



Environment and Natural Resources Trust Fund

2021 Request for Proposal

General Information

Proposal ID: 2021-323

Proposal Title: Expanding Access To Environmental Education For Underserved Communities

Project Manager Information

Name: Julia Ponder

Organization: U of MN - Raptor Center

Office Telephone: (612) 624-3431

Email: ponde003@umn.edu

Project Basic Information

Project Summary: The Raptor Center is proposing to build environmental literacy and engagement by bringing an integrated environmental education program featuring live raptors and standards-based curriculum to underserved communities throughout Minnesota.

Funds Requested: \$178,000

Proposed Project Completion: 2023-06-30

LCCMR Funding Category: Small Projects (H)

Secondary Category: Environmental Education (C)

Project Location

What is the best scale for describing where your work will take place?

Statewide

What is the best scale to describe the area impacted by your work?

Statewide

When will the work impact occur?

During the Project

Narrative

Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.

With environmental issues being among the most pressing challenges that society will face in the coming decades, there is a critical need to expand environmental and scientific literacy in the next generation. The fates of our wildlife and the natural world around us lay in the hands of an informed public. While Minnesota has state standards for environmental education, not all students and teachers have equal access to effective tools for meeting these standards.

For forty-five years, The Raptor Center (TRC) has worked to build essential connections between people and wildlife by providing high quality environmental education programs. With support from Minnesota's ENRTF fund, TRC developed Raptor Lab to engage, inspire and captivate students' awareness, concern and action toward protecting our natural environment while teaching critical STEM concepts. The Raptor Lab curriculum is a coherent sequence of lessons that teachers can integrate into their classroom over time. Student engagement with Raptor Lab and other raptor-based curriculum is enhanced when they have the opportunity to experience the magnificence of a live raptor visit to their classroom. Many communities, however, are unable to access these passion-sparking experiences due to limitations of resources and geography.

What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.

The Raptor Center is proposing to build environmental literacy and engagement by bringing an integrated environmental education program to underserved communities throughout Minnesota. This program will combine a standards-based curriculum using live raptors in the classroom with raptor-based coursework such as Raptor Lab to create an engaging and impactful learning experience. The live bird programs will be taught by highly skilled environmental educators and engage students (primarily focused on grades 6 through 8) in learning about environmental issues and solutions. Aligning with the live raptor programming, teachers will be provided an appropriate age-based curriculum, including lesson plans, curriculum guides, and activities, along with supplementary materials and resources to reinforce learning. They will also receive support in integrating the coursework into their classroom. The foundation for classwork will be Raptor Lab, an interactive online curriculum aimed at having students investigate an important environmental issue impacting bald eagles in Minnesota. Raptor Lab's final module, Outdoor Investigator, guides students in conducting their own outdoor investigation. A comprehensive evaluation tool will be developed and implemented to measure impact.

What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?

The Raptor Center will provide re-usable environmental education curriculum supplemented by an experiential learning experience with a live raptor program to 300 classrooms in underserved communities through Minnesota; around 200 programs will be presented in urban areas of the metro and at least 100 programs in greater Minnesota with expected reach of 20,000-30,000 students over two years. Students that take part in Raptor Lab's Outdoor Investigator curriculum will have the opportunity to present their projects at the University of Minnesota Science Ecology Fair.

Activities and Milestones

Activity 1: Deliver environmental education curriculum supplemented by live bird programming to classrooms throughout Minnesota.

Activity Budget: \$178,000

Activity Description:

The Raptor Center will deliver 300 environmental education programs using live raptors in the classrooms as part of a raptor-based classroom curriculum. Staff will identify, contact, and schedule programs in schools with a student population 50% or greater receiving free and reduced lunch. Teachers will be assisted in choosing an appropriate science standards-based curricula for their class from a selection of Raptor Lab, Outdoor Investigator, Raptors of Minnesota, Endangered Species, Animal Adaptations or other raptor-based topics. They will be provided with lesson plans, teacher guides, activities, and resources. A web site will be developed to provide quick access to classroom tools (guides, activities) for course-delivery, supplemental materials for course enhancement and staff contact information for support in curriculum delivery. For classes using Raptor Lab’s Outdoor Investigator, supporting materials will be provided to assist teachers in encouraging their students to present their outdoor investigations at the University of Minnesota’s (UMN) Science Ecology Fair. To measure impact, a comprehensive evaluation program will be designed, developed, and implemented in partnership with the University of Minnesota’s Office of Measurement Services.

