



**THE STATE OF DELAWARE**  
**Children In Nature/  
No Child Left Inside® Initiative**  
**Taskforce Report**

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**Presented October 2012**





Dear Delawareans,

With growing concerns about the short-term and long-term implications of Delaware's children spending less time outdoors, Governor Jack Markell directed our agencies, the Delaware Department of Education and Department of Natural Resources and Environmental Control, to pull together key partners and develop an action plan to address the interrelated challenges of providing all children with meaningful outdoor experiences, improving children's health, promoting environmental literacy and increasing student achievement. This report contains the recommendations of our agencies and the Children In Nature/No Child Left Inside Taskforce.

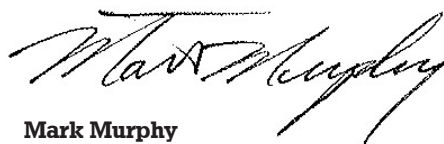
The partnership was created in response to the alarm among educators, parents and health care workers at the disconnect existing between children and the outdoors through the lack of time to learn and play outside. The reduction in physical activity and hands-on outdoor experiences is harming our children's health, hampering their academic engagement and success, and leaving them ill prepared for the opportunities and challenges of the 21st century.

The goal of the report and recommendation is to address these issues through the creation of a comprehensive statewide plan for environmental literacy and development of a broad and diverse coalition of organizations and agencies that will advocate for policies, programs and infrastructure to facilitate outdoor learning and play for all children and their communities. In addition, a key component of the report and recommendations is a comprehensive communications and outreach campaign to engage Delaware residents in accessing and utilizing our state's tremendous natural resources.

The members of the taskforce that developed Delaware's plan represent a vast range of expertise and interest, including: Department of Education, Department of Natural Resources and Environmental Control, Nemours Health and Prevention Services, the Delaware Nature Society, U.S. Fish and Wildlife Service, Center for Inland Bays, Department of Health and Social Services, Delaware Greenways and the Delaware Association for Environmental Education. This collaboration represents unprecedented leadership and an opportunity to make significant changes that will have tremendous impact on our children's well-being and long-term commitment to protecting Delaware's unique environment.

We are deeply committed to the mission of the partnership, which is to improve environmental literacy, create opportunities for children to participate in outdoor experiences, promote healthy lifestyles and provide better access to green space through school and community programs. Ensuring that every Delaware child is healthy and active will not be easy – but it is possible if we focus our collective efforts. We hope that you will join us in the hard work necessary to accomplish the goals outlined in this report. Together, we will ensure that no child is left inside.

Sincerely,



**Mark Murphy**  
Secretary, Delaware Department of Education



**Collin P. O'Mara**  
Secretary, Delaware Department of Natural Resources and Environmental Control





# Executive Summary

## Vision for Children in Nature/No Child Left Inside

Many parents have memories of growing up when the outdoors was not a place to fear but embrace from sunrise to sunset. Every stream became a place to kick off shoes and splash, search for crayfish and race leaf boats. Every season brought a new adventure. Autumn was for catching falling leaves, running through leaf piles and going on hayrides; winter was for snowball fights, igloo forts and sledding; spring was for chasing grasshoppers, picking flowers and watching the newborn animals venture out; and the summer was for splashing in

**Evidence now shows that children 8-18 average 6.5 hours per day with electronic media<sup>1</sup> and just minutes a day engaged in unstructured outdoor activities.<sup>1</sup>**

**Kaiser Family Foundation**

the ocean, running through sprinklers and catching fireflies. Those childhood memories were filled with adventure, play and imagination. Without knowing, families were building an understanding, appreciation and connection with the natural world.

Today, many Delaware children do not enjoy the same outdoor experiences as their parents and grandparents. Evidence now shows that children 8 to 18 average 6.5 hours per day with electronic media<sup>1</sup> and just minutes a day engaged in unstructured outdoor activities. As children lose touch with the land, water and wildlife, they also lose opportunities to re-establish critical connections. It is essential to provide accessible, safe and enjoyable outdoor opportunities to educate and inform future

generations about the state's resources and build an appreciation of those resources.

Schools have a tremendous opportunity to reconnect children with nature. There exists a growing body of evidence indicating that children who have meaningful outdoor experiences have an overall higher rate of achievement than those who do not. Through experiential education and environmental literacy, schools can tap the power of the natural world to address educating the whole child. Schools have become the primary source to connect children to nature, yet acquiring school field trip funding remains a challenge. There are no programs that provide school children access to the Delaware Bay or the Atlantic Ocean by boat, preventing students from experiencing two of Delaware's largest natural resources. Only a small percentage of Delaware students have the opportunity for overnight experiences, which encompass a comprehensive program of environmental education. In fact, more out-of-state school children attend overnight experiences here than do Delaware school children.

State, city, and county parks; public and private schools; non-profit organizations; businesses; and most importantly, families throughout Delaware must collaborate to reverse this trend. The recommendations in this report are structured to bring resources from across the state together to build safe and healthy communities where every child and family can play outdoors in public green spaces, parks, streams and oceans. The recommendations encourage school

systems to adopt green initiatives to become more environmentally aware and efficient. School grounds can be used as outdoor classrooms and children can have meaningful outdoor and overnight experiences. A statewide trail system will connect neighborhoods, businesses, schools, parks and natural areas. By following these recommendations, Delaware will ensure that every Delaware child enjoys meaningful outdoor experiences that lay a strong foundation for living a healthier life.





## **Background on the Children in Nature Taskforce**

Secretary Collin O'Mara of the Delaware Department of Natural Resources and Environmental Control (DNREC) and former Secretary Lillian Lowery of the Delaware Department of Education (DOE) charged the Children in Nature/No Child Left Inside® taskforce to be proactive in addressing the opportunities afforded by the reauthorization of the Elementary and Secondary Education Act (ESEA) and the current status of “nature-deficit disorder” facing the citizens of Delaware. The taskforce has responded to this charge and addressed the growing alarm among educators, parents and healthcare workers that a lack of time to learn and play outdoors is harming our children's health, hampering their academic success and leaving them ill prepared for the opportunities and challenges of the 21st century. Tackling increasing rates of childhood obesity, providing opportunities for children to experience nature up close and integrating meaningful hands-on, outdoor experiences into the school curriculum are essential to the solution. The taskforce was challenged to address these issues with a comprehensive plan; a coalition of organizations and agencies to advocate for policies, programs and infrastructure to facilitate outdoor play and learning; and a comprehensive communications and outreach campaign to give Delaware residents greater access to our state's tremendous natural resources.

**The members of the taskforce represent a vast range of expertise**, including: DNREC, DOE, Nemours Health and Prevention Services, the Delaware Nature Society, U.S. Fish and Wildlife Service, Center for Inland Bays, Department of Health and Social Services/Division of Public Health, Delaware Greenways and the Delaware Association for Environmental Education (DAEE). This collaboration represents unprecedented leadership and opportunity to make significant changes that will have a positive impact on children's well-being and long-term commitment to protecting Delaware's unique environment.

### **No Child Left Inside**

As the Elementary and Secondary Education Act (ESEA) moves closer to reauthorization, the opportunity to focus on environmental education throughout Delaware is profound. The No Child Left Inside (NCLI) legislation recommended that appropriations be made to train teachers for such instruction, provide innovative technology and to develop studies assessing the worth of these programs in elementary and secondary school curricula. While mainly addressing environmental literacy, the legislation also touches on healthy living programs to encourage outdoor recreation and sound nutrition. Programs will include funding for curriculum changes as well as field trips to environmental areas of interest.

## Taskforce Mission

To improve environmental literacy, create opportunities for children to participate in outdoor experiences, promote healthy lifestyles and provide better access to green space through schools and community programs.

## Taskforce Vision

Delaware will be recognized as a leader in environmental education for all of the state's children. At school and at home, in parks, backyards and other outdoor spaces, children and adults will experience a multitude of ways to improve health and well-being and enhance life-long learning through encounters with and growing knowledge of the natural world. No child will grow up without having had a positive outdoor experience. All families will have access to green spaces. Children will reconnect with the natural world in meaningful ways and there will be no child left inside!

## Primary Taskforce Objective

To create a comprehensive plan to present to the DOE and DNREC Secretaries with implementable recommendations.

## Taskforce Recommendations

The taskforce has researched and developed recommendations and actions in education, access, community, health, plan implementation, marketing and policy and legislative support.

## Education

### We envision a Delaware ...

Where every child has access to outdoor learning experiences at school and in the community to arouse their natural curiosity to explore and learn by discovery and to achieve environmental literacy. To realize this vision, we must take these steps:

- Promote meaningful outdoor and overnight experiences.
- Establish Greener Schools for Delaware programs.
- Develop schoolyard natural areas to strengthen education in grades Pre-K through 12.
- Increase collaboration between formal and informal educators.
- Develop an environmental literacy plan.



## Outdoor Connection

### We envision a Delaware ...

Where children and families have safe and enjoyable outdoor recreation opportunities that are both convenient and provide equal access to nature. To realize this vision, we must take these steps:

- Incorporate natural spaces into the built environment.
- Provide access for multi-generational use to increase physical activity for all ages.
- Improve accessibility to existing areas.
- Share inventory data about the state's outdoor recreation resources.
- Improve walkability and safe access to natural resource areas.

## Community

### We envision a Delaware ...

Where all members of the community embrace the value of connecting with nature and providing the support needed to maintain longstanding promotion of its benefits for generations to come. To realize this vision, we must take these steps:

- Increase access to recreational facilities through community partnerships.
- Develop training to increase communities' understanding of the CIN/NCLI movement and increase environmental literacy statewide.
- Bring together full representation of the state's population, across generations, cultures, and economic conditions to help build a unified CIN/NCLI message.
- Address issues that prevent underserved communities from experiencing nature.

## Health

### We envision a Delaware...

Where individuals and communities are aware of the benefits of time spent in the natural world and have a better understanding of the relationship between health and outdoor activities. To realize this vision, we must take these steps:



- Use nature-based activities (unstructured outdoor play, hiking in a safe area, spending time in a green space, etc.) and resources as a health strategy.
- Provide outreach and professional development in fields of health care and prevention services.
- Conduct research that supports the relationship between health and activity in nature.



# Table of Contents

Letter from the Delaware Children In Nature Ambassadors	<b>11</b>
Section 1:	
The Problem: What Happens When We Leave Youth Behind	<b>12</b>
Section 2:	
Taskforce Report on Education	<b>14</b>
Section 3:	
Taskforce Report on Outdoor Connections	<b>28</b>
Section 4:	
Taskforce Report on Community	<b>34</b>
Section 5:	
Taskforce Report on Health	<b>38</b>
Section 6:	
Keys to Implementation	<b>44</b>
Section 7:	
Taskforce Recommendations on Policy and Legislative Support	<b>46</b>
Section 8:	
Taskforce Recommendations on Marketing	<b>48</b>
Legislative Document	<b>52</b>
Taskforce and Committees	<b>54</b>
Glossary	<b>58</b>
Notes	<b>63</b>
Delaware Children’s Outdoor Bill of Rights	<b>65</b>

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Dear Delawareans,

Many of us have childhood memories of special places to explore and adventures to discover in natural settings. "Outdoors" was a place for children to spend the whole day at play. The only rule was to be back before dark, and we even stretched that from time to time. For many of us, those experiences sparked in us a passion and appreciation for the natural world. Sadly, many of today's children have not had the encouragement and opportunity to create their own memories of the outdoors.

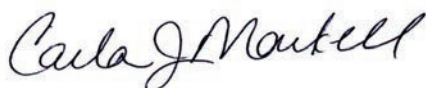
It is important that our children and families become active and stay active in the outdoors to combat today's troubles of stress and obesity. The physical and mental benefits alone are worth the energy of every family in Delaware. With simple outdoor connections, our youngest generation will be given experiences that build in them a sense of stewardship of our natural world.

Delaware has a long tradition of stewardship of the environment, dating back to the 1960s and 70s. Russell W. Peterson, Governor of Delaware at that time, was a dedicated environmentalist and the force behind the 1972 Coastal Zone Act. Governor Markell's administration is building on this tradition of stewardship by investing in our natural resources and ensuring that every Delaware family has meaningful opportunities to enjoy our great outdoors.

A coalition of partners across the state have created the Children in Nature/No Child Left Inside Recommendation. This is a plan that outlines a solid path forward to reconnect our children, families and communities with nature. The professionalism, care and passion that went into preparing this report by 150 of Delaware's leaders, represent a leap forward toward making Delaware a happy, healthy and environmentally literate community.

In the next year, you will begin to notice the opportunities our communities have to enjoy the outdoors. We are going to take strides in making school buildings, grounds and programs greener. Children and young adults who typically do not have access and opportunities to learn and work in the outdoors will begin to see programs right in their neighborhoods. Most importantly, Delaware will begin to see the recommendations in this report come to life to make our state a national model of environmental awareness.

