Stem Leadership PD Proposal by Amber Sulich

The title of my proposed STEM professional development is "K-5 Literature that Cultivates STEM." I chose this topic because it can be used in a variety of ways by educators and parents. Literature that enhances the understanding and appreciation of STEM content comes in both fiction and non-fiction. Books, magazines, and websites, such as www.nasa.gov, can be used to enrich material in subjects that are not only STEM but also language arts and history. This cross curricular approach was emphasized in the Endeavor course Reading and Writing in the Science Classroom.

I propose to give my PD (Parent Development) to adults with children and grandchildren at my work, the San Diego Convention Center. While the Engineering Department in which I work is small, I hope to find more people to come to my PD by discussing it with other departments within my company. I will also be sharing my handouts and presentation with teachers and principals from past districts I have worked at. The goal is that I can provide these educators with resources they can use in whatever grade level they are teaching at or administering.

The learning goal I hope to achieve is that guardians will look for and use STEM related reading materials to engage with their learner. While this is being designed for non-education professionals, the resources provided could be used in a variety of classrooms and to supplement many lessons. Literature can be used to cover and give depth to many standards. Through this PD, guardians should be able to help students of grade levels K thru 5 in Common Core State Standards, English Language Arts Standards, Reading: Informational Text, specifically Key Ideas and Details, as well as, Craft and Structure. A few examples of these standards are (http://www.corestandards.org/ELA-Literacy/):

Kindergarten
Key Ideas and Details:
CCSS.ELA-LITERACY.RI.K.1
With prompting and support, ask and answer questions about key details in a text.
CCSS.ELA-LITERACY.RI.K.2
With prompting and support, identify the main topic and retell key details of a text.
Craft and Structure:
CCSS.ELA-LITERACY.RI.K.4
With prompting and support, ask and answer questions about unknown words in a text.
CCSS.ELA-LITERACY.RI.K.5
Identify the front cover, back cover, and title page of a book.
CCSS.ELA-LITERACY.RI.K.6
Name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text.

Grade 3
Key Ideas and Details:
CCSS.ELA-LITERACY.RI.3.1
Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

CCSS.ELA-LITERACY.RI.3.2
Determine the main idea of a text; recount the key details and explain how they support the main idea.
CCSS.ELA-LITERACY.RI.3.3
Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
Craft and Structure:
CCSS.ELA-LITERACY.RI.3.4
Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
CCSS.ELA-LITERACY.RI.3.5
Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
CCSS.ELA-LITERACY.RI.3.6
Distinguish their own point of view from that of the author of a text.

Grade 5
Key Ideas and Details:
CCSS.ELA-LITERACY.RI.5.1
Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
CCSS.ELA-LITERACY.RI.5.2
Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
CCSS.ELA-LITERACY.RI.5.3
Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
Craft and Structure:
CCSS.ELA-LITERACY.RI.5.4
Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.
CCSS.ELA-LITERACY.RI.5.5
Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.
CCSS.ELA-LITERACY.RI.5.6
Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

This is not an all-encompassing list of all the standards that could be covered using the resources but instead a short example to show how good literature, fiction and non-fiction, can be used by guardians to teach and reinforce the lessons that teachers cover in the classroom.

I will carry out by PD for parents at the corporation I am currently working for. At this time, I intend to invite co-workers with children or grand-children to attend one of

two sessions. Each session will be approximately 30 minutes, this is to fit within lunch time constraints and the problem that my co-workers are on a variety of shifts. I intended to have the PD on two consecutive days but at different lunch times so that I can reach other attendees. The sessions will be held in one of the break or lunch rooms. These sessions will be done on whatever days I can find that the convention center is the least busy, that way there is less likely hold that our time will be interrupted. Those in attendance will not have access to computers but I will have a handout available to them and the ability to send the handout to their smart phone via Google Docs.

I will provide a pre-survey and post-survey using Google Forms as well as paper surveys. First my survey will compile general information student and survey taker. I will ask for ages, gender, ethnicity, and economic status. Next, my surveys will ask at what frequency do they, the parent, stepparent, grandparent or guardian, read with their child and what topics/genres are being read. I will then collect information on what the adult reads. Lastly, I will gather data on the educational level of the survey participant.

The outcome I hope for with those at my PD is that they see and use the wide variety of resources for all ages to read about STEM related subjects. I expect that after the PD the people in attendance will be more likely to choose literature and non-fiction articles to share with the students in their lives. They will now have resources to use to pull from and easy ways that they can discuss these resources with their student(s).

I hope to follow up with the people that take my PD with an email and survey a few months after it is done. In this way, I might know if they instituted any changes in what they read with their student and/or what they read themselves. The latter survey will let me gauge what changes took hold after the PD and did any of the participants use the information provided. I will also interview some of the PD attendees to see what they did or didn't like about the PD as well as any information that they thought they would like included or excluded.