Bosque School Year I: Algebra II and Geometry

Syllabus 2015-2016

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Classroom: M1

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“A person who never made a **mistake**, never tried anything new." Albert Einstein

Year I is a comprehensive course that requires a fine balance between skills and conceptual understanding. To build the conceptual understanding students will be completing mathematical tasks during class to build connections between the concepts and apply what they are learning. **Students are asked to take risks and embrace challenges. Mistakes are part of that process. Please encourage your child to keep a growth mindset.** Overcoming obstacles leads to true growth and learning. In order to learn new skills, the students may receive lessons in class or via video. They will be able to practice their new skills on homework. I use a variety of teacher created tasks, worksheets, and textbook problem-sets.

***Course Description*:** This course includes both geometry and intermediate algebra.  Emphasis will be placed on developing and applying intuition for algebraic and geometric properties.  The purpose of integrating Algebra II and geometry is to build a stronger connection between the disciplines and provide regular practice of both algebra and geometry.  Students will often engage in problems that require both algebraic and geometric skills thus deepening their understanding of the material.  Students will investigate geometric principles and algebraic relationships using compass and straightedge, as well as Geogebra. Coordinate geometry will be emphasized. Topics include properties of parallel and perpendicular lines, triangles, polygons, and circle properties, transformations, linear and quadratic functions, matrices, complex numbers, arithmetic sequences, proportion, and similarity.  The course includes material from *Discovering Geometry* published by Kendall Hunt & *Algebra 2* published by McGraw-Hill Glencoe.  Prerequisite: Algebra I

**MC900332680[2]*Materials:***

* Planner, a student’s best friend
* Three ring binder with four dividers
* Graph paper
* Pencils and a pen for grading and corrections
* Ruler
* Compass
* Scientific Calculator (TI-30XIIS) OR Graphing Calculator TI-84

(The graphing calculator is not mandatory for my classes, but it may be a good investment. The same model will be used in upper school mathematics, and may also be used on the SAT.

Used graphing calculators are readily available on e-bay, and can be purchased for about $45. A new one will cost $100- $120.)

Students will organize their materials in a binder with two sections labeled:

* Notes and Activities (all handouts, example problems, data sheets)
* Definitions and Conjectures
* Check-ins (Daily problem)
* Graded Work (All work, including homework, that has been graded and corrected belongs in this section.

***Grading:***Mastery Based Assessment (MBA) is used to evaluate student learning. With MBA, academic scores and student responsibilities are assessed separately. This system allows students, parents, and teachers to monitor student learning more accurately. Students are empowered because they know their strengths and areas of needed growth.

**4: Exceeding the Standard**

You consistently demonstrate a thorough understanding of this idea. You work independently and apply this skill in multiple situations. You can explain this to someone else.

**3: Meeting the Standard**

You understand the process or idea, but when you do it on your own you may miss a detail or occasionally get a wrong answer. Overall, your skills are strong.

**2: Progressing Toward the Standard**

You start to get the idea but you need some more practice. Your skills are developing.

**1: Little or no progress toward the Standard**

You try to follow, but it’s going too fast. You need more examples and a lot more practice. You’re not sure how to start and really need help.

|  |  |
| --- | --- |
| Average Scale Score Across Multiple Goals | Traditional Grade |
| 3.75 – 4.00 | A+ |
| 3.26 – 3.74 | A |
| 3.00 – 3.25 | A- |
| 2.84 - 2.99 | B+ |
| 2.67 – 2.83 | B |
| 2.50 – 2.66 | B- |
| 2.34 – 2.49 | C+ |
| 2.17 – 2.33 | C |
| 2.00 – 2.16 | C- |
| 1.76 – 1.99 | D+ |
| 1.26 – 1.75 | D |
| 1.00 – 1.25 | D- |
| Below 1 | F |

***Test Corrections and Test Retakes:*** All students complete test corrections with explanations to learn from their mistakes and to help them prepare for the standards retake. The standards retake is similar to a test retake, but students only need to retake problems associated with the standards in which they earn a 2.5 or below. This gives the students another opportunity to earn a 3 on the standard. If the student wants to earn a 4, they can create their own assessment with high level problems and explain their thinking to me.

***Homework:*** Homework is critical to the learning process in Year I. Students should work independently on their homework assignments. The homework is assessed based on whether all the problems were attempted and if the odd problems were checked and redone if mistakes were made. In other words, homework should not be a source of stress. Time will be allotted for questions during class. If your child is struggling with homework, I recommend that he or she come in at 7:35 a.m. to ask questions, find me during a free block, or stop by after school. I am available each afternoon apart from Wednesdays due to faculty meetings and days that I have scheduled department leader or parent meetings.

***Classroom Guidelines:*** Students should come to class with all materials and with ALL homework problems attempted and graded if possible (please see homework rubric below). Students will write their homework assignments in their planners. The homework is also posted on my Web site in case a student is absent or loses his or her planner. Students should then put the assignment under “graded work” in the binder.

*I expect students to:*

Show respect toward their peers and community, be responsible, and be ready to participate. Students should follow the Bosque School Code of Conduct which can be found in the handbook. They should keep in mind the Bosque School core values of *scholarship, integrity*, and *community*.

**Math Homework Instructions**

This year you will check your homework before you come to class. There are many reasons this will benefit you. First, if you are getting the right answers, you will have confidence to continue. If you get a problem incorrect, you can work to find your mistake and you won’t make the same mistake on subsequent problems. This system is designed to empower you to continuously improve.

You will be given credit for the work you show on your homework and for correcting it before you come to class.

Step 1: Write the problem (if it is not a word problem) and complete it in pencil. Make sure you show your work.

Step 2: Check your answer in the back of the book. (If it’s not there, mark “NIB”.)

Step 3: Using a PEN, score your work. If you miss the problem, try it again with a pen.

**✓ Got it on the 1st try**

*I got the problem right the first time I tried. I completely understand the problem.*

**✓✓Got it on the 2nd try**

*I got the problem wrong, did the problem over in PEN, and understand my mistake. I understand the problem now. You can see my original pencil work and corrections in pen.*

**x Still don’t get it**

*I tried my best, but the book says my answer is wrong. I can’t find my mistake. I will ask for help.*

Step 4: Repeat this process for each odd numbered homework problem.

\*\**Discovering Geometry* does not have answers provided. Your work will be evaluated by the teacher or by you during class.