Please join us in supporting the Children in Nature/No Child Left Inside Recommendations and take your communities, schools and families outdoors. Together, we can give our children opportunities for lasting memories of adventures in the outdoors. Together, we can form the stewards of tomorrow. Together, we can make sure No Child is Left Inside!



**Carla Markell, Honorary Co-Chair**



**Michael Riska, Honorary Co-Chair**

## SECTION 1

### The Problem: What Happens When We Leave Youth Inside?



**“Just as technology has made it easy for kids to be engaged online, we need to find ways to get kids and families engaged outside – particularly in a state as beautiful and blessed with nature as Delaware.”<sup>1</sup>**

**Remarks by Gov. Jack Markell, Sussex Outdoor Summit  
(October 2011)**

Too many Delaware children live sedentary lifestyles with limited connection to the outdoors. This can lead to poor health, chronic disease, underperformance in school, limited career opportunities, and a life devoid of outdoor enrichment. Too many children face this future unless we collectively take proactive efforts to change this trajectory. The current problem has four primary causes:

- ➡ **Lack of physical activity:** Hours of sedentary electronic stimulation and other indoor activities have replaced the time that children have played outside for generations
- ➡ **Poor diet:** When combined with limited exercise, poor daily nutrition is the leading contributor to rising incidences of childhood obesity, juvenile diabetes and other related health problems – and the corresponding healthcare cost.<sup>2</sup>
- ➡ **Nature deficit disorder:** A term coined by author Richard Louv in his book *Last Child in the Woods*, it describes what happens to young people who spend too little time outdoors and become disconnected from the natural world.<sup>3</sup>
- ➡ **Too little nature in education:** Many schools have responded to budget shortfalls and other pressures by reducing formal environmental education, outdoor activities and related field trips.<sup>4</sup>

**An informal survey of 180 Delaware teachers conducted in 2012 revealed that more than 81% of those educators believed Delaware students would benefit from an overnight, standards-based outdoor education experience.<sup>6</sup>**

#### **No Child Left Behind: Connecting Children with Nature**

The No Child Left Behind Act (NCLB) has contributed to an environmental literacy gap across the nation through a reduction in environmental education in Pre-K – 12 schools. The emphasis on testing for core subjects has caused many administrators to eliminate environmental education in favor of investing more resources in math and language arts, severely limiting instructional time for science and social studies, the traditional subjects in which environmental education is taught.<sup>5</sup>

The taskforce has dedicated more than 4,000 hours to prepare these recommendations. The goal of this report is to suggest ways to reconnect the state's children with the outdoors and to encourage all Delawareans to embrace the natural world and become healthier, happier and smarter.

## No Child Left Inside

The No Child Left Inside (NCLI) legislation proposes that appropriations be made to train teachers for such instruction, provide innovative technology and to develop studies assessing the worth of these programs in elementary and secondary school curricula. While mainly addressing environmental literacy, the legislation also seeks to touch on healthy living programs to encourage outdoor recreation and sound nutrition. Developed programs will include funding for curriculum changes as well as field trips to environmental areas of interest.

As national momentum swelled and states took action to prepare for the NCLI legislation, Governor Jack Markell charged this taskforce to address the opportunities afforded by the reauthorization of the ESEA and the status of "nature-deficit disorder" facing the citizens of Delaware.



**“This is an exciting time for Delaware, as they complete an environmental literacy plan that will become a national model and builds on Delaware’s exemplary history in education, health and the environment.”**

**Don Baugh- Director, No Child Left Inside Coalition**

The primary objective of the taskforce was to create a comprehensive plan with implementable recommendations to the DOE and DNREC Secretaries and to do the following:

1. Draft a Children in Nature Executive Order;
2. Inventory public, private, state-wide and national research, data, initiatives, programs and best practices;
3. Develop a report to include goals and recommendations;
4. Support the DOE in the development of the Environmental Literacy Plan for the State of Delaware as required in the re-authorization of ESEA;
5. Develop a Children's Outdoor Bill of Rights;
6. Identify potential funding opportunities to implement the recommendations of the report;
7. Identify messages and marketing strategies.

## SECTION 2

# Taskforce Report on EDUCATION

### Background

Educating the citizens of Delaware is one of the most powerful tools available to change how they view the benefits of spending time with and in nature. The CIN/NCLI Initiative can utilize the power of the state's formal and informal educational resources to foster environmentally literate generations.



In 2011, The Nature Conservancy commissioned a nationwide poll of American children to understand their connection with nature. The polling team conducted on-line interviews with a diverse sample of 602 children between the ages of 13 and 17. Survey questions explored children's current connection with nature, environmental attitudes, obstacles and opportunities to connect with nature. The survey report highlights included:

- Children spend much of their time engaged with electronic media. For example, 88% of children reported using

a computer almost every day, while only 11% reported visiting a local park or natural area almost every day.

- Children reported that feelings of discomfort (bugs, heat, etc.), lack of transportation to natural areas and lack of natural areas near home were the top three reasons why they did not spend more time in nature.
- Obese children prefer indoor activities more than other children do and are less likely to have had a meaningful experience in nature.
- Two-thirds of children reported having a meaningful experience in nature.
- Children who have had a meaningful experience in nature are more likely to prefer spending time outdoors, express concern about environmental issues, consider themselves a strong environmentalist and express interest in studying the environment or pursuing an environmental career.
- Children most often experience nature with friends (79%), followed by parents (46%) and siblings (44%).



- ☛ Children living in the West are most likely to prefer spending time outdoors, while children living in the Northeast are most likely to prefer spending time indoors.
- ☛ A majority of children (86%) said that it is “cool” to do things that protect the environment.



Based on the survey results, researchers point to a number of strategies to enhance children's connection to nature, including providing opportunities at school that engage children with nature, getting friends and parents to encourage children to spend more time outside and ensuring that activities are fun and easy.<sup>1</sup>

Direct nature experiences are important for changing environmental attitudes and behaviors of Delaware youth. Many environmental education programs strive for a positive influence on children's environmental behavior; however, researchers know very little about program elements and experiences that lead to changes in environmental behavior.

In a 2010 study, Duerden and Witt investigated the relationship between indirect and direct nature experiences and children's environmental knowledge, attitudes and behavior. They used surveys, focus groups and observations to evaluate the experiences of 108 middle and high school students who participated in an international environmental education immersion program. The program included a preparatory program (indirect nature experience), a seven- to fourteen-day international field workshop (direct nature experience) and a post-trip service project.

Participants were surveyed at multiple stages in the program, as was a comparison group of 49 middle and high school students who did not participate in the program. The researchers found that program participants had a significant increase in knowledge about the environment in contrast to the comparison group. Duerden and colleagues found that, during the indirect nature experience, environmental knowledge increased more than attitudes about the environment, which had a stronger impact on environmental behavior. During the direct nature experience, both environmental knowledge and attitudes developed rather equally and both environmental knowledge and attitudes were related to environmental behavior.

Evidence has existed for years that the benefits of direct experiential learning can increase one's appreciation of nature and the environment, as well as positively impact test scores. The taskforce acknowledges the complexity of integrating environmental literacy across the curriculum. However, the following recommendations offer implementable solutions that can begin the process of shifting to experiential learning.

Through experiential education and environmental literacy, schools can tap the power of the natural world to educate the whole child. The educational and developmental benefits of contact with nature, coupled with the significant time children spend at school, reinforce the notion that our schools can greatly supplement the exposure that Delaware children can have with nature.

### **Nature-Smart Kids Receive Higher Test Scores**

In 2005, the American Institutes for Research conducted a study of the impact of weeklong residential outdoor education programs. The focus was on at-risk youth, 56% of whom reported never having spent time in a natural setting. Comparing the impact on students who experienced the outdoor education program versus those in a control group who did not, the results were statistically significant. Major findings were: a 27% increase in measured mastery of science concepts, enhanced cooperation and conflict resolution skills, gains in self-esteem, gains in positive environmental behavior and gains in problem-solving, motivation to learn, and classroom behavior.<sup>2</sup>

### **Existing Barriers/ Education**

#### **Lack of Consistent Opportunities**

For some districts, there is minimal support for experiential outdoor learning, which is often viewed as having little educational value. There is currently no requirement for schools to provide students the opportunity for outdoor experiences, learning outside of the school environment or overnight educational experiences in nature.



#### **Teacher Training**

Teachers who have had few outdoor opportunities themselves may not be comfortable teaching outdoors. In a 2012 informal survey of 180 Delaware teachers, 48% reported that current in-service training opportunities for environmental education teachers are not adequate to meet the needs of their classroom.<sup>3</sup>

#### **Fewer Field Trip Opportunities**

In general, the number of field trips that involve environmental education or outdoor activities has decreased significantly in the past ten years, and few Delaware schools offer overnight field experiences.

#### **Perceived Lack of Value**

There are significant opportunities for greater integration of indoor classroom instruction and outdoor experiential learning. For example, much of what is taught in science kits could be reinforced with outdoor, hands-on experiences. Science education does not need to be confined to the classroom.

## Ecology of Schoolyards

Traditional design and management of schoolyards and school property has created ecological monocultures that often do not support native plants, wildlife or environmental learning. School design and construction in the 20th century missed the opportunity to expose students to sustainability and environmental issues that will be their generation's challenge to overcome.

## Existing Strengths/Education

### Timely Focus

The U.S. Secretary of Education, the EPA and the White House Office on Environmental Quality have recently announced the launch of the Green Ribbon Schools program. There is national and state level focus on making students "college and career ready" through Science, Technology, Engineering, and Mathematics (STEM) Education and Race to the Top initiatives. Our nation is showing signs of "greening" in every aspect of society and culture and recognizes that reconnecting with nature is essential for future generations.

### State and Legislative Support

There is a tremendous focus of support for environmental literacy as evidenced by Governor Markell's creation of the CIN/ NCLI taskforce, led by DNREC and DOE. In June 2011, the Delaware State Senate 146th General Assembly passed Resolution No. 20 expressing support for the work of this movement.

### Resources Available

Some natural areas exist within our school properties and can easily be expanded into outdoor natural learning areas. High quality, professional development for Delaware teachers is currently available through the University of Delaware, Delaware State University, Wesley College and Delaware Technological Colleges, Delaware Nature Society, Nemours Health and Prevention Services, Healthy Foods for Healthy Kids programs and DNREC.

### Successful Projects/Existing Curriculum

Schools in Woodbridge, Indian River, Colonial, Christina, Red Clay, Caesar Rodney, Cape Henlopen, and Appoquinimink Districts are currently hosting schoolyard food and flower gardens and certified rain gardens. Current curriculum and educational resources that support state learning standards can easily be adapted to accommodate outdoor learning experiences.

### Correlating Green Schools and Student Achievement

A study prepared by The Maryland Association for Environmental and Outdoor Education (MAEOE) concluded that there is a positive, statistically significant relationship between higher achievement and Maryland Green School designation, as indicated by Maryland State Assessment (MSA) reading and mathematics scores. This study supports prior research that schools that incorporate environmental education across the curriculum are associated with higher overall academic achievement. Using the schoolyard, community and local environment as an integrating context for instruction is associated with overall higher student achievement, regardless of student background differences.<sup>4</sup>

**Research**

There is a growing body of research on the effect of green schools on student achievement. Schools with higher quality or greener school grounds support greater physical activity among students (Dyment & Bell, 2008). Students participating in school gardening programs increase their overall consumption of fruits and vegetables (Libman, 2007; Lineberger & Zajicek, 2000; McAleese & Rankin, 2007) and are more willing to try new foods (Morris & Zidenberg-Cherr, 2002).<sup>5</sup> Both local and national research is supporting the need to focus on including constructive and integrated environmental curricula.

**Special Recommendations by the Taskforce to Create Meaningful Outdoor Experiences for Students**

Many other states require that students have an opportunity to experience nature first-hand facilitated by trained park rangers, scientists, naturalists and outdoor educators. Classroom teachers must meet rigorous requirements over an academic year. An outdoor educational

partner can enhance and enrich the educational experience for both students and teachers. Students cannot fully appreciate the majesty of nature through a book, PowerPoint or video. They must get outdoors!

Programs such as Project Wild, Project Wet, Project Learning Tree, Earth Force, etc. offer high-quality environmental education experiences. Beyond these are exceptional local programs close to schools throughout Delaware. The taskforce offers the following recommendations that serve to integrate science standards established by DOE:

- ➡ Ensure that every single elementary student takes part in hands-on coastal experiences.
- ➡ Develop requirements to add meaningful outdoor experiences for every student throughout their school careers.
- ➡ Incorporate service learning opportunities to build stewardship ethics in Delaware's youth.
- ➡ Establish three primary sites throughout the state, one in each

**How a Trip on the Bay Got Me to Where I am Today**

**By Ray Bivens**  
**Chief of Operations, Delaware State Parks**

As a 10th grader growing up in the greater Baltimore area, I was given the chance to experience the Chesapeake Bay by boat, thanks to a Chesapeake Bay Foundation overnight program that focused on watersheds. I clearly remember learning about the ecology of the bay while we harvested and had the opportunity to sample an oyster (my first time) on the trip. As a child who was raised in Baltimore City, the Chesapeake Bay was not tangible to me, it was simply something I crossed over on a big bridge or saw on a map until that day when I was given that opportunity to experience and appreciate it firsthand. I am convinced that experience played a large role in directing my career and igniting my passion for Natural Resources.

county, which can help local school districts offer meaningful overnight environmental education experiences.

