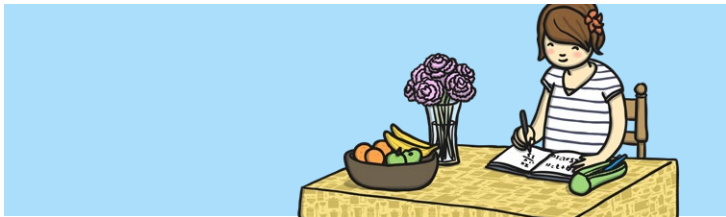# Programming Turtle Logo and Scratch

Introduction

This Programming Turtle Logo and Scratch unit will teach your class to create and debug algorithms. Following on from the earlier Year 2 unit on Preparing for Turtle Logo, the children use the basic commands in Logo to move and draw using the turtle on screen, and then further develop algorithms using the "repeat" command. These skills are then developed by teaching children to create algorithms in Scratch using a selection of blocks.

Health & Safety

Children should be encouraged to have good posture and sit up to the computer.

Home Learning

Task 1 Programming Turtle Logo: Children use Turtle logo to create different algorithms for different rectilinear shapes and then use the repeat command.

Task 2 Programming Scratch: Children use Scratch to create an algorithm to make a Sprite dance and then design their own backdrop.

Assessment Statements

By the end of this unit...

...all children should be able to:

- Draw lines of different lengths using the fd command.
- Move blocks into the Scripts Area.
- Snap blocks together to combine commands.

...most children will be able to:

- Turn the turtle using rt 90 and lt 90.
- Draw squares and rectangles.
- Create simple algorithms using a number of different blocks.
- Use the repeat and green flag blocks to control algorithms.

...some children will be able to:

- Write an algorithm for a shape.
- Use the repeat command.
- Combine a range of blocks to achieve a purpose.
- Use more than one sprite and combine algorithms.

Lesson Breakdown

1. Drawing Shapes
I am developing problem-solving strategies, navigation and co-ordination skills, as I play and learn with electronic games, remote control or programmable toys. TCH 1-09a

2. Repeat
I am developing problem-solving strategies, navigation and co-ordination skills, as I play and learn with electronic games, remote control or programmable toys. TCH 1-09a

3. Movement and Sound
I am developing problem-solving strategies, navigation and co-ordination skills, as I play and learn with electronic games, remote control or programmable toys. TCH 1-09a

4. Repeat and Say Something
I am developing problem-solving strategies, navigation and co-ordination skills, as I play and learn with electronic games, remote control or programmable toys. TCH 1-09a

5. Green Flag
I am developing problem-solving strategies, navigation and co-ordination skills, as I play and learn with electronic games, remote control or programmable toys. TCH 1-09a

6. Sprites
I am developing problem-solving strategies, navigation and co-ordination skills, as I play and learn with electronic games, remote control or programmable toys. TCH 1-09a

Resources

1. Drawing Shapes
- Desktop Computer or Laptop
- Turtle Logo application (installed or online)

2. Repeat
- Desktop Computer or Laptop
- Turtle Logo application (installed or online)

3. Movement and Sound
- Desktop Computer or Laptop
- Scratch application (installed or online)

4. Repeat and Say Something
- Desktop Computer or Laptop
- Scratch application (installed or online)

5. Green Flag
- Desktop Computer or Laptop
- Scratch application (installed or online)

6. Sprites
- Desktop Computer or Laptop
- Scratch application (installed or online)

Lesson Breakdown

	Resources
1. Drawing Shapes Understand what algorithms are; and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs using Turtle Logo. • I can create an algorithm to move or rotate the turtle.	• Desktop Computer or Laptop • Turtle Logo application (installed or online)
2. Repeat Understand what algorithms are; and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs using Turtle Logo. • I can create an algorithm and use the repeat command.	• Desktop Computer or Laptop • Turtle Logo application (installed or online)
3. Movement and Sound Understand what algorithms are; and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs using Scratch. • I can create an algorithm and add sound.	• Desktop Computer or Laptop • Scratch application (installed or online)
4. Repeat and Say Something Understand what algorithms are; and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs using Scratch. • I can create an algorithm and use the repeat and say command.	• Desktop Computer or Laptop • Scratch application (installed or online)
5. Green Flag Understand what algorithms are; and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs using Scratch. • I can create an algorithm and use the green flag to start.	• Desktop Computer or Laptop • Scratch application (installed or online)
6. Sprites Understand what algorithms are; and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs using Scratch. • I can create an algorithm and use the commands to change the backdrop and add sprites.	• Desktop Computer or Laptop • Scratch application (installed or online)