

Resource 1. LOG Evaluation Logic Model Worksheet



**INSTITUTE of MUSEUM and LIBRARY SERVICES**

1100 Pennsylvania Avenue, NW

Washington, DC 20506

<http://www.ims.gov> or [imsinfo@ims.gov](mailto:imsinfo@ims.gov)

## **Learning Opportunities Grant (LOG) Evaluation Logic Model Worksheet**

### **Required**

**Museum name:** Museum of Living Art (MOLA)

**Museum address:**

The Fort Worth Zoo  
1989 Colonial Parkway  
Fort Worth, TX 76110

**Contact person for LOG evaluation planning:**

Dianne Rees

**Contact title:** Instructional Designer, consultant

**Contact phone:**

**Contact e-mail:** [diannerees@sbcglobal.net](mailto:diannerees@sbcglobal.net)

Sections marked “required” are the components of the abbreviated evaluation plan. Pale gray sections are “optional,” but recommended. Sections not marked required or optional are strongly recommended.

**Required: 1. What is the title of the LOG project whose outcomes you will evaluate?**

Raising conservation awareness at the MOLA

**2. What partner institutions are involved in the project? [Optional]**

The Fort Worth Zoo; Turtle Survival Alliance, Texas Park and Wildlife Department, University of Texas at Austin (Herpetology Department)

3a. Who are the project's key influencers? [Optional]	3b. What will they want to know about your project participants' outcomes? [Optional]
IMLS	How many people participated in this project or used this product? What were their important characteristics as a target audience for this project or product? What key outcomes and indicators did you use to build the project? How many of these participants or users showed the outcome you hoped for? How do you know? Did you meet the need that shaped the project or product?
The Fort Worth Zoo	<ul style="list-style-type: none"> <li>• How will the outcomes of this project further the missions of the Fort Worth Zoo? How will we assess this?</li> <li>• Will the project encourage visitors to buy memberships and/or support our Species Survival Program efforts?</li> <li>• What resources (including money, staff, software, hardware, and other materials) are required for the initiation and maintenance of the project?</li> <li>• How will the project complement the look and feel of current signage and kiosks?</li> <li>• Can components of the project be updated/modified as the MOLA grows?</li> <li>• What training will be required to help staff and volunteer facilitate the project? How much time commitment will the project require for staff/volunteers?</li> </ul>
Turtle Survival Alliance (TSA)	<ul style="list-style-type: none"> <li>• Will the project support the efforts of the TSA (conservation action through development of living turtle collections and recovery programs)?</li> <li>• Will it increase membership in, and support of, the TSA?</li> </ul>
Texas Park and Wildlife Department (TPWD), Amphibian Watch Program. Lizard Watch programs	<ul style="list-style-type: none"> <li>• Will the project encourage visitors to participate in Amphibian and Lizard Watch efforts?</li> <li>• Will the project stimulate visitors to monitor and mitigate pollution in their own environments?</li> <li>• Will the project encourage visitors to support local wildlife conservation efforts/policies?</li> </ul>
Teachers in the Metroplex area	<ul style="list-style-type: none"> <li>• Will the project support state and national standards?</li> <li>• Will the project help students make connections between what they learn at school and what they learn in the MOLA?</li> <li>• Will the project encourage students to develop a greater interest in the life-sciences and in approaches used to investigate research questions relating to environmental sciences?</li> <li>• Will the project foster an interest in continuing education in herpetology and/or environmental sciences?</li> </ul>

