

**Environment and Natural Resources Trust Fund
2010 Request for Proposals (RFP)**

LCCMR ID: 175-F

Project Title:

Climate Change Education for the Next Generation

LCCMR 2010 Funding Priority:

F. Environmental Education

Total Project Budget: \$ \$241,000

Proposed Project Time Period for the Funding Requested: 3 years, 2010 - 2013

Other Non-State Funds: \$ \$0

Summary:

Deliver interactive Climate Change curriculum to students. Unique school visit featuring an earth laboratory on climate change. Conduct teacher workshops and instruct the public with public events.

Name: David Knutson

Sponsoring Organization: Earth Adventure

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Web Address: www.earthadventure.org

Location:

Region: Regional

County Name: Statewide

City / Township:

_____ Knowledge Base	_____ Broad App.	_____ Innovation
_____ Leverage	_____ Outcomes	
_____ Partnerships	_____ Urgency	_____ TOTAL

MAIN PROPOSAL

PROJECT TITLE: Climate Change Education for the Next Generation

I. PROJECT STATEMENT

This project will deliver an interactive climate change curriculum to students, teachers, parents and the public to promote STEM (Science, Technology, Engineering and Technology) education. The primary focus for this proposal is with 4th and 5th grade students.

Three year project goals include:

- | | | | |
|-----------------------------|--------|---------------------------------------|--------|
| • Students Impacted: | 15,000 | • Teacher participants: | 750 |
| • Public Events: | 30 | • Population Served by Public Events: | 15,000 |
| • Teacher Workshops: | 20 | • Teachers trained via workshops: | 250 |
| • Number of schools served: | 100 | | |

This project will provide:

1. A week-long climate change institute for 4th and 5th grade students. The first four days of the institute will consist of an interactive 40 minute classroom teacher-led lesson each day. This portion of the institute will be developed by our partner organization, U.S. Satellite Laboratory, working in conjunction with sponsorship from the National Science Foundation (NSF). Classroom lessons and activities will feature written materials, hands-on activities and online, interactive activities that focus on learning science in the context of Earth's Polar Regions (i.e. frozen water, frozen land, food). Enrollment will be via direct contact, announcements, communications, past collaborations, partner organizations, conferences and media outlets.
2. The institute will culminate on day 5 when an Earth Adventure teacher visits the school with a reinforcing, experiential Climate Change program featuring the Earth Balloon. The Earth Balloon is a 20-foot diameter globe whose interior serves as an Earth laboratory. Students enter the Earth Balloon to learn about our changing, dynamic planet.
3. Participating classroom teachers will be trained in the classroom and online activities using authentic data for analysis via workshops and WebEx seminars. Continuing Education Units will be provided through Winona State University.
4. Student knowledge gained will be measured through pre and post program assessment.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: Student Education

Budget: \$65,333 per year

Earth Adventure will deliver a week-long climate change program to 4th & 5th grade students. Results will be reported in July of each of the three years of this project.

Deliverable

1. 5,000 school students impacted per year
2. 250 teachers participating per year
3. 30 schools participating per year

Completion Date

July 2010-13
July 2010-13
July 2010-13

Result 2: Teacher and Public Education

Budget: \$15,000 per year

Teacher workshops will be facilitated by Earth Adventure staff via WebEx seminars and workshops to train teachers (i.e. generalists, science, technology, mathematics, special education, ELL) in the classroom activities. The goal is 35% participation for the teacher workshops. Additionally, the public will be instructed in a series of public evening events

featuring the Earth Balloon to highlight the present and future impact of Climate Change. Results will be reported in July of each of the three years of this project.

Deliverable	Completion Date
1. 85 Teachers trained via project workshops per year	July 2010-13
2. 5,000 Minnesota residents benefit from public events per year	July 2010-13

Result 3: Climate Change knowledge gained

Budget: \$0.00 per year

We will summarize the Climate Change knowledge of participating 5th grade students through a pre and post program assessment and through focus groups. The results will indicate the effectiveness of the project and look at content knowledge and student attitudes. Results will be reported in July of each of the three years of this project.

Deliverable	Completion Date
1. Pre-program 5th grade score average	July 2010-13
2. Post-program 5th grade score average	July 2010-13

III. PROJECT STRATEGY

A. Project Team/Partners

Earth Adventure (www.earthadventure.org):

David Knutson: Project Lead

Minnesota Pollution Control Agency (www.pca.state.mn.us):

Jeff Lederman, Denise Stromme: MPCA literacy scope guidance

US Satellite Laboratory (www.us-satellite.net): Glen Schuster: Printed/Online curriculum development

Winona State University: Continuing Education Units

B. Timeline Requirements

Deliverables will be compiled at the end of each school year. A final report will be compiled at the conclusion of the project.

- July 2010-Sept 2010 Program development
- July 2010-Dec 2012 Program enrollment (ongoing)
- Sept 2010-June 2011 Facilitate program at 30 schools, 6 workshops, 10 public events
- Sept 2011-June 2012 Facilitate program at 35 schools, 7 workshops, 10 public events
- Sept 2012-June 2013 Facilitate program at 35 schools, 7 workshops, 10 public events
- July 2013 Project complete

C. Long-Term Strategy

This program has a three-fold long term continuation strategy, including:

1. Building on program momentum by communicating online continuation resources via a project newsletter and email communications,
2. Schools and districts may obtain the complete climate change curriculum that is the basis for this project developed by U.S.-Satellite Laboratory, and
3. Continue the project with future LCCMR funding for the next generation of Minnesota 4th and 5th grade students.

