## **Building Connections to Expand Arizona's Bioscience Education**

Collateral Institutions: Investments/Returns

## **High School Benefits**

### **Student Dividends**

#### University of Arizona (U.A.) NSF Grant

- U.A. professors do bacterial genomics research in high school (HS) DE classes
- Teachers receive \$2,000/yr for lab supplies
- Teachers receive grad course credit tuition free

#### Supplies & Support

- Funds biotech lab equipment
- Lab supplies
- Science tech lab support

#### Course Variety

- HS students choose from nine different college biotechnology courses.
- In addition, 6 college science courses are offered to augment the biosciences.

## USDA eUBET Grant

Mentoring

Superor

#### Science Fairs

- Initiated in two high schools,
- Expanded in three high schools,
  Students from 9 schools entered Arizona Science & Engineering Fair (AzSEF)

#### Mesa College (MCC) NSF Grant

- Provides a mobile biotech lab to HS's
- Provides teacher training/mentoring

#### Faculty Professional Development

- Biotechnology workshops
- Tuition reimbursement
- Become community college certified
- Research internships

#### Graduation & Transfer

- 93% percent graduated high school & plan to transfer to college
- Five student research internships
- 236 college scholarship recipients
- 43 university scholarship recipients

#### USDA/ARS – Arid Lands Agriculture Research Center (ALARC)

- Provides student & teacher internships / ARS Community Service
- Provides guided tours for bioscience students / promotes ARS research & community involvement

COMMUNITY COLLEGE

#### Promoting Teacher Cooperation

- eUBET acts as a 3<sup>rd</sup> party to negotiate space
   & supplies with teachers; promote cooperation;
- & overcome competition in science departments

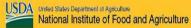
#### Students Demographics

- 18%, Spanish is their primary language.
- 36% are Spanish/Hispanic; 6% African Am.
- Average 4-5 family members; 32%, low SES
- 32% 1st in family in college; 59% female

# Teachers and Students value Provide to Piccological and Students value

- Survey Results Indicate:

  Teachers and Students value: Labs/lab technicians, lab equipment, dual enrollment. USDA United States Department of Applicature
- Barriers to Bioscience growth: Local school budgets, HS scheduling, lab availability



#### **Future Considerations**

Construct a science & engineering academy (grades 7-12) on a HS campus; Jointly operated by HS, college, university, & ALARC





Tours

Training



