|  |  |  |
| --- | --- | --- |
| **Year 5 Autumn 2 – Coding** | | |
| **Key Images** | **Key Learning** | |
|  | * To represent a program design and algorithm. * To create a program that simulates a physical system using decomposition. * To explore string and text variable types so that the most appropriate can be used in programs. * To use the Launch command in 2Code Gorilla * To program a playable game with timers and scorepad. | |
| **Key Vocabulary** | **Key Questions** |
| * Action * Alert * Algorithm * Bug * Code Design * Command * Control * Debug/Debugging * Design Mode * Event * Get Input * If * If/Else * Input * Output * Object * Repeat * Sequence * Selection * Simulation * Timer * Variable | **What does simulating a physical system mean?**  Creating a program where the objects behave as they would in the real world. For example, a football program that uses angles, speed and friction to simulate kicking a football. When simulating a physical system, you first must break the system down into parts that can be coded (decomposition). The different parts will come together to make the full simulation.  **Describe how you would use variables to make a timer countdown and a scorepad for a game.**  Timer countdown: Create a timer variable and set it to the starting number of seconds. Add a Timer command that repeats and subtracts 1 every second. Add a text object in design view to display this number.  Score: create a variable to store the score, each time the user gains a point, change and display the value of the variable.  **Give examples of how you could use the Launch command in 2Code.**  Clicking on a button or other object in the program to open another 2Code program or a webpage. |



Reference to