



Dinosaur Treasures In Our Backyards: A Model for Fostering Community Pride in Geological and Paleontological Resources

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ABSTRACT

Insatiable curiosity and a powerful desire to learn about the world around them make children instinctual lovers of science, particularly of the earth and natural sciences. Unfortunately, through lack of access to quality science instruction and programming, many children lose interest in science early on, believing it is not a realistic career path, is "not for them," or is "too hard." This problem is particularly acute in rural areas where, paradoxically, natural phenomena and opportunities to observe them abound.

In contrast, successful biological and ecological conservation initiatives often rely on accompanying programs that not only educate people about their resources, but also introduce, develop, and foster a strong sense of pride among local populations. We believe this proven model can be applied to non-biological subjects, particularly geological and paleontological resources and phenomena.

Dinosaur Treasures In Our Backyards is a multi-day, immersive, hands-on, and inquiry-based program offered free of charge to children ages 6 through 13 in rural Carbon County, Montana. The program utilizes dinosaurs as an avenue to introduce many other disciplines, including geology, paleo- and modern ecology and ethology. It also focuses on the paleontology and geology of the surrounding region - particularly the northern Bighorn Basin - including the prominent role their home region has played in the history of those sciences. The program attempts to foster local pride in and stewardship of these resources, creating critically important local young ambassadors who promote the public understanding of science within their own communities. In addition, the program provides these same children with the opportunity to once again fall in love with science, envision themselves as scientists, and consider future careers in STEM fields.

SUCCESSFUL STRATEGIES FOR RESOURCE CONSERVATION

Biologists have long known that successful strategies to conserve species, ecosystems, and other biological resources very often rely on the implementation of local community-oriented programs. This strategy incorporates educational curricula about the need for conservation of the specific resource(s) on the local level, but also bring the resource(s) and efforts into larger context by emphasizing the impacts on regional and even global scales. In turn, these programs foster community pride in their resource; a critical component of success. Countless organizations, from grass roots groups to large multinational societies, have employed these tactics to successfully conserve resources around the globe.

Although paleontological resources on public lands are rarely threatened in the same manner, the theft of these irreplaceable public resources by unscrupulous or uninformed individuals is a serious concern for paleontologists and represent a significant loss to the scientific community as a whole. Local residents, however, are often largely unaware that important paleontological resources even exist nearby, and therefore have little understanding of the necessity of paleo-resource conservation, or even that the problem of theft exists at all.

A community-oriented education and outreach program, built upon the model of those designed to foster biological conservation, may be equally effective at protecting paleontological resources.



