



Dear Harbor Families,

Happy Valentine's Day! I hope your day is filled with kindness and connection.

Over the course of the next few months, I intend to shift my weekly messages to a different format, one that highlights a series of educational and philosophical stances and that corresponds to the bright future of Harbor Country Day School. Each commentary will have two or three parts that provide a framework, perspective, and even some layers of analysis.

I look forward to engaging in dialogue with you in the future as we grow together as a community. The first topics will be as follows:

1. Building a Cohesive and Inspired Math Program
2. The Inherent Advantages of the Independent School PK-8 Structure
3. How STEAM Education Can Shape *Our* Future

I am excited to be launching these essays as a type of open-ended blog. It is my hope that we can use this as a means to highlight the strengths of our curriculum, enhance professional development for faculty, and continue to focus efforts on parent education through such community events as our speaker series. These are only a few of the many important conversations that we will engage in collaboratively.

### **Building a Cohesive and Inspired Math Program**

#### *Part 1 - Foundations for Readiness*

I would imagine that many of you remember the 2010 documentary "The Race to Nowhere." This unsettling portrayal of our education system painted a picture of stressed children competing for advantages without purpose or inspiration. The pressures of parenting may have increased since then, and as partners in education, we may never feel more responsible for creating opportunities to both affirm and inspire our children. As I stated in my recent reflection on teaching math, there are few more powerful tools to build confidence and create a sense of calm than engaging kids in the process of problem-solving using the language of mathematics.

In order to develop that essential feeling of self-worth that kids desperately need, we need to base our math program on three tenants; reasoning, readiness, and rationale. As you know, we use Singapore Math (Dimensions) as a foundational resource for our K-5 students. The aspects of this program that align with our mission speak to these tenants. Number Bonds and Bar Modeling strategies help students visualize concepts and find relationships on their own which creates moments for reflection and confidence-building; further, the CPA approach (Concrete Pictorial Abstract) allows kids to progress through increasing levels of abstraction. And while no one math program is perfect for every school, these aspects have certainly allowed Harbor students to engage in more math banter around why math procedures work the way they do. Encouraging students to reason abstractly and explain their thinking has boundless long-term advantages, particularly in preparation for higher-level math content.

As students progress through our math curriculum, they also need to have opportunities for both enrichment and challenge. As we continue to grow our program, I envision even more chances for our students to solidify their understanding of math concepts and to be able to experience appropriate levels of challenge. It's critical to remind ourselves that most kids do not learn math content well in isolation. And while learning algorithmically is a needed tool in every child's math kit, being able to rationalize thoughts is something that many schools do not emphasize enough. Harbor kids must regularly engage in those discussions that help identify reasons why methods exist and what solutions mean. As a pertinent illustration and example, when students learn algebra, they often solve for "x" as if it's some type of random variable. Of course, when you help them connect this to the x-axis on the coordinate plane or even the x-intercepts on a parabolic curve, their ability to synthesize and analyze solutions increases dramatically.

**In summary, kids simply will not remember what they didn't truly understand in context, nor will they retain what they cannot explain.**

I'll end this first installment with a "don't get me started" reminder and a bit of a teaser that I am committed to teaching math at Harbor, perhaps most officially next year. Keeping in mind that I am incredibly impressed with our current delivery model, I am certainly looking forward to infusing my enthusiasm and love for math in all the most collaborative ways possible.

Next week, I will share more about readiness grouping and my thoughts on preparation for secondary school math placement.

With warmest regards,  
Andy