Activity Milestones:

Description	Completion Date
Develop website to include lesson plans, curriculum guides, activities, and resources for quick access	2021-10-31
2021-2022 School Year: Present 100 programs to urban schools, 50 to rural schools	2022-06-30
Develop and implement comprehensive evaluation program	2023-06-30
2022-2023 School Year: Present 100 programs to urban schools, 50 to rural schools	2023-06-30

Long-Term Implementation and Funding

Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this be funded?

During this grant period we will establish new relationships with schools we have not been able to serve in the past due to funding issues. We will share the results of our evaluation program with teachers and administrators so they can see a measured impact from our program. Results will also be shared at teacher conferences. This direct experience of our program, in combination with our evaluation results, can be shared with local organizations and foundations to garner community support to continue funding this program into the future.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Spruce Grouse as Indicators for Boreal Forest Connectivity	M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 03e	\$350,000
Expanding Raptor Center Online Education	M.L. 2017, Chp. 96, Sec. 2, Subd. 05d	\$270,000
Raptor Lab Integrating Online and Outdoor Learning Environments	M.L. 2014, Chp. 226, Sec. 2, Subd. 09h	\$186,000
Game and Nongame Bird Pesticide Exposure	M.L. 2016, Chp. 186, Sec. 2, Subd. 03m	\$349,000

Project Manager and Organization Qualifications

Project Manager Name: Julia Ponder

Job Title: Associate Professor/Executive Director –The Raptor Center

Provide description of the project manager’s qualifications to manage the proposed project.

Dr. Ponder is the Executive Director for The Raptor Center and a College of Veterinary Medicine faculty member. Dr. Ponder is a veterinary expert in avian health working in a clinical and research environment devoted to birds. She has led The Raptor Center’s mission-based activities, including environmental education programming and strategy, since 2007. She has extensive project management experience, as well as international experience working with non-profits and governmental agencies. She has managed projects varying from \$10,000 to \$3.7 million, addressing issues as diverse as wildlife health surveillance, community partnerships, environmental education and international field research.

Organization: U of MN - Raptor Center

Organization Description:

The Raptor Center (TRC) is a University research and outreach center focused on health issues found at the intersection of raptors and humans. TRC provides medical care of over 1000 injured and ill raptors each year, trains veterinarians and veterinary students from around the world in conservation medicine and has extensive experience in outreach and environmental education, averaging over 1,000 programs reaching more than 100,000 people throughout Minnesota, Wisconsin, and Iowa annually. For over 45 years, staff at TRC has studied health issues in raptors. In addition, the faculty of The Raptor Center have appointments in the College of Veterinary Medicine, University of Minnesota, a research university.

The University of Minnesota is a highly ranked public research university with a mission that encompasses research and discovery, teaching and learning, and outreach and public service. A land-grant university, it supports research and

discovery benefiting the conservation and management of Minnesota's natural resources. It has well-established systems and processes for management of research awards and financial oversight of grants.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Project manager		Project oversight, coordination, reporting			36.5%	0.1		\$21,210
Project and partner coordinator		Educational program content and adaptation for classes; program evaluation; teacher/school communications			36.5%	0.2		\$14,157
Interpretive naturalist/educator		Classroom programs - scheduling, delivery and follow-through work with teachers and students			31.8%	2		\$100,674
							Sub Total	\$136,041
Contracts and Services								
UMN Office of Measurement Services	Professional or Technical Service Contract	Development and implementation of program evaluation				0.05		\$5,000
Copy editor and designer	Professional or Technical Service Contract	Copy editor/designer for printed materials (Pre/post activities, teacher's guide, and TRC program lesson plan with objectives, outcomes, content)				0.05		\$5,000
							Sub Total	\$10,000
Equipment, Tools, and Supplies								
	Tools and Supplies	Animal food	Raptor food for live bird programming for out-state visits to schools					\$1,800
							Sub Total	\$1,800
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-

Travel In Minnesota								
	Miles/ Meals/ Lodging	Mileage	Getting to schools (metro and out-state) for program delivery. 36000 miles at 0.\$58/mile					\$20,880
	Miles/ Meals/ Lodging	Per diem and hotels	Hotels and meals for overnight trips to out-state areas (approximately 50 overnight trips will be needed)					\$9,279
							Sub Total	\$30,159
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
							Sub Total	-
Other Expenses								
							Sub Total	-
							Grand Total	\$178,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
			State Sub Total	-
Non-State				
In-Kind	Waived facilities and administrative costs	The University of Minnesota is waiving the income normally generated from extramural research grants that contribute Facilities and Administrative (F&A). The current full rate is 55% of direct costs.	Pending	\$92,158
			Non State Sub Total	\$92,158
			Funds Total	\$92,158

Attachments

Required Attachments

Visual Component

File: [a27bff46-b66.pdf](#)

Alternate Text for Visual Component

Image shows a live bird program being presented in a classroom situation along with screen shots of two on-line curriculum options that teachers and students will have access to.

Optional Attachments

Support Letter or Other

Title	File
University of Minnesota cover letter	7dbd9b31-88e.pdf

Administrative Use

Does your project include restoration or acquisition of land rights?

No

Does your project have patent, royalties, or revenue potential?

No

Does your project include research?

No

Does the organization have a fiscal agent for this project?

Yes, Sponsored Projects Administration

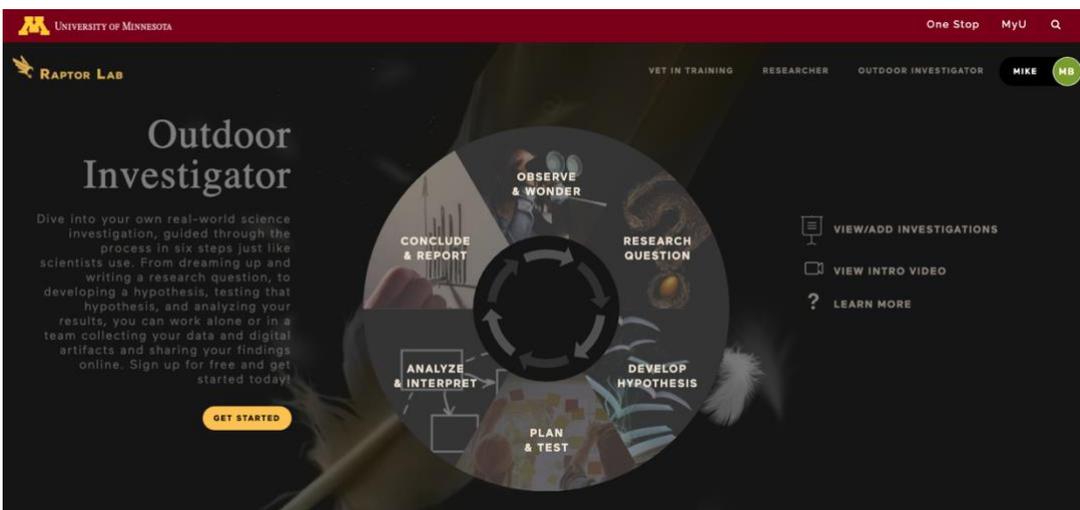
Expanding Access to Environmental Education for Underserved Communities

Connecting students with wildlife to inspire our next generation of environmental stewards.



Raptor Lab

Role play a scientist helping solve an environmental issue impacting bald eagles.



Outdoor Investigator

Investigate your own question about the natural world and present your findings to the world.

