

Kathryn Pennell

## Integrating Science & Engineering with Math and Literacy

I would like to lead a PD at my elementary school to support teachers in their ability to incorporate science and engineering learning standards into their math and ELA lessons, as we are primarily focused on teaching math and ELA. I believe students should have opportunities to learn about all disciplines, and at the same time, I understand the time constraints as well as the necessary math and reading proficiencies often needed to do science research. My goal is to provide resources that teachers can walk away being able to use with any of their students, regardless of the reading or math level they are on.

I would like this PD to be for grades K-5, but it might be more realistic to lead it for grades 3-5 since our K-2 does not have a science curriculum, and most of the resources that have been shared with me through the Endeavor program are not applicable to K-2. There will be 5 teachers, 3-5, serving approximately 110 students.

I want to provide a sample unit plan I have created that integrates math (measurement & data), science, reading comprehension, vocabulary, and engineering into one unit (11 days, about 30 minutes each day). This unit can be altered to meet 4th and 5th-grade standards as well. I will provide resources to 3-5 teachers that can be used to supplement math and literacy.

Teachers will be able to:

- Identify at least one NASA resource they can use to include science learning with math and/or literacy.
- Brainstorm and plan ways to integrate science concepts and/or engineering standards into a math or literacy lesson for the unit after spring break.

I will follow up with teachers in attendance by providing a very short multiple choice survey so they will be willing to fill it out and provide opportunities to discuss any ideas or questions with me after the PD by providing my contact information.