	<ul style="list-style-type: none"> <li>• Will learners appreciate the multiple disciplines involved in a study of herpetology and develop an inquiry-based approach to problems of ecosystem alterations and conservation threats?</li> </ul>
Metroplex residents (Fort Worth, Irving, Dallas)	<ul style="list-style-type: none"> <li>• Are learning activities in the MOLA worth my time/personally relevant for me or my children?</li> <li>• How much time will participating in these activities take?</li> <li>• This is a recreational activity for me and my family—will these activities be fun?</li> <li>• Will participating in these activities cost money?</li> </ul>
<b>4. What is the purpose of the project?</b>	
<p><b><u>Required:</u> 4a. What need did you identify that led you to create the project or product?</b></p> <p>The Fort Worth Zoo's Museum of Living Art (MOLA) is the Zoo's newly rebuilt herpetarium. The installation has the dual purpose of spearheading the Zoo's conservation efforts and educating visitors about reptiles and amphibians. For example, the MOLA maintains an active breeding program for Conservation Focus Species and partners with the Turtle Survival Alliance. The MOLA also promotes the conservation efforts of the Texas Park and Wildlife Department and interacts with the University of Texas at Austin to increase public awareness of conservation issues relating to amphibians and reptiles in Texas.</p> <p>In addition to displaying a variety of habitats housing diverse reptile and amphibian species (many of which are endangered), Zoo keepers allow visitors to get an up-close look at some of the reptiles in an open-encounter area. While visitors are highly interested in, and engaged by viewing the animals themselves, the conservation message seems to be getting lost, in part because of the way families are moving around in the exhibit. Visitors generally "window shop," seeing if they can see the animals, taking pictures, and moving on. Signage, kiosks, and current materials relating to conservation, though attractively designed, don't appear to be engaging and keeping visitors' attentions.</p> <p>There is a need to:</p> <ul style="list-style-type: none"> <li>• Enhance awareness of the importance (and personal relevance) of conserving diverse species of reptiles and amphibians (Knowledge, Attitude)</li> <li>• Promote understanding of the interactions between reptile and amphibian species and their habitats and the impact of human activities on the balance of these interactions (Knowledge, Attitude)</li> <li>• Provide learners with an understanding of, and desire to participate in, the conservation efforts being undertaken at the MOLA (Knowledge, Attitude, Behavior)</li> <li>• Develop the observational and analysis skills of visitors to help them monitor and mitigate harmful environmental events (e.g., caused by human activities or by invasive species) in their own neighborhoods (Knowledge, Skills, Behavior)</li> </ul>	
<p><b>4b. What information did you use to identify this need? [Optional]</b></p> <ul style="list-style-type: none"> <li>• Visits to the MOLA (observing interactions between visitors and the exhibits)</li> <li>• Information on the <a href="#">MOLA website</a></li> <li>• Information on the <a href="#">Turtle Alliance website</a></li> <li>• Information on the <a href="#">Texas Park and Wildlife Department website</a></li> <li>• <a href="#">State standards</a> for teachers</li> </ul>	

**Required: 4c. What group of people has that need (who is your target audience)?**

Adults, a diverse group including:

- Parents with children
- Couples
- Individuals (including educators, researchers, seniors)

Children and adolescents: a diverse group, with an age-range from 6-17 years

**4d. What general characteristics of that group will be important for project design decisions? [Optional]**

Both adults and children generally are interested in the behaviors of animals and in watching them in their natural environments. In principle, they enjoy both exploratory and goal-oriented tasks but they are also used to shallow knowledge acquisition at zoos. (Can I see an animal? If yes, take a picture and move on.)

Knowledge about conservation:

- General understanding about the importance of conservation and idea that some species are endangered.
- A lack of understanding that many amphibians and reptiles are particularly vulnerable
- Do not generally connect conservation efforts to their personal lives

Technical skill

Both adults and children will have varying levels of technical skills, although many adults and older children will be able to:

- Take pictures using their mobile phones or digital cameras and upload their images to a Web site
- Capture video and audio
- Text message using their mobile phones
- Access the Web
- Interact with menu items and navigation features of a Web site
- Download and open an app if owning a smartphone

Most adults and children will not be familiar with QR codes and may not have a QR code reader. They will need to see an introductory video or view explanatory text to use QR codes at the MOLA.

Additional characteristics:

*Adults:*

- Will have an average 6<sup>th</sup> to 8<sup>th</sup> grade reading level (though a smaller subset will have a 12<sup>th</sup> grade or higher reading level)
- If parents or couples, will generally be interested in socializing to share comments and information about what they are seeing with children, partners, etc.
- If parents, will generally be interested in keeping their children from wandering off and in moving at a certain pace through the exhibit, but will be interested in participating in a game that allows them to interact with their children as they learn

A subset of adults will be specifically interested in

	<p>learning more about the MOLA (e.g., events, research) and in obtaining a deeper understanding of ecology (learning more about specific animals, habitats); however, they still will enjoy participating in a game that's geared towards their interests, level of experience</p> <p><i>Children:</i></p> <ul style="list-style-type: none"> <li>• Will generally have the technical skills noted above (or will quickly be able to learn)</li> <li>• May be more technically savvy than their parents</li> <li>• Will have varying reading levels, given their age range</li> <li>• May require help from parents in reading or using mobile devices</li> <li>• Will be enthusiastic about playing a game, but will be less interested in an overtly educational program</li> </ul>
--	--

