

APPRENTICESHIP UPDATE



Martha Ponge
Director of Apprenticeship

Now is The Time to Get Students Interested in STEM

Last month I asked the MACNY community if we were starting too late to try and get students interested in careers in STEM and specifically manufacturing. I got several responses about high school and middle school efforts and inquiries regarding information on how companies can become involved with the schools in their own communities. Although I was encouraged by the response, it still seems to me that we as a community of families, not just companies, need to make some strides to help this process along.

I recently came across a diagram that showed that along the pathway from kindergarten to college we lose over 50% of the available students, most of whom self-selected out of STEM careers by the 8th grade. So again, I ask myself, are we starting too late?

My efforts towards spanning the gap between high school and a career in manufacturing may be getting sabotaged way before I even start to address it.

I tried to think about how I myself, as an engineer, got interested in pursuing a STEM degree. What kept me from losing interest by the time I got to high school? I know my dad who was a dentist played a role. He taught me to be curious and to think about how things related to one another. He was a great mentor to me and my siblings. I know that as a whole, having mentors be part of the education equation is a big part of keeping kids interested. MACNY and PEB continue to address this by playing roles in P-TECH at the high school level and Enterprise America at the elementary school level. I feel we make a big difference in this realm.

I know it wasn't just my dad and curiosity, but I also attribute my elementary school library and its abundant supply of

biographies to my unwavering interest in STEM. The nuns made us borrow a book every week and report back on our reading. I learned to love STEM by living vicariously through entrepreneurs and inventors I learned about in books. They gave me the opportunity to imagine myself in those kinds of jobs.

Last year, STEM magazine came out with a list of top reads for STEM and I thought I would share them. This is an easy way for all of us to address the drop off of STEM curious kids – put a book in their hand.

Buy a book for a classroom or library in your local school district. Better yet, offer to go in to a class and read to them.

The complete list can be found at <http://static.nsta.org/pdfs/2018BestSTEMBooks.pdf>

A few of the books that I enjoyed most from the list for primary school are:

Ada Lace Sees Red by Emily Calandrelli with Tamson Weston. This is the story of a little girl struggling with an art project because she is color blind.

Caroline's Comets by Emily Arnold McCully. This book has both STEM problem-solving and illustrates the societal barriers that used to exist for women in astronomy.

For young readers, a couple of the most interesting titles were:

Music of Life by Elizabeth Rusch. This book chronicles the invention of the piano and integrates music and science to interest children in fields not always considered STEM.

Warcross by Marie Lu Penguin, uses STEM challenges within the world of competitive, online gaming and virtual reality technology to encourage and develop inquisitive problem-solvers.

Elon Musk and the Quest for a Fantastic Future, in the Young Readers' Edition, by Ashlee Vance shows the growth of an innovator and includes excellent examples of his failures, testing, and many iterations that led to his ultimate success.

I hope you can take a minute to look at the whole list and find a way to share even one with a STEM curious kid in your own life.