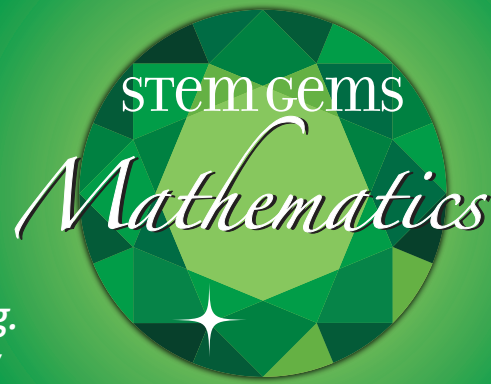


STEM Gem Career:
GRAPH THEORY MATHEMATICIAN

STEM Gem:
MARIA CHUDNOVSKY

“My work is somewhere between solving a crossword puzzle and making a painting. It’s about pure logic and pure aesthetics.”



Is a career in Graph Theory Mathematics in your future? Do you love the clarity and logic behind mathematics? STEM Gem Maria Chudnovsky uses combinatorics to investigate abstract objects called graphs, which are all about networks and connections. She has earned a series of awards for her groundbreaking contributions, including the “Genius Grant.” Watch one of her videos. Then, with your STEM Gems Tribe, **discuss, explore, reflect, and act.**

DISCUSS

1. How do Graph Theory Mathematicians like Professor Chudnovsky make a difference in the world?
2. What experiences did Professor Chudnovsky have that led to her pursuit of a career in Mathematics?
3. What is Professor Chudnovsky's educational background?
4. What are some of the challenges that Professor Chudnovsky faced along her journey?
5. What are some of Professor Chudnovsky's key accomplishments?
6. What inspired you most about Professor Chudnovsky's story?
7. Professor Chudnovsky says: *“My work is somewhere between solving a crossword puzzle and making a painting. It’s about pure logic and pure aesthetics.”* How does this description of Professor Chudnovsky's work resonate with your interests and talents?

EXPLORE

1. To pursue a career as a Graph Theory Mathematician, what college majors should you consider? What colleges and universities have programs in these areas?
2. What companies hire Graph Theory Mathematicians? What is the salary range for a Theoretical Mathematician?
3. What classes should you take in middle and high school to prepare for college and a career as a Graph Theory Mathematician?
4. Name at least two other women Theoretical Mathematicians. How are they similar to Professor Chudnovsky? How are they different?
5. What professional organizations support women in Mathematics? Do they have programs available for middle and high school students?

REFLECT

Professor Chudnovsky says that she would not be where she is today without great math teachers who made her believe that math was the most interesting thing in the world. What can you do to get more from your math teachers? What is your role as a student?

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.

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Giving girls role models.

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