

PreCalculus Final Project 2012: Math in Today's Technological World

Choose a topic explaining where math is used in today's technology and how it is being used. Everyone must pick a different topic and sign up. First one signed up wins!

All presentations will include: Historical background. How/who discovered/invented? What it is used for? How is the math computed/derived and used?

Potential Topics:

Bar codes

GPS Systems

Internet Search Engines

Genetics

There is also an attached page from Ms. Wilson

Sources

Math Forum, the best starting point for any mathematical searches, www.mathforum.org

Ms. Wilson in the library is prepared to help you choose and narrow down a topic

Your task

- I. At the beginning of your presentation, hand in a 1 – 2 page summary paper that includes a bibliography.
- II. Present an oral presentation to the class (5 – 10 minutes.) Tell us about any historical background for your topic. How/who discovered/invented? Describe the mathematics involved in your topic. What is it used for? How is it computed/derived? Are there relationships with other types of technology?
- III. Make sure you use a visual aid, for example, a poster, a Power Point presentation, web site(s), or a handout for your topic. Power Point presentations or web sites are preferred to posters because everyone can see them. Posters must be organized such that the document camera can be used to see/read the display. Be sure to use the rubric as a checklist to prepare your presentation.
- IV. Copy any Power Point documents to the folder in the HSDrop folder so they can be quickly accessed for the presentation.

Additional Topic Ideas

SPORTS AND FITNESS

- **COLLEGE FOOTBALL (which teams make it to the Bowls)**
- **SPORTS STANDING AND "SEEDINGS"**

PLANES, TRAINS & AUTOMOBILES

- **FLYING AN AIRPLANE**
- **SKYDIVING**
- **CRASH TESTS**
- **SPACE PROGRAM**
- **GPS NAVIGATION**
- **CAR DESIGN**

MEDICAL APPLIATIONS

- **ROBOTIC SURGERY**
- **DNA OR GENETIC ANALYSIS**
- **IMAGING**
- **ERGONOMICS**
- **GENETICS**
- **DISEASE PREVENTION & CURES**
- **STEM CELLS**

COMPUTERS/INTERNET/ENTERTAINMENT

- **FINGERPRINT SCANNERS**
- **UPC BARCODES**
- **CREDIT CARD FRAUD DETECTION**
- **CRYPTOLOGY**
- **DATA MINING**
- **DIGITAL ANIMATION AND DIGITAL MODEL CREATION**
- **SECURITY DEVICES**
- **3-D**
- **ENCRYPTION AND ENCRYPTION DEVICES**
- **ONLINE SHOPPING SECURITY**
- **IP ADDRESS**
- **COMPUTER NETWORKS**
- **CELL PHONES**
- **DIGITAL MUSIC**

MILITARY APPLICATIONS

- **STEALTH TECHNOLOGY**
- **GUIDING WEAPONS**

OTHER

- **BUILDING SKYSCRAPERS**
- **WEATHER PREDICTION**
- **ATM MACHINES**
- **SOLAR PANELS**

Precalculus Final Project 2012

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 today's technology, appropriate for classroom	
Historical Background	
Quality visual aid(s): shows time, effort and creativity	
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. What is it used for? How is it computed/derived? Are there relationships with other types of technology?	
Expertise: learn enough about your topic to answer questions from an ignorant audience (your classmates and me), especially be able to answer questions from your classmates.	
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 for your scheduled presentation (-10 points) Learning from others: attendance (missed class -5 points/ -10 points for the double period class)	

95 is the baseline score—met the standard in each category. If you want a higher score, be prepared to impress me!