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| **Date:** | | **Class:** 7 |  | **HW:** | |
| **The Big Picture**  Pupils are being introduced to programming using a text based language. Some may have already had experience of using a “drag n drop” or “building block” method to write programs. These lessons will give pupils the opportunity to experience writing / running programs and develop a range of skills such as problem solving that can be used across curriculum areas. | | | | | |
| **Lesson Objectives All**   * Be able to write programs that repeat instructions until a specific event occurs. | | | | | |
| **T** | **Teacher** | | | | **Pupils** |
| 5min  5min  40min  10 min | **Starter: - write an IF/ELSE program** Do this while completing the register  Learning intentions should be written in pupils books.  Task 1 – Exploring loops - Demonstrate the For loop to show a program writing the values from 1 – 10 – Allow pupils to write and run the program  It might be useful to show pupils that the variable “a” in the first line of the program can be changed for any other text but if they write a number they will get an error.  Task 2 – Demonstrate how the program is broken down into different parts i.e. variable / string. Demonstrate the multiplication table program running – pupils should then write the program & run it*. More able pupils could write programs for different multiplication tables.*  Task 3 – Demonstrate how to use the step function to write programs that increase and decrease the lines of code written. – pupils should then practice the code themselves.  Task 4 – Demonstrate the “WHILE” loop – pupils should then write the program – if time allows get pupils to try running the program with different values.  Complete extension task or could complete the homework if not being set for HW  Encourage pupils to “de-bug” their program if it doesn’t work for spelling mistakes or missing code - they should try to do this independently    **Pupils should print screen their programs and print them out**  Plenary **– Stick print code into books then annotate them with their** WWW & EBI comments | | | | Independent pupil work to write code, de-bug if needed, run and save their programs |
| **Success criteria - pupils should be able to say if they have been successful if they have:-**   * Written a program which uses For & While loops | | | | | |
| **Differentiation / Extension**  More able pupils could extend the programs for different tables or values.  Pupils may want to use the colour coded printed worksheets to refer to and assist in the writing of the code.  Less able pupils could copy and paste the code from the webpage  ELO - Extension task – show what you know | | | | | |
| **Assessment For Learning**   * The programs they create | | | | | |