GUIDELINES FOR SUBMITTAL OF EVALUATION PLANS

NASA's Office of STEM Engagement requires recipients of its cooperative agreements to conduct an independent evaluation of its sponsored activities. To facilitate awardees efforts to meet this obligation they will use the uniform format presented here in reporting their evaluation results to the Office of STEM Engagement. This template benefits awardees by providing clarity on report elements and standardization of the types of information required to assist in comparing outputs and outcomes.

This template is the result of the Office of STEM Engagement Performance and Evaluation Strategy (Learning Agenda). Among the priorities of this learning agenda, is to improve the overall data quality, integrity and analysis/reporting capabilities. In purist of this goal the components, format, and reporting requirements laid out below focus data collection in alignment with Federal, Agency and Office of STEM Engagement (OSTEM) legislative directives, priorities, and metrics of interest while reducing the volume of data collected by eliminating duplication, reducing the burden placed on recipients of cooperative agreements, and standardization.

In compiling and submitting their evaluation reports cooperative agreements recipients are expected to adhere to the instructions and requirements developed for each component of their report as outlined but may provide additional site-specific information as necessary.

Evaluation Plan Elements

The cooperative agreement awardees shall submit a Comprehensive Evaluation Plan within 30 days of participating in the Space Grant Program-Level Independent Evaluation Kick-Off Meeting via email to NASA Shared Service Center (NSSC), the Space Grant Deputy Project Manager, and NASA Performance & Evaluation (P&E) Team personnel. The purpose of the evaluation report is to 1) Document project activities and accomplishments measured against proposed goals and objectives. 2) Provide evidence the project has advanced stakeholder priorities. 3) Report the extent to which awardees have fostered and developed collaborations and/or partnerships. 4) Summarize data collection activities and relevant evaluation findings and. 5) Establish a set of recommendations based on empirical evidence findings to enhance the program.

All Evaluation Plans submitted to NASA's Office of STEM Engagement by cooperative agreement awardees must include the following elements:

- Cover Page
- Table of Contents
- Introduction
- Evaluation Design Methodology
- Timeline
- Risk Mitigation Strategy
- Works Cited

- Appendices

Cover Page

All evaluation reports submitted to NASA's Office of STEM Engagement must contain a title page with the following elements:

- Project Title
- Institutional Affiliation
  - College/Department
  - Address
- Federal Award Identification Number (FAIN) or Other Identifying Number
- Project Principal Investigator (PI)
  - Name
  - Title
  - Contact Information (Email Address and Phone Number)
- Project Independent Evaluator
  - Name
  - Title
  - Contact Information (Email Address and Phone Number)
- Submission Date
- Cooperative Agreement Period (Start Date, End Date)

A template outlining how awardees are to organize and present these elements is located on the following pages.

Table of Contents

The table of contents is a formatted list of the report's sections and subsections, including References and Appendices with page numbers. In drafting your Table of Contents please:

- List only pages that appear after the table of contents
- Ensure the table of contents is number correctly and match the actual page each section/subsection is found on
- Do not include Tables and Figures in your Table of Contents
  - These may optionally be listed in their own "List of Table" and "List of Figures" each in their own tables and on their own successive pages

A template outlining how awardees are to organize and present the Table of Contents is located on the following pages.

Comprehensive Evaluation Plan

Program Title

Grant: NX#######

Cooperative Agreement Awarded Month Day, Year - Month Day, Year

Institution Name

Department/College

Street Name, Building

City, State Zip code

Period of Performance: Month Day, Year - Month Day, Year

Submitted Month Day, Year

By

Principal Investigator: Independent Evaluator:
Name   Name
Origination   Origination
Email & Phone Number   Email & Phone Number

Table of Contents

Introduction

Provide background information, outline the major activities and accomplishments during the reporting period, and place the evaluation in context.

Background

Office of STEM Engagement

Briefly discuss and review the National Space Grant Program and its major goals and objectives.

Program Information

Provide a brief description and background of the program being evaluated including:

- Proposed implementation dates, timing, and frequency of activities
- Proposed type of content and how the content is delivered (e.g. Saturday, summer, or after school)
- The goals and objectives or performance measures of your program as they relate to those of the agency-wide initiative, note each laid for the initiative by the Office of STEM Engagement must relate to one or more goals or performance measures specific to your program
- The target audience of this project (if multiple activities were held, include all target audiences; e.g. Students, Teachers, Parents/caregivers)

Purpose of the Evaluation

State the purpose of the evaluation; consider the stakeholders who will receive the report and how each will use the results (for example ensuring accountability, documenting progress, identifying successes, compile recommendations for continued improvement). Additionally, this section of the report should include:

- A Logic Model that summarizes program inputs, activities, and outcomes, you may optionally divide outcomes between short and long term

Evaluation Design and Methodology

This section details the evaluation plan and includes the following elements:

- Evaluation Questions
- Data Collection Strategy
- Evaluation Methods

Evaluation questions

Layout each of the evaluation question assessed in the proposed evaluation. Each question must:

- Must relate to a specific site goal or objective/performance measure
  - Note that each site goal or objective/performance measure must have at least one associated evaluation question

- Are clear, concise, and falsifiable
- Do not contain normative or subjective language
- Address measurable concepts
- Focus on a specific program component

Data Collection Strategy

This component lays out the strategy for obtaining the data necessary to address the proposed evaluation questions. This includes:

- Clearly defined indicators for each concept identified in evaluation questions
- Each indicator clearly operationalized and associated with specific data collection instruments/protocols
- Instruments are valid and reliable
- Adequately described the strategy or method used to recruit respondents
- A statement of the proposed sampling method (e.g. convenience, random, PPS, Snowball, etc.)

Evaluation Methods

This section lays out the proposed evaluation methods to analyze the data collected for the evaluation. For each of the proposed instruments listed above provide a detailed discussion of the analysis process and should:

- Be based upon reputable models and techniques that are appropriate to the content and scale of the Space Grant Program
- Detail the methods used to analyze the data (e.g. descriptive statistics, T-test, ANOVA, Regression, etc.)
- Indicate the variable(s) derived from the instrument that will be analyzed using the method(s) discussed
- An explicit indication of the unit of analysis

Timeline

This section lays out the proposed timing of the evaluation and should include a Gantt chart or Similar figure that:

- Includes all evaluation activities and milestones
  - Data collection
  - Data analysis
  - Periodic reporting of evaluation findings to stakeholders
  - Drafting of the Evaluation Report
- Indicates the responsible party for each activity or milestone
- Activities and milestones are scheduled with a resolution at the monthly level

Risk Mitigation Strategy

This section outlines contingency plans to respond to events and or changes in the implementation of the program that poses a risk to the successful completion of the evaluation

consider:

- How data collection activities will be rescheduled if activities are canceled or postponed
- Will any of the evaluation activities require IRB approval, if so specify which activities will require submission to the IRB and the timing of that submission as a strategy to overcome any delays obtaining clearance
- How analysis methods will be affected by the potential of low response rates
- How to ensure continuity in the event of turnover in evaluation staff
- How you will communicate to stakeholders at NASA's Office of STEM Engagement or others in the event these or other unforeseen adversities materialize

Works Cited

A reference section list any research or instruments used in the Evaluation Report.

- All works cited in the body of the report should have a corresponding entry in the works cited list
- All citations must follow MLA, Chicago, APA, APSA or other commonly used formatting guidelines
- Entries must appear in alphabetical order
- Entries are single-spaced and spacing between entries is double spaced

Appendices

Appendices provide additional information and reference material. There are three required elements to be included although additional elements may be included as required.

Evaluation Data Collection Summary Matrix

Include a data collection summary matrix similar to examples outlined on the following page. This table summarizes the evaluation questions and provides an explicit linkage of your programs goals and objectives/Performance targets those NASA has set for the broader initiative as a whole

Copies of Instruments

Include copies of your instruments (i.e. surveys, interview protocols, coding guidelines, etc...). Each instrument used must be placed in its own Appendix and appear in the Table of Contents

Examples of Evaluation Data Collection Summary Matrix

Table 3. Data Collection Summary (Example A)

	NASA Space Grant Objective	Evaluation Question	Instrument(s) Used	Data Collection Method(s) & Sampling Strategy	Data Analysis Method(s)
NASA Space Grant Goal	*Contribute to the NASA mission, specifically in the area of government and industry partnerships "to improve America s aerospace technologies and advance American leadership by funding education, research, and informal education projects through a national network of university based Space Grant consortia*				
	[Increase the number of historically underserved and underrepresented students interested in NASA specific STEM careers]	*[To what extent is the program engaging students from underserved or underrepresented communities]*	*[Enrollment Forms]*	*[Data collected when registering for the program from all participants]*	*[Descriptive Statistics]*
	[Provide skills to parents/caregivers to work with and encourage their children in STEM activities and programs]				

Table 3. Data Collection Summary (Example B)

Evaluation Question	Data Collection Methods	Frequency and Schedule	Data Analysis Approach
[To what degree does the program attract and serve historically underserved and underrepresented students?]	*[-Sign in sheets at weekly events and summer camp registration logs.* *-Initial registration demographic survey filled out by parents.* *-Field observations, and journaling]*	*[Summarize monthly data from each event site throughout the year.]*	*[Descriptive Statistics, coding themes qualitatively using MaxQDA software]*
[To what extent does the collaboration result in a valued experience by the organization?]	*[Researcher will conduct semi-structured interviews with various stakeholders including parents, teachers, administrators, assistant superintendent, and school board members. Teachers will complete survey questionnaire assessing student groups during the Summer course.]*	*[At a sample of three events.]*	*[Open coding and coding themes qualitatively using MaxQDA software.]*