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Thriving Naturally in 4-H

Nature-Deficit Disorder is a term coined by Richard Louv in his 2005 book, "Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder." It refers to the psychological, physical and cognitive consequences stemming from a lack of time in nature. "Children spend only 4 to 7 minutes a day in unstructured outdoor play, yet they spend more than seven hours each day in front of electronic media" (Ernst, 2012, p. 11). This reality contributes to youth lacking social and gross motor skills, as they become increasingly socially isolated and do not spend time learning to navigate the physical and cognitive challenges nature provides. Youth are missing opportunities to observe birds and insects, jump in puddles, climb trees, build log or stone bridges across streams, and develop wilderness shelters. "While the disconnect between indoors and outdoors may not be at fault for every psychological and physical ill we suffer, it is almost certainly related to some of the modern "epidemics" of depression, obesity, and stress. At the very least, we should use "nature-deficit disorder" to remind us that it can't hurt to get some more time out in nature!" (Ackerman, C., 2019, para. 5).

Nature-Based Learning v. Environmental Education

The solution to nature-deficit disorder is nature-based programs and experiences; in short, getting outside. Nature-based learning is often confused with environmental education. While the two are often closely linked, many environmental education programs take place in natural settings and nature-based programming often has environmental education themes. However, they are not one and the same. "Environmental education is a process that allows individuals to explore environmental issues, engage in problem solving, and take action to improve the environment." (United States Environmental Protection Agency, 2018). While it encourages exploration of the natural environment, it does not necessarily incorporate nature immersion. Nature-based programming centers on providing natural experiences where youth reap the benefits of exploring natural areas. This exploration may lead to academic pursuits of environmental education but does not have to. Getting youth out in natural settings is the critical component.

The great news is that we do not have to be biologists or ecologists to develop nature-based programs. We just have to serve as enthusiastic guides navigating the numerous exploratory opportunities that nature provides.

Nature Helps us Think and Interact

Many studies conclude that a lack of exposure to nature has detrimental effects on young people. A 2003 survey, published in the *Journal of Psychiatric Services*, found "the rate at which American children are prescribed anti-depressants almost doubled in five years...evidence suggests that the need for such medications is intensified by children's disconnection from nature…nature experiences can relieve some of the everyday pressures that may lead to childhood depression" (Louv, 2008, p. 49).

Children with more nature near their homes have "lower levels of anxiety and depression and higher levels of self-worth than their peers" (Ernst, 2012, p. 10). They are more resilient and can bounce back from life's stressful events. "Children who play together in nature have more positive feelings toward one another…(as nature exploration) provides a critical opportunity to cultivate social skills, including cooperation, self-awareness,

and self-regulation...and fosters a sense of wonder, and appreciation" contributing to an increased affinity for nature and desire to engage in environmental stewardship efforts (Ernst, 2012, p. 10).

A Nature "Diet" can Help in the Fight Against Childhood Obesity

A lack of outdoor contact contributes to physical problems, such as childhood obesity (Rosenow, 2008). "Based on the meta-analysis of 37 studies, including a total of over 10,000 preschool-aged children, nearly ½ of preschool-aged children do not engage in sufficient physical activity…since 1980, obesity prevalence among U.S. children and adolescents has almost tripled" (Ernst, 2012, p. 9).

The obesity epidemic coincides with the greatest increase in organized children's sports in history; leaving one to ask what's missing. The answer is nature-based play. "Young children playing in a natural environment had a greater increase in gross motor skill development, motor fitness, balance, and coordination than their peers in a traditional playground setting" (Ernst, 2012, p. 9).

The Thriving Model Helps 4H Educators Facilitate Nature-based Programs for Youth

As 4-H educators, we want to see youth in our programs thrive, developing vital life and career skills. The 4-H Thriving Model predicts that we, as educators, can facilitate the thriving of youth in our programs by providing a high-quality developmental context. Programming should take into account youth interests, referred to as sparks in the model, and developmental stages as well as physical and emotional safety and well-being. In this context, the model predicts that youth will thrive as they experience a sense of belonging in 4-H programs, contributing to their willingness to take risks and explore. These thriving youth have a growth mindset and are open to new challenges and discoveries. They exhibit pro-social behaviors and a sense of personal responsibility as they learn that they are part of a larger, inter-connected world (Arnold, 2018).