- Ensure that by 2016, every single student statewide participates in an overnight environmental education experience prior to graduation.
- Create a “teacher-on-loan” for informal environmental educators so they understand the opportunities and needs of the state environmental curriculum.
- Create a “naturalist-on-loan” to help assist teachers with integrating environmental education.

## NATIONAL HIGHLIGHTS

### Learning Afloat

#### NEW YORK

In New York, the Hudson River sloop *Clearwater* is a unique part of an innovative environmental education program. This 106-ft. sailing sloop has opened the hearts and minds of more than a half million children to the natural treasures and challenges of the Hudson River Valley.

Today, these children are eco-minded professionals, government leaders and grassroots volunteers who are leading the environmental recovery of the Hudson River through their words and actions.

*Clearwater's* program of shipboard education has been duplicated nationally and internationally and is embraced by schools across the Hudson River Valley. Since 1969, when the majestic sloop was launched, the *Clearwater* has inspired educators and children alike.

#### MARYLAND

Maryland school children have multiple venues to interact with the state's Chesapeake Bay, including the schooner *Sultana*, skipjack *Martha Lewis*, Living Classrooms Foundation and the Chesapeake Bay Foundation.

Other vessels are available to help people discover the connection between the bay and the people of Maryland, such as the *USS Constitution*, the *USS Torsk*, and the *Pride of Baltimore II*.

#### WASHINGTON STATE

On Puget Sound, Service, Education and Adventure (SEA) promotes engagement with the natural world and fosters spirited environmental stewardship by connecting youth, adults and communities in meaningful service and learning on Puget Sound and throughout the Pacific Northwest. They operate five vessels, ranging from a 22-ft. aluminum ferry to a 74-ft. wooden sailing ketch.



### Overnights

Delaware's overnight environmental education facilities such as Ashland Nature Center and Cape Henlopen State Park, serve more out of state schools than Delaware schools.

## LOCAL OPPORTUNITIES

There currently are no environmental education programs that expose students to Delaware Bay or the Atlantic Ocean through a boating experience.

- ➡ The University of Delaware College of Earth, Ocean and Environment in Lewes currently operates a research vessel that could enhance advanced placement environmental education in Delaware high schools.
- ➡ The Kalmar Nyckel could become a partner for experiential learning along our waterways.
- ➡ The Delaware River and Bay Authority (DRBA) presents an intriguing opportunity as a resource that already possesses boats and vessels with captains and crews capable of hosting school groups for excursions (to study the heron rookery at Fort Delaware, to cross the Delaware Bay and Atlantic Ocean confluence, etc.).



## Taskforce Recommendations on Education

### GOAL 1:

Increase awareness within Pre-K – 12 multidisciplinary curricula of the value of outdoor learning experiences and their positive impact on student achievement.

**Recommendation 1:** Provide professional development to administrators, teachers and pre-service teachers that demonstrates the benefits of using the outdoors as a learning opportunity across many disciplines and foster a connection through outdoor experiences.

**Action 1:** Secure opportunities for administrators to study issues relating to insurance, best teaching practices in outdoor settings, funding opportunities, budgeting, etc. that encourage the teaching community to harness the power of the “outdoor classroom.”

**Action 2:** Provide teachers time and resources to investigate outdoor learning skills and experiences within their areas of expertise; include field trip training to build confidence in taking students out of the classroom.

**Action 3:** Work with state colleges and universities to include environmental literacy in pre-service teacher preparation programs to make known the need to address environmental literacy.

**Recommendation 2:** Create and implement an environmental literacy plan throughout Delaware schools.

**Action 1:** Ensure that every single elementary student takes part in a hands-on coastal experience.

**Action 2:** Develop requirements to add meaningful outdoor experiences for every student throughout their school careers.

**Action 3:** Establish a strategy for funding and implementing environmental literacy that also includes a strategy for reporting to stakeholders and partners.

**Action 4:** Incorporate service learning opportunities to build stewardship ethics in Delaware's youth.

**Action 5:** Consider school facilities and grounds in the plan as it relates to environmental health, operational costs and conservation.

**Recommendation 3:** Establish three primary sites throughout the state, one in each county, which can help local school districts offer meaningful overnight environmental education experiences.



**Action 1:** Ensure that by 2016, every single student statewide participates in an overnight environmental education experience prior to graduation.

**Recommendation 4:** Assign a dedicated environmental education point-of-contact or department in DOE to evaluate environmental content and coordinate training to help teachers integrate other curricula (reading, math, social studies) with outdoor learning experiences.

**Action 1:** Evaluate and reinforce 15% of state science kits to ensure part of the lesson includes a significant component that promotes connections to the outdoors.

### **GOAL 2:**

Establish a voluntary statewide Greener Schools for Delaware program that is open to all schools so they can become places where students learn ecological principles by example and practice, experience nature first-hand, and understand the economics of environmental stewardship.

**Recommendation 1:** Using the experience of successful programs around the country, create and implement a statewide Greener Schools for Delaware program with a clear path for schools to follow for certification.



**Action 1:** Identify a partner such as the DAEE to provide administrative leadership for the program.

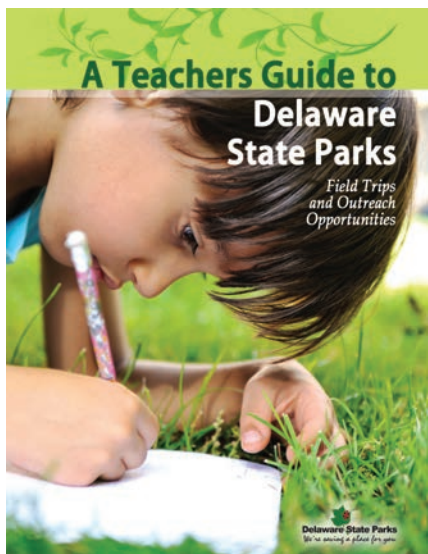
**Action 2:** Identify community funding resources to pilot the statewide program.

**Action 3:** Incorporate the requirements of the national Green Ribbon Schools program so that schools certified in the Greener Schools for Delaware program will be eligible for national recognition.

**Recommendation 2:** Develop workshops and training that incorporate certification elements for Greener Schools for Delaware.

**Action 1:** Provide training to develop schoolyard habitats, outdoor classrooms and school gardens.

**Action 2:** Develop an instructional guide for creating and delivering environmental education programming in a schoolyard habitat, outdoor classroom or school garden.



**Recommendation 3:** Bring experts and resources together to help Delaware schools become community models using best management practices for green facilities management, energy and water conservation, earth-friendly landscaping and storm water management, with biologically diverse open spaces on campuses.

**Action 1:** Provide incentives at the state level through DOE, Energy Office and DelDOT to invest in the long-term cost savings of green technologies.

**Action 2:** Develop a plan that evaluates existing school campuses (in accordance with certification programs such as Leadership in Energy and Environmental Design – LEED).

**Action 3:** Introduce legislation that will allocate a higher percentage of state matching funds for new school construction, which conforms to national green building standards.

**Action 4:** Provide training and incentives to keep agency facility planners current on best practices for green building design, maintenance and renovation of buildings and grounds.

### **GOAL 3:**

Develop partnerships between formal and informal educators to connect students with nature and the outdoors through environmental education tied to the Next Generation Science Standards.



**Recommendation 1:** Establish and maintain an updated environmental education resource database for formal and informal educators that is Delaware-centric and supports the statewide environmental education curriculum.



**Action 1:** Invite non-traditional members to support environmental education across curricula, not just in science.

**Action 2:** Seek formal coordination between DOE, DNREC and third parties to share assets and solutions to support environmental literacy for all citizens (such as linking park nature centers to standards and statewide science curriculum).

**Action 3:** Establish an online inventory of environmental education resources that is updated on a regular basis

**Recommendation 2:** Create a “teacher-on-loan” program for informal environmental education providers so they understand the opportunities and needs of the state curriculum.

**Recommendation 3:** Create a “naturalist-on-loan” program to help teachers integrate environmental education into their curricula.

**Recommendation 4:** Formalize the relationship between the DAEE and DOE to provide for the exchange of information and share best practices for teaching environmental education.

**Recommendation 5:** Encourage partnership projects that provide new outdoor experiences for students

**Action 1:** Evaluate existing daytime and overnight environmental education programs.

**Action 2:** Implement new programs with the collaboration of community stakeholders (DNREC, Delaware Nature Society, U.S. Fish and Wildlife Service, vendors, etc.) that support STEM subjects and environmental education.

**Recommendation 6:** Address transportation obstacles that prohibit some schools from taking field trips.

**Action 1:** Develop a funding strategy that makes transportation simple for teachers when planning field trips.

**Action 2:** Make a significant investment of Community Environmental Projects Fund Grant dollars to help fund field trips.

**Action 3:** Work with DelDOT to use DART bus service as an alternative to buses for field trips.

**I have been working in the environmental field for approximately 14 years. It's been an interesting journey as I began my career in consulting, became a regulator, went back into a form of consulting, and then became a full time environmental educator. I wanted to inspire children and adults to engage in outdoor activities, to not be afraid but to embrace a good challenge. As an environmental educator, I have the awesome responsibility and privilege to work with students, teachers, and the public to connect them with their environment and inspire a greater appreciation of the natural resources in their community.**

**Jennifer Holmes,  
Education Coordinator  
Delaware National Estuarine Research Reserve**

#### **GOAL 4:**

Create opportunities for students to spend part of the school day outdoors.

**Recommendation 1:** Help schools develop schoolyard habitats – outdoor classrooms that include wetlands, rain gardens, vegetable gardens and native plant gardens to foster understanding and a connection with nature as a centerpiece of their "Greener School."

**Action 1:** Follow successful models for the creation of schoolyard habitats, outdoor classrooms, wildlife habitats and schoolyard gardens from programs around the state and country.

**Action 2:** Encourage outdoor play as part of physical education classes.

**Action 3:** Provide daily recess and challenging play environments for all preschools and elementary schools that include outdoor activities such as unstructured play, opportunities beyond the pavement and interaction with nature.

## Next Generation Science Standards (NGSS) in Delaware

**Tonyea Mead:**  
**Delaware Department of Education**  
**and Delaware Children in Nature/No Child Left Inside**  
**Taskforce Member**

Science education reform in Delaware has evolved during the past 20 years and will continue to evolve as the state moves toward the adoption of the NGSS.

The John W. Collette Education Resource Center, financed by the state of Delaware with support from the business community, has provided the facilities and materials for teacher professional development since 2005. Science education evolution continues with the introduction of 21st century technologies and integration of STEM curricula to better serve the education and workforce needs of the state.

In 1995, The Delaware Science Coalition was formed. The coalition consists of voting representatives from each of the 19 Delaware public school districts, as well as one voting representative from the state's 23 charter schools. Other members include the DOE, business community as represented by the Delaware Foundation of Science and Math Education, DuPont Corporation, informal educators, and centers of higher education.

Today, the Delaware Science Coalition continues to function as a decision-making body with specialized subcommittees to initiate and synchronize reform policies. The coalition leadership is structured to identify and provide attention to the needs of elementary, middle and high schools, such as improved approaches to assessment. Additionally, the Delaware Children and Nature Committee comprised of informal and formal educators, works within the state to promote science education. These organizations will be a supportive network in Delaware to promote NGSS adoption and implementation.

Delaware students must complete at least three credits of laboratory science (biology, chemistry, and physics) in order to graduate from public high school. The Delaware Science Content Standards were first adopted in 1995 by the State Board of Education, and have been considered a living document since then. The most recent revision was in 2006 with the collaboration of elementary, middle and high school teachers, university faculty and community stakeholders from business and industry. Delaware is currently working to align its state adoption timeline, including state review, professional development opportunities and curriculum and assessment materials to coincide with the anticipated NGSS timeline.

**NATIONAL SPOTLIGHT****New School Construction Standards, Harrisburg, PA**

The Pennsylvania legislature amended school construction reimbursement rates for the state's public schools, providing hundreds of dollars of funding per pupil for public schools with LEED Silver certification or higher, or two Green Globes or higher. In addition, four state funds, including the \$20 million Sustainable Energy Fund, provide grants, loans and "near-equity" investments in energy efficiency and renewable energy projects.

