STEM Gem Career:
CANCER MODELING MATHEMATICIAN

STEM Gem:
TRACHETTE JACKSON

"Once I found out math had the power and potential to address the world's most pressing problems, it made me vigorously pursue a career in math."

STEM Gems Mathematics

Is a career as a Cancer Modeling Mathematician in your future? For years, math research has aided in the treatment of cancer, but it did not become a driving force in its diagnosis and treatment until passionate researchers like STEM Gem Trachette Jackson made computational cancer modeling their full-time job. Watch one of her videos. Then, with your STEM Gems Tribe, **discuss, explore, reflect,** and **act.**

DISCUSS

1. How do Cancer Modeling Mathematicians like Professor Jackson make a difference in the world?

2. What experiences did Professor Jackson have that led to her pursuit of a career as a Cancer Modeling Mathematician?

3. What is Professor Jackson's educational background?

4. What are some of the challenges that Professor Jackson faced along her journey?

5. What are some of Professor Jackson's key accomplishments?

6. What inspired you most about Professor Jackson's story?

7. Professor Jackson says: *"Once I found out math had the power and potential to address the world's most pressing problems, it made me vigorously pursue a career in math."* What pressing real life problem, either regionally, nationally, or globally, would you like to solve? How can math help you solve it?

EXPLORE

1. To pursue a career as a Cancer Modeling Mathematician, what college majors should you consider? What colleges and universities have programs in these areas?

2. What companies hire Cancer Modeling Mathematicians? What is the salary range for a Cancer Modeling Mathematician?

3. What classes should you take in school to prepare for college and a career as a Cancer Modeling Mathematician?

4. Name at least two other women Cancer Modeling Mathematicians. How are they similar to Professor Jackson? How are they different?

5. What professional organizations support women in Cancer Modeling Mathematics? Do they have programs available for middle and high school students?

REFLECT

Professor Jackson advises girls and young women to take upper-level math courses and participate in STEM extracurricular programs. What math courses are offered at your school? Are you slated to take all of them? Are you a member of your school's math team? Are you maximizing the math offerings that your school provides?

ACT

It's time to step outside your comfort zone. Name one concrete thing you will do before your next meeting that will have you one step closer to becoming a STEM Gem. Blog about it. Include it in your written or photo journal. Hold yourself accountable.

Work hard. Be brave. Stay curious.

BE A GEM!

Stephanie Espy

P.S. I'd love to hear about your journey. Share on Facebook, Twitter, or Instagram and tag @STEMGemsBook #STEMGemsTribe, or email me at tribe@STEMGemsBook.com.