

S.T.E.A.M.

Fibonacci Spiral

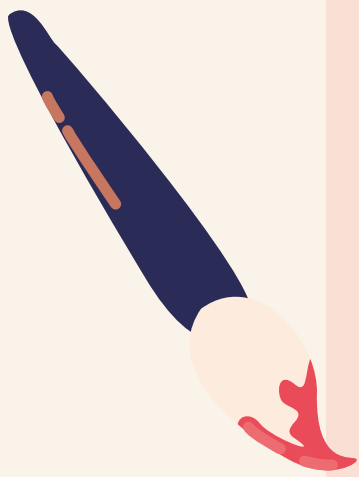
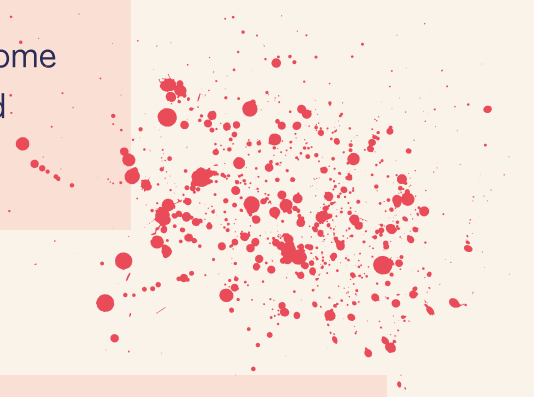
GRADE: 4/5

Students will use their knowledge of number patterns and line symmetry to create a Fibonacci Spiral inspired artwork using the Fibonacci number pattern and watercolour pencils.

Materials: Graph paper, pen and pencil, tape, thick printer paper or watercolour paper, watercolour pencils

Background Knowledge

Students should have already been introduced to the basics of number patterns, sequence values and rules. Students should also have some foundational knowledge of line symmetry and how to use watercolour pencils.



Opening

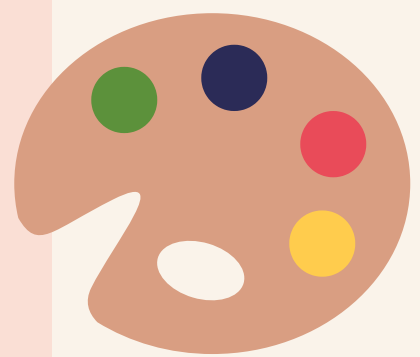
Show students Doodling in Math: Vihart (Youtube) and explain that they will be creating their own Fibonacci inspired art project. Display the Fibonacci number pattern on the board and have students discuss how to find the next few numbers in the sequence. Explain they will use the pattern to create their art project.

Instruction

Have students map out their Fibonacci squares on their graph paper up to 18x18. Show students how to properly draw the spiral through their squares. Tape the graph paper to a piece of thick printer paper and trace the fibonacci squares and spiral onto the new paper by taping them to a window to trace.

One finished, orient the spiral in a different direction either creating a symmetrical or asymmetrical design. Connect the spirals with lines to make sections.

Fill in each section with watercolour, ensuring that touching squares have different colours.



Assessment

Have students write a reflection about how the Fibonacci number pattern is related to what they have been learning in their math class. How is line symmetry connected?