

Math Thru Art

Fall 2020 – Session 1

Instructor: Candice Renaker

Objective: Discover how art and math work together by using mathematical concepts to create beautiful art pieces.

Materials: Students will need a sketch pad, pencil, and pen for every class. Some classes will need additional materials as posted on Edmodo. No phones will be needed for any of the classes. Students will use Edmodo to submit their artwork.

Topics covered:

Symmetry & Fractals

Students will learn about both symmetry and self-symmetric figures. Students will use a fractal generator to create art. CCSS4.OA5

Patterns, Sequences & Series

Students will look at different forms of patterns, sequences, and series (including the Fibonacci sequence). Students will create beaded jewelry that reflects the concepts learned. CCSS4.G3

Transformations & Tessellations

Students will learn about the mathematical transformations: translation, reflection, rotation, dilation, and tessellations (also known as tiling). Art includes examples by M.C. Escher, and historical mosaics. Students will use transformations and tessellations to create stationary. CCSS8.G1,2,4, CCSSG-CO2

Geometric constructions

Students will learn how to use their compass and straightedge and a computer program on a website to make simple geometric constructions. Students will use their geometry set to create a personal mandala. CCSS7.G2, CCSSG-CO12, CCSSG-C4, CCSSG-CO13(extension)

Modelling 3-Dimensional Figures

Students will use blocks, legos, playdough and/or clay to create 3-dimensional models of Platonic solids and other strange figures. CCSS7.G3, CCSSG-GMD4, CCSSG-MG1

Drawing 3-Dimensional and Impossible Figures.

Students will learn to draw 3 -Dimensional figures and impossible figures. Students will create a drawing including these figures.

Knots, Mazes, and Other Weird Things

Students will learn to draw knots and mazes and play with mobius strips