

# Computing, Year 4, term 3: Programming A – Repetition in shapes

Summary: Children will create programs by planning, modifying, and testing commands to create shapes and patterns. They will use Logo, a text-based programming language. This unit is the first of the two programming units in Year 4, and looks at repetition and loops within programming

Threshold Concepts
Programming
Data handling and multimedia
Technology in our lives
E-safety

Generating	Debugging	Problem solving and logic	Research	Information	Presentation	Software	Privacy and personal information	Consent	Behaviour/citizenship
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**Technology in our lives**

Understand how and why programming and repetition is used by everyday technology

**Generating**

- learn the basic Logo commands (see next page for glossary)
- create a code snippet for a given purpose
- write an algorithm to produce a given outcome
- design own program that includes count-controlled loops

**Debugging**

- debug their code by finding and fixing any errors that they spot
- develop own program by debugging it

**Problem solving and logic**

- explain the effect of changing a value of a command
- identify patterns in a sequence
- predict the outcome of a program containing a count-controlled loop

## Glossary of Logo commands

FD — forwards. FD is always followed by a space and then a number of steps, eg FD 50

BK — backwards. BK is always followed by a space and then a number of steps, eg BK 50

LT — left. LT is always followed by a space and then a number of degrees to turn, eg LT 90

RT — right. RT is always followed by a space and then a number of degrees to turn, eg RT 90

CS — clear screen. This command clears any pen marks on your screen and gets the turtle back to the home position in the centre of the screen.

PU — pen up. This command will stop the turtle from leaving a pen trail. It is not followed by any numbers.

PD — pen down. This command will make the turtle start leaving a pen trail again, so it needs to be used before you want to draw. It is not followed by any numbers.

e.g:

FD 100

LT 90

FD 60

