International trade (particularly produce imports) at the U.S./Mexico border ports of entry at Nogales and Douglas

U.S. Department of Defense engagement at the Fort Huachuca Army Base in Cochise County

Tourism, based upon the significant geographical and historical sites

Some agriculture and agribusiness opportunity in Cochise County

Economic Vitality
<table>
<thead>
<tr>
<th></th>
<th>Jobs</th>
<th>Non Farm Share of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Nonfarm</strong></td>
<td>34,300</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Total Private</strong></td>
<td>22,700</td>
<td>66.2%</td>
</tr>
<tr>
<td><strong>Goods Producing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mining and Construction</td>
<td>1,100</td>
<td>3.2%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>500</td>
<td>1.5%</td>
</tr>
<tr>
<td><strong>Service-Providing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Service-Providing</td>
<td>21,100</td>
<td>61.5%</td>
</tr>
<tr>
<td>Trade, Transportation, and Utilities</td>
<td>6,200</td>
<td>18.1%</td>
</tr>
<tr>
<td>Information</td>
<td>300</td>
<td>0.9%</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>900</td>
<td>2.6%</td>
</tr>
<tr>
<td>Professional and Business Services</td>
<td>4,300</td>
<td>12.5%</td>
</tr>
<tr>
<td>Educational and Health Services</td>
<td>4,600</td>
<td>13.4%</td>
</tr>
<tr>
<td>Leisure and Hospitality</td>
<td>3,900</td>
<td>11.4%</td>
</tr>
<tr>
<td>Other Services</td>
<td>900</td>
<td>2.6%</td>
</tr>
<tr>
<td><strong>Government</strong></td>
<td>11,600</td>
<td>33.8%</td>
</tr>
<tr>
<td>Federal Government</td>
<td>5,100</td>
<td>4.9%</td>
</tr>
<tr>
<td>State and Local Government</td>
<td>6,500</td>
<td>19.0%</td>
</tr>
</tbody>
</table>

### Cochise County Large Employers (2015)

<table>
<thead>
<tr>
<th>Employer</th>
<th>Fulltime Equivalent Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fort Huachuca</td>
<td>7,956</td>
</tr>
<tr>
<td>U.S. Department of Homeland Security</td>
<td>1,720</td>
</tr>
<tr>
<td>Cochise County</td>
<td>816</td>
</tr>
<tr>
<td>Sierra Vista Unified School District</td>
<td>707</td>
</tr>
<tr>
<td>Wal-Mart Stores, Inc.</td>
<td>643</td>
</tr>
<tr>
<td>Canyon Vista Medical Center</td>
<td>623</td>
</tr>
<tr>
<td>General Dynamics Information Technology</td>
<td>623</td>
</tr>
<tr>
<td>Arizona State Prison Complex</td>
<td>615</td>
</tr>
<tr>
<td>Cochise College</td>
<td>521</td>
</tr>
<tr>
<td>Douglas Unified School District # 27</td>
<td>492</td>
</tr>
<tr>
<td>Northrop Grumman Corporation</td>
<td>450</td>
</tr>
</tbody>
</table>

Source: Cochise College Center for Economic Research. *Note.* A fulltime equivalent employee equals one fulltime or two part-time employees. Includes only those employers that participated in the annual top employer survey. *Large employer U.S. Department of Homeland Security, which includes Immigration and Customs Enforcement (ICE), Customs and Border Protection (CBP), and U.S. Border Patrol, did not participate.*
Community Unique Strengths

• Fort Huachuca Army Post—Communications and Intelligence Center---Cyber Security, Engineering and Aviation

• Proximity to the Mexico Border

• Community Demographics—Education level of SV area citizenry according to the U.S. Census Bureau’s 2009-2011 American Community Survey (ACS)

91.3 percent of Sierra Vista’s population aged 25 years and older has at least a high school diploma or equivalent. This is above countywide, statewide, and national levels.