**Required: 4e. What services will you provide to address the need?**

- Mobile learning (“mlearning”) tools
- An alternate reality game experience (“Mystery at the MOLA”)
- Social media supports

My informal learning project will augment the Zoo’s educational and conservation programs through mlearning tools (either an app or mobile friendly web pages accessible via QR codes placed at strategic locations). Mobile tasks will be designed to motivate learners to observe the animals in their habitats, identify behaviors and interactions with living and nonliving components of their environments, predict the effect of natural and human alterations to habitats, and to consider the specific relevance of different animals to their personal ecosystems.

Mobile learning approaches will be complemented by enhanced interactive kiosks, including videos, animations, and problem-solving activities. Additionally, I’ll be designing an alternate reality game (“Mystery at the MOLA”) that will include some of the keepers as players. This will give Zoo staff and volunteers an opportunity to interact more closely with visitors who will be motivated to ask questions to progress through the game. Game elements will also require visitors to obtain clues provided at various exhibits.

There will be tiered levels of activities/game elements, providing an experience with appeal for both children and adults. While a smartphone prototype will be designed, individuals without smartphones will still be able to interact by taking and sharing pictures to a Website and/or by texting. Visitors also will be able to report their observations of the animals’ behavior on social media sites like Twitter, Facebook, and Flickr, allowing them to stay connected to events at the MOLA and conservation activities in Texas (e.g., the TSA and TPWD) through these sites. Although users can interact with the game via a game-specific website using their smartphones, visitors without phones will also be able to write down their solutions to game tasks on a brochure which includes information about game rules and which provides space for visitor notes.

**Supporting learning outside of the MOLA**

Certain elements of the game can be maintained outside of the MOLA itself. For example, visitors can gain additional game points by participating in Turtle Watch or Amphibian monitoring activities in their own neighborhoods. Rewards will include being named as a “Discoverer” on the MOLA website and discounts at the Zoo gift shop. Visitors will be invited to create and share learning trails on Flickr by posting their photos and comments and sharing these with others via a designated MOLA Daily Shoot Group page and will be awarded additional points for these activities. Similarly, from time to time, those who follow the MOLA on Twitter or who participate in challenges on Facebook may earn ongoing game points to move up to “Discoverer” or higher levels.

### Helping visitors use technology to enrich their experiences

As noted in 4d, visitors will have varying levels of comfort with using mobile devices and technology to capture and reflect on their experiences at the MOLA. A number of strategies will be used to help make technology more accessible.

- A dedicated room (“Technology Theatre”) including a movie played at regular intervals will help users get the most out of their mobile devices while at the MOLA. The video will also available via YouTube and on the MOLA website.) The movie and website will also describe the rules of the ARG game.
- There will be kiosks describing how to download a QR code reader and how to access museum information via QR codes. Visitors can also use these kiosks to obtain further information about the ARG game.
- The Guest Relations center will include people who are able to answer questions about using QR codes and playing the ARG game while at the MOLA.

### **Required:** 4f. What will your audience learn that will help meet their need?

Visitors will learn that:

- An ecosystem is a community of organisms living in a habitat defined by interdependent living and nonliving elements and organisms, such as amphibians and reptiles, compete and cooperate for basic needs in different ecosystems
- Species have unique adaptations that help them live in different ecosystems (including environments such as Texas parks and neighborhoods)
- Amphibian and reptile species diversity can have far-reaching impacts on human environments (including environments in Texas)
- Natural and human disturbances can threaten or enhance species survival and reduce species diversity
- There are a variety of different ways to participate in conservation efforts at the MOLA (e.g., through Zoo memberships, by volunteering, by supporting conservation-friendly policies in local government, and by sharing their learning experiences using social media)
- They can monitor ecosystems including reptiles and amphibians in their own neighborhood and can collect data that can benefit conservation efforts
- Participating in environmental efforts can be fun and engaging

### 5. What are the key project inputs? [Optional]

IMLS Grant

#### Personnel:

- Existing MOLA staff
- One new full-time staff member to facilitate technology use with the exhibits
- One part-time staff member to participate in data collection and evaluation to monitor outcomes
- Three volunteers to serve as “Game Masters”
- Existing Guest Relations staff
- Existing webmaster
- A Social Media Coordinator with expanded duties
- A liaison to interact with external groups such as the TSA and TPWD (“External Services Liaison”)

