**Computing Learning Journey**
**Year 4 Summer First Half**

# 4.5 We are artists

Fusing geometry and art

Create art, inspired by Bridget Riley's early works, using Inkscape

Create art, inspired by Bridget Riley's late works, using Inkscape

Create a repeating pattern using Scratch

Create Islamic-style art using Scratch

Create more complex tessellations using Inkscape

Create simple tessellations using Inkscape

**Key Vocabulary**

**Abstraction:** a process of managing complexity by setting to the side irrelevant detail and concentrating on function rather than form

**Bitmap:** an image represented by a large, rectangular grid of pixels, each having its own colour value, typically in the range 0 to 255 for each of red, blue and green

**Fractal**: a self-similar repeating (or almost repeating) structure in which ever greater detail becomes apparent as the structure is examined more closely

**Pixel:** picture element – one of the small, square dots that makes up a digital image

**Repetition**: programming construct which allows a group of instructions to be repeated a number of times, or until a certain condition is met

**Sprite**: a graphical character in a program that can be given its own sequence of instructions

**Tessellation**: a regular pattern of one shape that fills a space without overlapping or leaving spaces between

**Transform**: to change the shape of an image or part of an image

**Turtle:** a small floor robot (or a representation of one on screen) that draws by moving forward and turning, under the control of a program, for example in Logo or Scratch's pen commands

**Vector graphics**: a way of representing an image by specifying the lines, arcs and regions from which it is made

Software: Inkscape (alternatives: Vectornator X for the iPad or Google Draw on Chromebooks) and Scratch (alternative: Logo)
Hardware: Laptop/desktop/Chromebook computers or tablets

**Switched on Online Safety Unit:**
**Digital Citizenship**
Unit 4.5 – We are respectful of digital rights and responsibilities

**Online safety:**
We use safe search to search for images
If we upload work we create for others to see – we are careful not to reveal any personal information and we limit our audience

**Unit overview:**
The children will learn to:
- develop an appreciation of the links between geometry and art
- become familiar with the tools and techniques of a vector graphics package
  - develop an understanding of turtle graphics
  - experiment with the tools available, refining and developing their work as they apply their own criteria to evaluate it, and receive feedback from their peers
  - develop some awareness of computer-generated art.

**In Key Stage 1:**
- Pupils create digital art in **Unit 1.3: We are digital artists.**
- They program in Scratch in **Unit 2.1: We are astronauts.**

**In Key Stage 2:**
- Pupils program in Scratch in **Unit 3.1: We are programmers, Unit 4.1: We are software developers, Unit 5.1: We are game developers** and **Unit 6.2: We are computational thinkers**.
- They use other digital media in **Unit 5.3: We are architects** and **Unit 5.6: We are VR designers**