4-H'ers Thrive in Nature

Natural exploration plays a critical role in positive youth development. Nature can provide that critical spark, helping youth find a sense of belonging with others who care about the natural world and experiencing the healing powers of nature. Through nature-based learning and play experiences, youth develop an awareness of the natural world and are often inspired to develop hope-filled solutions for issues or concerns they see in natural settings. Nature-based programming can be a powerful tool for helping 4-H youth to thrive. **"If, as a growing body of evidence recommends, contact with nature is as important to children as good nutrition and adequate sleep, then current trends in children's access to nature need to be addressed" (Louv, 2008, p. 110).**

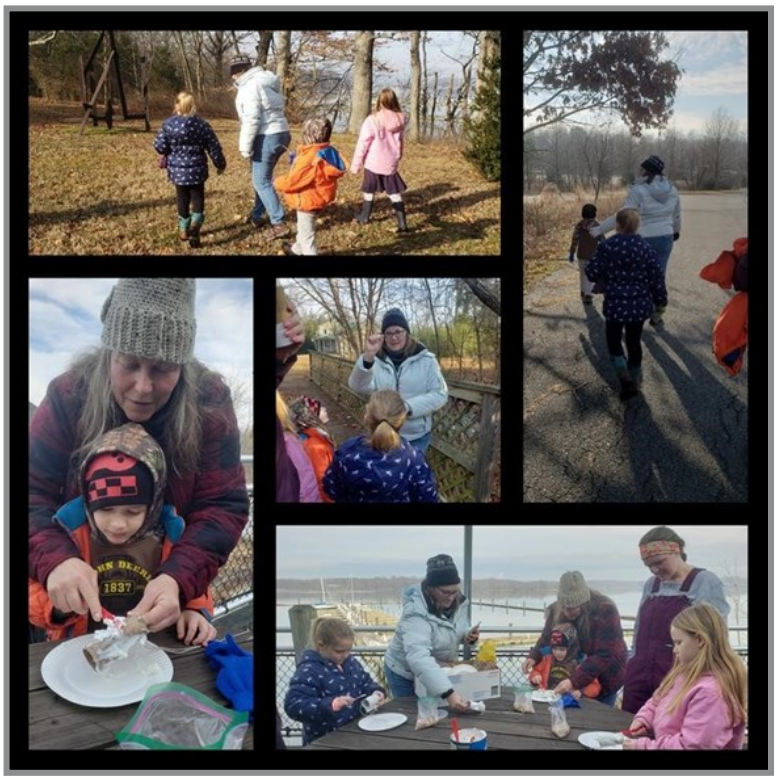
As children spend time in nature, they "create positive attitudes toward nature…and science…fostering feelings that influence lifelong attitudes and behaviors" (Wells & Zeece, 2007, p. 286). Nature exploration has been linked to many benefits in every aspect of early childhood development. Cognitively, children's creativity, imagination, evaluation, differentiation, classification, and problem-solving skills flourish in a natural environment (Sweatman & Warner, 2009).

Speech and language skills are developed as "outdoor play encourages children to communicate (and) express their feelings" (Olsen et al., 2011, p. 3). Studies show that nature play also relieves the symptoms of ADD and ADHD. Being closer to nature helps boost a child's attention span. "The greener the setting, the more the relief. By comparison, activities indoors, such as watching TV, or outdoors on paved, non-green areas, increase these symptoms" (Louv, 2008, pp.105-106). As children learn experientially and discover their own abilities, they experience an increase in self-confidence and self-esteem, resilience and perseverance (Charlton & House, 2012). Children in nature find and care for plants and animals, gaining skills in pro-social "nurturing behaviors that help them interact in kind and gentle ways with people" (Rosenow, 2008, p. 10).

A literature review of 90 different nature immersion studies found that 60 percent reported positive mental, physical, or social outcomes in youth from 3-18 years of age, including those with special social and emotional needs, such as autism,

behavioral challenges, and attention deficit/hyperactivity disorders. Nature play also has positive outcomes for children from low socio-economic backgrounds. The benefits of nature experiences included improved self-esteem, self-efficacy, resilience and academic and cognitive performance. (Mygind, L.et al., 2019). The list of developmental benefits stemming from nature-based programming is extensive.

Knowing the beneficial tools nature provides in our efforts to see young people thrive, 4-H must act.