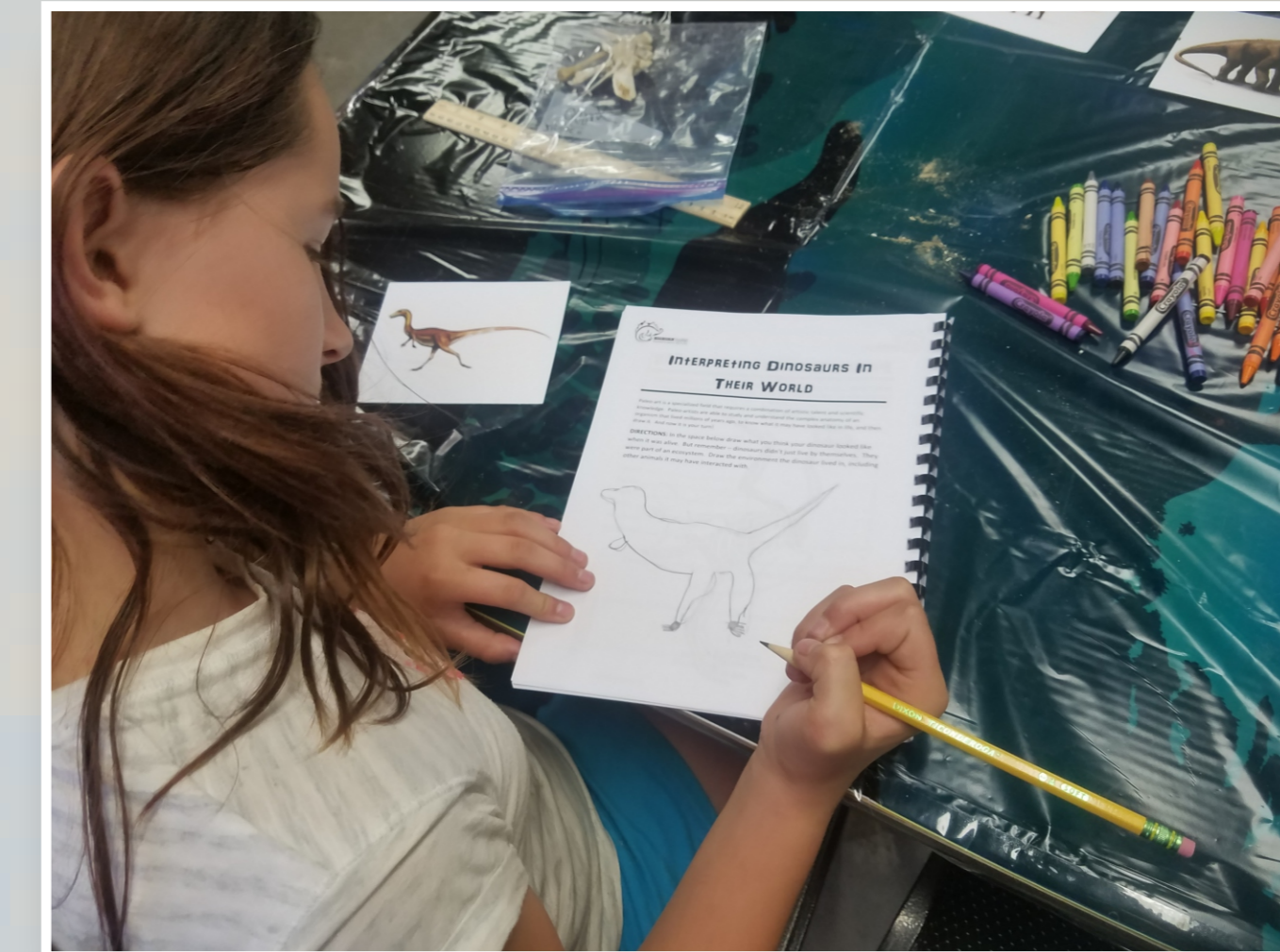
Deinonychus

Emphasizing local type specimens for "Carnivore vs. Herbivore" and Paleo-art.

Use Local Paleo & Geology Resources!

Using nearby localities for Trace Fossils vs. Body Fossils"

Using locally collected specimens for "Paleontology & Geology Field Methods"



DINOSAUR TREASURES IN OUR BACKYARDS

Dinosaur Treasures In Our Backyards (DTIOB) is an outreach initiative developed by the **Bighorn Basin Paleontological Institute (BBPI)** and led by BBPI paleontologists and educators to teach local children basic paleontological and earth science concepts by focusing largely on important paleo- and geologic-resources in their home region. The three-day immersive, inquiry-based program is offered free of charge to kids ages 6 - 13 in rural Carbon County, Montana.

This region lies at the northern extent of the Bighorn Basin and is well known among paleontologists because it is home to vast paleontological resources, including the type specimens of dozens of plant and animal species spread across wide swathes of geological time. Despite this, the vast majority of local residents have little or no knowledge of these facts, and theft of fossils from the vast nearby public lands is a significant and growing problem.

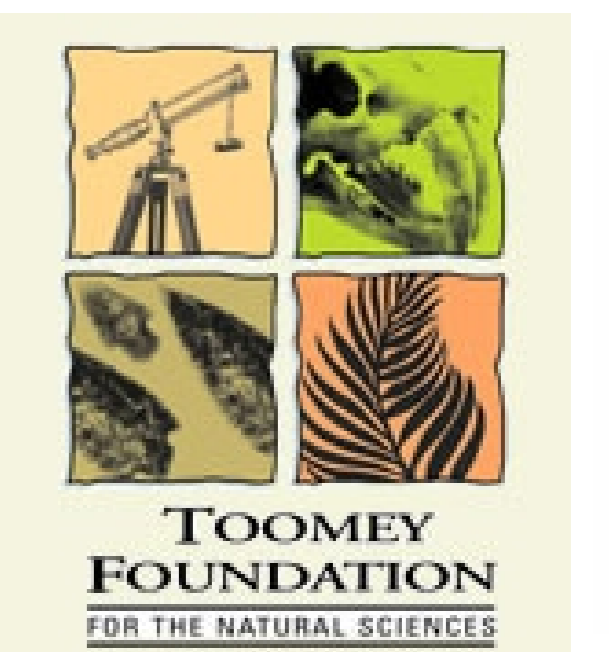
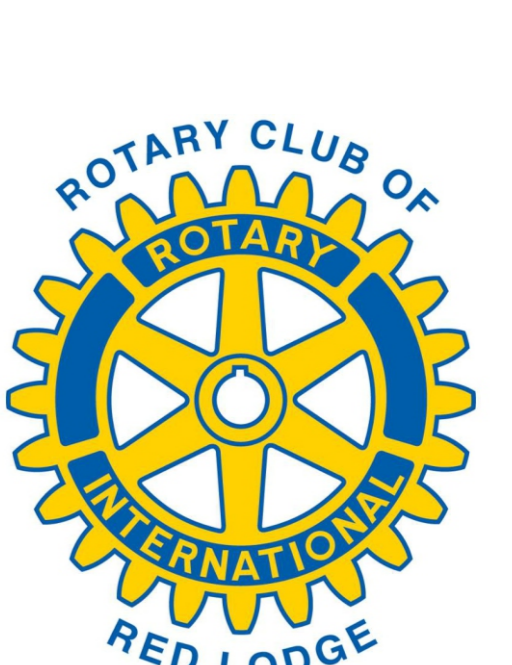
The *DTIOB* participants receive an activity book filled with lesson-specific games and activities. Most importantly and effectively, the majority of the activities and lessons utilize local paleontological and/or geological resources.

THANK YOU!

We would like to thank the administrators and kids in the Carbon County area summer programs that participated in the *Dinosaur Treasures In Our Backyards* programs in 2017 and 2018.

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- Toomey Foundation for the Natural Sciences
- The Paleontological Society
- David B. Jones Foundation
- Red Lodge Rotary Club
- Red Lodge Area Community Foundation



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