**DELAWARE SPOTLIGHT****Green Schools Save Money, Seaford, DE**

Administration, school board, taxpayers, staff and students in the Seaford School District made a commitment to develop an effective energy management plan for the six schools in the district. Led by Roy Whitaker, Chief of Building and Grounds, an energy team was formed consisting of two technicians, the six building chiefs, a night shift supervisor, and 29 janitors who are responsible for the six schools. Implementing the plan saved the district \$640,000 in energy costs in 2011.



## SECTION 3

# Taskforce Report on OUTDOOR CONNECTIONS

With each passing year, our citizens lose touch with our land, water and wildlife. They also lose opportunities to re-establish critical connections to these resources. It is essential to provide accessible, safe and enjoyable outdoor opportunities to educate and inform people of these resources and build appreciation of them and to develop healthy activities.

### Our Vision on Outdoor Connections

We envision a Delaware where children and families have safe and enjoyable outdoor recreation opportunities that are both convenient and provide equal access to nature.

The Committee focused on the following key areas:

- Incorporating natural spaces into the built environment.
- Providing access for multi-generational use to increase physical activity for all ages.
- Improving and increasing accessibility to existing areas.
- Sharing inventory data about the state's outdoor recreation resources.
- Improving walkability and safe access to natural resource areas.

### Background

As development expands and population swells, there is an increasing demand on outdoor recreation facilities and for the use of our natural resources. As this demand increases, we are challenged to find a balance between reaping the largest benefit from our parks and natural resources while ensuring their availability to future generations. More often than not, the value of parks and natural spaces is overlooked when, in fact, these places provide a variety of benefits.<sup>2</sup>

### Economic Benefits

Tourism motivated by outdoor recreation contributes to the economy. Outdoor recreation activities foster tourism, motivate business and residential choices and encourage investment in natural resource protection. Studies have shown that tourists and visitors are attracted to an area's natural resources. Visitors choose these areas for a wide range of activities, from visiting historic sites to mountain bike riding. Delaware has unique natural and cultural history that allows us to capitalize on visitors' desire to participate in diverse recreational activities. Outdoor recreation can also be viewed as an investment in preventative health care. Access to a variety of outdoor recreation opportunities allows a person to be physically active, which has repeatedly been proven to reduce health care costs.<sup>3</sup>

### Social Benefits and Community Building

There has been an increasing awareness about the environmental and health impacts of urban sprawl in North America, resulting in a reevaluation of the way communities are designed. Placing homes, schools, recreation facilities and worksites closer together and increasing pedestrian and bicycle pathways creates a sense of community. Accessible outdoor recreation facilities are valuable to communities, add to the local environment and encourage community pride. By

fostering team building, self-esteem, cooperation, creativity, imagination and communication, outdoor recreation brings people together who have similar interests, building social capital.<sup>4</sup>

## Environmental Benefits

Spending time outdoors makes people appreciate the natural environment, creates connections to and promotes ownership of an area. These connections drive individuals to become stewards of an area's resources and to participate in activities that will enhance or protect them. Furthermore, by taking a genuine interest in the world around them, people become educators who can share their experiences to broaden others' understanding of nature. As people recognize the importance of the natural environment, they are more willing to invest both time and money on the protection, conservation and maintenance of parks, natural areas and open spaces.<sup>5</sup>

## Existing Weaknesses/Outdoor Connections

### State Agencies Lack Coordination

Attempts across state agencies to coordinate with one another have provided limited and uneven successes. Attempts across state agencies to coordinate with one another have been unsuccessful. Duplication of efforts, gaps in service, lack of countywide park systems in each region and inefficient marketing of the state's natural opportunities add to the lack of coordination. In addition, many public and private outdoor areas and facilities across the state are aging and require maintenance and restoration to ensure user safety.

### Walkability

Access to the outdoors must be easy. There are few funding sources available to improve walkability to natural areas in existing communities. Little consideration is given to walking distance from population centers in the construction of new schools.

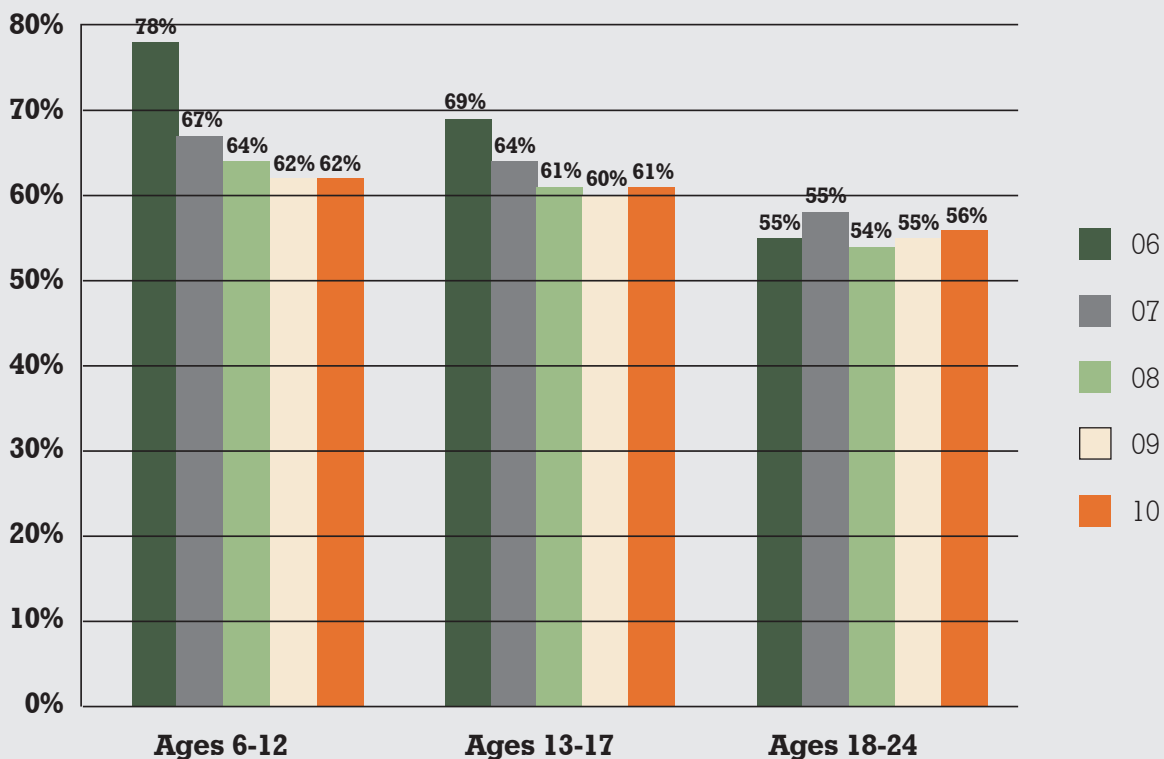
### Transportation

Lack of transportation to natural areas limits access for many citizens. This may be a result of the cost of transportation or the inability of the public transportation system to access the areas.

### The Unknown

Some parents have fears about children's outdoor activities. Families lack sufficient information and awareness of existing programs and resources to ensure safety in the outdoors.





## 2010 National Outdoor Participation Study

### The Good News

Participation in outdoor recreation in 2010 remained steady for a third year in a row, matching levels seen in 2008. 48.6 percent of Americans ages six and older, or 137.9 million individuals, participated in at least one outdoor activity in 2010, making 10.1 billion outdoor outings.

Notably in 2010, ethnically diverse participants made up a significantly higher percentage of participants than in previous years, up over four percentage points since 2007 to 29.5 percent of participants.

Compared to 2009, youth participation in outdoor activities was flat among ages 6 to 12, but increased slightly among ages 13 to 17 and 18 to 24. Running, biking and camping were popular among youth, ages 6 to 24, though backyard, car and RV camping and bicycling continued to see participation decreases in 2010, part of a three-year trend.

### The Not So Good News

Participation in outdoor recreation in youth has trended downward over the past five years. <sup>1</sup>

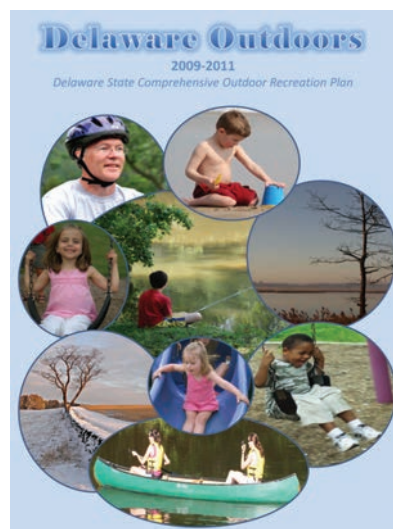
## Existing Strengths/Outdoor Connections

### Administrative and Legislative Support

Delaware Governor Jack Markell launched the First State Trails and Pathways initiative establishing a world-class, interconnected network of shared use pathways and trails. The Legislature approved \$7 million for the trail initiative in FY 2012 and \$13 million for FY2013.

### Data Available

Reliable Delaware-specific outdoor recreation trend data is currently available, thanks to the State Comprehensive Outdoor Recreation Plan (SCORP).



### National and State Level Partnerships

There is considerable momentum at the national and state level to implement programs and partnerships that support Children in Nature and offer strategies that leave no child inside. Non-traditional partnerships such as the one between Nemours Health and Prevention Services and Delaware State Parks are occurring on a regular basis.

### Focused Momentum

There are programs emerging such as Bike Delaware, Sussex Outdoors and the Complete Street Community Project that are providing opportunities to engage in more active lifestyles. Workgroups such as the Delaware Council on Health Promotion and Disease Prevention, The Delaware Coalition for Healthy Eating and Active Living (DE HEAL) and the Council on Greenways and Trails are working to connect open spaces throughout the state and promote healthy outdoor experiences.

### Nature Available

Throughout Delaware, nature is available to the majority of our population, often free or at a low cost. Urban areas, suburbs and rural locations with opportunities for physical outdoor activity are available on public and private lands. According to the SCORP, there are 169,397 acres of public parks, recreation areas, and protected open space throughout Delaware, including 192 acres of boat ramps, 720 acres of active recreational sites (sports complexes), 988 acres of historical sites, 18,156 acres of state forest, 52,882 acres of park, natural areas, or nature preserves, 10,181 acres of open space and 84,059 acres of wildlife land.

## Taskforce Recommendations on Outdoor Connections

### GOAL 1:

Improve public access to green space and recreational resources.

**Recommendation 1:** Create a web-based recreation clearinghouse to help families identify existing public recreational facilities near their homes (i.e. people enter their home address into the interactive tool and then see a map of facilities available throughout the state or within 20 minutes of home).

**Recommendation 2:** Encourage DelDOT and DNREC to create and fund a statewide trail plan

promoting neighborhood connections, recreation resources and alternative transportation.

**Action 1:** Expand and adjust transportation routes to include stops at green spaces, parks and recreation areas.

**Recommendation 3:** Conduct a special analysis of identified underserved areas throughout the state to determine which areas are in need of green space.

**Recommendation 4:** Provide funding support for communities to implement walkability and bikability plans.

**Recommendation 5:** Improve the distribution of green space and trail connectivity through partnerships, joint use agreements, easements and open space purchases. An example is the C & D Canal Trail, which could connect Delaware City to Chesapeake City in Maryland.

**Action 1:** Enhance interpretation and visitor services to promote expanded use of State Wildlife Areas

**Action 2:** Support ecotourism improvements such as the Delaware Bayshore Initiative.

**Recommendation 6:** Promote model codes and ordinances that require the development of pocket parks within communities

**Recommendation 7:** Conduct studies of the economic benefits of green space and parkland in Delaware.

### **GOAL 2:**

Increase allowable usage of existing infrastructure.

**Recommendation 1:** Identify liability issues and other barriers associated with students using natural areas and recreational facilities outside of regular school hours.

### **Bayshore Initiative**

Extending from Pea Patch Island in New Castle County to the City of Lewes in Sussex County, the Delaware Bay shoreline is widely recognized as an area of global ecological significance. Its expansive coastal marshes, shoreline, agricultural lands and forests provide diverse habitat to many species, including migratory shorebirds. Birders and biologists from around the world come to central Delaware to witness the annual spring spectacle of more than a half million shorebirds taking a rest stop to dine on eggs laid by spawning horseshoe crabs.

By building on public-private partnerships and leveraging state, federal and private resources, the Bayshore Initiative targets three major areas for improvement:

- Conservation and ecological restoration – Connect wildlife areas by acquisition or easement of unprotected lands, restore native habitat and protect resources.
- Recreation and connectivity – Focus strategic investments to connect wildlife areas to urban centers, provide safe, healthy recreational experiences and enhance access to wild areas.
- Engagement and marketing – Engage, educate and inspire the next generation of environmental stewards, partner with local communities and organizations to promote the area regionally, nationally and internationally, and promote local volunteerism.<sup>6</sup>

**GOAL 3:**

Review funding and budgetary solutions looking for ways to provide more access to Delaware's natural resources and infrastructure.