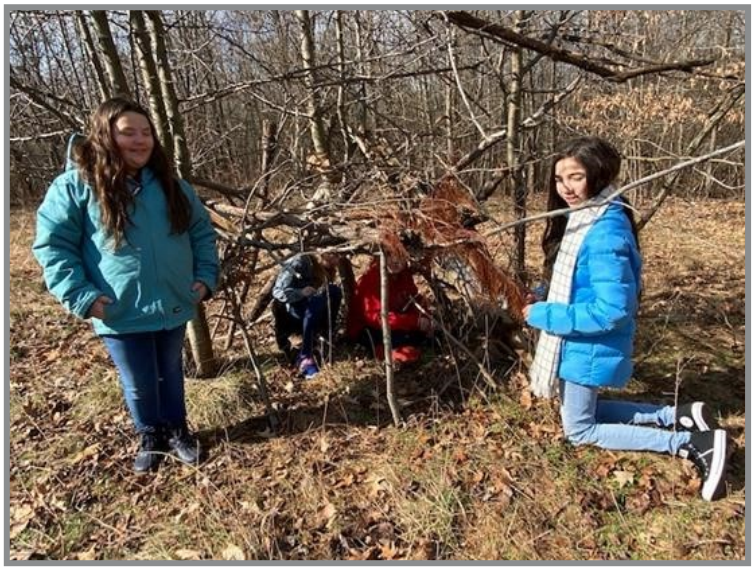


Our youngest outdoor explorers learned about winter adaptations and made bird feeders to help the birds survive the rest of winter.

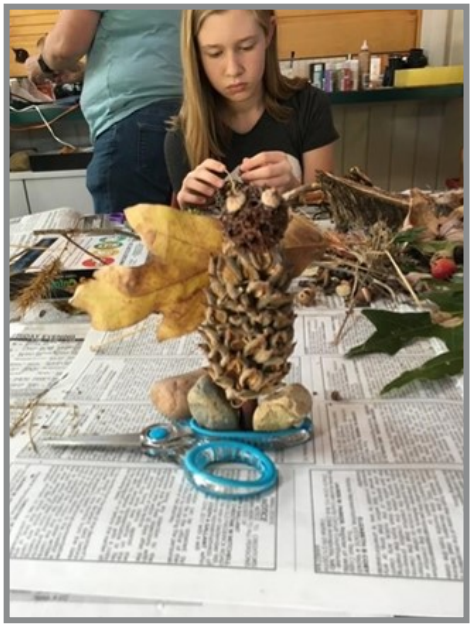
A 4-H Course of Action

Recognizing the detrimental impact nature-deficit disorder may have on children, it is our responsibility as 4-H professionals to incorporate natural exploration into our programs. As 4-H educators, we can launch 4-H programs aimed at using nature as a healer of nature-deficit disorder. Opportunities abound:

- Art in the Park programs provide youth with opportunities to enjoy the natural world through artistic expression.
- Outdoor Discovery groups and clubs inspire outdoor discovery and adventure.
- Summer camps can provide time to reflect on how nature experiences benefit mental and physical well-being.



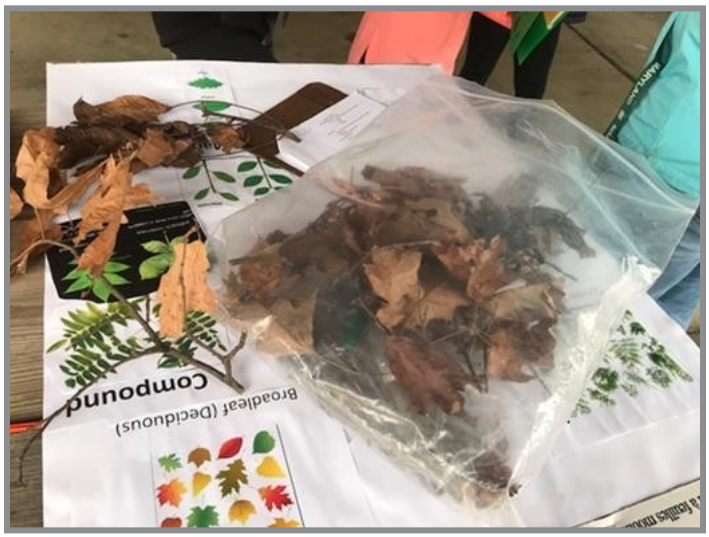
Our older group of explorers learned about animal adaptations in winter and then tried to make a winter shelter for themselves. They quickly learned that animals are much better at adapting to winter conditions than we are.



