		F1 = 3 – 4 years old F2 = 4 – 5 years old	5 – 6 years old	6 – 7 years old	7 – 8 years old	8 – 9 years old	9 – 10 years old	10 – 11 years old
Controlling	**Making Things Happen (Control and sensing)**	**F1** When using a remote control to operate devices (TV, robot, toys) put instructions in the correct sequence to achieve the correct results. • Use a CD player and be able to play, stop and pause and control volume. **F2** • Use instructions such as forwards, backwards, turn, left, right When using a simple floor robot (BeeBot) • Predict the outcome of a set of instructions and test the results by playing with equipment that stimulates control devices (traffic lights, pelican crossing, cash tills, etc.)..	• Put instructions in the correct sequence to achieve the correct results, e.g. Explore outcomes when individual buttons are pressed on a robotic toy/device Give instructions in a common language: Create/follow instructions to navigate other children and programmable toys around a course. • Write a sequence of instructions for others to carry out (algorithm) • Write instructions in an agreed format using standardised unit lengths. • Predict the outcome of a set of instructions and test the results. • Write sets of instructions and interpret them correctly and make and test predictions. Use a sound recorder to collect and store information as sound (Use remote controlled toys and devices purposefully.) .	• Enter single commands to control a floor turtle (or on screen, using LOGO) and predict the outcome. • Enter a sequence of commands to control a floor turtle (or make a simple shape on screen, using LOGO) and predict the outcome. • Programme the floor turtle to repeat instructions. • Control motion by specifying the number of steps to travel, direction and turn. • Specify user inputs (such as clicks) to control events. • Specify the nature of events (such as a single event or a loop) • Create conditions for actions by waiting for a user input (such as responses to questions like: What is your name?) • Experience controlling other devices such as MP3 players, DVD & CD players and digital cameras.	• Create a program which includes sequence, selection and repetition. • Use logical reasoning to detect and correct errors in algorithms and programs • Solve open-ended problems with a floor robot, screen turtle and other programmable devices. • Control a simple on-screen turtle in LOGO purposefully (e.g. draw a specific shape or pattern). • Use more advanced LOGO programming (penup/pendown, repeat commands and procdedures) to create more complex shapes and patterns. • Test and modify procedures in LOGO.	• Create a simple flow diagram with a program (e.g. Scratch) which responds to various forms of inputs and outputs for real or on-screen simulations. • Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions). • Use variables to store a value. • Use the functions define, set, change, show and hide to control the variables or move a character in a programming environment. • Use logical reasoning to detect and correct errors in algorithms and programs	• Solve a problem to accomplish a specific goal which includes variables and a range of inputs and outputs, by developing more complex flow diagrams/procedures to make things happen. • Use logical reasoning to detect and correct errors in algorithms and programs, refining procedures to improve desired outcomes. • Use boolean operators • () < () • () = () • () > () • ()and() • ()or() • Not() • to define conditions. • • Write control sequences which use outputs and inputs (using if... then... type commands) to control events in response to conditions.	• Use logical reasoning to detect how a simple algorithm works. • Design, program and test a program, game, simulation or APP to achieve a specific goal. (eg a game) for use by others, e.g. Kodu.or Appshed • Combine the use of pens with movement • Use a range of sensing tools (including proximity, user inputs, loudness and mouse position) to control events or actions. • Use the Reporter operators • () + () • () - () • () * () • () / () • to perform calculations. • Pick Random () to () • Join () () • Letter () of () • Length of () • () Mod () This reports the remainder • after a division calculation • Round () • () of ().
	Developing Ideas and Trying Things Out (Modelling)	**F1** • Complete a simple program. • Use a simple website to access content. **F2** • Explore a simple adventure game	• Explore a simple adventure game • Solve a simple problem. • Choose an option. • Achieve a desired effect by choosing particular options. • Use a variety of types of information - text, pictures, sound, colour.	• Use a computer simulation/ games to explore options and make choices. • Try out ideas to solve a problem and explain to others how to use the 'tools' or 'keys'. • Work with others to make decisions and solve a problem. • Add text strings, show and hide objects and change the features of an object. • Select sounds and control when they are heard, their duration and volume. • Control when drawings appear and set the pen colour, size and shape.	Consolidation of skills taught so far	• Explore the effects of changing the variables in simulations and use them to make and test predictions, changing the variables in a simulation to achieve a given outcome. • Record the outcome of choices in a simulation systematically to help achieve an outcome.	• Use a spreadsheet to model real life situations/ investigations • Change data in a spreadsheet to answer what if questions	**Consolidation of skills taught so far.**
	Resources	A.L.E.X, Beebot app, Kodable, Mist					Textease (logo), Flowol2, Ecolog, Scratch Internet BBC Viking Quest, living library	