#### Material and equipment:

- Modified signage to include QR codes and information about the ARG game
- Enhanced kiosks
- Software to develop animations and videos and enhanced mobile-friendly Web pages and/or apps
- A dedicated theatre room with audiovisual equipment to display “Technology Tips and Mystery at

the MOLA” game information at regular intervals

- A contracted IT support contact person for MOLA staff
- Brochures including a url to download a QR code reader, a brief description of QR code usage, and social media urls/QR codes relevant to the exhibit. The Brochures will also describe rules of the ARG game and will also include space for visitors without smartphones to take notes and write down solutions to game tasks

Services: Facilitation of the game and mlearning experience; maintenance of the Theatre, see, also, paragraph 6)

Funds: Funds to support additional staff and training of staff and volunteers Liaison training of three additional volunteers; design and development of mlearning and game materials and advertising, described further below

#### **6. What key administrative activities will the project need? [Optional]**

- Design and development of mobile learning materials (Web pages and/or app, signage with QR codes)
- Design and development of enhanced kiosk materials
- A dedicated room and staff to display a movie at regular intervals (as described above, to instruct visitors how to get the most out of their mobiles and the rules of the ARG game)
- Training for staff and volunteers on game rules and technology being used in the exhibit
- Enhancing the MOLA’s website to advertise the new mobile learning aspects of the exhibit and the ARG game
- Design and development of brochures (described in paragraph 5)
- Materials for teachers and schools in the Metroplex to encourage visits to the MOLA and to connect the program with existing educational efforts
- A sign-up area to encourage visitors to participate in Texas Turtle Watch and Amphibian Watch Activities (provide refrigerator magnets and brochures with url information and QR codes)
- Social media facilitation to encourage continued learning and participation in MOLA events and to enhance game events outside of the MOLA

#### **7. What are the anticipated outputs of the project?**

- An increase in the number of people obtaining Zoo memberships to make return visits to the MOLA and to improve their scores in game activities
- Increased number of participants in Turtle Watch and Amphibian Watch Programs
- Increased interest in volunteer opportunities at the Zoo
- Increased participation in social media programs involving the MOLA
- Increased numbers of educational programs incorporating visits to the MOLA
- Increased number of contributions to the Zoo

**Required: 8-10. What key outcome have you designed your project to have? (What outcome will you measure?)**

<b>8a. Outcome 1.</b> Visitors will be able to provide examples of interdependence between animals, plants, and their habitats.				
<b>8b. Indicator(s)</b>	<b>8c. Applied to</b>	<b>8d. Data Source</b>	<b>8e. Data Interval</b>	<b>8f. Goal</b>
<b>(1)</b> Number and percent of visitors who are able to correctly provide at least one example of interdependence between animals, plants and other elements of a habitat	Families and individual visitors	<ol style="list-style-type: none"> <li>Exit interview</li> <li>Surveys</li> </ol>	<ol style="list-style-type: none"> <li>Interview visitors as they leave</li> <li>Encourage visitors to complete surveys on site using their smartphones (e.g., by providing a coupon upon survey completion to be used at the gift shop; survey completion onsite is also awarded game points)</li> <li>Send a reminder email in a week to those who have registered at the MOLA website after they leave (survey completion is awarded game points)</li> </ol>	<ol style="list-style-type: none"> <li>At least 1% of visitors are interviewed on pre-determined dates (at least 80% of these provide correct answers)</li> <li>Receive at least 1% of survey responses onsite (at least 80% of these provide correct answers)</li> <li>Get at least 5% of visitors registered on the MOLA website with 80% of those who register taking a survey and accurately identifying at least one threat as part of the survey</li> </ol>
<b>(2)</b> Number and percent of visitors able to solve at least one problem relating to interdependence between animals, plants, and their habitats presented in an ARG game.	Families and individual visitors	<ol style="list-style-type: none"> <li>Game Website analytics</li> <li>“Game Masters” debriefing (“Game Masters” provide daily observations)</li> <li>Numbers of accurately completed game brochures</li> </ol>	<ol style="list-style-type: none"> <li>Collect data continuously, preparing data summaries monthly</li> </ol>	<ol style="list-style-type: none"> <li>At least 1% of visitors register on Game Website or complete game brochures (at least 80% of those who register/complete game brochures are able to accurately solve at least one problem)</li> </ol>



