



# Leaves OF *Change*

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## Outreach Highlight

### Kids in the Woods Expands Science, Nature Experiences for Middle School Kids

**THE KIDS** in the Woods (KIW) program at Westwood Middle School in Gainesville, Florida started in 2013 with one simple question, ‘How do we get kids outdoors and physically active?’ For a group of local, state, and federal partners the answer was through science.

The US Forest Service, the University of Florida’s School of Forest Resources and Conservation, the City of Gainesville Parks, Recreation, and Cultural Affairs, the Alachua County Environmental Protection Department, and Camp Crystal Lake partnered with the Alachua County School District to create Westwood’s Kids in the Woods program. The program started initially through a More Kids in the Woods grant from the US Forest Service that was to last for two years, but is now sustained through joint Forest Service and University of Florida funding and in-kind partner contributions.

After four years of growth, the Kids in the Woods program is now firmly integrated into the sixth-grade science curriculum. Students learn to identify trees in natural areas around and on the school campus. They observe and compare feeding behavior of birds in relation to predators, and they look at erosion processes in a nearby creek – all while learning about the steps in the scientific process – asking questions, collecting



Kaylie Buettner, a 6th grade science teacher at Westwood, helps one of her students record data from the creek study.

Photo by: Annie Hermansen-Baez

data, analyzing information, and making connections.

The students get a hands-on introduction to science, but also they get to do things like feel the bark of different trees, listen to birdcalls, and feel the sensation of cool creek water around their feet.

**Annie Hermansen-Báez**, science delivery coordinator with the US Forest Service (SRS-4952) and program co-founder, said the initial idea of the program was to provide science teachers with lesson plans and field equipment so that after two years they could conduct the studies without the team’s involvement. However, as the team worked with the teachers and students throughout those first years, they found working together created a unique experience for students to interact with natural resource professionals and scientists, as well as university students.

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## Outreach: Kids in the Woods Expands Science, Nature Experiences for Middle School Kids

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“The kids get to meet real scientists,” she said. “They laugh, talk, and share with the team members and many say they can picture themselves as scientists or natural resource professionals one day.”

**Kaylie Buettner**, a sixth-grade science teacher at Westwood, said surprisingly many of the kids who have trouble sitting quietly and listening to a lesson in the classroom become interested, involved student scientists when they go outside.

“Some of the students that I couldn’t pull anything out of in the classroom are the most excited and involved in Kids in the Woods,” she said. “And that has fed back into the classroom – I’ve seen a big change in attitudes.”

Outdoor science lessons provide a completely different experience for the kids compared to the indoor classroom. First, their senses are engaged – the sights, sounds, textures, and smells of nature can make the lesson a more meaningful and memorable experience. Second, kids learn that science isn’t always done by people in white coats in far off laboratories. Science can be done in a creek near their home or at a bird feeder outside their window.

Buettner said teaching outdoors makes science less intimidating. “Science is full of big concepts with words that seem foreign to many of these kids,” she said. “Outside we can break it down into steps and show the real world applications. That way it doesn’t seem as challenging anymore.”

Kids in the Woods has evolved into a full-year program involving a sequence of projects that build on each other, introducing scientific concepts and experiments.

Toward the beginning of the school year, the Westwood teachers and KIW team members take the kids on a hike in nearby Loblolly Woods Nature Park. They explore their senses – sight, sound, touch, and smell – and do bark rubbings to examine the textures of different trees.

Next, the students study how predators affect bird feeding behavior. The students spend time watching and recording the action at feeders set up around the school and in Loblolly Woods. A realistic rubber snake is placed on some of the feeders to provide a comparison of feeding behavior in relation to predators.

**Sally Wazny**, coordinator of environmental and cultural history programs for the City of Gainesville Parks, Recreation, and Cultural Affairs and the bird study lead, said one of the students stopped her one day as they were walking back to the school after a morning of observing bird feeding behavior.

“I have to tell you something. You taught me something I didn’t know,” he said. “I love birds, I love birds, Miss Sally.”

Wazny said the student told her he asked his mother to buy a bird feeder after his experience with the bird study, and now he and his mother spend every day watching birds.

Those types of transformations are what the team members describe as the most rewarding aspects of program. “It lets me know we’re doing the right thing, we’re having an impact,” said Wazny.

In the creek study, the kids put on rubber boots and walk around in the water. For many, it is a unique experience. Some start out scared and uncomfortable, but by the end they are thrilled to be in the creek. They use surveying equipment to build a cross-section profile of the creek, and compare their data with the data collected by students in previous years to measure erosion and deposition over time.

“When we start to graph things out, they make connections between what they see on paper and what we saw in the creek,” said **Wayne Zipperer**, research forester with the US Forest Service (SRS-4952) and creek study lead. “They’re learning real methodologies and real techniques.”

