

# Programming- Repetition in Shapes

## Construction

### Prior Knowledge

Year 3: Sequence in music.  
Events and actions.

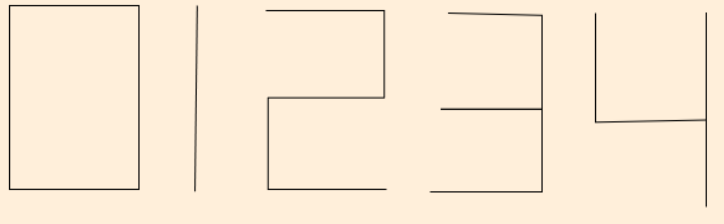
Year 2: Robot algorithms.  
An introduction to quizzes.

Year 1: Moving a robot.  
Introduction to animation.

### Future Knowledge

Year 5: Selection in physical computing. Selection in quizzes.

Year 6: Variables in games. Sensing.



### My Component Knowledge:

Lesson 1: I know that accuracy in programming is important.

Lesson 2: I can create a program in a text-based language.

Lesson 3: I can explain what repeat means in every day tasks and in sequencing.

Lesson 4: I can modify a count-controlled loop to produce a given outcome

Lesson 5: I can decompose a task into small steps

### My Composite Knowledge:

I can use basic commands to draw shapes by repeating instructions.

### My Powerful Knowledge:

I can use a text-based programming language to create programs by planning, modifying and testing commands to create shapes and patterns.

### Key Vocabulary

**Tier 1:** Turtle

**Tier 2:** Program, commands, procedure

**Tier 3:** Code snippet. Count-controlled loop, debug

What is a code snippet?

FD 100 RT 90

FD 200 RT 90

FD 100 RT 90

FD 200 RT 90

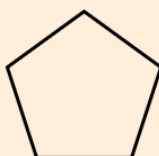
What comes next in this repeating pattern?

Triangle



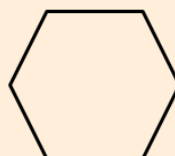
120°

Pentagon



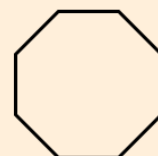
72°

Hexagon



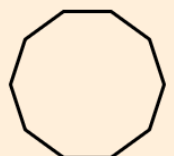
60°

Octagon



45°

Decagon



36°