

# Recruiting Women into Engineering Careers

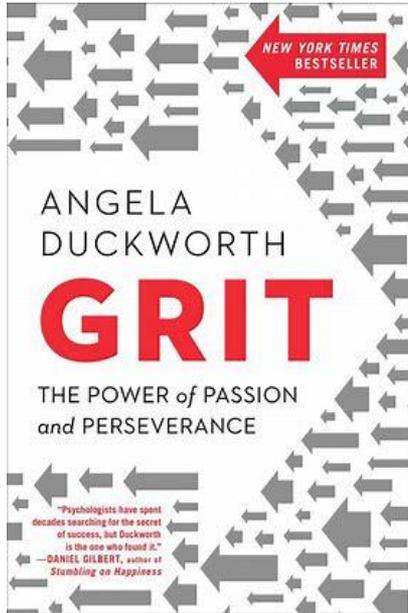
August 8, 2022 presentation to the New Mexico  
Science, Technology, and Telecommunications Committee

Sharon Sessions, PhD  
Director of STEM Outreach  
Chair of Physics



- Why?
- What does it take?
- How do we support it?

# What is one of the biggest predictors of success?



- **Passion** is the consistency of goals held over a long period of time
- **Perseverance** is the ability to overcome setbacks, put in hard work, and finish things you've started

Dr. Angela Duckwork

Professor of Psychology at the University of Pennsylvania

# #1: Interest

Women first need to be exposed to engineering, and it must be fun



Fourth graders competing in FIRST Lego League competition in 2019

## #2: Practice

Deliberate practice  
leads to continuous  
improvement



2022 New Mexico Science Olympiad competition

## #3: Purpose

Women must believe  
that their work  
matters and  
improves the lives of  
others



New Mexico Tech student mentors third grader.

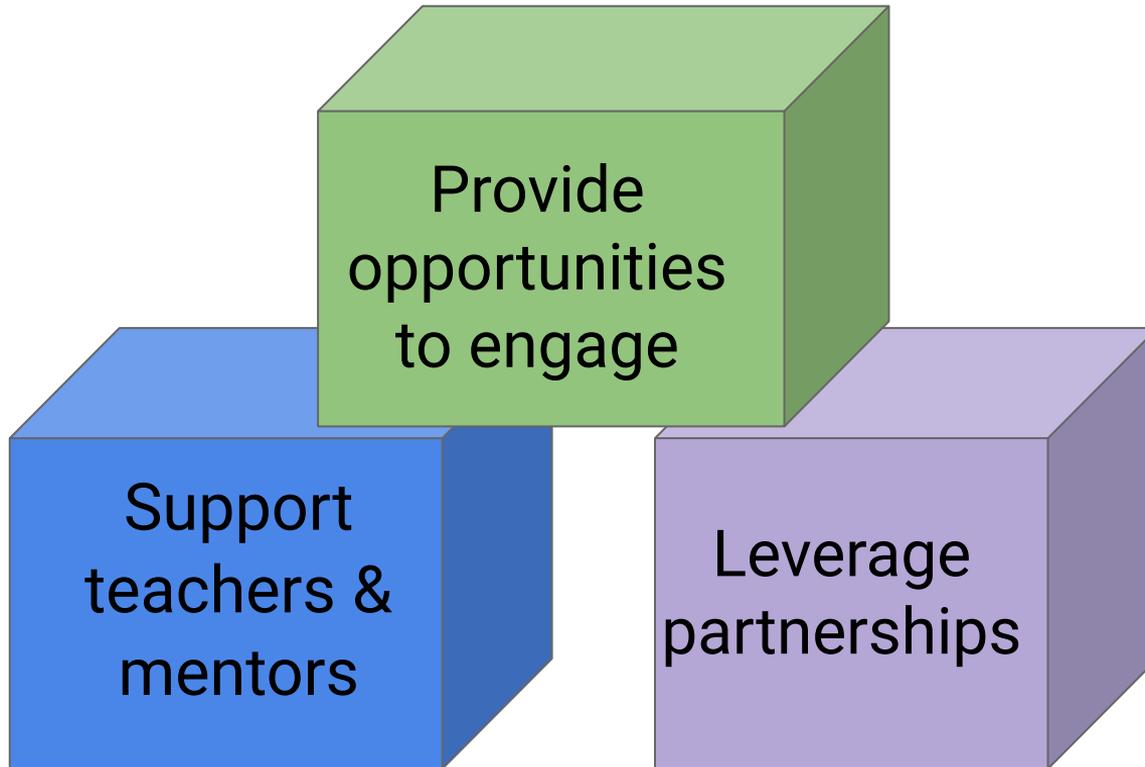
## #4: Hope

Women must believe  
in their capacity for  
achievement and  
their ability to  
overcome difficulties

