

# Independent Evaluation

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# Purpose of Evaluation

- ▶ Provide feedback
- ▶ Help ensure goals are being met
- ▶ Guide program or project changes

**It Really Is Important**

# Data That is Collected- PI Form

- ▶ Contact information
- ▶ Project/work overview
- ▶ If they conducted outreach and what that was and who were the participants (school age, community, etc.)
- ▶ How many students or community members attended outreach or were reached?
- ▶ Demographics of the school or community (not individual information on K-12 students)
- ▶ Project benefits
- ▶ Completed invoicing
- ▶ Press or social media links
- ▶ Use of NASA resources
- ▶ Space Centers engaged with
- ▶ NASA collaborators and other collaborations
- ▶ Value of collaboration (what was it, sponsorship, data, expertise, etc.)
- ▶ Number of faculty, staff and researchers on project
- ▶ Numbers of students from grad, UG, K-12 and K-12 staff, community members
- ▶ Hours spent by students on the project
- ▶ Location of work
- ▶ Other proposals and funding plans for future
- ▶ Patents, presentations and publication
- ▶ Online teaching tools used

# Data Collected- Student Form

- ▶ Year of participation
- ▶ Gender
- ▶ Race
- ▶ Ethnicity
- ▶ Disability
- ▶ Considered underrepresented minority (determined by program staff based on above )
- ▶ Citizenship
- ▶ Military service
- ▶ Place of residence
- ▶ First generation status
- ▶ Low income (SES)
- ▶ Project involved with (Internship, Fellowship, Proven Idaho Program)
- ▶ Project Location
- ▶ PI and project name or NASA mentor and project name
- ▶ At what institution they are enrolled and what they are studying (major)
- ▶ Anticipated graduation date, and professional goal
- ▶ Paid or unpaid

# New Data to be Collected Through Surveys

- ▶ Event Participation and Feedback Forms
- ▶ Relationship Development Interview Protocol
- ▶ Scale: Authentic STEM Experiences
- ▶ Scale: Student Engagement
- ▶ Scale: Mentoring Best Practices

# Event Participation and Feedback Forms

## 1. Event Specifics:

- "Which event did you attend?"
- "On a scale of 1 to 5, how relevant did you find the content of the event to your interests or studies?"

## 2. Engagement Metrics:

- "How engaged did you feel during the event? (Not at all engaged - Extremely engaged)"
- "Which parts of the event did you find most engaging?"

## 3. Learning Outcomes:

- "What is one new thing you learned from this event?"
- "Has this event increased your interest in NASA and space exploration? (Yes/No)"

## 4. Future Participation:

- "How likely are you to participate in similar events in the future? (Unlikely - Very Likely)"
- "What topics or types of activities would you like to see in future events?"

# Relationship Development Interview Protocol

- ▶ Nature of the Collaboration
- ▶ Benefits and Outcomes:
- ▶ Challenges and Solutions
- ▶ Impact on Career or Institution
- ▶ Future Perspectives
- ▶ Advice for Others

# Authentic STEM Experiences Scale

- ▶ Designing a scientific research project
- ▶ Designing an engineering research project
- ▶ Finding research articles
- ▶ Writing a research proposal
- ▶ Presenting a research proposal
- ▶ Planning an experiment
- ▶ Building and testing a prototype
- ▶ Using laboratory techniques
- ▶ Using field research techniques
- ▶ Using laboratory equipment and instrumentation
- ▶ Analyzing data
- ▶ Writing a scientific or technical paper



# Student Engagement Scale

- ▶ Was it challenging.
- ▶ Provided me with opportunities to engage with peer mentors.
- ▶ Provided me with academic support or assistance.
- ▶ Connected me with students like myself.
- ▶ Provided me with opportunities to work together in collaborative projects.
- ▶ Provided an environment in which students help one another to advance towards career goals.
- ▶ Provided me with opportunities to voice my opinions.
- ▶ Encouraged me to pursue my interests.
- ▶ Helped me decide if the field is right for me.
- ▶ Helped me explore whether research and graduate school may be the right path for me.
- ▶ Helped me win an academic award or competition.
- ▶ Enhanced my resume/CV.
- ▶ Connected me to faculty who will be helpful for my future education or career.

# Mentoring Best Practices Scale:

## Perceptions of interactions with mentors/advisors

- ▶ Accessibility
- ▶ Resources provided
- ▶ Showed interest
- ▶ Connected me to opportunities
- ▶ Model scientific/inquiry process

# We Need Your Cooperation

**Encourage-Encourage-  
Encourage everyone to  
respond**

Employee surveys typically have a response rate of 25-60%.

**Please be thoughtful and thorough in your responses**

According to most research, the average time spent answering a single survey question is around 7.5 seconds;

