

NAEA PRESENTATION: An Art Teacher in Mathmagic Land

March 1, 2012

- I. Introduction
- II. Math/Art Workshops
 - A. Proportion, pattern, & perspective
 - 1. The grid
 - 2. Symmetry
 - B. Response from math teachers
 - 1. Estimating
 - 2. Hands-on strategies
 - 3. Visual strategies
 - 4. Real-life application of math concepts
 - 5. Language: terms and definitions
 - 6. Time constraints
 - C. Series of math-related workshops at The Metropolitan Museum of Art
 - D. Contemporary Strategies for the Elementary Math Classroom at Hunter College
- III. Digging into math/art connections
 - A. Readings – philosophy (Sinclair and Bickley-Green, see bibliography)
 - B. Readings – fun (Bellos, Crosby, and Schneider, see bibliography)
 - C. Lesson plans – content
 - D. Ethno-math and ancient world <http://csdt.rpi.edu/>
 - E. Common Core: Standards for Mathematical Practice <http://www.corestandards.org/the-standards/mathematics/introduction/standards-for-mathematical-practice/>
- IV. Examples
 - A. Roman mosaic
 - 1. Estimating, pattern, tessellation, geometry, angles, proportion
 - 2. Other curriculum links: science, social studies, language arts
 - 3. Standards for mathematical practice
 - B. Navajo weaving
 - 1. Measurement, axis, binary code, symmetry, algebra
 - 2. Other curriculum links: science, social studies, language arts
 - 3. Standards for mathematical practice
- V. Into the future
 - A. Familiarization with the STEM initiative (Science, Technology, Engineering, and Math) <http://www.stemedcoalition.org/>
 - B. STEAM, not STEM <http://steam-notstem.com/>
 - C. Collaborations with math teachers

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