**Recommendation 1:** Use the Delaware Land and Water Conservation Trust Fund to create natural wildlife areas and improve access to natural play space in urban, suburban and rural locations throughout the state by identifying focus areas and purchasing land to fill the gaps.

**Action 1:** Increase matching fund amounts for natural play space projects until 2015.

**Action 2:** Target underserved communities in each county with the goal of creating a minimum of one natural play area in each county by 2016.

**Recommendation 2:** Work with school districts to develop acceptable use policies that allow communities increased access to school buildings.

**Recommendation 3:** Study issues and obstacles that prohibit citizens in urban and suburban locations from accessing existing community garden resources.

**NATIONAL SPOTLIGHT****Fairfax High School, VA**

The Fairfax High School operates not only as a school but also as a community center. The school is used seven days a week, year-round by the school and the community.

**NATIONAL SPOTLIGHT****Cincinnati, OH**

The Marge and Charles Schott Nature PlayScape is a model of the Nature PlayScape Initiative (NPI). This initiative aims to create a blueprint for healthy child development and demonstrate how to use the outdoors to strengthen a child's mind, body and spirit.

The Nature PlayScape offers a variety of programs for both children and adults including *Hands-On Nature* and *Grownups in Nature* days. On these days, facilitators are on hand to encourage and inspire play in nature.



## SECTION 4

### Taskforce Report on COMMUNITY

Every citizen should be informed of the unique natural resources that Delaware offers, but we should not assume that they are aware of the benefits that come from connecting children with nature. Nor should we fail to invite the entire state to stand behind one unified movement to steward resources and opportunities so that no child is left inside, that no citizen remains on the margin and that all feel welcome to partake in the treasures and experiences that this beautiful state affords.

#### Our Vision on Community

We envision a Delaware where all members of the community embrace the value of connecting with nature and provide long-term support to promote its benefits for generations to come.

The Taskforce focused on the following key areas:

- Increasing access to recreational facilities through community partnerships.
- Developing trainings and workshops to increase communities' understanding of the CIN/NCLI movement and increase environmental literacy statewide.
- Bringing together full representation of the state's population, across generations, cultures and economic conditions to help build the CIN/NCLI unified message.
- Addressing issues that prevent underserved communities from experiencing nature.

#### Background

Many reports have referred to children's lack of connection to nature. Part of that disconnect may come from a general fear of the outdoors, "stranger danger" and a feeling of anxiety of the unknown. Stranger danger is a justified concern; however, its occurrence does not relate directly to the outdoors. In fact, through management and enforcement efforts, Delaware's city, county and state parks continue to be safe places to recreate.

Many children and adults do not have a connection to the outdoors because they have never been exposed to trails, woods, facilities, programs and situations that encourage exploration of the unknown. Nature centers, environmental education centers, school field trips and informal education programs introduce students and families to the outdoors, dispel the myths that exist

#### Minorities Missing from the Outdoors

**The U.S. Fish and Wildlife Service traces ethnic and racial trends and reveals that individuals spending time outdoors are almost exclusively non-Hispanic whites.**

**Research conducted by The Outdoor Foundation identified the fear of being outdoors as one reason that people do not spend more time there. Minority children are twice as likely as Caucasians to see the outdoors as a place where they can get hurt in accidents.<sup>1</sup>**

and connect individuals to elements of the outdoors that can enrich lives, relieve stress, add health benefits through fitness and provide families with activities to share.

## Existing Weaknesses/Community

### Economic Issues

In the current economy, budgets and resources are limited. Short-term economic development strategies often overlook ecotourism potential and the long-term benefits of creating and retaining green spaces in the community. Fostering collaboration at the regional and state level will take time, focused effort and resources.

### Interest/Motivation

Busy schedules and other activities compete with outdoor recreation for people's limited time and attention. Urban citizens, especially may feel disconnected from nature because of a lack of accessibility, misinformation and misperceptions about the dangers of being outdoors. Many people see nature as a place far away and fail to recognize opportunities that exist close by.

## Existing Strengths/Community

### Collaborative Opportunities

The mission of CIN/NCLI is aligned with other movements and organizations such as the National No Child Left Inside Coalition, Nemours Health and Prevention Services, DOE, Delaware Nature Society, US Fish and Wildlife, Center for Inland Bays, Delaware Health and Social Services, DAEE and DNRC that focus on quality of life, health, family and our natural world.

### Consistent Message

Connecting children with nature resonates across cultures, geographic regions and economic levels. Professionals and communities can appreciate the benefits of economic development through nature-focused and eco-tourism opportunities. Governor Markell's promotion of natural resource-related tourism will provide a strong foundation to build upon.

### Resources Available

There are many resources available in Delaware to help key organizations create momentum toward executing the mission of the No Child Left Inside Initiative, including technology, marketing and manpower.

## Taskforce Recommendations on Community

### GOAL 1:

Increase community access to school recreational facilities by reducing barriers associated with use.

**Recommendation 1:** Research insurance liability solutions to help schools make campuses available to the local community after school.

**Recommendation 2:** Identify sources of financial support for the increased maintenance costs associated with increased community use.

**Action 1:** Partner with community organizations, city parks and county parks to provide liability insurance coverage through shared-use partnerships.

**Action 2:** Establish volunteer groups to donate time and resources to help maintain community areas on school grounds.

### **GOAL 2:**

Create a statewide career development program for community members, families and children to pursue nature-based careers.

**Recommendation 1:** Establish funding for a Youth Conservation Corps program designed to introduce underserved youth to the outdoors and build career skills.

**Action 1:** Seek annual funding for a job corps program with 40 members that includes supervision, training and advancement into outdoor careers.

**“As I look back on my summer of YCC as a teen, I first think of sweat, bugs and really hard work. I also think of the incredible sense of accomplishment, of belonging, of being part of something bigger than myself. Years later, I can still clearly see the faces of my teammates, remember the laughter. We were all from different places, different people and different backgrounds. But on our team, those differences didn’t seem to matter. I know we did great things for our parks, but really, it seemed the biggest benefit was to us kids.”**

**Glen Stubbolo,  
Chief of Volunteer and Community Services  
Delaware State Parks**

**Recommendation 2:** Develop statewide outreach programs for teens and adults to provide mentoring opportunities and develop career skills.

**Action 1:** Provide a full-time Park Ranger and Naturalist for each state park to ensure safety and training to advance the Children In Nature movement. Enhance facilities in state parks, state wildlife areas and other organizations to build programming capacity statewide.

**GOAL 3:**

Raise awareness within families with Children In Nature celebrations and programs statewide that are customized to meet the needs of local communities.

**Recommendation 1:** Offer a series of outdoor workshops through community centers, schools, faith-based organizations and other partners that are open to all at a reduced cost or no cost to encourage people to spend a day outdoors.

**Recommendation 2:** Suggest the declaration of a "Delaware Children in Nature Day."

**Recommendation 3:** Create a community award program to recognize exceptional efforts by communities to further the Children In Nature Initiative.

**Recommendation 4:** Offer supplemental training and workshops to teach parents how to embrace the outdoors with their children.

**NATIONAL SPOTLIGHT****Boston Youth Conservation Corps**

To date, more than 580 teens have participated in the Youth Conservation Corps as part of the Boston Natural Areas Network. In its eighteenth year of operation, the YCC teaches teens teamwork and job skills while completing park improvements such as environmental restoration, trail building, landscaping and urban agriculture projects.

**DELAWARE SPOTLIGHT****Sussex Outdoors – Delivering a Unified Message to the Community**

Emerging in October 2011, Sussex Outdoors is a campaign involving a series of events that encourage families and children to be physically active in the outdoors of Sussex County, Delaware.

Sussex County offers opportunities to enjoy the environment in ways that promote a healthy lifestyle. Sussex Outdoors works in partnership with the Governor's Office, Delaware State Parks, Sussex County Council, Sussex Child Health Promotion Coalition, Nemours Health and Prevention Services and the majority of the Executive Branch of Delaware State Government.

## SECTION 5

### Taskforce Report on HEALTH

**“I really believe that there is something about nature – that when you are in it, it makes you realize that there are far larger things at work than yourself. Natural spaces and materials stimulate children’s limitless imaginations and serve as the medium of inventiveness and creativity observable in almost any group of children playing in a natural setting.**

**Time in nature is not leisure time; it’s an essential investment in our children’s health. By taking nature experiences out of the leisure column and placing it in the health column, we are more likely to take our children on that hike...more likely to, well, have fun.”**

**Richard Louv, Author**

#### Our Vision on Health

We envision a Delaware with healthier individuals and communities because of increased awareness of the benefits of time spent in the natural world and a better understanding of the relationship between health and outdoor activities in nature.

The Taskforce focused on the following key areas:

- Utilizing nature-based activities (such as unstructured outdoor play, hiking in a safe area outdoors, spending time in a green space, etc.) and resources as a strategy to promote health.
- Providing outreach and professional development in the fields of health care and prevention services.
- Conducting research that supports the relationship between health and activity in nature.

#### Background

Many people in Delaware are unaware of the growing obesity epidemic facing school-aged youth. Nemours Health and Prevention Services reports that approximately 37% of Delaware’s children and youth are overweight or obese,<sup>1</sup> as are nearly two-thirds of adult Delawareans.<sup>2</sup> Regular physical activity, which can be achieved by running in the park, hiking as



a family on nearby trails or playing on playgrounds, helps maintain a healthy weight and prevent heart disease, type-2 diabetes, and other chronic diseases.<sup>3</sup>

The increased time youth are spending indoors playing video games, on the computer or in front of the TV is a major factor in their reduced exposure to nature and to physical inactivity, which contribute to obesity. Using nature to combat this disturbing health trend is possible with the recommendations put forth in this report. Delaware has the resources and the will. Children need the leadership that the CIN/NCLI Initiative can provide to help families, partners and stakeholders in the journey toward healthier and happier communities across the state.

### **Making the link between physical fitness, academic achievement and student behavior:**

In a research study completed by DOE and Nemours Health and Prevention Services, student health was evaluated using the FitnessGram assessment tool to determine the correlation between physical fitness and academic achievement and absenteeism.

#### **Relationship between fitness level and academic achievement:**

The study clearly displayed that as fitness levels increased, the percentage of students at the “Distinguished” performance level for math and reading increased.

#### **Relationship between fitness levels and days of suspension:**

After identifying five different levels of fitness, research found that the lowest fitness level participants averaged 2.8 days of suspension compared to the 0.4 days of suspension for the highest fitness level participants.

#### **Relationship between fitness levels and student attendance:**

The lowest fitness level participants average 28.7 more days absent from school per year than the highest fitness level participants. In a school career, a participant in the lowest fitness level could be absent for more than a full year.<sup>3</sup>

Delaware is home to an abundance of state, local and neighborhood parks, trails and greenways. These outdoor recreation facilities can provide safe, fun, accessible and convenient places for physical activity, which is critical amidst the growing obesity epidemic. In the midst of this epidemic, these facilities must also be regarded as a health necessity.<sup>4</sup>

In December 2011, Nemours Health and Prevention Services (NHPS), Governor Jack Markell and representatives from DOE announced the results of a study that demonstrated a clear and consistent relationship between fitness and academic achievement, as well as fitness and student behavior regardless of gender, race, family income or school district. The data showed

students who are more fit perform significantly better in both reading and math. These findings are consistent with a number of research studies suggesting a link between physical activity, student behavior, and academic achievement. Studies have shown that physical activity is linked to better concentration, reduced disruptive behaviors and higher test scores in reading, math and writing. This study is the first to demonstrate these relationships among students in Delaware.<sup>5</sup>

### **DELAWARE SPOTLIGHT** **Shearman Street Intergenerational** **Gardens** **Wilmington, DE**

This two-block plot of land was donated by the City of Wilmington on the condition that it is used specifically as a community garden. The organic community vegetable garden boasts 16 raised beds, ten families participating and an intergenerational garden program that teaches city youth horticulture and a love of plants.

The Walnut Street YMCA summer camp is one of the groups taking advantage of the intergenerational garden program. Summer campers visit the garden each week to learn about organic farming and to experience food from seed to table.

**Photos provided by**  
**The Delaware Center for Horticulture**



## Existing Weaknesses/Health

### Research and Awareness

The research linking experiences in nature to health is relatively new and has not reached many of our citizens. We are at the very beginning of this awareness campaign. More research is needed to clarify the connection between health and nature experiences, and more effort is needed to enlighten adults and children throughout the state.

#### Solutions to Increase Health

- ☞ Take a short hike, or a long hike!
- ☞ Go on a bird watching walk with your friends.
- ☞ Find a playground or open space and play.
- ☞ Exercise or keep moving for 30 minutes or more.
- ☞ Play a pick-up game of basketball.
- ☞ Ride a bike.
- ☞ Play a game of tag for 15 minutes or more.

