



YEAR 3 COMPUTING PROGRESSION IN SKILLS AND KNOWLEDGE STATUTORY REQUIREMENTS



AUTUMN N.C Objectives in bold	SPRING N.C Objectives in bold	SUMMER N.C Objectives in bold
<p><u>AUTUMN 1: DESIGN, WRITE AND DEBUG PROGRAMS THAT ACCOMPLISH SPECIFIC GOALS, INCLUDING CONTROLLING OR SIMULATING PHYSICAL SYSTEMS; SOLVE PROBLEMS BY DECOMPOSING THEM INTO SMALLER PARTS</u></p> <p><i>Coding (Unit 3.1 Purple Mash)</i></p> <ul style="list-style-type: none">-To design algorithms using flowcharts.-To design an algorithm that represents a physical system and code this representation.-To use selection in coding with the 'if' command.-To understand and use variables in 2Code.-To deepen understanding of the different between timers and repeat commands. <p><u>USE TECHNOLOGY SAFELY, RESPECTFULLY AND RESPONSIBLY; RECOGNISE ACCEPTABLE / UNACCEPTABLE BEHAVIOUR; IDENTIFY A RANGE OF WAYS TO REPORT CONCERNS ABOUT CONTENT AND CONTACT</u></p> <p><i>Online safety (purple mash unit 3.2)</i></p> <ul style="list-style-type: none">-To know what makes a safe password.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.	<p><u>SPRING 1: 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</u></p> <p><i>Graphing (Unit 3.8 Purple Mash)</i></p> <ul style="list-style-type: none">-To enter data into a graph and answer questions.-To solve an investigation and present the results in graphic form. <p><u>SPRING 2: 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</u></p> <p><i>Email (Unit 3.5 Purple Mash)</i></p> <ul style="list-style-type: none">-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.	<p><u>SUMMER 1: 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</u></p> <p><i>Branching Databases (Unit 3.6 Purple Mash)</i></p> <ul style="list-style-type: none">-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. <p><u>SUMMER 2: DESIGN, WRITE AND DEBUG PROGRAMS THAT ACCOMPLISH SPECIFIC GOALS, INCLUDING CONTROLLING OR SIMULATING PHYSICAL SYSTEMS; SOLVE PROBLEMS BY DECOMPOSING THEM INTO SMALLER PARTS</u></p> <p><i>Simulations (Unit 3.7 Purple Mash)</i></p> <ul style="list-style-type: none">-To consider what simulations are.-To explore a simulation.-To analyse and evaluate a simulation



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AUTUMN 2: USE SEQUENCE, SELECTION, AND REPETITION IN PROGRAMS; WORK WITH VARIABLES AND VARIOUS FORMS OF INPUT AND OUTPUT

Spreadsheets (Unit 3.3 Purple mash)

- 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.

USE TECHNOLOGY TO ACCOMPLISH GIVEN GOALS

Unit 3.4 Purple Mash- 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 practice typing with the left and right hand.



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KNOWLEDGE TO BE LEARNED BY THE END OF EACH UNIT (WHAT DO WE WANT THE CHILDREN TO KNOW AND REMEMBER?)

AUTUMN TERM	SPRING TERM	SUMMER TERM
<p style="text-align: center;"><u>Coding</u></p> <ul style="list-style-type: none">• Writing the code for a computer program = to code.• An algorithm is a precise step by step set of instructions used to solve a problem or achieve an objective.• A bug is a problem in a computer program that stops it working the way it was designed.• Debug/Debugging is fixing code that has errors so that the code will run the way it was designed to.• An action is the way that objects change when programmed to do so. For example, move or change a property.• Alert is a type of output. It shows a pop-up of text on the screen.• A command is a single instruction in a computer program. <p style="text-align: center;"><u>Online Safety</u></p> <ul style="list-style-type: none">• The internet is a global computer network providing a variety of information and communication facilities, consisting of interconnected networks and computers.• Personal information is information that is personal to someone. For example, their favourite food, their name and age.	<p style="text-align: center;"><u>Graphing</u></p> <ul style="list-style-type: none">• A row is horizontal (across the page)• A column is vertical (down the page)• Data is a collection of information, especially facts or numbers.• Axis are a fixed horizontal or vertical line for the measurement of coordinates or to plot data in a graph.• A chart is a diagram that represents data. Charts include graphs and other diagrams such as pie charts or flowcharts.• A graph is a diagram that represents data. There are specific layouts for graphs including bar graphs and line graphs.• Sorting is organising data by a rule such as alphabetical or numerical.• Investigation is a formal inquiry or study.• A Tally Chart is a way of recording how often something happens by counting in fives. <p style="text-align: center;"><u>Email</u></p> <ul style="list-style-type: none">• Trusted Contact is a person who you know and trust, making an email from them safe to open.	<p style="text-align: center;"><u>Branching Databases</u></p> <ul style="list-style-type: none">• Binary Tree is another name for a branching database.• Database is a collection of data organised in such a way that it can be searched, and information found easily. Database usually refers to data stored on computers.• Branching databases are used to classify groups of objects. It is used to help identify the objects by answering questions with either 'yes' or 'no'. Branching databases can also be called binary trees.• Debugging is the process of identifying and removing errors from computer hardware or software.• Data is a collection of information, especially facts or numbers, obtained by observation, questions or measurement to be analysed and used to help decision-making. <p style="text-align: center;"><u>Simulations</u></p> <ul style="list-style-type: none">• Analysis is a detailed examination of something.• Modelling is the act of representing something, often on a smaller scale.



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- Website A set of related web pages located under a single name.
- Inappropriate means behaviour or content online that is upsetting, rude, unkind or makes someone feel unsafe or concerned.

Spreadsheets

- A spreadsheet is a computer program that represents information in a grid of rows and columns. Any cell in the grid may contain either data or a formula that describes the value to be inserted based on the values in other cells.
- Data is a collection of information, especially facts or numbers, obtained by observation, questions or measurement to be analysed and used to help decision-making.
- Rows are boxes running horizontally in a spreadsheet.

Typing

- **Typing** is the action or skill of writing something by means of a typewriter or in this case a computer.
- **Keys** are buttons that are pressed on a computer keyboard or typewriter. These can be described by their position; bottom row, top row and home row (middle row).
- The **spacebar** is at the bottom of the keyboard.
- **Posture** is the correct way to sit at the computer.

- **Save to draft** allows you to compose an email and save it to draft folder to review later before sending.
- Personal Information is Identifying information about yourself such as your name, address and telephone number.
- **Password** is a secret word, phrase or combination of letters, numbers and symbols that must be used to gain admission to a site or application such as email.
- Inbox is the folder where new emails go into when they are received.
- **Compose** is to write or create something.
- CC A way of sending a copy of your email to other people so they can see the information in it.
- BCC Blind Carbon Copy: A way of privately sending a copy of your email to other people so they can see the information in it, without the recipient knowing.
- **Attachment** is a file, which could be a piece of work or a picture, that is sent with the email.
- **Address book** is a list of people who you regularly send an email to.

- **Simulation** is a program that models a real-life situation. They let you try things out that would be too difficult or dangerous to do in real life.
- **Evaluation** is to judge the value, condition or effectiveness of something.
- Decision is the act or result of making a choice after careful thought.



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Children working at below Age Related Expectations in COMPUTING at the end of Year 3: