

Map Tools for Adventure Case Overview



In a 2002 Global Literacy Survey, young adults in the United States scored next to last (out of 8 countries) in identifying specific countries on a map. This geographic illiteracy is well documented in a number of other studies and points out the critical need to introduce and reinforce geography and geographical concepts in ways that are fun, exciting, participatory, artifact-rich and technologically advanced.

The Children's Museum of Indianapolis (TCM) is partnering with the National Geographic Society (NGS) to create an engaging exhibit furthering geographic education for children, families, and learners of all ages. The exhibit will feature: one-of-a-kind artifacts that help tell the story of maps,

past and present; engaging interactives which promote family learning; and technology rich components that feature new and emerging mapping tools. In addition to the exhibit which will travel to other venues, the project includes the creation of a special web site hosted by NGS that introduces kids to the essentials of mapping and geospatial representation.

The Children's Museum of Indianapolis, a nonprofit institution committed to enriching the lives of children, hosts over one million visitors a year. As the largest children's museum in the world (14 acres), the 433,500-square-foot facility houses 13 major galleries that explore the physical and natural sciences, history, world cultures and the arts. In existence for over 75 years, TCM defines its mission "to create extraordinary learning experiences that have the power to transform the lives of children and families," TCM sees itself as a place to learn and do, with exhibits, whenever possible, "hands on" or participatory in nature.

Over 28,000 households enjoy the services and privileges of museum membership. The museum employs about 400 full-time and 200 part-time staff members, with a total budget of \$23 million in 2006. The Children's Museum of Indianapolis maintains and uses a collection of more than 110,000 artifacts. Several thousand programs are offered annually: classes, workshops,





gallery demonstrations and interpretation, live performances, field trips, parent/child activities, adult programs, special interest clubs and fairs.

For additional information, go to <http://www.childrensmuseum.org/themuseum/overview.htm>

The National Geographic Society was created in Washington, D.C., in January 1888 for “the increase and diffusion of geographic knowledge.” The Society mirrors the world and all that is in it through incisive magazines, maps, books, films and interactive media. National Geographic’s Education and Children’s Programs engage young people

in real-world issues like conservation, offers online resources for students and teachers, provides national teacher training and supports a network of state teacher alliances. For additional information, go to <http://www.nationalgeographic.com/>

Profiles of Stakeholders

These are fictional statements typifying attitudes and illustrating needs, not actual direct quotations.

National Geographic Society Staff Member

We've got some of the best map experts in the world and we're one of the most prominent promoters of geographic education, but we're always looking for ways to connect more people with geography and to support new and innovative ways to achieve that goal.

Geography Educator

American students test as some of the worst at understanding world geography. Many can't even identify countries on a map! With the growing significance of globalism, we've got to promote geographic literacy. But not too many students get excited about maps. We need a way to make geography relevant, exciting, and to bring out the sense of adventure and discovery embedded in maps.



TCM Exhibit Designer

We're a hands-on kind of museum and we want to create experiences that engage our visitors. We want them to connect with the exhibit content, with each other, and with their own potential as learners. Designing exhibit elements that people of all ages can interact with is a great way to promote these connections, but creating interactives that promote active learning, that don't break easily, and that are easy to use requires lots of time and testing.



TCM Director of Education

We get more than a million visitors a year, but with our web site we can reach many more. The MAPS project is a great opportunity to expand our reach to schools anywhere and to partner with such a renowned organization as the National Geographic Society. Our curriculum can also provide ideas for pre- and post-visit classroom activities and help connect the exhibit experience to the broader learning objectives of the teacher. But this goal requires understanding teachers' needs, objectives that meet state and national standards, not to mention creative, engaging content!

IMLS Program Officer

As with all our projects we want to know if funds are appropriately managed and the deadlines are being met, but most importantly we want to know if the desired outcomes are being achieved.

Logic Model Worksheet

I. Situation: program partners and stakeholders	
What is the program's name ?	<p>National Geographic's MAPS: Tools for Adventure, Traveling Exhibit</p> <p>MAPS</p>
What partners are involved?	<p>National Geographic Society Environmental Research Systems Institute (ESRI)</p>
Who are the program's stakeholders ? (Be sure to include yourself, your target audience, partners, funders and any other stakeholders.)	What does each stakeholder want to know?
MAPS Exhibit Team	<p>How can we use the data collected from front-end and formative evaluation to produce the best possible exhibit?</p> <p>How will we identify appropriate consultants and advisors to provide expert guidance on geographic content and technologies? How can we use the feedback from advisors to inform us as we design and develop this exhibit?</p> <p>How will data from front-end evaluation and content recommendations shape the exhibit design document?</p> <p>How can we leverage our partnerships to identify and borrow artifacts to enhance the exhibit?</p> <p>How will this affect the visitor experience at the museum, as well as at other venues across the country?</p> <p>What will visitors do and learn in this exhibit?</p>

Geographic Educators (classroom teachers, college, university & museum geography educators)	How can this exhibit contribute to the improved geography learning in the target audience? What will visitors learn? Can we incorporate other educational products in our teaching?
National Geographic Society ESRI	How can this exhibit contribute to improved geography learning in the target audience? How does this reflect on our institution and our collections?
IMLS	What key outcomes and indicators result from the planning process? Are the needs met that shaped the planning phase of the project?
The Children's Museum	How will this exhibit affect attendance levels? What other venues will be interested in hosting the exhibit? How does this exhibit relate to our mission and strategic plan?
Other Museums	Is this exhibit worth bringing to our institutions?

II. Program planning: connecting needs, solutions, and results

Who are the audiences ?	Children in grades 3-5 and their families Geographic educators
What are the needs of the audience?	Children need basic geography literacy including both skills and knowledge to be productive participants in an increasingly global economy and informed citizens of the world. A 2002 Global Literacy Survey indicates that young adults in the United States are among the most geographically illiterate of the 8 countries tested. Geography educators need curricular materials that engage students and enhance learning experiences by being fun, participatory, artifact-rich and technologically advanced to engage students in order to increase geographic literacy.

What are some audience considerations ?	<ul style="list-style-type: none"> •Parents and children do not perceive that geography is a part of their everyday lives. Parents and children do not see the connection between current events and geography. They are also unaware of the technological tools that are changing the way we view our world. •Geographic educators are looking for sources and materials to utilize in teaching geographical concepts.
What solution fulfills the needs?	<ul style="list-style-type: none"> •An extraordinary traveling exhibit about the dynamic world of maps that has the power to transform the lives of children and families •An extraordinary website and unit of study directed to teachers and librarians
What will be the desired results ?	Visitors have family learning experiences in a compelling traveling exhibit. The target audience's level of geographic understanding and skills is improved.

III. Logic model summary: program purpose statement

We do what?	Create an extraordinary traveling exhibit and associated web site and unit of study.
For whom ?	<ul style="list-style-type: none"> •Children in grades 3-5 and their families •Geographic educators
For what outcome /benefit(s)?	<ul style="list-style-type: none"> •Target audience (children in grades 3-5 and their families) have positive family learning experiences (according to the museums' family learning rubric) in the exhibit. •Target audience (children in grades 3-5 and their families) demonstrate improved knowledge of map making, map reading and world geography. •Geographic educators use sources and materials for teaching geographical concepts.

IV. Program elements

Inputs	Outputs (or counts)
IMLS grant to pay for staff time and travel	

TCM staff time to conduct research and surveys, plan exhibit, write document	
Data collected from front-end and formative evaluation	
Partners at NGS and ESRI provide expertise	
Project advisors provide expertise	
National Academic Standards for Science	
National Academic Standards for Geography Research files	
Activities	Outputs (or counts)
Design survey instruments	# of survey instruments
Conduct surveys and focus groups	# of surveys distributed and focus groups conducted
Analyze evaluation data	Evaluation data
Produce a conceptual and design document	1 concept and design document
Recruit and meet with project advisors and partners	
Research and secure loans or select from TCM collections appropriate artifacts	Object lists
Manage budget	
Conduct formative evaluation of exhibit elements and interactives	Unit of study
Design, fabricate and install exhibit	1 traveling exhibit
Services	Outputs (or counts)
Children in grades 3-5 and their families have extraordinary experiences at traveling MAPS exhibit.	Number of children visiting the exhibit
Geographic educators are provided with an accurate and engaging unit of study relevant to appropriate national standards.	
Visitors to web site navigate the site easily and gain knowledge about maps.	1 website
Other museums can borrow traveling exhibit.	Number of other museums borrowing the exhibit

V. Outcomes

Outcome 1: Target audience (children in grades 3-5 and their families) have positive family learning experiences in the exhibit.

Indicator(s)	Applied to	Data Source	Data Interval	Target
The number and percent of children and families that report their experience was “positive” to “very positive” on a scale of five AND	Target audience	Survey form	Duration of exhibit run (7 months)	80%
The number and percent of target audience observed in positive social and learning exchanges among family members based on family learning criteria accepted in the museum field	Target audience	Visitor tracking study using TCM family learning rubric	Duration of exhibit run (7 months)	60%

Outcome 2: Target audience (children in grades 3-5 and their families) demonstrate improved knowledge of map making, world geography and map reading.

Indicator(s)	Applied to	Data Source	Data Interval	Target
The number and percent of target audience able to list at least three important points from exhibit’s main messages related to map making AND	Target audience	Exit survey of visitors	Duration of exhibit run (7 months)	75%

The number and percent of target audience able to list at least three important points from exhibit's main messages related to world geography AND	Target audience	Exit survey of visitors	Duration of exhibit run (7 months)	75%
The number and percent of target audience who can apply one or more concepts of geographic information analysis	Target audience	Exit survey of visitors	Duration of exhibit run (7 months)	75%

Outcome 3: Geographic educators use sources and materials for teaching geographical concepts.

Indicator(s)	Applied to	Data Source	Data Interval	Target
The number and percent of geographic educators who report use of three or more sources or curricular materials from the MAPS unit of study AND	Sample of members in geography educator associations	Web-based survey; on-line postings of instructors' comments inquiry records indicating # of requests for unit of study Web site statistics Indicating # of downloads from web site	End of exhibit run	15%
The number and percent of geography educators who rate their confidence has improved "somewhat" to "a great extent" on a five part scale	Sample of members in geography educator associations	Web-based survey; on-line postings of instructors' comments	End of exhibit run	