







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

**Economic  
Vitality**

Tourism, based upon the  
significant geographical and  
historical sites

Some agriculture and agri-  
business opportunity in  
Cochise County



<b>Cochise County Employment by Industry (2015)</b>		<b>Non Farm</b>	
	<b>Jobs</b>	<b>Share of Total</b>	
<b>Total Nonfarm</b>		34,300	100.0%
<b>Total Private</b>	22,700	66.2%	
<b>Goods Producing</b>	1,600	4.7%	
Mining and Construction	1,100	3.2%	
Manufacturing	500	1.5%	
<b>Service-Providing</b>	32,700	95.3%	
<b>Private Service-Providing</b>	21,100	61.5%	
Trade, Transportation, and Utilities	6,200	18.1%	
Information	300	0.9%	
Financial Activities	900	2.6%	
Professional and Business Services	4,300	12.5%	
Educational and Health Services	4,600	13.4%	
Leisure and Hospitality	3,900	11.4%	
Other Services	900	2.6%	
<b>Government</b>	11,600	33.8%	
Federal Government	5,100	4.9%	
State and Local Government	6,500	19.0%	

Source: Arizona Office of Employment and Population Statistics and [UsEconomicResearch.com](http://UsEconomicResearch.com)

## **Cochise County Large Employers (2015)**

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

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)

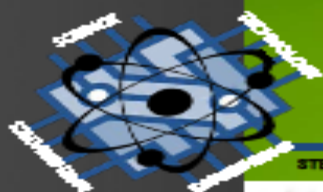
91.3 percent of Sierra Vista's population aged 25 years and older has at least a high school diploma or equivalent. This is above countywide, statewide, and national levels.

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



SIAP

STEM In Action Partnership

# on EDUCATION

FOCUSED



## 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.

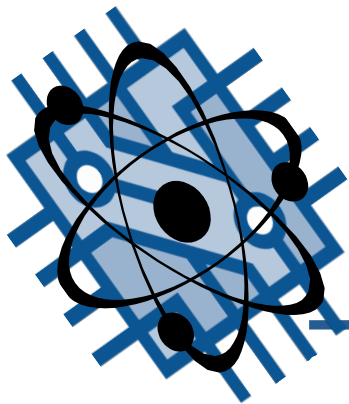
## HOW CAN I GET INVOLVED?

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.





# SIAP

STEM In Action Partnership

## 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.

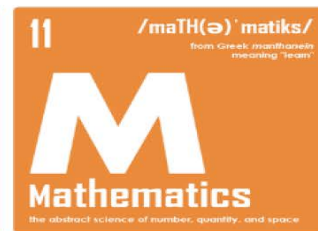
That is changing, as an informal partnership of schools, businesses, and organizations will formally unveiling the STEM in Action Partnership, or SIAP. The initiative hopes to make a splash right away,

inspiring a free community event, "Iterating Education," which will feature Jaime Casap, global education evangelist for Google. The event is set to take place on March 4 at Cochise College. In part, 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, joining a laundry list of other entities such as the Sierra Vista Area Chamber of Commerce, and others. It's an evolving community initiative to take what has been here for years in a grass-roots kind of way and strengthen the participation," says Steve Pedigo, corporate executive lead for Northrop Grumman.

FEB








13





# 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 21<sup>st</sup> Century skills from strategic workforce placement
-  Explore real world problem based learning and curriculum aligned with AZCCR 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.sfaz.org/>



### 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 work force 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

# RAIN



## 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**

*Informal  
STEM  
learning*

**Build a research base of knowledge**

**Showcase of STEM projects**

**To explore STEM Disciplines**

**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***



