



Respect, Believe, Achieve

# Year 4

## Applying Variables and Repetition

Computer Science



### Key Words

#### variable

A number which the computer records. It can be changed or used by the program.

variable 0

#### loop

A command which starts a sequence again. This means you don't need to keep typing the same commands over and over.



### Scratch Toolkit



Motion



Looks



Sound



Events



Control



Variables



Sensing

### What do I already know?

- I can break a problem up into smaller parts
- I can put programming commands into a sequence to achieve a specific outcome
- I keep testing my programme and can recognise when I need to debug it
- I can set up conditional events with 'if statements'
- I can set up a sequence
- I can describe the algorithm that I will need for a simple task
- I can detect a problem in an algorithm that may result in unsuccessful programming

# Our Learning Steps

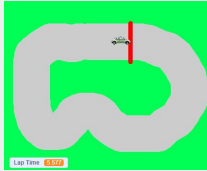
## 1. Using Loops

I will make my sprite complete a dance using loops. I will copy the code to other sprites. I will add my own music.



## 2. Design Track, Car and Clock

I will choose or create a track and Resize my car. I will make a variable called lap time, and set It to timer.

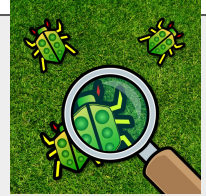


## 3. Steering and Speed

I will use if key commands to turn the vehicle and speed up. I will use if/else commands to slow the car on the grass.

## 4. Debugging A Game

I will test my code, fix bugs and Add my own ideas.



## 5. Customise My Game

I will develop my game by changing the sprites and altering programming. I will use different types of randomisation. I may add a player.



## 6. Assessment: Evaluate the Game

I can use computer keys to control game. I can use variable to keep time and score. I can debug games.