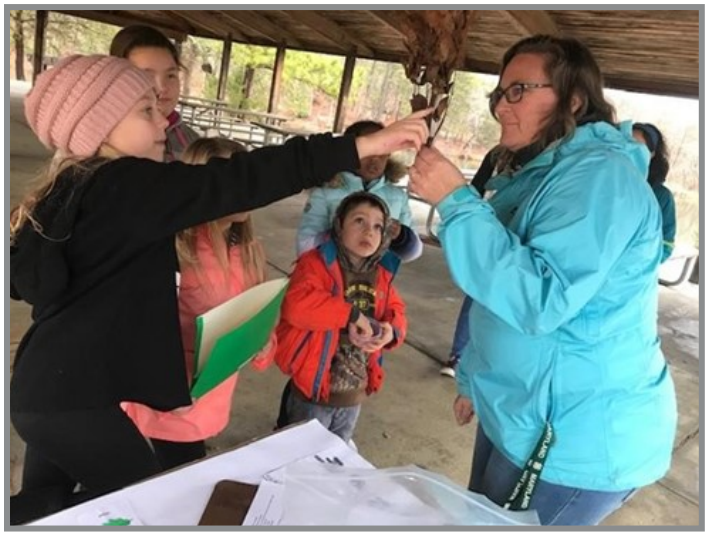
A youth in our Art in the Park program. We took a nature hike of discovery and collected natural artifacts to turn into artistic creations.

To build nature-based programming capacity, professional development opportunities should be designed to build awareness of the unique benefits nature play provides (Ernst, 2012) and assure staff and volunteers that they do not need to have a background in science to support the growth and development of natural intelligence. All that is needed is an enthusiastic adult willing to participate with children (Sweatman & Warner, 2009).

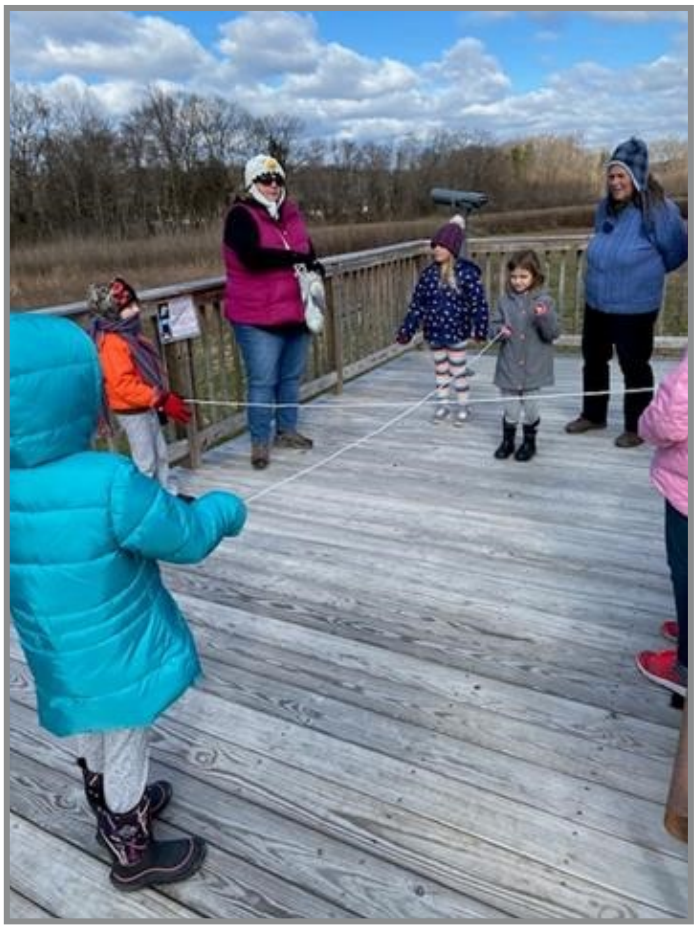
"Research indicates that two factors are key in influencing children's social and natural play interactions: access to the natural environment and supportive adults" (Dowdell et al., 2011). Our role as 4-H educators is to support children's exploration by joining them in outdoor nature play, creating opportunities for them to experience nature (Dowdell et al., 2011), and sparking curiosity that will lead to the development of lifelong learners (Olsen et al., 2011). Sadly, today's children haven't learned how to direct their own play in nature. 4-H educators must be taught how to help them rediscover the wonder and awe of nature and the creativity it inspires (Olsen et al., 2011).



