurements of length and distance.	**5.4 databases** • To learn how to search for information in a database.	**5.5 game creator** • To plan a game. • To design and create the game environment.	**5.6 3D Modelling** • To be introduced to 2Design and Make and the skills

	• To understand what a simulation is. • To program a simulation using 2Code. • To know what decomposition and abstraction are in computer science. • To a take a real-life situation, decompose it and think about the level of abstraction. • To understand how to use friction in code. To begin to understand what a function is and how functions work in code. • To understand what the different variables types are and how they are used differently. • To understand how to create a string. • To understand what concatenation is and how it works. • 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 program 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,	children's responsibility to one another in their online behaviour. • To know how to maintain secure passwords. • To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this. • To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online. • To learn about how to reference sources in their work. • To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information. • To ensure reliability through using different methods of communication. • 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	• To use the count tool to answer hypotheses about common letters in use. • To use a spreadsheet to model a reallife problem. • To use formulae to calculate area and perimeter of shapes. • To create formulae that use text variables. • To use a spreadsheet to help plan a school cake sale 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	• To contribute to a class database. • To create a database around a chosen topic. 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	• To design and create the game quest. • To finish and share the game. • To self and peer evaluate. • design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 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	of computer aided design. • To explore the effect of moving points when designing. • To design a 3D Model to fit certain criteria. • To refine and print a model • 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 **5.7 concept maps** • To understand the need for visual representation when generating and discussing complex ideas. • To understand the uses of a 'concept map'. • To understand and use the correct vocabulary when creating a concept map. • To create a concept map. • To understand how a concept map can be used to retell stories and information. • To create a collaborative concept map and present this to an audience. 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,

	evaluating and presenting data and information					including collecting, analysing, evaluating and presenting data and information
Year B	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	General computing *See attached document.*	**Expressive art** • Invent, adapt and recount narratives and stories with peers and their teacher. • Sing a range of well-known nursery rhymes and songs. • Perform songs, rhymes, poems and stories with others, and – when appropriate – try to move in time with music. **Creating with materials** • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used. • Make use of props and materials when role playing characters in narratives and stories.	**Maths** • Have a deep understanding of number to 10, including the composition of each number. • Subsidise (recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. **PSED** • Work and play cooperatively and take turns with others. • Form positive attachments to adults and friendships with peers.	**Communication and language** • Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions. • Make comments about what they have heard and ask questions to clarify their understanding. • Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. • Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. • Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. • Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher.	**Understanding the world** • Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps. • Know some similarities and differences between different religious and cultural communities in this country, drawing on their experiences and what has been read in class. • Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and – when appropriate – maps. • Talk about the lives of the people around them and their roles in society. • Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class. • Understand the past through settings, characters and events encountered in books read in class and storytelling. • Explore the natural world around them,	**Literacy** • Say a sound for each letter in the alphabet and at least 10 digraphs. • Read words consistent with their phonic knowledge by sound-blending. • Read aloud simple sentences and books that are consistent with their phonic knowledge, including some common exception words. • Write recognisable letters, most of which are correctly formed. • Spell words by identifying sounds in them and representing the sounds with a letter or letters. • Write simple phrases and sentences that can be read by others. • Demonstrate understanding of what has been read to them by retelling stories and narratives using their own words and recently introduced vocabulary. • Anticipate – where appropriate – key events in stories. • Use and understand recently introduced vocabulary during discussions about stories, non-fiction,

			• Show sensitivity to their own and to others' needs. • Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explain the reasons for rules, know right from wrong and try to behave accordingly. • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. • Show an understanding of their own feelings and those of others and begin to regulate their behaviour accordingly. • Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate. • Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions		making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter	rhymes and poems and during role-play **PD** • Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases. • Use a range of small tools, including scissors, paint brushes and cutlery. Begin to show accuracy and care when drawing. • Negotiate space and obstacles safely, with consideration for themselves and others. • Demonstrate strength, balance and coordination when playing. • Move energetically, such as running, jumping, dancing, hopping, skipping and climbing.
1/2	**Online safety and exploring purple mash (1.1)** • To log in safely.	**Questioning (2.4)** • To learn about data handling tools that can give more information than pictograms.	**Animated story books (1.6)** • To introduce e-books and the 2Create a Story tool.	**Making music (2.7)** • To make music digitally using 2Sequence.	**Pictograms (1.3)** • To understand that data can be represented in picture format.	**Presenting ideas (2.8)** • To explore how a story can be

