Dear Geometry Parents,

Greetings! I’m Patrick, your student’s geometry teacher.  I wanted to reach out to you early, so you can have an idea of what your student will go through this year.  This is a very fun, different course than most of the math your student has encountered in the past.  The purpose of this email is to inform you.  No action is needed unless you have questions for me.

The course is different in a few specific regards.   We are going to be learning math through solving interesting problems that have multiple solutions.  Most, if not all, of the problems feel completely approachable.  After each class 5-6 homework problems will be assigned.  Most of them are continuations in topics of something that has been discussed but they have received no direct instruction on them.  There is no “book”.  There are no specific chronological units.  The course is problem based. Some students get frustrated initially and think, “How can I do this if I’ve never been taught it?”  I assure them that early mathematicians discovered mathematics by first thinking of interesting problems, and through these interesting problems, discovering patterns that lead to what we know of as mathematics.  I’m trying to recreate this authentic, artful approach to math.

While I am new to Khabele, this approach is not.  This has become the standard in the Khabele geometry course so your student’s experience will not be all that different than any student from the past four years.  This approach is also used at other forward thinking private schools such Phillips Exeter Academy, The Trinity School NYC, and The Deerfield Academy.

So how does the class actually work?

Today, six homework problems will be assigned.  If your student cannot complete all of their problems within 50 minutes (every other day), tell them to stop.  I don’t expect them to do more than that.  EVER.  If they are compelled to keep working, that’s fine but please never at the expense of family time or other coursework.  When they get to class the next day, they can voluntarily put up solutions to their problems on the white boards.  They then present their solution.  Complete solutions are not required.  If they get 80% of the problem and present it as “And this is as far as I got. Anyone have an idea?” then that’s perfect.  Real mathematics is communal.  Once the problem is present students can ask questions or ask for clarifications from me.  I step in to clean up and help organize their thoughts.  After all the presentations we will spend the remainder of class continuing more problems either by ourselves, or in small groups, depending on the student’s choice.  They will be assigned another 50 minutes of problems after that, and the cycle continues.

The rules are pretty simple:  don’t use the Internet, don’t ask someone for direct help.  It may be difficult not to help your student but these problems are written and organized in such a way that needs the long process.  Preemptive help is like someone ruining a magic trick or telling the punchline to a joke that isn’t finished.

The goal is to leave class with a solid understanding of the problems, not enter the class with a perfect understanding of the problems.  This can be uncomfortable since they may be used to having an answer and saying “I’m correct so I’m done”.  I have used this structure before and after the initial adjustments, the students loved it and the class was full with rich mathematics that blew my mind.

If you have questions or concerns please reach out to me.  I’m very excited for the year!