Year 4 - Computing - Autumn 2 - Repetition in Shapes

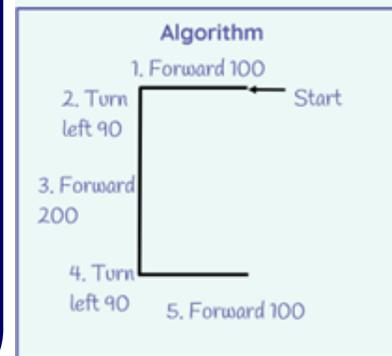**The Rivers** C.of E. Academy Trust

Sticky Knowledge:
- To know a loop command in a programme can be used to repeat instructions.
- To know a count-controlled loop stops after a specific number of times.
- To know there are different coding languages.
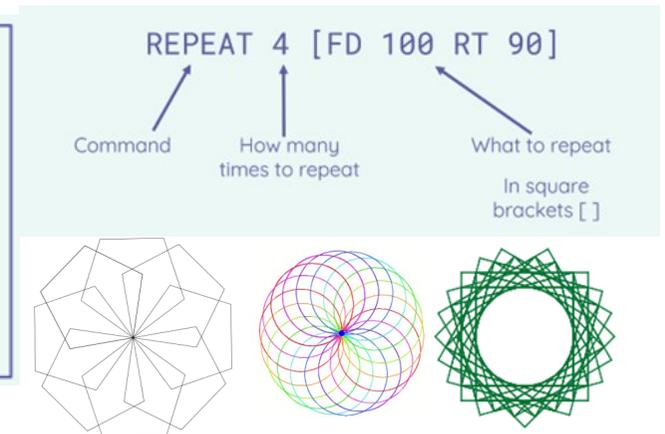- To be able to design a program for a purpose.

Computational Thinking
- To be able to identify patterns in code

Use a block-based programming language to explore count-controlled loops when drawing shapes.
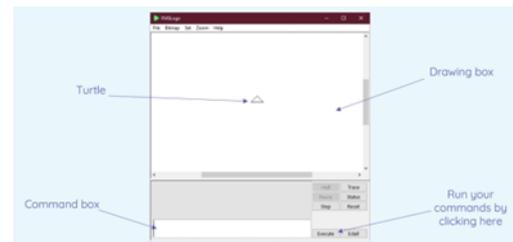
Algorithm
1. Forward 100
2. Turn left 90   Start
3. Forward 200
4. Turn left 90
5. Forward 100

Code
FD 100
LT 90
FD 200
LT 90
FD 100

REPEAT 4 [FD 100 RT 90]

Command | How many times to repeat | What to repeat | In square brackets [ ]

Example A | Example B

Turtle | Drawing box
Command box | Run your commands by clicking here

Shape	Logo Commands	Scratch blocks
	REPEAT 4 [FD 100 RT 90]	

Triangle	Pentagon	Hexagon	Octagon	Decagon
120°	72°	60°	45°	36°

Glossary:
- Program - a series of instructions to control a computer
- Event - an action that has significance for a system
- Input - put data into a computer
- Decompose - a problem solving technique
- Forever loops - a loop that repeats without ending
- Count-controlled loops - a loop that repeats a specific number of times
- Design - planning that exists behind an action
- Debug - identify and remove errors in a computer
- Algorithm - a set of rules to be followed by a computer
- Sequence - a basic algorithm
- Logic - describes the decision making process in programming.