

Visual Mathematics – Final Presentation

Presentation Date: Wednesday, 30 October

Electronic file for presentation must be submitted no later than Tuesday, 29 October and checked for compatibility issues and functionality.

Goal: Describe the mathematical phenomena, and discuss its use in both historic and contemporary art.

Sources of information:

- Textbooks in ASMS library and Brewer's classroom
- Scholarly articles from <http://archive.bridgesmathart.org/>
- Scholarly articles from respected journals, accessible via JSTOR/USA Library
- NO NON-SCHOLARLY INTERNET SOURCES!

All information should be properly cited with end notes.¹

Presentation Format: Powerpoint or Prezi²

Presentation Length: 8-10 minutes; 20-40 slides

Note: Slides/visual aids should complement your verbal presentation - slides are NOT reading prompts!

See full grading rubric for further tips on what makes for an exceptional presentation.

“Fractals” - Holly Parker, Veronica Kinoshita, Gage Morrison

Book in ASMS Library: Mandelbrot, *The Fractal Geometry of Nature*;

Books in Brewer's office: Barnsley, *Fractals Everywhere*; Frantz & Crannell, *Viewpoints*

“Knots, Links, and Seifert Surfaces” - Amelia Haas, Abby Obakpolor, Brent Zeralsky

Books in ASMS Library: Adams, *The Knot Book*; Murasugi, *Knot Theory & Its Applications*; Francis, *A Topological Picturebook*; Armstrong, *Basic Topology*

“Spherical Symmetry and Polyhedra” - Hannah Frasier, Mallory Burch

Books in Brewer's office: Conway, *The Symmetries of Things*; Belcastro, *Crafting by Concepts*; Hart, *Zome Geometry*

“Star Polygons and Islamic Geometric Patterns” - Julia Rath, Anna Tankersley, Marta Muñoz

Books in Brewer's office: Critchlow, *Islamic Patterns*; Wilson, *Islamic Designs for Artists and Craftspeople*

“Circles and Anti-circles: Euclidean versus Hyperbolic Geometry” (packing, Apollonian circles, hyperbolic geometry, spirals, mandalas, etc.) - Lorenzo Gapud, Jacob Commerford, Michael Prince

Books in ASMS Library: Elam, *Geometry of Design*

Electronic Books available: Anderson, *Hyperbolic Geometry*

Books in Brewer's office: Taimina, *Crocheting Adventures with Hyperbolic Planes*

“Mathematical Art through Codes and Words” - Kaitlyn Allen, Cailin Powell, Laura Chase

¹ End notes will allow for proper citation of information without distracting your audience, as during the presentation, the viewer will only see superscript numbers. Your final slide should include the bibliographic documentation of these endnotes.

² If Prezi, must be saved for accessibility offline.