Project Budget - Climate Change Education for the Next Generation

IV. TOTAL PROJECT REQUEST BUDGET 3 years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel: Payroll = \$168,000 over 3 years (70.5% of budget)	\$ -
Project Support Specialist: school program delivery, public event program delivery, enrollments, communications, teacher coordination, marketing, 1 person in this position, 70% salary, 30% benefits, \$56,000.00/yr, FT	168,000.00
Contracts: \$10,000 over 3 years (5% of Budget)	\$ -
Contract teachers (1): teachers to deliver or assist with teacher workshops \$500 x 20 workshops = \$10,000 (\$3,333/yr)	10,000.00
Equipment/Tools/Supplies: \$29,000 over 3 years (10% of budget)	\$ -
Earth Balloon Hardware Lease: Lease for equipment (Earth Balloon educational module) used at on-site school programs (\$250 per school) \$250 x 100 = \$25,000 (\$8,333/yr)	25,000.00
Teacher Workshop Expenses: Printed instruction materials, training support materials (\$1,333/yr)	4,000.00
Travel: \$4,000 over 3 years (1.5% of budget)	\$ -
Workshops & Programs: Mileage and travel expenses for staff to facilitate non-Twin City workshops and school programs in MN (mileage, hotel & meals) \$200 X 20 schools = \$4,000 (\$1,333/yr)	4,000.00
Additional Budget Items: \$30,000 over 3 years (13% of budget)	\$ -
US-Satellite Laboratory: Supply of curriculum, classroom educational materials and activities (\$300 per school) \$300 x 100 = \$30,000 (\$10,000/yr)	30,000.00
TOTAL PROJECT BUDGET REQUEST TO LCCMR	\$241,000.00

Educating Minnesota in Climate Change (EMCC) Project Manager Qualifications and Organization Description

David A. Knutson, Executive Director, Earth Adventure, Inc. (www.earthadventure.org) – Founder of Earth Adventure. David has 17 years experience providing hands-on school programs. David also possesses extensive experience in partnering with school systems and government agencies to develop unique programming regarding water conservation, environmental awareness, geographic awareness and other special needs curriculum. David has a strong interest in improving education opportunities and is the developer of the Earth Balloon® Portable Classroom and the Earth Walk™ Floor Map.

David's duties will include overseeing the project to completion and assuring that all project objectives have been met and all financial responsibilities toward the award have been accounted for. He will work closely with partnering organizations to assure the success of this project. Additionally, David will work with education systems throughout Minnesota to ensure that the project target enrollments are met.

Earth Adventure is a nonprofit organization whose mission is to improve K-12 science, geography, and standards-based aptitudes and competencies through supplemental learning activities and programs which enhance classroom curriculum. Earth Adventure promotes its unique avenue of exploration and discovery with tools and hands on activities which, captures the imagination, engages the participants, and are innovative in approach. It provides its resources to schools, organizations, and the public everywhere, with a focus on disadvantaged youth and underserved school districts. Earth Adventure utilizes unique tools such as the Earth Balloon to create enthusiasm and promote a sense of discovery among students.

During the 2008-09 school year Earth Adventure will deliver educational programs to over 200 schools across the United States, impacting 50,000 students. Additionally, over 200,000 people have benefitted this past year from our activity in Earth Day festivals, International Festivals, Environmental Festivals and Water Conservation Events.

In addition to Mr. Knutson, the Earth Adventure Board of Directors is comprised of the following Individuals:

Rick Roy, Chair of the Earth Adventure Board of Directors, has over 20 years experience in career and technical education services targeting youth and adult populations. He is a founding member of two public charter schools in Rochester, Minnesota and has led nationally recognized efforts in youth development and adult literacy. As Regional Administrator for the State Department of Employment and Economic Development, Rick supports partnerships among K-12 and post-secondary education, workforce and economic development and community-based agencies. He holds a Master's Degree in Management and is an adjunct instructor of economics for two local colleges.

John Bilotta, Earth Adventure Board Member, Director of Program Development and Teacher Training, Earth Adventure, Inc. – John Bilotta is an accomplished Extension Educator in Natural Resources for the University of Minnesota (10+ years). One of the many program teams he is involved with includes the Environmental Science Education Team that recently published the Best Practices for Environmental Field Day Programs. John has over 15 years of experience in natural resource and environmental education. His expertise includes curriculum development, program coordination, content delivery, and education evaluation. In addition, John has been actively involved with the utilization of the Earth Balloon Program across the Country.

Dr. Kathleen Williams, Earth Adventure Board Member, Vice President for the Office of Academic Initiatives and Test Development for the College Board where she manages the activities of the academic committees and supervises the development of College Board assessments, such as the new SAT™. Previously, she was Vice President of Product Development for AGS Publishing where she authored numerous publications and assessments. Dr. Williams has served as a technical consultant for several large government studies on early childhood development and is a frequent presenter of continuing education workshops in the areas of reading, oral language, vocabulary development, and writing assessment and intervention.