	• To learn how to find saved work in the Online Work area and find teacher comments. • To learn how to search Purple Mash to find resources. • To become familiar with the icons and types of resources available in the Topics section. • To start to add pictures and text to work. • To explore the Tools and Games section of Purple Mash. • To learn how to open, save and print. • To understand the importance of logging out. ○ **Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.** **Maze explorers (1.5)** • To understand the functionality of the direction keys. • To understand how to create and debug a set of instructions (algorithm). • To use the additional direction keys as part of an algorithm. • To understand how to change and extend the algorithm list. • To create a longer algorithm for an activity. • To set challenges for peers.	• To use yes/no questions to separate information. • To construct a binary tree to identify items. • To use 2Question (a binary tree database) to answer questions. • To use a database to answer more complex search questions. • To use the Search tool to find information • **use technology purposefully to create, organise, store, manipulate and retrieve digital content** **Online safety (2.2)** • To know how to refine searches using the Search tool. • To use digital technology to share work on Purple Mash to communicate and connect with others locally. • To have some knowledge and understanding about sharing more globally on the Internet. • To introduce Email as a communication tool using 2Respond simulations. • To understand how we should talk to others in an online situation. • To open and send simple online communications in the form of email. • To understand that information put online leaves a digital footprint or trail. • To identify the steps that can be taken to keep personal data and hardware secure. **Use technology safely and respectfully, keeping personal**	• To add animation to a story. • To add sound to a story, including voice recording and music the children have composed. • To work on a more complex story, including adding backgrounds and copying and pasting pages. • To share e-books on a class display board • **Use technology purposefully to create digital content.**	• To explore, edit and combine sounds using 2Sequence. • To edit and refine composed music. • To think about how music can be used to express feelings and create tunes which depict feelings. • To upload a sound from a bank of sounds into the Sounds section. • To record and upload environmental sounds into Purple Mash. • To use these sounds to create tunes in 2Sequence. ○ **Use technology safely and respectfully** ○ **Recognise common uses of information technology beyond school** ○ **use technology purposefully to create, organise, store, manipulate and retrieve digital content** **Spreadsheets (2.3)** • To use 2Calculate image, lock, move cell, speak and count tools to make a counting machine. • To learn how to copy and paste in 2Calculate. • To use the totalling tools. • To use a spreadsheet for money calculations. • To use the 2Calculate equals tool to check calculations.	• To contribute to a class pictogram. • To use a pictogram to record the results of an experiment **Use technology purposefully to create, organise, store, manipulate and retrieve digital content**	presented in different ways. • To make a quiz about a story or class topic. • To make a fact file on a non-fiction topic. • To make a presentation to the class ○ **Use technology purposefully to create digital content.**

