Module 5

Easy Exercises

1. **Move to a Beat**
   Check that the sprite moves when clicked. Make sure that drum beats are included in the script. Encourage the use of costume changes.

   ![Zebra Script]

   ![Bug Script]

2. **Colour Burst**
   Check that the green flag starts the program. Both sprites require code to change colour.

   Zebra Script

   Bug Script

3. **Polly Moves About**
   A wait command can be used to control the speed of the parrot. Use the “if on edge, bounce” command to make the parrot bounce off the edge of the stage.
Random Drum
Use the pick random command. The most efficient way of playing 5 random beats is using a repeat loop rather than 5 separate “play drum” commands.

Draw a Triangle
The most effective way of drawing a triangle is by using a repeat loop to draw and rotate 3 times instead of 3 separate draw and 3 rotate commands. Don’t forget to put the pen down to start drawing!

Difficult Exercises

Build a House
You will need to use 2 repeat loops for the triangle and square parts of the house. Make sure your sprite is pointing in the right direction and that you position the sprite correctly inside the house.

Spooky Surprise
Create costume 2 by copying and editing costume 1 in the paint editor. Use a forever loop to repeat the switch between costume 1 and costume 2 continuously. A wait command can be used to decrease the speed of the animation.
3 Extraordinary Whirl
The set whirl effect should be placed in a forever loop. The forever loop allows the whirl effect to change continuously as the x position of the mouse changes. The “mouse x” command is found in the sensing block.

4 Scribbling Dog
Use the pen down command to allow the sprite to scribble on the stage. Set the pen to any size or colour. Use the “point towards mouse-pointer” inside a forever loop to follow the mouse. Move the sprite to leave a trail.

5 Score goes Up and Down
Create a variable score. Use the wait command to decrease the speed of the animation.
Extreme Exercises

1  What's the Answer?
Create 3 variables: Number 1, Number 2 and Answer. Use an if else statement. By using the 'when Sprite 1 clicked' command, clicking on the sprite should tell you if the answer is right or wrong. Remember to double click on your variables to make them into sliders as shown on the card.

2  Keeping Track
To make the variables for x position and y position appear on the stage, click the check box next to the block as shown here.

Once the variables appear on stage, you can then use a forever loop and pick random commands to make the sprite move randomly. The variables track the position of the sprite.

3  5,4,3,2,1
Draw a rocket or just use a picture of a plane from the Scratch image library. Create a variable called Timer and set it to 5. Use a 'repeat until' loop. When Timer = 0, broadcast ‘blast off’ to the rocket sprite.

The rocket sprite contains the following code.
4 Bigger and Bigger
Make the sprite shrink to zero. Create a variable named size. Use a repeat until loop to make the sprite grow to until it reaches full size (100%) again.

5 Shape Sensation
Use variables to store sides and angle. Start with a triangle. Use a ‘repeat until’ loop to stop when sides = 9. Use ‘wait’ to slow things down.