

## GUIDELINES FOR EVALUATIONS AT AMNH

These guidelines have been developed by the Education Research and Evaluation group, and are intended to shape both summative and formative evaluations within and across efforts at the museum. The guidelines have emerged from assessments of existing and past evaluations; reviews of evaluation literature; and a collective effort to build consensus, articulate values and determine where we should focus our efforts (for a discussion of our methods, see the attached Methods Appendix).

Given the current focus in the field of conducting high-quality evaluations of informal science experiences, we first share our recommendations for the **features of the evaluation design** itself. We follow with suggestions for **five key steps** that may help support the **process of developing an evaluation**. We also include some ‘questions to consider’ which might be worth discussing in advance, so that findings and from the evaluation can be used more broadly across programs. In this document, we use the term “**intervention**” to refer to the AMNH program, exhibition, game, application experience, tool or material to be evaluated. We use the term “**evaluation**” to refer to the process of conducting formative or summative assessments of the intervention—either by hiring outside evaluators or doing assessment work internally.

### I. THE EVALUATION

We are aiming for an evaluation that does the following:

- Pushes back on what we are doing; makes us ask important questions about our work
- Provides empirical data to help us learn about whether and how we are accomplishing our goals and how we might adjust our current practice
- Sets findings within a larger context or compares to findings about similar work going on in other settings (e.g. through a literature review or a written discussion of the policy or informal learning context)
- Connects to and builds upon other work happening at AMNH (other programs, similar evaluations, our larger research agenda, our efforts to create some shared approaches to instruments and evaluations)
- In some cases, and if appropriate, helps us prepare to do more research in line with larger questions about teaching and learning

Although circumstances and purposes vary, in general, we suggest that a strong evaluation will have most of these features:

- **An appropriate framing grounded in research**
  - Clearly reflects program goals
  - Includes some literature review (or discussion of similar efforts in different contexts)
  - Identifies key aspects of the AMNH context
- **Key questions carefully framed**
  - Evaluation questions are clear, robust, and targeted

- Questions are connected to program goals
- **Methods that reflect a strong chain of logic**
  - A “chain of logic” drives the design and methods
  - This logic chain should link initial questions, design and methodology, data analysis and conclusions/recommendations
  - Explanations for methodological choices should be included (i.e. rationale for sample sizes, or interviews vs. observations, quantitative vs. qualitative, etc.)
  - Any instruments used should be included in an appendix
- **Value for AMNH clearly articulated**
  - Key findings are highlighted
  - Findings illuminate both challenges and strengths
    - We especially seek findings that identify specific areas of challenge and/or strength and that move beyond “the museum is a great place to learn” and towards characterization of/identification of specific resources, assets, practices
    - Findings that are at a level that is specific and detailed enough that we can learn and build upon our work
  - Findings are connected to a literature review (to what we know in the field; to help us connect findings to a larger research body)

## II. THE EVALUATION PROCESS

Below we describe the process by which we believe the strong evaluation described above might be obtained:

### Step 1. Preparation

Because the most useful evaluations reflect the goals of the intervention and provide opportunities to examine the underlying theory, it is important to help the evaluator understand the intervention and the context. While not every project or exhibit will have a ‘theoretical framework’, our work suggests that evaluations are more successful when programs have made their goals explicit and are articulate about the theories that undergird those aims.

One specific suggestion: program logic models, or theories of action, will be especially helpful for an evaluator—who can then use the evaluation to ‘test’ those ideas and to gather evidence to help inform the ideas that guide our work. Spending time as a team articulating the logic model that guides your specific program can be particularly important preparation for a useful evaluation.

Thus, in preparing for an evaluation, gather information that will best help the evaluator understand the intervention. This includes articulating and sharing:

- The **goals** of the AMNH intervention: the *aims* and *purposes* of this work
  - Gather funding proposals or other materials that help describe goals
- The **theory** (or reasoning) behind the AMNH intervention  
*Be prepared to explain why* the intervention is designed this way and the assumptions about how people will experience it

### Step 2. Articulating goals and purposes for evaluation

The strongest evaluations have clear goals and purposes; build upon prior work; fit with and reflect the context of the museum; and are connected to our overall goals and aims. Before meeting with an evaluator, articulate the **goals** for evaluation. What do you want to learn from the evaluation? What information will help you the most in making your own program improvements? Is there information that might be related to building a foundation for future research and other projects?

Specific kinds of questions the research group has found useful include:

- What *features* of the intervention do you want the evaluator to focus upon?
- What aspects of the intervention do you have the most questions about?
- Are there particular kinds of *data* you might want to gather that will best help the evaluation answer your questions or provide some useful evidence?
- Is the funding/budget adequate for the kind of goals and purposes the evaluation is intended to achieve?

### Step 3. Help guide the design and methods; Connect to our research agenda

The strongest evaluations have a **clear chain of logic** that links initial questions, design and methodology, data analysis and conclusions or recommendations. You may also want to ask for explanations around methodological choices such as:

- Rationale for sample sizes, or interviews vs. observations
- For transparency and further use, any instruments used should be included in an appendix
- How can you help the evaluator make sure he/she gathers data from a representative sample?
- Is the design consistent with, and reasonable, given the budget?

We also would like to work towards evaluations that **take advantage of what we are learning across programs, and that connect to a larger research agenda** (if appropriate). In addition, we are identifying a set of emerging ideas in our research work across programs, for instance, our understanding of the variation in visitor profiles (or learner or teacher profiles)—that visitors (or learners or teachers) are not monolithic in nature. Furthermore, at AMNH we are working towards shared approaches to collecting survey data across programs. To build upon these ideas, consider:

- How could you help the evaluator connect to the *larger educational research agenda* at AMNH?
- What current research or evaluations might your work be related to?

- Are there any resources (surveys, interview protocols, content knowledge assessments) the evaluator might use that would allow us to gather similar data across several efforts?

#### Step 4. Articulating the timeline and working relationship

The most effective evaluations have an **explicit timeline**, and evaluators and AMNH staff have spent time articulating the kind of **working relationship** they will have. While meeting with the evaluator, set up a **timeline** that reflects the dates for the evaluation work. Consider the **kind of working relationship** you would like to have with the evaluator. This might include creating opportunities for the evaluator to observe programs or experiences, to meet with key stakeholders, as well as opportunities for regular updates for you from the evaluator, opportunities to give the evaluators feedback on reports, or for you to examine some initial data.

Additional strategies the R&E group recommends include:

- Inviting evaluators to observe or participate in the programs or experiences being evaluated so they can better understand the specific context of the work at AMNH
- Developing shared instruments (surveys, observation protocols, rubrics)
- Giving feedback on the evaluation design; and on the reports;
- Writing a ‘response’ to the evaluation that can be included in a final report; and
- Getting advice from the evaluator about how to understand/interpret and make use of the findings.

#### Step 5. Plan for using the evaluation for program improvement and learning

To gain the most from an evaluation, the R&E group found that planning ahead specific ways to use an evaluation increases the chances that it will help programs and practices. Before the evaluation is over, think together as a team about **how you will use the findings**. Identify some of the concrete supports you can set up so that you can discuss and share results. This includes setting aside time to read and discuss the results of the evaluation as a group. It also includes making use of existing structures (e.g. meetings) and resources (e.g. people) that you can use to share and discuss findings.

- What are the supports you have, that you can take advantage of, in order to use the results of the evaluation to move forward?
- How will you be using the findings to improve your work?
- How can you share the results of the evaluation beyond your program (opportunities to publish? To share on social media?)? Are there findings that might be relevant to others across the museum?