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| **Computing** | Communication  Skills:  Complete a web search, refine my search, compare results, describe how search engines select results, recognise the role of web crawlers, explain that search results are ordered, suggest criteria that a search engine checks, explain the different ways people communicate, identify there are different ways of communicating over the internet, choose suitable methods of communication, decide when to and when not to share.  Knowledge:  Know how to search the internet, know how to refine searches, know how to use a search engine and an address bar. Know how search engines use web crawlers to create an index for the WW. Know about ranking web pages. Know about searchers, search engines, content creators, communication, and internet. Know the definition of communication, know different methods of internet communication.  Vocabulary:  Search, search engine, google, bing, yahoo, swisscows, duckduckgo, refine, RANKING, SEARCH ENGINE, OPTIMISATION, WEB CRAWLERS, content creator, selection, ranking, communication, internet, public, private, one way, two way, one to many, SMS, email, What’s App, blog, You Tube, Twitter, BBC Newsround, | 3D Modelling  Skills:  Create and manipulate 3D digit objects. Discuss similarities and differences between 2D and 3D shapes. Explain why 3D objects might be represented on a computer. Select, move and delete a digital 3D shape. Identify how graphical objects can be modified, resize a 3D object, and change the colour of a 3D object. Rotate a 3D object, positon 3D objects, select and duplicate 3D objects, create 3D objects, group a digital 3D shape and a placeholder to create a hole in an object. Plan a 3D model, select 3D objects, and modify multiple 3D objects. Evaluate a model.  Knowledge:  Know how to create, select and move 3D objects in Tinkercad. Know how to view them from different angles. Know how to alter the colour of objects. Know how to rotate and position 3D objects. Know how to resize objects, design,  Vocabulary:  2D, 3D, 3D object, 3D space, view., resize, colour, lift, rotate, position, select, duplicate, dimensions, placeholder, hole, group, ungroup, modify, | **Web page creation**  Skills:  Explore a website, discuss the different types of media, suggest media to include on a page, draw a web page layout that suits purpose. Say why copyright-free images should be used, describe what is meant by the term “fair use”. Add content to web page, preview a web page, and evaluate a web page. Explain what a navigation path is. Make multiple web pages and link them using hyperlinks. Evaluate the user experience.  Knowledge:  Know that websites are written in HTML. Know the terms website, web page, and browser. Know how to make a webpage. Know how to use Google effectively.  Vocabulary:  Web page, website, logo, layout, header, media, purpose, copyright, fair use, home page, preview, evaluate, device, Google sites, breadcrumb trail, navigation, hyperlink, subpage, implication, external link, embed, | **Introduction to spreadsheets**  Skills:  Explain the relevance of data headings. Answer questions from an existing data set, ask simple relevant questions which can be answered using data, explain what an item of data is, apply an appropriate number format to a cell, construct a formula in a spreadsheet, identify that changing inputs, changes outputs, recognise data, create a formula that includes a range of cells, apply a formula to multiple cells, use a spreadsheet to answer questions, apply a formula to calculate the data, produce a graph, answer questions.  Knowledge:  To know why data headings are important. Know that data is organised in columns and rows. Know that data needs to be organised. Know how to input data, collect and enter data. Know that formulas can be used to produce calculated data. Know how to enter a formula.  Vocabulary:  Spreadsheet, data, data heading, data set, cells, columns, rows, object, spreadsheet application, format, common attribute, cell reference, calculate, range, duplicate, stigma, propose, question, data set, organised, formula, software, tools, | **Programming A- variables in games**  Skills:  Identify examples of information that is variable. Identify the variables that can hold numbers or letter. Explain that a variable has a name and a value; recognise that a variable can be changed. Decide where to change a variable. Recognise the value of a variable. Identify ways in which a game can be improved. Extend a game using more variables. Share a game with others.  Knowledge:  Know what a variable is. Know how variables can be changed through the running of a programme. Know how to design a programme using the “levels of abstraction” approach.  Vocabulary:  Variable, change, name, value, value, set, change, design, event, algorithm, code, test, debug, improve, evaluate, share. | **Programming B-sensing**  Skills:  Create a program to run on a controllable device. Explain that selection can control the flow of a program. Update a variable with a user input. Use a conditional statement to compare a variable to a value. Design a project that uses inputs and outputs on a controllable device. Develop a program to use inputs and outputs on a controllable device.  Knowledge:  Know how to use variables in a programming environment. Know how to use a micro bit as an input, process, output device. Know how to create own programmes. Know how to find and fix bugs.  Vocabulary:  Selection, condition, variable, random, input, sensing, accelerometer, compass, direction, variable, navigation, micro bit, design, step counter, plan, create, code, test, debug |