Figure 1

## Existing Strengths/Health

### Statewide Partnerships

Citizens of Delaware can connect with statewide networks, programs and services that educate families about the link between health and nature. The Delaware Coalition for Healthy Eating and Active Living (DE HEAL) addresses the issue of obesity by suggesting that nature be used as a context to reverse the current health trends of our youth.

### Healthy Citizens

Seeing the benefit of increased time spent outdoors in nature unites Delawareans behind the idea that building a healthier, more informed citizenry creates an overall better place to live, learn and play. They understand that exposure to nature and

the opportunity for outdoor physical activity helps to improve the health of children and families throughout the state.

## Taskforce Recommendations on Health

### GOAL 1:

Seek new partnerships with proven programs to create healthy schools and transform communities.

**Recommendation 1:** Partner with the Department of Health and Social Services and the Delaware Council on Health Promotion and Disease Prevention to raise awareness of the challenges and solutions to addressing childhood obesity.

**Recommendation 2:** Inventory programs in Delaware schools such as wellness plans, farm-to-school programs, Healthy Food, Healthy Kids, etc.

**Action 1:** Support the implementation of Sussex Outdoors as a model for community involvement and change.

**Action 2:** Expand the model of Prescription for Health beyond Sussex County.

**Action 3:** Expand community and school yard gardens.

**Recommendation 3:** Develop a Children In Nature website as a practical resource for health professionals, families, youth providers, etc. that provides simple solutions to help youth experience the outdoors to reap health benefits (see Figure 1).

**Recommendation 4:** Work with the Department of Children, Youth and their Families to incorporate nature guidelines into standards for daycare and residential childcare facilities.



**Delaware is home to an abundance of state, local and neighborhood parks, trails and greenways. These outdoor recreation facilities can provide safe, fun, accessible and convenient places for physical activity, which is critical amidst the growing obesity epidemic. In the midst of this epidemic, these facilities must also be regarded as a health necessity.<sup>5</sup>**



## DELAWARE SPOTLIGHT

### Sussex County Doctors

**Dr. Joe Kim, General Physician**

**Drs. Meredith Arthur and Harry Lehman,  
Pediatricians**

A group of doctors in Seaford, DE was so concerned about the number of children coming into their offices who were obese, they decided to give out special health prescriptions. They began handing out free passes to Trap Pond State Park and giving patients resources to find places to be active in and around Seaford.



### Nemours Partners with State Parks

Nemours Health and Prevention Services published an informational pamphlet, *Investment in Parks and Recreation is Necessary for Children's Health*, which promotes healthy lifestyles for the children of Delaware. This partnership works together to improve children's health by spending time being active in the safe areas provided by Delaware State Parks.

## NATIONAL SPOTLIGHT

### Childhood Obesity Prevention Coalition, Seattle, WA

The Comprehensive Health Education Foundation (CHEF) helped to form the Childhood Obesity Prevention Coalition in 2007. It is a critically needed statewide partnership to tackle childhood obesity, working at the levels of policy and systems. The coalition is especially interested in shaping the social and physical environment so that all children and families can access safe places to play, walk or bike to school and easily purchase healthy and affordable foods.

With a great spirit of collaboration, the coalition accomplished major milestones within the first year, including identifying legislative priorities, testifying and mobilizing support. The diverse interests represented in the coalition – nutrition, physical activity, education, hospitals, health provider groups, public health, alternative transportation and local and state non-profits – makes the coalition uniquely broad and influential. CHEF is committed to being an integral part of this partnership effort and looks forward to fashioning public policy solutions that can truly make a difference in childhood obesity prevention.

## SECTION 6

### Keys to Implementation

**“Plans are only good intentions unless they immediately degenerate into hard work.”**

**- Peter Drucker**  
**Professor, Author and Social Ecologist**

Only when people recognize that their leaders are committed to an effort and giving it their regular and close attention will they reconcile themselves to its inevitability and embrace its desirability. Implementing and sustaining the recommendations set forth in this plan will require great agents of change to spearhead its progress. Only then will we be able to say we have truly served our citizens.

#### **GOAL 1:**

Establish the Children in Nature / No Child Left Inside website to act as a clearinghouse for all Delawareans to access informational resources.

**Recommendation 1:** Create a clearinghouse of environmental education programs, both formal and informal, that are offered throughout the state.

**Recommendation 2:** Identify and create links with all Delaware CIN/NCLI partners.

**Recommendation 3:** Create a practical resource for professionals, families, youth providers, etc. that gives simple, attainable solutions for experiencing the outdoors and nature.

**Recommendation 4:** Create a resource bank of curriculum- and standards-aligned, multidisciplinary activities that get students outside.



**Recommendation 5:** Develop an interactive tool that shows all public recreational facilities within a 20-minute travel radius of the user's home or organization.

#### **GOAL 2:**

Form the Delaware 15 Committee to assist with policy changes and funding support

**Recommendation 1:** Invite key representatives who are empowered and motivated to lead, rather than be messengers.

**Recommendation 2:**

Identify a clear mission and operational boundaries of the Delaware Children In Nature Ambassador Committee.

**Recommendation 3:**

Prioritize key goals and expectations of the committee.

**Recommendation 4:**

Develop a phased implementation plan that addresses the Governor's final recommendations.



**Recommendation 5:** Evaluate implementation and modify plans according to budget, time and resources available.

**Recommendation 6:** Coordinate quarterly meetings with the Delaware Children in Nature Ambassador Committee to review progress and identify areas where assistance is needed.

**GOAL 3:**

Identify a dedicated funding source for CIN/NCLI Initiative

**Recommendation 1:** Identify a dedicated funding source to assist with the implementation of the recommendations. Funding will be used to develop a website, for marketing, to hold special events associated with the CIN/NCLI Initiative and as a source of matching for fundraising efforts. DNREC and various partners have shared staff resources up to this point. To move forward and implement the plan, a dedicated funding source is required.

**GOAL 4:**

Expand the role of the taskforce from planning to implementation.

**Recommendation 1:** Extend the role of the taskforce to meet quarterly with annual CIN/NCLI partnership update meetings.

**Recommendation 2:** Develop a CIN/NCLI Summit in association with the DAEE and other partners throughout Delaware.

## SECTION 7

# Taskforce Recommendations on Policy and Legislative Support

Without direct support from state government and key decision makers, the CIN/NCLI Initiative will lose momentum, energy and attention. In the end, it will be the citizens and stakeholders who will suffer the greatest impact.

The potential of Delaware's children and the power of the state's leadership can be harnessed to spearhead environmental education innovation and propel the First State to be first in the nation at taking care of Delaware's valuable human resources. Policy and legislative support are paramount to the success of leaving no child, or Delawarean inside.

- Request an Executive Order from the Governor to implement the taskforce's recommendations.
- Develop a policy granting schools sovereign immunity for use of the facilities after school for community events or playground use.
- Support completion of and ratify an Environmental Literacy Plan by DOE and DNREC to meet Federal guidelines.
- Use the Delaware Land and Water Conservation Trust Fund to increase natural play space throughout the state and create new play areas in urban environments where green space is limited.
- Designate DNREC Community Environmental Projects Fund Grant to support environmental education field trips and overnight experiences.
- Create a Delaware No Child Left Inside bill to:
  - Require meaningful outdoor experiences for every student;
  - Establish the Youth Conservation Corps;
  - Provide incentives for new school construction to meet national green building standards by providing a higher percentage of state matching funds;
  - Establish a statewide *Greener Schools Program*;
  - Invest in the \$43 million maintenance backlog in Delaware's state parks to stabilize annual funding for open spaces.





**The potential of Delaware's children and the power of the state's leadership can be harnessed to spearhead environmental education innovation and propel the First State to be first in the nation at taking care of Delaware's valuable human resources.**



## SECTION 8

### Taskforce Recommendations on Marketing

**“Good branding without a good business plan is like prettying up a duck with no feathers. It may look good but it ain’t gonna fly.”**

**Paul Provost, August 2010  
President and Founder of 6P Marketing**

Marketing the Delaware CIN/NCLI Initiative is crucial to informing stakeholders about the efforts of the taskforce and the resources available.

Communicating the benefits of connecting learning, wellness and recreation to the natural world is fundamental to addressing the weaknesses of our current situation. Many Delawareans do not know how close a green space or environmental center is to their home. Let teachers know what resources are available to support their curricula beyond the classroom.

Health care professionals advise on nutrition and wellness but could also provide information about opportunities to use Delaware’s natural resources and have a positive effect on childhood obesity and promote active living.

#### **GOAL 1:**

Launch a two-year integrated marketing campaign strategy.

**Recommendation 1:** Hire a professional marketing firm to research and estimate the cost of branding the movement and marketing the campaign over a five-year period.

**Action 1:** The marketing campaign will include specific research to better understand the awareness, perceptions, barriers, cultural considerations and motivations of targeted groups as compared to the CIN/NCLI Taskforce SWOT (Strengths, Weaknesses, Opportunities, Threats) and Gap Analysis.

**Action 2:** Prioritize specific target audiences and inventory existing resources and organizations that will adopt the brand and marketing campaign.

**Recommendation 2:** Request a single, branded message that includes every Delaware citizen with special attention given to reaching underserved communities.

**Recommendation 3:** Require the marketing firm to present a full-scale marketing plan that includes tiered campaigns aimed at specific sectors (Education, Outdoor Connections, Community and Health).

**Action 1:** CIN Taskforce will help to establish marketing targets and benchmarks given budget and fundraising limitations .

**Action 2:** Ensure that marketing alternatives are available to the Governor if the CIN/NCLI Taskforce or the executive team has limited structure or power to initiate.

**Recommend 4:** Evaluate effectiveness of the two-year integrated marketing campaign strategy.

**Action 1:** Conduct a post-survey to targeted groups to determine if attitudes, perceptions or awareness levels have changed.

**Action 2:** Determine which objectives have been achieved and what work remains to be done to accomplish the goals.



## Specific Key Area Marketing Considerations

### EDUCATION

- Use promotional materials and branding efforts to increase awareness of the educational benefits of nature during workshops, professional development, principal's messages, etc.
- Encourage the use of the brand on school science kits, units and subject matter courses that have been redesigned to connect with nature or take place outside the classroom.
- Create video programming to educate students, teachers and non-formal educators about nature and natural resources through the newly created CIN website; online videos, downloads to portable devices and in DVD format.

### OUTDOOR CONNECTIONS

- Study targeted groups of private landowners, state and local government, designers and planners, nonprofits, community and neighborhood associations, and volunteer groups in order to connect better with these audiences.
- Create a CIN/NCLI marketing or promotional tool that drives repeat traffic to specific sites or types of sites, such as public boat ramps, beaches, trailheads, municipal parks, etc. The tool can help agencies reach and motivate their target areas and encourage repeat visits.

### COMMUNITY

- Community stakeholders see a brand and ad campaign targeting consumers as essential to helping the general public make connections to the movement and increasing economic potential in targeted areas such as underserved neighborhoods, underserved populations, groups of citizens who typically do not use natural resources, etc.
- Use the Delaware Children In Nature Ambassador Committee as a focus group to compile a list of organizations in each community or municipality that will best reach children and families with the CIN/NCLI branded message.
- Create materials specifically targeting local leaders and communicating the taskforce's recommendations economic impact and ease with which they can be adopted. Topics might include nature tourism, career opportunities and easy ideas for playing in and exploring nature in backyards, schoolyards, neighborhoods or local parks.

### HEALTH

- Involve healthcare professionals as advocates for the message through blogs, published articles in newspapers or journals and as speakers at professional conferences, chamber of commerce gatherings, school events, professional development training for educators and community events (Delaware State Fair, Sussex Outdoors etc.).
- Provide patient materials for healthcare professionals that promote the medical and general health benefits of spending time in nature and support "doctor recommended" messaging.





Communicating the benefits of connecting learning, wellness and recreation to the natural world is fundamental to addressing the weaknesses of our current situation. Many Delawareans do not know how close a green space or environmental center is to their home.





SPONSOR: Sen. Venables & Rep. Atkins  
Sens. Bushweller, Sokola & Sorenson; Reps. Bennett,  
Carson, Heffernan, Kenton & Lavelle

DELAWARE STATE SENATE  
146th GENERAL ASSEMBLY

SENATE CONCURRENT RESOLUTION NO. 20

EXPRESSING SUPPORT FOR THE WORK OF DELAWARE'S NO CHILD LEFT INSIDE.

