Statistics & Mathematical Modeling

Course Expectations

Statistics & Mathematical Modeling is a course intended for the student who has completed Algebra 1 and Geometry. The course is intended to challenge students to use mathematics, science and technology to solve problems. Curricular topics include and are not limited to: right and non-right triangle trigonometry, linear, quadratic and exponential functions, descriptive statistics, graphical methods of describing data, measures of center and variation, bivariate data analysis, combinatorial probability and random distributions will be studied. The main thrust of this course is to place students in an environment in which they must apply mathematics and basic science principles to solve problems. The problems posed are rich in real life context. The course hopes to answer the question that many students ask: “When am I ever going to use this?” Students are expected to work in groups as well as independently on projects. Communication skills, written and oral are essential. The course utilizes technology when and wherever possible.

My website: [www.mathizaverb.com](http://www.mathizaverb.com) All links to problems, knowledge, assignments are found here.

.**Class requirements: DUE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. A 1.5 inch binder. Fill it with paper for notes and homework.
2. Folders, pens and pencils. You will have a place in the classroom to store some of these items. It is important to be ready for class.
3. Graphing calculator-the math department will provide this for those who do not own one. However, it must remain in school. If you plan on purchasing one please buy at least the TI-83 or TI-84 plus. If you can purchase the type that is sold with a Graph Link cable, even better. The Graph Link cable allows you to connect the calculator to your home computer and download programs off of the internet. **Ask** if you are not sure what to do.
4. Willingness to try new things.
5. **PARTICIPATE.** We will be DOING mathematics!

**Evaluation:**

1. Project work both individual and group.
2. Worksheets
3. Participation
4. Quizzes
5. Write-ups

The course grade works on a point system. More details will follow.

# **The Write-Up:**

The write up is a single document that must contain the following bare essentials:

An **introduction** that describes the scope of the assignment and the objective. The purpose of the project must be made clear.

A **math/science component** will include a data collection section, a section on graphs and an analysis section. Details on these sections will be project dependent. Handouts will follow and must be kept in the binder.

A **technology component** specific to the individual project. A bill of materials, procedure and an evaluation will be common to some projects.

A **conclusion** that technically describes what happened. Whether the project was successful or not and why. Was the conjecture posed at the start of the project confirmed. No personal feelings…please.

The write up for each project is unique. We will most likely be using Power Point where possible. A rubric of how points will be awarded will be given out with each project packet.

**Write-ups must be handed in on time for full credit.**

I will be showing you examples of what I expect and of course will be helping you along the way. This learning experience should be fun! But it will also be work as well.

Did I mention fun? ☺

Also, if you have any ideas or concerns that you want to share- just email me or speak to me directly.

**Assignment #1**

**Have your parents email me with your name in the subject line with the class period.**