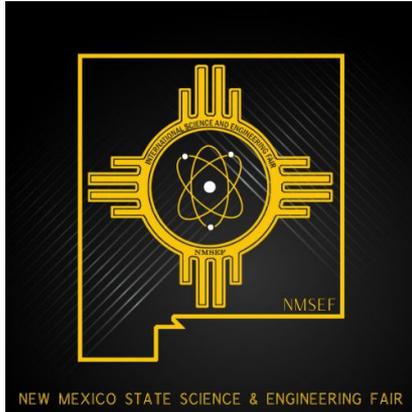
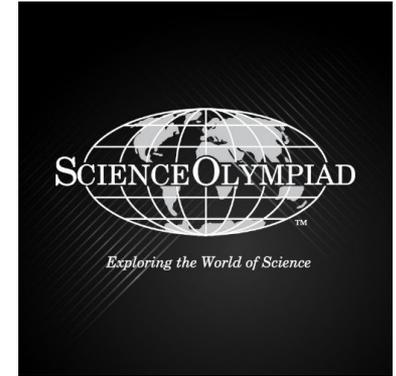
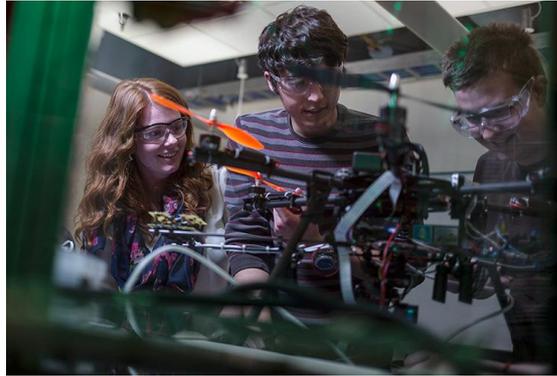


Navajo Tech Student, Malynndra Tome, was accepted into the Lamont Doherty Earth Observatory summer research program at Columbia University.

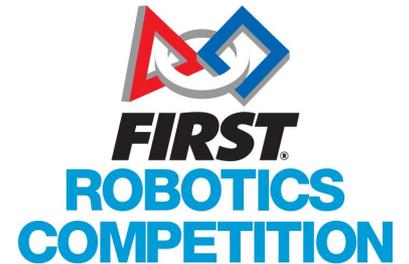
# How can we support these elements?



# Provide opportunities to cultivate GRIT



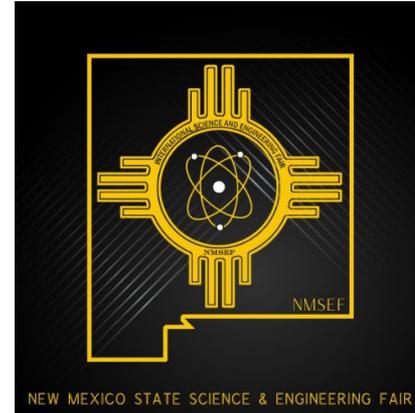
NMT's COMBAT  
ROBOTS & TEAM  
DRONE



# 2022 Statewide competitions



- 529 students
- 34 middle schools & 27 high school teams
- 85% growth from last year



- 138 projects, 163 students
- 8 students participated in the International Science & Engineering Fair

# Support teachers and mentors



Mentoring is an excellent opportunity to recruit STEM teachers that inspire students.



Teacher education programs support teachers to be effective coaches.

# Leverage partnerships



NMT Combat Robots program **grew from 3 to 40 teams** in their competition by partnering with New Mexico MESA.



- 3000 students
- 96 middle & high schools in 27 districts
- 120 MESA Advisors
- 51% female
- 78% minority
- 63% free & reduced lunch
- >300 MESA activities

# Build new partnerships & opportunities



Navajo  
Technical  
University-  
New Mexico  
Tech  
Navajo Nation  
Water  
Purification  
Project



To recruit Women in Engineering Careers, build sustainable infrastructure to support STEM activities that cultivate GRIT

- Support expansion of existing and new STEM programs
- Coordinate activities and connect partners
- Provide resources to collect and analyze data that measure the impact of these activities on recruiting women in engineering