

Department of Conservation and Natural Resources

Think Outside....an invitation to Pennsylvania's outdoor classrooms

Pennsylvania's state parks and forests are great classrooms. They are wonderful places to teach and learn, and should be a part of every students' educational experience. The DCNR *Think Outside* program is designed to expand the learning landscape by inviting colleges and universities to provide opportunities for place-based educational experiences in the commonwealth's 121 state parks and 2.2 million acres of state forests.

Think Outside is intended to get college students outdoors and work towards a more sustainable Pennsylvania in the process. Students and professors are invited to visit the state parks and forests for any learning experience, whether it be a single student, a group of students, or an entire class. Across all academic disciplines, students and professors are encouraged to cultivate new ideas and build stronger connections with the outdoors and our natural resources.

Getting outside is just the first part of the program, though. *Think Outside* was created as part of the DCNR Sustainability Initiative -- an agency-wide effort to make the parks and forests more resilient and to ensure DCNR is advancing energy efficiency and sustainability across its operations. As part of this, DCNR wants to hear from you. Students and professors are invited to share their projects, activities, research, or proposals with DCNR. In fact, each year DCNR will host a *Think Outside* Day with agency leaders where research and findings will be presented and will be considered for application/implementation.

As part of this, *Think Outside* invites students to develop proposals or conduct research that would help advance these goals. Projects could include:

- Having a professor take a class to a state park each semester and conduct a multi-semester analysis of soil, water, air, flora, or fauna.
- Going out to a forest and writing, painting or photographing what students see, hear, and experience.
- Research opportunities exist throughout almost every park and forest.

Interested students and/or professors should fill out a *Think Outside* application, which will be reviewed by DCNR staff. Certain research projects may require approval by the bureau of parks or forestry. Completed applications will be reviewed for this purpose. DCNR will work with participants on subsequent approvals needed for this purpose.

DCNR hopes that *Think Outside* opens the door for students and professors to expand their scope for research and activities, and explore and enjoy our state parks and forests.

Please see the attached list of possible projects and for a more in-depth list of priority projects for each park, please find the link on our website. For more information and to apply for *Think Outside*, please visit [DCNR's Think Outside web page](#) and email your completed application to DCNRthinkoutside@pa.gov.

Examples of Think Outside Student or Class Projects

Forest Buffers

A stream buffer can be a fundamental way to restore and promote the longevity of vital natural habitats in our state parks and forests. There are many miles of unprotected waterways running through state parks and forests that would benefit greatly from the installation of a riparian buffer.

Food Resources, Recovery, Recycling and Composting

There are numerous opportunities that exist within Pennsylvania's state parks to promote local food sourcing and to reduce food waste. There is a need for creating, improving, and advancing efforts, such as small-scale composting operations and recycling programs in parks and forests.

Energy Assessment and Efficiency

DCNR has 4,000 buildings throughout the commonwealth. Getting out and assessing the numerous facilities in parks and forests would provide an educational opportunity for students to see what green technologies are being utilized in DCNR buildings, as well as where improvements can be made.

Transportation to Parks

DCNR has achieved a goal of having a park within 25 miles of every Pennsylvanian, but how beneficial can this achievement be if every Pennsylvanian does not have the means to get out to a park and enjoy what it has to offer? Students could assess public transportation opportunities and improvements so that all Pennsylvanians have an equal opportunity to utilize their state's outdoor resources.

Trail Design

DCNR is in charge of managing and sustaining more than 500 trails that make up nearly 12,000 miles. DCNR is always looking to improve its trail network to serve the citizens of Pennsylvania in a more ecologically sensitive way. Planning a new trail is an involved process that requires surveying, mapping, planning, and construction. Another idea is creating video guides for trails aimed at attracting diverse audiences.

Geotech Mapping/GIS

Students can take current data on everything from trail usage, to the interaction of recreation and extraction on DCNR lands, to green energy features, to ecological and sustainability improvements and create visualizations of the spatial data. In some cases, the projects could include collecting the data through various means, including unmanned aerial vehicles (UAVs), ground penetrating radar (GPR), infrared cameras, and GPS.

Nature Writing

State parks and forests provide an opportunity for deep reflection about our connections to place, landscapes, ecosystems, and other species. Students could engage in creative writing exercises connected to experiences in and research about state parks and forests.

Connecting Visitor Experience to Sustainability

Students could conduct surveys, interviews, or focus group research to better understand visitors' knowledge and awareness of sustainability as well as visitors' expectations of sustainability incorporation into the park and forest system.