1 WHEREAS, research shows that Delaware's children are spending less time outdoors now than at any other time  
2 in history—and as many as forty-four hours per week in front of computers, video games, and televisions; and

3 WHEREAS, Nemours Health and Prevention Services research shows that nearly forty percent of Delaware's  
4 children are overweight or obese and research indicates that more sedentary lifestyles and a lack of outdoor activity are  
5 contributing to greater incidents of childhood obesity; and

6 WHEREAS, a growing number of researchers and scientists have stated that direct exposure to nature is essential  
7 for healthy childhood physical, emotional, cognitive and spiritual development; direct experience with outdoor play  
8 increases physical fitness, promotes curiosity, improves critical thinking abilities, and fosters joy and a sense of well-being;  
9 and

10 WHEREAS, the State of Delaware has a longstanding commitment to preserving Delaware's rich natural heritage  
11 and open spaces by connecting its citizens to the land by passing down traditions to future generations through activities  
12 such as family farming, wildlife preservation and outdoor recreation; and

13 WHEREAS, numerous conservation and youth organizations are actively engaged in promoting outdoor  
14 connections to the land through opportunities for children and their families to participate in outdoor play and  
15 environmental education, and

16 WHEREAS, addressing the environmental challenges of our time will require an active and environmentally  
17 engaged citizenry, committed to the stewardship of our environment; and

18 WHEREAS, in January 2010, Cabinet Secretaries of the Department of Education (DOE), Department of Natural  
19 Resources and Environmental Control (DNREC), and Department of Health and Social Services, and founding members  
20 including Nemours Health and Prevention Services, Delaware Nature Society, Delaware Center for the Inland Bays,  
21 Delaware Greenways, US Fish and Wildlife Service and the Delaware Association for Environmental Education came  
22 together to establish the No Child Left Inside / Children in Nature Task Force to create an action plan with implementable

23 recommendations to connect children with outdoor experiences and programs, promote healthy lifestyles, expand access to  
24 green spaces through school and community programs, and improve environmental education so that families will  
25 reconnect with the natural world in meaningful ways and there will be no child left inside;

26 NOW THEREFORE:

27 BE IT RESOLVED by the Senate of the 146<sup>th</sup> General Assembly of the State of Delaware, the House of  
28 Representatives concurring therein, that we hereby express our full support for the work of Delaware's No Child Left Inside  
29 / Children in Nature Initiative and its supporting organizations to ensure that all of Delaware's children have the  
30 opportunities and benefits of exploring, growing, and learning from our State's natural environment.

31 BE IT FURTHER RESOLVED, that we believe that every Delaware child should have a safe opportunity to climb  
32 a tree, catch and release a fish, discover frogs and insects, splash in the water, hike a nature trail, learn to swim, ride a bike,  
33 watch wildlife, paddle a boat, camp under the stars, fly a kite, visit a farm, grow a garden, and learn about Delaware's  
34 unique natural heritage.

35 BE IT FURTHER RESOLVED, that the Children in Nature Task Force shall produce an annual progress report to  
36 the General Assembly which includes recommendations for the consideration by the General Assembly and Governor. The  
37 report may include recommendations on ensuring that children, especially underserved populations, have access to natural  
38 areas and outdoor experiences, promoting healthy lifestyles and combating childhood obesity, providing greater access to  
39 green space through school community programs, and improving environmental education.

#### SYNOPSIS

This Resolution expresses support for outdoor activities for children to experience nature. Specifically, the Resolution supports the Delaware No Child left Inside/Children in Nature Initiative.

Author: Senator



# The Delaware Children in Nature/No Child Left Inside Taskforce and Committees

## Delaware Children In Nature/No Child Left Inside Taskforce and Committee Chairs

**Secretary Mark Murphy**  
Secretary of the Delaware  
Department of Education (DOE)

**Secretary Collin P. O'Mara**  
Secretary of the Delaware  
Department of Natural  
Resources and Environmental  
Control (DNREC)

### **Children In Nature Taskforce Chairs**

**Ray Bivens**  
DNREC- Division of Parks and  
Recreation

**John Ray**  
DOE

### **Students in Nature Sub-Committee Chairs**

**Helen Fischel**  
Delaware Nature Society

**April McCrae**  
Education Specialist-Science  
DOE

### **Community Outdoor Experience Sub-Committee Chairs**

**Helen Fischel**  
Delaware Nature Society

**Jennifer Holmes**  
Delaware Association for  
Environmental Education

### **Greener Schools Sub-Committee Chairs**

**Sally Boswell**  
Delaware Center for the Inland  
Bays

**Flavia Rutkosky**  
U.S. Fish and Wildlife Service

### **Active Living in Nature Sub-Committee Chairs**

**Ron Breeding**  
Nemours Health and Prevention  
Services

**John Ray**  
DOE

### **Neighborhood Connections Sub-Committee**

**Ray Bivens**  
DNREC- Division of Parks and  
Recreation

**Matthew Ritter**  
DNREC-Division of Parks and  
Recreation

### **Taskforce Members at Large**

**Fred Gatto**  
Division of Public Health

**Sally Humphrey**  
Delaware Greenways

**Tonyea Mead**  
DOE

### **Committee Members**

**Dot Abbott**  
Statewide Renewable Resources  
Agent  
University of Delaware  
Cooperative Extension

**Dr. Bruce Allison**  
Professor  
Wesley College

**Jenna Argo**  
Teacher  
Indian River School District

**David Bartoo**  
Planner, Trail Specialist  
DNREC- Division of Parks and  
Recreation

**Dr. Dennis Bartow**  
Schoolyard Habitat Coordinator  
Delaware Center for the Inland  
Bays

**Mary Betts**  
Recreation Superintendent  
Milford Parks and Recreation

**Ray Bivens**  
Operations Section Manager  
DNREC- Division of Parks and Recreation

**Sally Boswell**  
Education and Outreach  
Coordinator  
Delaware Center for the Inland Bays

**Ron Breeding**  
Program and Policy Analyst  
Nemours Health and Prevention Services

**Terri Brixen**  
Environmental Scientist  
DNREC- Division of Air and Waste Management

**Angel Burns**  
Trainer/Educator  
DNREC- Division of Parks and Recreation

**Steve Cardano**  
STEM Teacher  
Secondary Science Specialist  
Indian River School District

**Tim Carrick**  
Guide  
Wilderness Canoe

**Aracelio Caraballo**  
Teacher  
Red Clay School District

**Colleen Carter**  
District Office, School Nutrition  
Brandywine School District

**Sarah Coakley**  
Planner  
Department of Transportation

**Chief Dennis Coker**  
Lenape Indian Tribe of Delaware

**Dr. Daniel Curry**  
Superintendent  
Lake Forest School District

**Pat Drizd**  
Volunteer Coordinator/Teacher  
Delaware Center for the Inland Bays

**Charles Emerson**  
Director  
Newark Parks and Recreation

**Helen Fischel**  
Associate Director Education  
Delaware Nature Society

**Dr. Danielle Ford**  
Associate Professor, Science  
Education  
University of Delaware

**Todd Fritchman**  
Aquatic Biologist/President  
Envirotech Environmental Consulting

**Dr. Kim Furtado**  
Program Director  
Delmarva Community WellNet

**Fred Gatto**  
Healthy Promotion Bureau Chief  
Division of Public Health

**Peggy Geisler**  
Owner, Senior Consultant  
PMG Consulting, LLC

**Deborah Gilchrist**  
Professor  
University of Delaware

**Kate Hackett**  
Director  
Delaware Wildlands

**Bill Hall**  
Retired Professor  
University of Delaware

**Sarah Hilderbrand**  
Education Director  
Environmental Concern, Inc.

**Connie Holland**  
Planning Director  
Office of State Planning

**Paula Holloway**  
Director of Education  
Delaware Museum of Natural History

**Jennifer Holmes**  
Vice Chair  
Delaware Association for Environmental Education

**Catherine Houghton**  
Instructional Coach  
Christina School District

**Sally Humphrey**  
Program Director  
Delaware Greenways

**Michelle Jacobs**  
Community Relations Officer  
DNREC- Division of Watershed Stewardship

## TASKFORCE AND COMMITTEES

### Committee Members

**Dastina Johnson**

Public Affairs Specialist  
Natural Resource Conservation  
Service

**Jill Karlson**

Curator of Education  
Brandywine Zoo  
DNREC- Division of Parks and  
Recreation

**Gary Kreamer**

Administrator I  
Trainer/Educator  
DNREC- Division of Fish and  
Wildlife

**Leslie Lee**

Parent/Volunteer  
Rehoboth Elementary School

**Scott Lynch**

Energy Services Manager  
Delaware Municipal Electric  
Corporation

**Mark Manno**

State Extension Educator  
4-H Youth Development/ University  
of Delaware

**Dr. Thianda Manzara**

Executive Director  
Healthy Foods for Healthy Kids

**Lori Maramante**

Instructor  
Delaware Technical and  
Community College

**David Marvel**

Owner  
Marvel Farms

**Karon Massado**

Teacher  
Red Clay Consolidated School  
District

**April McCrae**

Education Specialist-Science  
DOE

**Ellen McLean**

Vice President of Operations  
Boys and Girls Club of Delaware

**Tonyea Mead**

Education Associate –Science  
DOE

**Rick Mickowski**

Conservation Planner/Public  
Education Coordinator  
New Castle Conservation District

**Christine Miller**

District Office, Parent Involvement  
Liaison  
Red Clay School District

**Jeanette Miller**

Associate Director  
Delaware Environmental Institute

**Patti Miller**

Program and Policy Analysts  
Nemours Health and Prevention  
Services

**Alice Mohrman**

Teacher  
James Farm Middle School Program  
Delaware Center for the  
Inland Bays

**Margaret Moor-Orth**

Agriculture Educator, Cooperative  
Extension  
Delaware State University

**Russell Morgan**

State Conservationist  
Natural Resource Conservation  
Service

**Carlyn Nelson**

STEM Program Specialist  
Girl Scouts of the Chesapeake Bay  
Council

**Samantha Neubert**

Teacher  
Appoquinimink School District

**Ginger North**

Associate Director for Natural  
Resources Conservation  
Delaware Nature Society

**Dr. Iva Obrusnikova**

Assistant Professor of Health,  
Nutrition and Exercise Services  
University of Delaware

**Dorothy Onn**

Senior Program Analyst  
Nemours Health and Prevention  
Services

**Dorothy Payton**

Assistant Park Superintendent  
DNREC- Division of Parks and  
Recreation

**Ashley Peebles**

Trainer/Educator  
Delaware Department of  
Agriculture

**Jay Poole**

Owner  
Wilderness Canoe

**Karen Pritt**

Physical Education Teacher  
Smyrna School District

**John Ray**

Education Specialist for Health  
Education, Physical Education,  
CDC School Health Programs  
DOE

**Matthew Ritter**

Chief of Programming  
DNREC- Division of Parks and  
Recreation

**Flavia Rutkosky**

Wildlife Biologist  
U.S. Fish and Wildlife Service

**Rob Schroeder**

Chair  
The Governor's Commission on  
Community and Volunteer Service

**Kendall Sommers**

Planner  
DNREC- Division of Parks and  
Recreation

**Garth Stubbolo**

Teacher  
Appoquinimink School District

**Tammy Sumner**

Physical Education Teacher  
Appoquinimink School District

**Lisa Tossey**

Outreach Specialist  
University of Delaware- College of  
Earth, Ocean and Environment

**Pam Vanderwende**

Teacher  
Woodbridge School District

**Peggy Vavalla**

Education Liaison  
DuPont Center for Collaborative  
Research and Education

**Kristen Wan**

Senior Analyst  
Health Promotion and Disease  
Prevention, Association of State  
and Territorial Health Officials

**Dawn Webb**

DuPont Nature Center Manager  
DNREC-Division of Fish and  
Wildlife

**Lynn Widdowson**

District Office, Special Services  
Capital School District

**Jacque Williamson**

Training Coordinator  
Delaware Center for Horticulture

**Barbara Woodford**

Trainer/Educator  
DNREC-Division of Parks and  
Recreation

**Dr. Susan Yost**

Educator  
Delaware State University- Claude  
E. Phillips Herbarium

**Harvey Zendt**

Educational Consultant

**Special acknowledgement to:****Dan Ashe**

Project Consultant  
Challenge Applications, LLC

**Don Baugh**

Director  
No Child Left Inside Coalition

**Michelle Eichinger**

Public Health Advisor  
DB Consulting

**Gary Heath**

Consultant  
No Child Left Inside Coalition

**John Hollis**

Sussex Manager  
Nemours Health and Prevention  
Service

**Dr. Lilian Lowery**

State Superintendent of Education  
Maryland Department of  
Education

**Charles Salkin**

Director  
DNREC- Division of Parks and  
Recreation



# Glossary

DOE	Department of Education
DNREC	Department of Natural Resources and Environmental Control
CIN	Children in Nature
NCLI	No Child Left Inside
ESEA	Elementary and Secondary Education Act
CBF	Chesapeake Bay Foundation
DAEE	Delaware Association for Environmental Education
STEM	Science, Technology, Engineering, and Mathematics
SCORP	Statewide Comprehensive Outdoor Recreation Plan

## **Accessible**

Accessible facilities are those that can be reached, used, and traversed by people of all ages and abilities without difficulty.

