

Mathematics and Art

Instead of a final exam, I will let you discover the beauty in mathematics and share it with your classmates. Impress me with your creativity! Research a topic that connects mathematics and art. Prepare a presentation to the class on your topic. Make sure you have strong visuals/aurals. Write a short paper summarizing your topic and what you learned. Cite your sources. Remember, this is worth a lot of points! So, make me say, "Wow!"

Visual/aural: you may use any type of materials, some suggestions: straws, toothpicks, marshmallows, Playdoh, poster board, PowerPoints, computer graphics; other forms of art such as poetry, drama or music

Start here:

American Mathematical Society Mathematical Art Exhibition, annual show
<http://www.ams.org/mathimagery/index.php?cat=0>

Example:

George Hart, visited SUNY Canton in 2000, awesome mathematical sculptor

<http://www.georgehart.com/sculpture/sculpture.html>

I saw his CD sculpture at UC Berkeley

<http://www.cs.berkeley.edu/~sequin/SCULPTS/RAINBOW/index.html>

Expectations:

Topic chosen is about a connection between mathematics and art (no TV or movies)

You must have your topic pre-approved!

Quality visual/aural

Vocabulary use: correct terminology (new vocab is a plus)

Complexity: you should demonstrate that you learned something new about mathematics

Mathematics: you need to explain/discuss the mathematics that is involved in your topic

Expertise: learn enough about your topic to answer questions from an ignorant audience (your class and me)

Class Presentation: organized, clear, interesting voice and manner

Originality: everyone must choose a different topic or a different aspect of a topic

Paper: neat, clear summary with details as needed, watch spelling! **Accurate list of sources.**

Timeliness: you will lose points if you are not prepared or absent.

Precalculus Final Project 2011

Name _____

Score _____

Topic _____

0	-	√-	√	√+	+
Not done	Below standard on a major point or a major mistake	Below standard on a minor point or a small mistake	Meets standard, all areas correctly performed	Above standard on a minor point or in small way	Above standard on a major point or in an impressive way
-10	-7	-4	0	+3	+5
Criteria					
Topic: Topic chosen is about a connection between mathematics and art, appropriate for classroom, everyone must choose a different topic					
Quality visual/ aural: shows time, effort and creativity (original art is a plus)					
Vocabulary use: correct terminology (new vocab is a plus)					
Complexity: you should demonstrate that you learned something new about mathematics (MS math is a minus, HS math is a check, something we've never done in HS is a plus)					
Mathematics: you need to explain/discuss the mathematics that is involved in your topic					
Expertise: learn enough about your topic to answer questions from an ignorant audience (your class and me)					
Class Presentation: organized, clear, interesting voice and manner					
Paper: neat, clear summary with details as needed, watch spelling! Accurate list of sources.					
Timeliness: you will lose points if you are not prepared or absent for your scheduled presentation (-10 points)					
Learning from others: attendance (missed class -5 points/ -10 points for the double period class)					