Computing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year Group | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer2 |
| Year 3 | Emailing Safely | Simulations | Branching Databases | Digital Art | Coding - Chimp | Coding – Chimp |
| I can understand ways in which people communication online and the potential danger  I can send and receive an email  I can reply to an email  I can use an address book to store and select email addresses  I can send an attachment via email  Children know what CC means and how to use it. | Children know that a computer simulation can represent real and imaginary situations.  Children can give some examples of simulations used for fun and for work.  Children can give suggestions of advantages and problems of simulations  Children can explore a simulation.  Children can use a simulation to try out different options and to test predictions.  Children can begin to evaluate simulations by comparing them with real situations and considering their usefulness.  Children can recognise patterns within simulations and make and test predictions.  Children can identify the relationships and rules on which the simulations are based and test their predictions.  Children can evaluate a simulation to determine its usefulness for purpose. | Children understand how YES/NO questions are structured and answered.  Children have used YES/NO questioning to play a simple game with a friend.  Children have contributed to a class branching database about fruit.  Children have completed a branching database about vegetables.  Children can choose a suitable topic for a branching database.  Children can select and save appropriate images.  Children can create a branching database.  Children know how to use and debug their own branching database. | I can minimise, resize and close windows on the desktop.  I can take screen shots  I can copy and paste information from the internet into a word document using ctrl and C or copy and paste through right clicking  I can combine graphics and text  I can type in capitals and lowercase letters by putting caps lock on/using shift  I can move a text box or any other object around the page  I can insert a picture from a file  I can take photographs  I can manipulate images using software to alter colour and style | Children can explain what Object, Action, Output, Control and Event are in computer programming.    Children can explain which commands they included in their program and what they achieve.  Children can explain how their program simulates a physical system, i.e. my vehicles move at different speeds and angles.  Children can describe what they did to make their vehicle change angle.  Children can show that their vehicles move at different speeds.  Children can show how their character repeats an action and explain how they caused it to do so.  Children are beginning to understand how the use of the timer differs from the repeat command and can experiment with the different methods of repeating blocks of code.  Children can explain how they made objects repeat actions.  Children can create an ‘if’ statement in their program.  Children can use a timer and ‘if’ statement to respond to the actions of a character and change their actions.  Children can explain what steps to follow to debug a program.  Children can explain what they did so that my computer program did not work.  Children can explain how they debugged a partner’s program.  Children can explain what a variable is in programming.  Children can explain why variables need to be named.  Children can create a variable in a program.  Children can set/change the variable values appropriately to create a timer. | Children can explain what Object, Action, Output, Control and Event are in computer programming.    Children can explain which commands they included in their program and what they achieve.  Children can explain how their program simulates a physical system, i.e. my vehicles move at different speeds and angles.  Children can describe what they did to make their vehicle change angle.  Children can show that their vehicles move at different speeds.  Children can show how their character repeats an action and explain how they caused it to do so.  Children are beginning to understand how the use of the timer differs from the repeat command and can experiment with the different methods of repeating blocks of code.  Children can explain how they made objects repeat actions.  Children can create an ‘if’ statement in their program.  Children can use a timer and ‘if’ statement to respond to the actions of a character and change their actions.  Children can explain what steps to follow to debug a program.  Children can explain what they did so that my computer program did not work.  Children can explain how they debugged a partner’s program.  Children can explain what a variable is in programming.  Children can explain why variables need to be named.  Children can create a variable in a program.  Children can set/change the variable values appropriately to create a timer. |

Basic Key Skills – taught through curriculum

**Computing-Related Attainment Expectations**

**Key Stage Two** KEY SKILLS for COMPUTING (to be used alongside the years 3-6 age-related expectations)

|  |  |
| --- | --- |
| * I can minimise, resize and close windows on the desktop. * I can get back to the desktop * I can take screen shots * I know that the shift key can be used to access other symbols on the keys * I can open multiple tabs without leaving the search e.g. by right clicking and opening in a new tab * I can copy and paste information from the internet into a word document using ctrl and C or copy and paste through right clicking * I can use and save favourites in the web browser * I can alter font type, size and colour for emphasis and effect * I can use bold, underline and italic * I can use bullet points and numbers * I can highlight text * I can use ‘select all’ * I can align left, align right and centre text * I can combine graphics and text * I can use the shift key to insert characters e.g. exclamation marks * I can type in capitals and lowercase letters by putting caps lock on/using shift * I can delete use delete and backspace * I can use undo and redo tools * I can create a simple text box * I can resize, rotate and format text boxes * I can move a text box or any other object around the page * I can insert and manipulate multiple text boxes and other objects on any page * I can insert a picture from a file * I can insert and manipulate Word Art * I can insert and format shapes * I can group and ungroup objects * I can layer objects for a purpose * I can insert and format a table e.g. add a border, change the background colour etc * I understand the terms field, record, file, sort, classify and order * I can use a database to answer questions * I can use a spread sheet to make various types of charts * I can use a database to sort and classify information and present their findings * I can send and receive an email * I can reply to an email * I can use an address book to store and select email addresses * I can send an attachment via email | * I understand that programs like PowerPoint are primarily about presenting information in manageable chunks/slides * I can add slides and change their layout using the options available * I can add text to a slide and how to modify it using simple formatting tools * I can add pictures or clip art onto a slide * I can place my slideshow into and out of presentation mode * I can reorder slides * I can add a sound file to a slide as an object * I can record a simple sound clip as an object on a slide * I can add a video to a slide * I can add hyperlinks to a slide * I can create slide transitions * I can add animations to objects on the page * I can change the running order of animations and slide timings * I can use transitions and animations for effect * I can use spell and grammar check through menu bar and right clicking * I can use the find and replace tool * I can move a word or a sentence by lassoing the text and dragging it into a new position * I can orient the page view and page size * I can insert a table and adjust its formatting adding new columns and rows and merging cells * I can use menus effectively to navigate software * I can save a copy of a word file as a PDF. * Web skills:   + I can use ~ on google to return synonym results e.g. ~*large lakes* will find results for great lakes as well   + I can use *define* before a word using google to get the dictionary definition   + I can use a minus (-) to exclude words on a web search e.g. *Manchester – football* would take out results for Manchester that involved football   + I can google search using *or* to give equal value * I can use the following terms to search a database – greater than, less than, and , or. * Spreadsheets :   + I can enter labels and numbers into a spreadsheet   + I can enter formulae into a spreadsheet   + I can use ‘SUM’ to calculate the total set of numbers in a range of cells   + I can change data in a spreadsheet to answer ‘what if…?’ questions and check predictions |

**E-Safety – to be taught through the year**

I can identify a range of ways to report concerns about content and contact

I can understand ways in which people communicate online and the potential danger **(including devices such as Xbox and other online gaming)**

**Graphing – to be done largely through science**

To make databases to store simple information

To turn data into graphs and charts (including bar and pie charts)

To annotate graphs and charts with labels for axis