	• To access peer challenges set by the teacher as 2Dos ○ **Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.** **create and debug simple programs.**	**information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.**		• To use 2Calculate to collect data and produce a graph ○ **Use technology purposefully to create, organise, store, manipulate and retrieve digital content**		
3/4	**Coding (4.1)** • To begin to understand selection in computer programming. • To understand how an IF statement works. • To understand how to use co-ordinates in computer programming. • To understand the 'repeat until' command. • To understand how an IF/ELSE statement works. • To understand what a variable is in programming. • To use a number variable. • To create a playable game. ○ 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	**Online safety (4.2)** • To understand how children can protect themselves from online identity theft. To understand that information put online leaves a digital footprint or trail and that this can aid identity theft. • To identify the risks and benefits of installing software including apps. • To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. • To identify appropriate behaviour when participating or contributing to collaborative online projects for learning. To identify the positive and negative influences of technology on health and the environment. • To understand the importance of balancing game and screen time with other parts of their lives. ○ 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Spreadsheets (4.3)** • To format cells as currency, percentage, decimal to different decimal places or fraction. • To use the formula wizard to calculate averages. • To combine tools to make spreadsheet activities such as timed times tables tests. • To use a spreadsheet to model a real-life situation. • To add a formula to a cell to automatically make a calculation in that cell. 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	**Writing for different audiences (4.4)** • To explore how font size and style can affect the impact of a text. • To use a simulated scenario to produce a news report. • To use a simulated scenario to write for a community campaign. 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	**Logo (4.5)** • To learn the structure of the coding language of Logo. • To input simple instructions in Logo. Using 2Logo to create letter shapes. • To use the Repeat function in Logo to create shapes. • To use and build procedures in Logo. ○ 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 **Animation (4.6)** • To discuss what makes a good animated film or cartoon.	**Effective searching (4.7)** • To locate information on the search results page. • To use search effectively to find out information. • To assess whether an information source is true and reliable. ○ 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 ○ Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. **Hardware investigators (4.8)**

	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				• To learn how animations are created by hand. • To find out how animation can be created in a similar way using the computer. • To learn about onion skinning in animation. • To add backgrounds and sounds to animations. • To be introduced to 'stop motion' animation. • To share animation on the class display board and by blogging. 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	• To understand the different parts that make up a computer. • To recall the different parts that make up a computer. 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
5/6	**Coding (6.1)** • To design a playable game with a timer and a score. • To plan and use selection and variables. • To understand how the launch command works. • To use functions and understand why they are useful. • To understand how functions are created and called. • To use flowcharts to create and debug code. • To create a simulation of a room in which devices can be controlled.	**Online safety (6.2)** • To identify benefits and risks of mobile devices broadcasting the location of the user/device. • To identify secure sites by looking for privacy seals of approval. • To identify the benefits and risks of giving personal information. • To review the meaning of a digital footprint. • To have a clear idea of appropriate online behaviour. • To begin to understand how information online can persist. • To understand the importance of balancing game and screen time with other parts of their lives.	**Spreadsheets (6.3)** • To use a spreadsheet to investigate the probability of the results of throwing many dice. • To use a spreadsheet to calculate the discount and final prices in a sale. • To use a spreadsheet to plan how to spend pocket money and the effect of saving money. • To use a spreadsheet to plan a school charity day to maximise the money donated to charity. • select, use and combine a variety of software (including	**Blogging (6.4)** • To identify the purpose of writing a blog. • To identify the features of a successful blog. • To plan the theme and content for a blog. • To understand how to write a blog and a blog post. • To consider the effect upon the audience of changing the visual properties of the blog. • To understand how to contribute to an existing blog. • To understand how and why blog posts are approved by the teacher.	**Text adventure (6.5)** • To find out what a text adventure is. • To use 2Connect to plan a story adventure. • To make a story-based adventure using 2Create a Story. • To introduce an alternative model for a text adventure which has a less sequential narrative. • To use written plans to code a mapbased adventure in 2Code. • design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by	**Networks (6.6)** • To learn about what the Internet consists of. • To find out what a LAN and a WAN are. • To find out how the Internet is accessed in school. • To research and find out about the age of the Internet. • To think about what the future might hold. • understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they

	• To understand how user input can be used in a program. • To understand how 2Code can be used to make a text-adventure game. • 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	• To identify the positive and negative influences of technology on health and the environment • 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 • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	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	• To understand the importance of commenting on blogs. • 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 • 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.	decomposing them into smaller parts • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • use sequence, selection, and repetition in programs; work with variables and various forms of input and output • 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	offer for communication and collaboration **<u>Quizzing (6.7)</u>** • To create a picture-based quiz for young children. • To learn how to use the question types within 2Quiz. • To explore the grammar quizzes. • To make a quiz that requires the player to search a database. • To make a quiz to test your teachers or parents • 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