



Bright Horizons

An Interview with engineer and educator, Michelle Shafer

Celebrate engineers during National Engineering week and all year long by understanding who they are and what keeps them excited about what they do. We sat down with engineer and educator Michelle Shafer of WhiteBox Learning to get her thoughts about careers in engineering.

Q: Tell us about your career as an engineer. What kind of engineering did you practice?

I studied biomedical engineering. I worked mainly on a research level, looking specifically at implants and a coating that would be applied to the implants that would be bio-compatible and contain benefits for the patient.

Q: When and why did you decide to move from corporate engineering to teaching?

I decided early on in my career that I loved learning and I love the field of engineering but missed the people aspect of a research biomedical engineering job. I decided to explore education because I was interested in exposing younger students especially young women to the field of science and engineering.

Q: What excites you about teaching the intersection of engineering and science?

When I entered teaching, STEM was not a common acronym and teaching engineering in school was foreign. I went into engineering because my guidance counselor told me I would be good at it because I liked science and was good in math. At that time, had no idea what engineering was or even really what they did. Today, students are exposed to the field through both outreach from colleges and many companies.



Michelle views film in her lab.

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Q: How has the world of engineering changed for young women?

The opportunities open to our students are overwhelming. We still have some distance to travel to keep young women in the field. I think industry is starting to become more family friendly and tries to actively recruit women. I also think there is beginning to be a culture shift letting young women know that they BELONG in the STEM fields. I recently attended a day for girls in STEM and the key note speaker told them they belonged. What a powerful message!

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Q: How would or do you counsel students who are interested in engineering?

I always encourage students to go into engineering even if they think they want to be a doctor or lawyer. I truly believe the world of engineering will open many doors for students. It teaches them to be critical thinkers and creative problem solvers. I believe having an engineering degree has allowed me so many opportunities versus just having a teaching degree. I was able to work part-time and have other opportunities in my career (like working with Flinn :))



Michelle presents research to her team.

Michelle Shafer is a degreed engineer with more than fifteen years teaching experience in high school science. She also holds a Masters of Education. Michelle currently serves as Science Department Chair, a role she has enjoyed for 10. She is a champion for bringing innovative curriculum to her school. Most of Michelle’s career has involved studying how to effectively administer STEM curriculum to students. Her article, Impact of Engineering Case Study in a High School Pre-Engineering Course was published in the Journal of STEM Education. Michelle has been using Whitebox Learning in her classroom for more than 6 years and presents webinars on how to effectively incorporate STEM into teaching.



Flinn conducts monthly webinars featuring Michelle Shafer and other talented presenters. Contact customer@flinnsci.com for more information. To investigate engineering resources and products go to www.flinnsci.com and use keyword engineering, or check out our [CTE page](#).