<p><b>(3)</b> Number and percent of visitors interacting with QR codes and associated Web pages to answer questions accurately and to record accurate exhibit observations</p>	<p>Families and individual visitors</p>	<p>1. Website and QR code analytics</p>	<p>1. Collect data continuously, preparing data summaries monthly</p>	<p>At least 10% of visitors interact with QR codes and QR-code associate Web pages (at least 80% of those who interact with the Web site pages are able to accurately solve 60% or more of the challenges they attempt)</p>
--	---	---	---	---

<p><b>9a. Outcome 2.</b> Visitors will be able to identify at least one threat to amphibian and/or reptile species population survival.</p>				
<p><b>9b. Indicator(s)</b></p>	<p><b>9c. Applied to</b></p>	<p><b>9d. Data Source</b></p>	<p><b>9e. Data Interval</b></p>	<p><b>9f. Goal</b></p>
<p><b>(1)</b> Number and percent of visitors who are able to correctly identify at least one threat to amphibian and/or reptile species populations</p>	<p>Families and individual visitors</p>	<p>1. Exit interview 2. Surveys</p>	<p>1. Interview visitors as they leave 2. Encourage visitors to complete surveys on site using their smartphones (e.g., by providing a coupon upon survey completion to be used at the gift shop; survey completion is also awarded game points) 3. Send a reminder email in a week to those who have registered at the MOLA website after they leave (survey completion is awarded game points)</p>	<p>1. Interview at least 1% of visitors on pre-determined dates (at least 80% of these provide correct answers) 2. Receive at least 1% of survey responses onsite (at least 80% of these provide correct answers) 3. Get at least 5% of visitors registering on the MOLA website with 80% of those who register taking a survey and accurately identifying at least one threat as part of the survey</p>

<b>(2)</b> Number and percent of visitors able to solve problems relating to amphibian and/or reptile species population threats presented in an ARG game.	Families and individual visitors	<ol style="list-style-type: none"> <li>1. Game Website analytics</li> <li>2. "Game Masters" debriefing ("Game Masters" provide daily observations)</li> <li>3. Numbers of accurately completed game brochures</li> </ol>		
<b>(3)</b> Number and percent of visitors interacting with QR codes and associated Web pages to answer questions accurately	Families and individual visitors	1. Website and QR code analytics	1. Collect data continuously, preparing data summaries monthly	At least 10% of visitors interact with QR codes and QR-code associate Web pages (at least 80% of those who interact with the Web site pages are able to accurately solve 60% or more of the challenges they attempt)

**10a. Outcome 3.** Visitors will be able to share accurate information relating to their learning about amphibian and reptile ecology (including local conservation interests) using social media media sites facilitated by the MOLA

<b>10b. Indicator(s)</b>	<b>8c. Applied to</b>	<b>8d. Data Source</b>	<b>8e. Data Interval</b>	<b>8f. Goal</b>
(1) Number and percent of visitors who become Twitter followers of the MOLA and who post accurate information relating to amphibian and reptile ecology and conservation interests	Adults and adolescent visitors	1. Twitter analytics (e.g., using Hootsuite)	1. Collect data continuously, preparing data summaries monthly	1. At least 5% of visitors follow the MOLA on Twitter; at least 0.5% are active participants (commenting and sharing accurate information)

<p>(2) Number and percent of visitors who “like” the Facebook page of the MOLA and who post accurate information relating to amphibian and reptile ecology and conservation interests</p>	<p>Adults and adolescent visitors</p>	<p>1. Facebook analytics</p>	<p>1. Collect data continuously, preparing data summaries monthly</p>	<p>1. At least 5% of visitors like the MOLA on Facebook; at least 0.5% are active participants (commenting and sharing accurate information)</p>
<p>(3) Number and percent of visitors who post photos and ecology/conservation related-comments on MOLA exhibits to the MOLA’s Flickr group.</p>	<p>Adults and adolescent visitors</p>	<p>1. Flickr analytics</p>	<p>1. Collect data continuously, preparing data summaries monthly</p>	<p>1. At least 1% of visitors post images to the Flickr group and at least 0.5% are active participants (commenting and sharing accurate information)</p>