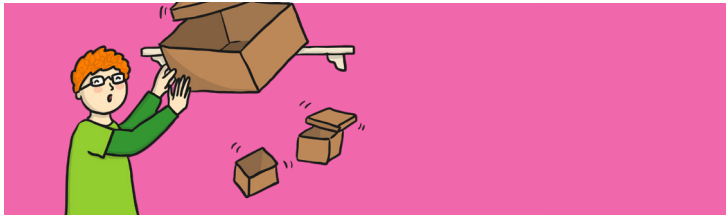


## Introduction

This Programming Turtle Logo unit will teach children how to create an algorithm to program a procedure. Lessons are designed to be used with online programs such as Turtle Logo/Logo Interpreter or MSWLogo. Children are reminded of the basic commands and how to repeat alongside a variable. The children are then shown how to program their own procedures, use colour and set the position of the turtle using coordinates. In the concluding lesson they use the arc command to create patterns using different shapes and randomly selected colours, which they are encouraged to share with the rest of the class.



## Health & Safety

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



## Home Learning

**Fill, Labels and Arcs:** Children are asked to make patterns using filled shapes and labels. They then create an algorithm to create an abstract piece of art.

**Writing Procedures:** Children use the setpos or setxy commands to draw squares and rectangles. They then create an algorithm to create a picture of a house.

## Assessment Statements

By the end of this unit...

### ...all children should be able to:

- Write procedures using simple algorithms.
- Change the colour of the pen.
- Write text using the label command.

### ...most children will be able to:

- Draw shapes using setpos or setxy.
- Fill shapes in different colours.
- Draw arcs of different sizes as required.

### ...some children will be able to:

- Create sophisticated algorithms and procedures.
- Include procedures with variables.

# Lesson Breakdown

## 1. Procedures

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.

Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. In the context of using Turtle Logo to create and debug a procedure.

- I can create and debug an algorithm to create a procedure.

## 2. Setpos

See above.

In the context of using Turtle Logo to create and debug an algorithm that uses setpos.

- I can create and debug an algorithm that uses setpos to draw shapes.

## 3. Colours

See above.

In the context of using Turtle Logo to create and debug an algorithm with different colours.

- I can create and debug an algorithm with different colours.

## 4. Fill

See above.

In the context of using Turtle Logo to create and debug an algorithm to fill areas with colour.

- I can create and debug an algorithm to fill areas with colour.

## 5. Label

See above.

In the context of using Turtle Logo to create and debug an algorithm to write text.

- I can create and debug an algorithm to produce text.

## 6. Arc

See above.

In the context of using Turtle Logo to create and debug an algorithm to draw arcs.

- I can create and debug an algorithm to draw arcs.

## Resources

- Desktop computer/laptop
- Turtle Logo application installed/online
- Whiteboards and pens or books and pens for recording.

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