

Year 3 Write a Program Part 2 Drawing Shapes Knowledge Organiser

Key words and prior learning from Year 2 Sequencing Simple Algorithms and Programs

Sequence – a particular order in which related things follow each other.

Reverse – do the direct opposite of the stated command.

Example of a sequence

- fwd 100
- turn R 90
- fwd 100
- turn R 90
- fwd 100
- turn R90
- fwd 100
- turn R90

Example of a sequence in code blocks

```

pen down
set colour to
move forward by 100
turn right by 90
move forward by 100
turn right by 90
move forward by 100
turn right by 90
move forward by 100
turn right by 90
    
```

```

pen down
set width to 5
set colour to
repeat 10 times
do
  repeat 6 times
  do
    move forward by 100
    turn right by 60
  turn right by 36
    
```

This is the code to draw a hexagon

After a completed hexagon 'turn' slightly.

New key words we will use in year 3 Write a Program Part 2 Drawing Shapes

Unplugged – an activity that does not need a computer

Algorithm- step by step instructions to do complete a task

Program - a stored set of instructions in a language understood by the computer

Sequence – the order of a set of instructions for a computer program

Visual – block-based programming language in J2e

Command blocks – blocks of code that are put together to write a program

Debug - finding an error in a program to fix it

Repeat loop – this is used in a program when we need to repeat something

Nested Loop – this is repeat loop with another repeat loop 'inside' it

Key Learning

Self-Assessment

	WT	A	WA
I can predict the outcome of a simple algorithm			
I can write a program that creates simple shapes			
I can add a repeat loop into my written algorithm			
I can debug my program			
I can write a program that creates simple shapes			
I can write a program that creates repeated shapes on the screen			
I can use a nested loop			
I can explain why I have used a nested loop			

Who uses skills like these?



- Computer game makers
- Computer programmers when they design and make software to solve problem
- App makers

Introducing sequence

Using sequence in shape algorithm and programming

Move from sequence to repetition to improve the program

Using repetition in shape algorithm and programming

Move from single shape to multiple shapes using nested loops

Using nested loops in algorithm and programming