



G-TEAMS at Flowing Wells Junior High

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FWJH

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Philosophy



In working together, we set out to accomplish a number of tasks. These included:

- Discussing different techniques and methods for teaching advanced students who must not only learn the high school coursework, but also material covered in traditional 8th grade classrooms and in newly established curriculum.
- Explore new ways to engage Mathematics with all students to encourage deeper thinking of the subject material and create new outlets for student creativity.
- Encouraging more students to find ways that the mathematics they learn is already in their lives. In particular, we want to encourage students to have fun with math.

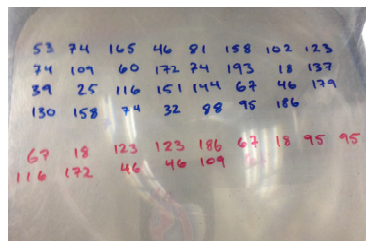
Implementation of New Standards

This year FWJH has begun implementing the new Arizona State math standards. Ryan has worked to help Christine introduce concepts that are new to the curriculum, including functional notation and applications of exponential functions.

Ryan has also used his familiarity with technology to introduce new tools to Christine's students, including Graphing calculators and Excel (future project).

My Personal Annuity Worksheet				
Given:	Principal	1000		
	Compounds	12		
	APR	7.083%		
	Payment	250		
Months	Principal	Interest	Payment	Total
1	1000.00	59.04	250.00	1309.04
2	1309.04	77.29	250.00	1636.33
3	1636.33	96.61	250.00	1982.94
4	1982.94	117.08	250.00	2350.02
5	2350.02	138.75	250.00	2738.77
6	2738.77	161.70	250.00	3150.47
7	3150.47	186.01	250.00	3586.48
8	3586.48	211.75	250.00	4048.23
9	4048.23	239.01	250.00	4537.24
10	4537.24	267.89	250.00	5055.13
11	5055.13	298.46	250.00	5603.59
12	5603.59	330.85	250.00	6184.44
13	6184.44	365.14	250.00	6799.58
14	6799.58	401.46	250.00	7451.04
15	7451.04	439.92	250.00	8140.96

Linear Equations and Cryptography



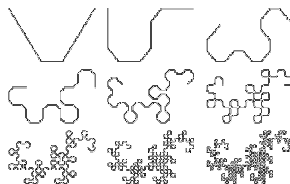
In Christine's Algebra 1-2 classes, students spent the first semester learning about linear equations and systems of linear equations. Ryan was able to use his interest in cryptography to show Christine's students some basic applications of linear equations and systems to cryptography.

Continuation of an after-school Math Club

Working with advanced students, we wanted to find a way to encourage them to learn new things beyond regular classroom instruction. We continued a once-weekly Math Club where students could learn new ideas, find multiple ways to approach problems, and compete with and learn from each other. This math Club Began as a G-TEAMS project with a fellow from Last year.

We use material from a variety of sources to introduce new topics, and also aim for the students to represent FWJH at a local competition. We have covered topics ranging from algebra and combinatoric shortcuts, to planar and spherical geometry, to introductions on fractals and probability. The Club is open for students of all Math levels, and we regularly have students from different classes attend. Many students show up intermittently, incorporating Math Club into their regular routine of sports or other extracurricular activities.

The purpose of the Club is twofold. First, to teach the students fun tricks and to build Mathematical esteem, either by explaining their answers to other students, or by showcasing their mettle against other schools. Secondly, to introduce a wide array of topics that many of them may never see even in high school. Ryan and Christine are working with G-TEAMS fellow and teacher partner Colin Clark And Jen Thompson to continue activities for this club.



Students were able to create their own code using a simple Linear substitution cipher, as well as learning about the idea of a function.

Students were then able to use what they had learned about systems of linear equations, as well as the concept of inverse functions to decode a linear cipher.

