YEAR 4 COMPUTING / KNOWLEDGE ORGANISER

Repetition in Shapes

In Logo, text commands control a screen turtle. A loop can repeat a set of commands to draw a shape or pattern.

Key vocabulary

Logo	A text-based programming language.
Turtle	An on-screen pointer that follows movement commands.
Command	An instruction for the computer to carry out.
Sequence	Instructions in the order they will run.
Repetition	Doing the same instruction or set of instructions again.
Count-controlled loop	A loop that runs a set number of times.
Decompose	Break a task into smaller parts.
Debug	Find and fix errors in a program.

What you need to know

- Write commands accurately. FD moves the turtle forwards and RT turns it right by an angle in degrees.
- In Logo, REPEAT tells the turtle how many times to run the commands inside the square brackets.
- A square uses four equal moves and four quarter turns. Changing the distance makes the square larger or smaller.
- Break a pattern into parts. Find the repeated part, test it, then combine it with the other parts.

Worked example

REPEAT 4 [FD 50 RT 90]

Draw a square by moving forwards 50 and turning right 90° four times.

Quick recall

1. Which number changes the length of each side?
2. Which commands are repeated and how many times?

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