## **Best Practices**

Methods or techniques that have consistently shown results superior to those achieved with other means, and that are used as benchmarks. For the plan, these practices may be observed by other states, agencies or service providers.

## **Brand/Branding**

The immediate image, emotion or message people experience when they think of a company or a product.

## **Built environment**

The human-made surroundings that provide the setting for human activity, production, and consumption. The built environment consists of houses, office buildings, roads and entire cities.

## **Ecotourism**

Responsible travel to natural areas that conserves the environment and improves the well-being of local people, uniting conservation, communities and sustainable travel.

## **Educational cooperatives**

Partnerships providing formal and informal education opportunities.

## **Educational tourism**

Field trips and visits to areas focused on learning opportunities.

## **Education standards**

Challenging and clear standards of achievement and accountability for all children, and effective strategies for reaching those standards.

**Environmental education**

Creating the opportunity to learn how the world and its ecosystems work together and how people interact with, affect and participate in the sustainability of those systems.

**Environmental Literacy Plan**

Creates the framework for standards, achievement, professional development, assessment and leadership for individuals and organizations to thrive and achieve innovation in education.

**Experiential learning**

The process of making meaning from a direct experience; learning through reflection on doing; focuses on the learning process for the individual.

**Formal education**

Learning experiences with a defined curriculum, learning objectives and outcomes, generally occurring within a structured system such as a school.

**GAP Analysis**

A tool that helps compares actual performance with potential performance. At its core are two questions: "Where are we?" and "Where do we want to be?"

**Green space**

A land-use planning and conservation term used to describe protected areas of undeveloped landscape.

**Greenway**

A corridor of undeveloped land, usually including some kind of trail or pathway that is provided for recreational purposes and/or environmental protection.

**Informal education**

Learning experiences outside of the formal education system.

**Interpretation**

A communication process that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource, typically occurring as a voluntary experience.

**Interpretive elements**

Those elements that help site users connect to natural resources in ways that help them better understand their relationship to the resource and how resources work together. These elements may be in the form of signage, exhibits, interpretive trails, interactive displays, brochures, programs and other media which help to connect the person to the resource.

**Meaningful outdoor experience**

Learning experiences that can be formal and informal designed to give students deeper insights through hands-on, experiential learning. These experiences are investigative or project-oriented, richly structured and based on high-quality instructional design, an integral part of the instructional program, part of a sustained activity, and involve external sharing and communication enhanced by natural resource personnel or educators, appropriate for all students.

**Natural areas**

Those areas that include natural components as a majority of their features.

**Natural play**

Free and structured play occurring in areas with predominantly natural features and/or components.

**Natural play areas / Playgrounds**

Those playgrounds complementing built components with natural features such as gardens, wildlife habitats, elevated landforms, sand, water, and natural and built portable materials ("loose parts") for imaginative/constructive play and nature study.

**Natural resource literacy**

The ability to understand, analyze and address major natural resource opportunities and challenges.

**Nature-based activities**

Activities immersed in the resource, engaging in nature, discovering and observing, including structured and unstructured play.

**Nature-based experiences**

Those experiences occurring and embedded in nature.

**Nature Deficit Disorder**

Refers to the trend that children are spending less time outdoors, resulting in a wide range of behavioral problems; is not a medical condition – it describes our lack of a relationship to the environment.

**Nature tourism**

Tourism based on an area's natural attractions, such as wildlife viewing, hunting, fishing, photography and visiting parks.

**Obesity**

A medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to reduced life expectancy and/or increased health problems.

**Open Space**

Parcels of land set aside for recreational use and/or environmental resource protection. These areas can be publicly or privately owned, and development on the site is usually unauthorized.

**Outdoor classroom**

An outdoor natural area where gaining knowledge and building skills in most subject areas can take place.

**Outdoor education**

Organized learning that takes place in the outdoors; journey-based experiences in which students participate in a variety of adventurous challenges in the form of outdoor activities such as hiking, climbing, canoeing, ropes courses, and group games. Outdoor education draws upon the philosophy, theory, and practices of experiential education and environmental education.

**Points of access**

Entrance and exit points for trails and natural areas, viewing areas, etc. that can be easily and safely accessed by the public.

**Pre-service teachers**

Students in a teacher education program, at a college or university, preparing for professional-level teaching positions.

**Safe Routes to School**

A federally funded and state-administered program that encourages local schools and jurisdictions to undertake projects that will encourage children to walk or bicycle to school and to make such trips safer.

**Stewardship**

Informed, responsible action and/or behavior on behalf of natural and cultural heritage, the environment and future generations.

**Target audience**

A specific group of people within the target market at which the marketing message is aimed.

**Universal design**

A broad-spectrum solution that produces buildings, products and environments that are usable and effective for everyone, regardless of physical ability.

**Unstructured play**

Play that exhibits no goals or rules.

**View shed**

An area of land, water, or other environmental element that is visible to the human eye from a fixed vantage point.

**Walk Score**

Walk Score is a number between 0 and 100 that measures the walkability of any address (with 0 being least walkable and 100 being most walkable). It is based on an algorithm that ranks communities nationwide based on an area's number of common destinations (businesses, restaurants, parks, schools) within walking distance of any given starting point ([walkscore.com](https://www.walkscore.com)).

**Walkability**

Walkability is often measured according to the environmental, health, financial, and safety benefits offered to pedestrians within a community. More broadly, walkability is a measure of how conducive an environment is to walking ([walkscore.com](https://www.walkscore.com)).

**Wildlife cooperatives**

Landowners joined together with common objectives and goals to manage wildlife habitat on a much larger scale than they could independently; especially helpful on smaller properties where many management practices are not feasible or on properties where landowners do not have enough land to manage for certain species of wildlife.

**Wildscape**

Altering and maintaining the habitat to provide all three basics for wildlife – food, shelter and water – arranged in a way that is easily accessible to wildlife, sustainable and consistent with the natural landscape.



## **Executive Summary**

1. Roberts, D. F., Foehr, U., & Rideout, V. Generation M: Media in the Lives of 8 to 18 Year Olds. Kaiser Family Foundation, 2005. Rideout, V. and E. Hamel. The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers, and Their Parents. Kaiser Family Foundation, 2006. Retrieved March 2, 2012, from [www.childrenandnature.org/research/volumes/C42/42](http://www.childrenandnature.org/research/volumes/C42/42)

## **SECTION 1:**

### **About No Child Left Inside and the Children in Nature Taskforce**

1. From Governor Markell's address at the Sussex Outdoors kick-off event, 2011.
2. No Child Left Inside Coalition Website (2012). The Problem–Narrowing Curriculum. Retrieved March 2, 2012, from <http://www.cbf.org/page.aspx?pid=690>
3. No Child Left Inside Coalition Website (2012). The Problem–Nature Deficit Disorder. Retrieved March 2, 2012, from <http://www.cbf.org/page.aspx?pid=702>
4. No Child Left Inside Coalition Website (2012). The Problem–Childhood Obesity. Retrieved March 2, 2012, from <http://www.cbf.org/page.aspx?pid=711>
5. No Child Left Inside Coalition Website (2012). What NCLB Has Done. Retrieved March 2, 2012, from <http://www.cbf.org/page.aspx?pid=784>

## **SECTION 2: Education**

1. The Nature Conservancy. (2011). Connecting America's youth to nature.
2. Nature-Smart Kids Get Higher Test Scores. "Effects of Outdoor Education Programs for Children in California." American Institutes for Research: Palo Alto, CA: 2005. Available on the Sierra Club web site. Retrieved March 2, 2012, from [www.childrenandnature.org/research/volumes/C16/16](http://www.childrenandnature.org/research/volumes/C16/16)
3. Delaware Teacher Survey (180 teachers across the state). Conducted by Delaware Children in Nature Taskforce. 2012.
4. Correlating Green School and Student Achievement (from MAOEO PDF: Prepared by Kate Clavijo, Ed.D. The Maryland Association for Environmental & Outdoor Education / [http://www.maeoe.org/pdf/GSreport\\_bw.pdf](http://www.maeoe.org/pdf/GSreport_bw.pdf)
5. Research Report for Greening Delaware Schools. Conducted by Green Schools for Delaware Sub-Committee, Delaware Children in Nature Taskforce. 2011.
6. Delaware Teacher Survey (180 teachers across the state). Conducted by Delaware Children in Nature Taskforce. 2012.

### **SECTION 3: Outdoor Connections**

1. From Section 2-9 The State of Delaware Statewide Comprehensive Outdoor Recreation Plan 2009-2011. Susan Moerschel and Kendall Sommers.
- 2.. From Section 2-11 The State of Delaware Statewide Comprehensive Outdoor Recreation Plan 2009-2011. Susan Moerschel and Kendall Sommers.
- 3.. From Section 2-12 The State of Delaware Statewide Comprehensive Outdoor Recreation Plan 2009-2011. Susan Moerschel and Kendall Sommers.
- 4.. From Section 2-2 The State of Delaware Statewide Comprehensive Outdoor Recreation Plan 2009-2011. Susan Moerschel and Kendall Sommers.
5. Outdoor Recreation Participation Report. (2010). Outdoor Foundation.  
[http://www.outdoorindustry.org/images/researchfiles/TOF\\_ResearchParticipation2010.pdf?121](http://www.outdoorindustry.org/images/researchfiles/TOF_ResearchParticipation2010.pdf?121).

### **SECTION 4: Community**

1. From "Minorities missing from the outdoors" by Bob Frye of the Pittsburgh Tribune (2012).

### **SECTION 5: Health**

1. Nemours Health and Prevention Services (2007). 2006 Delaware Survey of Children's Health Descriptive Statistics Summary, Volume 1.
2. Centers for Disease Control and Prevention (2007). Behavioral Risk Factor Surveillance System. Retrieved March 24, 2009, from <http://www.cdc.gov/BRFSS>.
3. From "Physical Fitness, Academic Achievement and Student Behavior," (2011)
4. Nemours Health and Prevention Services (2005). Delaware Children's Health Chartbook, Newark, DE.
5. Nemours Health and Prevention Services (2010). Investment in Parks and Recreation is Necessary for Children's Health. Miller and Kaplan, Newark, DE.
6. Nemours Health and Prevention Services (2011). Press Release" NHPS Announces Results of Recent Study: A Link Among Physical Fitness, Academic Achievements, and Behavior. Newark, DE.

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# Delaware Children's Outdoor Bill of Rights

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Outdoor activity can nourish children's physical, social, and emotional development, while connecting them to resources available in their backyards, neighborhoods, cities, and regions. The following list helps families, teachers, and youth leaders to engage children by connecting to nature throughout Delaware.

## 1. Go outside and play!

- a. Take a walk through fields and forest.
- b. Spend time watching clouds float by.
- c. Stand outside out a cold day, feel the power of wind and weather.

## 2. Explore Delaware's culture.

- a. Visit the closest museum or state park to your home.
- b. Explore areas where important events from Delaware's history have occurred.
- c. Hike the same path prisoners-of-war once travelled.

## 3. Camp under the stars.

- a. Practice setting up a tent.
- b. Use a sleeping bag or heavy blankets to sit outside and talk under the night sky.
- c. Share a story around a campfire.

## 4. Plant a seed.

- a. Look at flowers late in the summer and discover where seeds come from.
- b. Buy a small bag of seeds and try to grow a vegetable, flower or fruit.
- c. Plan, plant, grow and harvest a garden or visit a farm, orchard or pumpkin patch.

## 5. Play in the mud.

- a. Walk outside barefoot.
- b. Look for animal tracks and make some tracks of your own.
- c. Discover the affordable wonder of mixing water with dirt – have fun!

## 6. Catch a fish.

- a. Find out what types of fish live in your area.
- b. Take a child to a tackle shop and learn about local fishing techniques.
- c. Visit a fishing hot spot and relax while enjoying the slower pace of fishing.

### **7. Climb a tree.**

- a. Visit a local park to count how many different trees you see.
- b. Gather a pile of leaves and jump in.
- c. Climb a tree and get a better view.

### **8. Discover wildlife in your own neighborhood.**

- a. Sit still for five minutes and make no sounds; see what animals come close by.
- b. Observe birds or insects and try to watch their patterns. They may be using shelter close to your home.
- c. Hike in an area where animals live. Look for holes, shade, corners, nooks and areas protected from predators.

### **9. Play in the waves.**

- a. Put your toes in the sand, build a sand castle or find a unique seashell.
- b. Dash in the water up to your knees and ... get wet!
- c. Let the power of the waves push against you as you feel the pull of the ocean current.

### **10. Try a new nature activity.**

- a. Identify star constellations on a clear night.
- b. Listen to the different birds calling throughout the year.
- c. Choose to go outside and play rather than stay indoors.