Approximately 29.8 percent of Sierra Vista residents hold a bachelor's degree or higher, which is also higher than county, state, and national levels

Third grade AIMS data: 69% of pass Math Tests and 77% pass Reading Tests
Challenges

• Lack of STEM collaboration across educational community
• 28% of children under 5 years of age live in poverty
• Minimal coordinated community STEM efforts
• 62% of K-12 students receive free and reduced lunch
• Cochise Community College and University of Arizona South have a low % of Graduates in STEM fields
• Employment opportunities in pure STEM fields limited
• Limited business engagement with educational entities
WHAT IS SIAP?
STEM In Action Partnership (SIAP) is located within Cochise County and centralized in the city of Sierra Vista. It collaborates with businesses, educators, and organizations to create business engagement opportunities; strengthen teacher effectiveness; and integrate STEM into the local schools. SIAP seeks to prepare students for careers in Science, Technology, Engineering, and Mathematics (STEM) to stimulate the economy.

WHAT DOES SIAP DO?
- Assists teachers in finding STEM volunteers for their classroom/STEM Club activities.
- Works with businesses to increase their contributions to STEM education in sustainable and meaningful ways; ultimately improving workforce development.
- Serves on STEM education committees.
- Supports teachers in identifying funding sources and writing effective grant proposals.
- Partners to provide professional development opportunities to educators.
- Helps develop and/or deliver STEM curriculum to local schools.
- Collaborates on community STEM events.
- Highlights and rewards STEM collaborations and achievements.
  - Partners with groups and events, such as the Sci-Tech Festival, to publicize activities and events.

HOW CAN I GET INVOLVED?
Contact SIAP members regarding community events you would like to propose or facilitate.
Offer to volunteer or sponsor community events that have a STEM focus.
Volunteer in classrooms or with STEM Clubs.
STEM in Action Partnership kicks off with Google speaker

Sierra Vista, with the presence of Fort Huachuca, is a bit of a powerhouse when it comes to science, technology, engineering and math but the community sometimes fails to get that message out. That is changing, as an informal partnership of schools, businesses, and organizations will formally unveiling the STEM in Action Partnership, or SIAP. The initiative hopes to take a splash right away, sponsoring a free community event, “Iterating Education,” which will feature Jaime Casap, educational evangelist for Google. The event to take place on March 4 at Cochise College. Part of it’s an offshoot of the Innovation Campus Project, which is a STEM-focused partnership between the U.S. Army, the University of Arizona, Cochise College, Northrop Grumman and local K-12 schools. The new initiative is less formal and wider reaching, being a laundry list of other entities such as Proneon, the City of Sierra Vista, the Sierra Area Chamber of Commerce, and others.

Steve Pedigo, corporate executive lead for Grumman.
STEM Mentoring Program

ENLIST 2.0 Engineering New Leadership in STEM Teaching Goals:

- Professional STEM collaboration between industry and educators
- Increase teacher efficacy in STEM content
- Build 21st Century skills from strategic workforce placement
- Explore real world problem based learning and curriculum aligned with AZCCCR standards
- Investigate problem based instruction with integrated STEM content
- Escalation of student interest and rigor in STEM areas
- Connect industry to local educators

Goal of the Arizona STEM Network:

“To achieve its vision of an Arizona recognized globally for a qualified workforce that drives the economy, the Network is focused on 1) creating meaningful business engagement opportunities in education; 2) strengthening teacher effectiveness in STEM; 3) integrating STEM into schools and districts; 4) changing the culture and community fabric to embrace STEM; and 5) measuring outcomes.”

Retrieved from: http://stem.arizona.edu/

How Industry Can Help?

- Recruit industry volunteers in STEM fields to mentor a classroom teacher (grades 4 – 8)
- Offer on-site tour of facility to classroom teacher(s)
- Collaborate with teacher a minimum of twice a month for mentoring
- Share real world problem-based ideas

Why?

- Underutilized sharing of experienced workforce skills with community
- Teachers and their students would increase STEM proficiency
- Educators need the professional resources to improve their STEM development
- Service to the community by industry partners
- Possible return of future STEM workers to the community

Sponsors: AZ Science Foundation Grant, AZ Community Foundation | Contact: Sandra Trevino, NBCT, M.Ed. strevst4stem@gmail.com
STEM Rural Activation and Innovation Network (RAIN)

Innovations in Development Project

- Establish a Visible Showcase of STEM projects, celebrating project activities and participants
- Mobilize local STEM experts
- Identify best practices
- Build a research base of knowledge
- Showcase of STEM projects
- To explore STEM Disciplines
- Informal STEM learning
- Leverage local resources

AZ Statewide project---4 regions
Funded by the National Science Foundation
4 year grant beginning 2017

Cochise County Initiative Region Champion
Dr. Ronda L. Frueauff
frueauffr@cochise.edu