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| **Year 3 Medium term computing planner**  **Programming A – Sequencing Sounds** | | | |
| **NC link**   * 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   **Education for a Connected World links**   * I can explain what is meant by the term ‘identity’ * I can explain how people can represent themselves in different ways online. * I can explain ways in which someone might change their identity depending on what they are doing online | | **Key Vocabulary:** programming, sequencing, algorithm, motion, sound, events, blocks, design, stages, attributes, sprites, backdrops  **Links to other subjects:**  Music – children will make a representation of a piano | |
| **Concept 1: Introduction to Scratch (Lesson 1)** | **Concept 2: Programming Sprites (Lesson 2)** | **Concept 3: Sequences and Ordering Commands (Lesson 3 & 4)** | **Concept 4: Looking Good (Lesson 5)** |
| Key Knowledge: To know the objects in a Scratch project (sprites, backdrops). To explain that objects in Scratch have attributes. To know that commands in Scratch are represented as blocks  Consider: This lesson introduces learners to a new programming environment: Scratch. Learners will begin by comparing Scratch to other programming environments they may have experienced, before familiarising themselves with the basic layout of the screen.  **Computing strand:**  Effective Use of Tools, Programming | Key Knowledge: To know that commands have an outcome. To know how to create a program by following a design and understand that each sprite is controlled by the commands chosen. To predict the coding blocks used to move a sprite. To know that coding blocks match their actions  Consider: In this lesson, learners will create movement for more than one sprite. In doing this, they will design and implement their code and then will create code to replicate a given outcome. Finally, they will experiment with new motion blocks.  **Computing strand:**  Programming | Key Knowledge: To know that a program has a start and that it can start in different ways. To know how to create a sequence of connected commands. To know that the objects in my project will respond exactly to the code. To recognise that a sequence of commands can have an order. To know how to combine sound commands on a sequence.  Consider: In this lesson, learners will be introduced to the concept of sequences by joining blocks of code together and they will consider when order is not important. They will also learn how event blocks can be used to start a project in a variety of different ways. In doing this, they will apply principles of design to plan and create a project. They will create their own sequences from given designs.  **Computing strand:**  Design & Development, Programming | Key Knowledge: To know how to change the appearance of my project. To know how to build a sequence of commands. To decide the actions for each sprite in a program. To make design choices for my artwork  Consider: This lesson develops learners’ understanding of sequences by giving them the opportunity to combine motion and sounds in one sequence. They will also learn how to use costumes to change the appearance of a sprite, and backdrops to change the appearance of the stage. They will apply the skills in Activity 1 and 2 to design and create their own project, including sequences, sprites with costumes, and multiple backdrops.  **Computing strand:**  Design & Development, Programming |
| **Concept 5:** Making an Instrument (Lesson 6) | **Online Safety:** Self-image and identity | Notes:   * Make sure you are adapting your slides to fit the MTP * Still use the short-term plans as they go into more detail regarding certain topics * You will need laptops and to set up a teacher Scratch account * Some lessons will need new slides or lessons combining * Make sure that you practise using the concepts you are teaching on the Scratchbefore you begin each lesson. | |
| Key Knowledge: To know how to create a project from a brief. To know and name the objects I will need for a project. To know how to implement my algorithm as code  Consider: In this lesson, learners will create a musical instrument in Scratch. They will apply the concept of design to help develop programs and use programming blocks — which they have been introduced to throughout the unit. They will learn that code can be copied from one sprite to another, and that projects should be tested to see if they perform as expected.  **Computing strand:**  Algorithm, Creating Media, Design & Development, Programming. | Key Knowledge: To know what an identity is and to know what identities may be changed online.  Consider: Can children explain what is meant by the term ‘identity’? Can they explain how people can represent themselves in different ways online? Can they explain ways in which someone might change their identity depending on what they are doing online (e.g., gaming; using an avatar; social media) and why? |