Leaders in the Field
Engaging students in STEM

Justin Taylor - Riverton, WY
Teresa Strube - Laramie, WY
Chad Sharpe - Casper, WY
Robin Schambler - Pinedale, WY
Elementary

Justin Taylor

- 13 years of teaching in grades 1st, 3rd, 5th, and 6th.
- Worked for 7 years at Idaho National Lab within Teaming with Teachers Program.
- Currently a Math and Science facilitator in Riverton, WY.
Mars Lander Project

Student-lead project. Students are given intro and guidelines. Project is focused around the Engineering Design Process.

https://www.youtube.com/watch?v=AcepkWRx4SM
https://www.youtube.com/watch?v=RzjydSRRdKM
Successes and Struggles

Family Engineering Night

District Technology Restrictions
Community Involvement

Outdoor Classrooms
PTO is paying for supplies.
Teton Science School
Geometry and Construction Class through the High School
Local Businesses
Middle Level-UW Lab School

- 4 Science Teachers: Life, Earth, Physical, Space. Teachers have science and math endorsements. Integrated STEM throughout grades 6-9.

- Multi-Grade Classrooms
- 95 Minute Science Rotations
- Project Based Learning
STEM Curriculum

- NGSS
- Sustainability Fair
- Engineering Fair
- Keystone Science School
- Pi Day
- Water Fair
Extensions and Electives

No Risk

Creation

Tech Lab & iGame-uCompute
Challenges

- NGSS
- Space & Funding
Partnerships/Stakeholders

- SMTC
- LRC
- SER
Outcomes

- Data Driven
- Science PAWS
- Math MAP Scores
High School-Teaching

Physics students launch experiment...
High School-Principaling

Architecture
Engineering
BioTechnology
Robotics
3D Modeling

FRC
FTC
Expand & Connect

5 Community advisory boards (400)
- Provide insight into “Industry Standard”
- Advise on outcomes for student experiences
- Act as community resource
  - Externships & Internships
  - Capstones & Projects
- Champions
Informal Learning

Robin Schamber  University of Wyoming Extension 4-H & Youth Development

- Research Science Background
- 4-H & Youth Development Educator in Pinedale
- 400 Youth, 76 volunteers in 4-H program
- Another 100+ Youth reached annually in Afterschool programs
- Specializes in STEM education in out of school programs
Afterschool STEM Education

Inquiry Based and Experiential
4-H STEM - Robotics, Aerospace, Gardening, Animals and just FUN Science!
Success Stories!

Wyoming State Champions!

Now reaching hundreds of new members!

2012 State Champs!

2014 Champs!- Headed to California!
Community Partnerships

"Alone we can do so little; together we can do so much." - Helen Keller

Energy Companies
Local Government Agencies
School Districts
BOCES

QEP- Rose Skinner 4-H Preserve Donation