Youth used a dichotomous key to identify trees in our local park.



Staff sharing their enthusiasm about winter tree identification.



Volunteers use ropes to demonstrate the diameter of an eagle's nest. Scopes and a live eagle cam were used to generate enthusiasm as well.

Helping Volunteers Find Opportunities for Nature Play

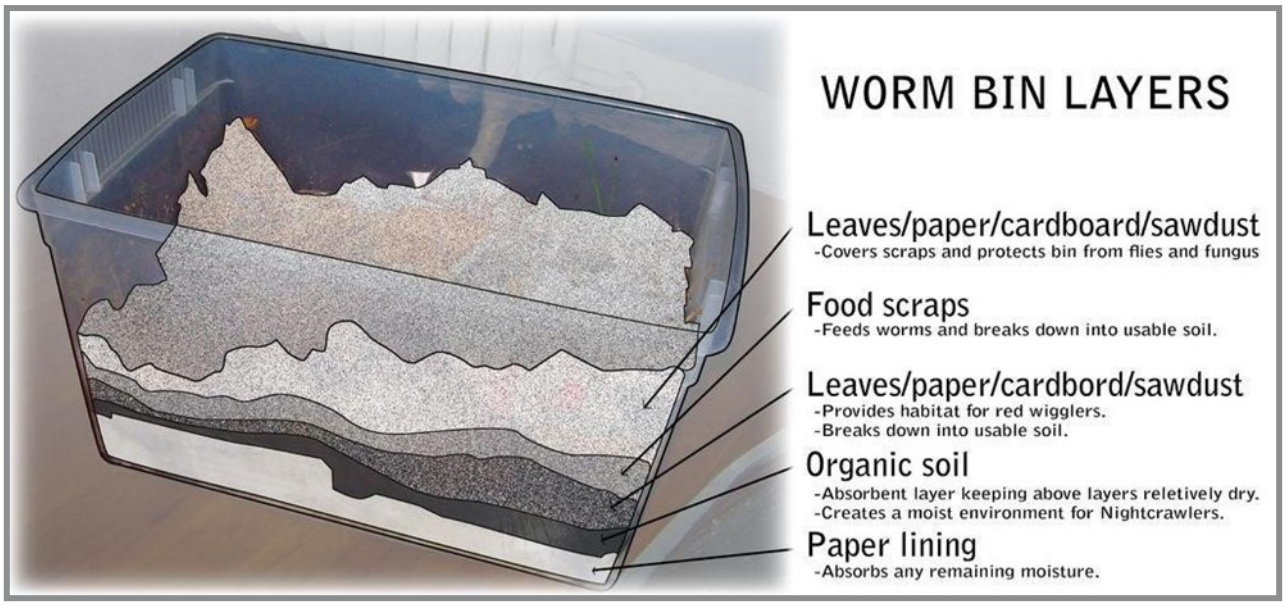
As the importance of nature-based play is understood, we can support volunteers and staff with ideas and professional development sessions illustrating how to effectively incorporate nature exploration into their programs to support thriving outcomes such as openness to challenge and discovery, hopeful purpose, belonging, and contributions to others. A question that invariably comes up is the issue of access, or perceived access to natural play spaces. One option is to partner with local parks. They love guests and staff will often help you lead the program.

The schoolyard greening movement is underway in the United States, making changes to school environments to restore natural habitats incorporating nesting boxes (Figure 1), worm farms, ladybugs, tadpoles, cocoons, and slugs (Dowdell et al., 2011). Simple methods to bring children and nature together include planter boxes, worm bins (Figure 2), I Spy walks, and adequate all-weather gear for mud, snow, and rain play (Rosenow, 2008). As professionals, we must seek out resources and opportunities to incorporate natural exploration into our programs.

Figure 1. Putting up boxes allows youth to observe bluebirds

Bluebird Box: Copyright: Credit: ZUMA Press, Inc. / Alamy Stock Photo

Figure 2. Worms have an important place in every ecosystem



Courtesy of https://www.instructables.com/id/Drain-Free-Home-Worm-Bin-Composting/

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