**Molly Disabb**, the Kids in the Woods program specialist, had a light bulb moment when she took some special education students to the creek. Many of the kids had an individual helper and clearly needed a lot of assistance...until they got into the creek.

### Molly Disabb, Kids in the Woods Specialist

Molly Disabb started working as a Kids in the Woods specialist in January 2016. Molly graduated from the University of Florida in May 2016, receiving her B.S. in wildlife ecology and conservation. She grew up in Gainesville and attended Westwood Middle School, which she says makes the work she does with Kids in the Woods even more rewarding. Her responsibilities include preparing the study materials and study set up, coordinating each study, and working with the students to understand the study concepts. She also helps maintain the Kids in the Woods blog and the InterfaceSouth website content. In her spare time, Molly likes to play soccer, camp and explore outside, spend time with her dog, and hang out with her family.



Photo by: Annie Hermansen-Baez

Molly Disabb teaches Westwood students how to take measurements in the creek.

“Kids put on their boots, got into the water, and enjoyed the cool sensation of the creek water around their feet – they were so excited, and they didn’t want to get out, some threw fits when it was time to leave,” she said. “Those experiences are valuable for all kids.”

Toward the end of the school year they learn about the benefits of trees – energy savings, carbon storage, wildlife habitat, stormwater management, and more—in a tree study led by **Michael Andreu**, associate professor at the University of Florida’s School of Forest Resources and Conservation and program co-founder. After measuring trees on the school grounds and in Loblolly Woods, they input the data they collect into the National Tree Benefit Calculator to see which location provides the most economic benefits to the community.

Andreu said the excitement of the kids while learning outside is contagious. “The energy the kids show is positive feedback to me as an instructor,” he said. “And it also benefits the teachers at the school to see the kids excited and engaged – it reinvigorates them.”

The program wraps up toward the end of the school year with a campout for 60 students chosen through a lottery. The overnight experience includes pitching tents, team building activities, a night hike, stargazing courtesy of a local astronomy club, and stories and s’mores around a campfire.

Andreu said the night hike experience really pushes the kids out of their comfort zone. The group walks and listens to night sounds, turn off their flashlights and walk in the dark, and then at the end they talk about how the forest is different at night compared to the day.

In 2017, Westwood hosted the first Kids in the Woods parent night. This event gave students a chance to show their parents what they had learned in the Kids in the Woods program. The kids led their parents through the bird study, the creek study, and the urban tree study as well as other science related activities. The main goal is for families to be inspired to explore other outdoor activities on their own.

The Kids in the Woods team initiated a pilot program in 2017 to bring the bird study to two local elementary schools (Littlewood and Stephen Foster). This has sparked interest in expanding Kids in the Woods to connect elementary, middle and high schools along the Hogtown Creek Watershed. The team is also exploring the possibility of initiating a summer camp program focused on middle and/or high school students that would also support efforts for students to learn about majors and careers in forestry and other related fields. Additionally, University of Florida graduate student, **Mary Mazyck**, is evaluating the influence of outdoor learning through the Kids in the Woods program on several key factors, such as attentional capacity and interest in science.

The KIW team said one of the biggest challenges in starting the program was getting buy-in from teachers and school administrators. Demands placed on schools for meeting curriculum standards means there is little time for extras.

## No Child Stays Inside: The Munford Schools

In the spring of 2017, the Kids in the Woods team and school administrators and teachers visited the national award winning Munford schools in Alabama. The Munford schools are an elementary, middle, and high school that immerse students in a curriculum focused on project-based, hands-on learning, connecting students with the outdoors. The schools also provide mentoring opportunities between high school, middle, and elementary school students and incorporate conservation education into the core curriculum.

The Munford schools are located within the Talladega National Forest and the schools have developed a close partnership with the US Forest Service. The Forest Service helped to fund the school’s science resource teacher and has assisted in the development of many of the interactive exhibits and demonstrations that line the school hallways and campus grounds. The school has 12 outdoor classrooms, an amphitheater, nature trail, longleaf pine stand, low ropes course, greenhouse, fishpond, frog pond, wetland, butterfly gardens, blue bird trail and an aquaculture facility.

Building on the theme of ‘No Child Stays Inside,’ natural resources and environmental themes are incorporated into the core curriculum, and students develop a rich understanding of the role natural resources play in their community. Project-based learning is designed to help students see the real world applications of the content from their classes, and that is enhanced with contributions from the schools’ partners, such as the Forest Service, the Alabama Forestry Commission, state universities, and others, who provide opportunities for students to meet natural resource professionals and scientists and learn about potential careers in outdoor-related fields.

“We did a good job of sticking to the curriculum but taking it outdoors,” said **Sara Charbonnet**, a sixth-grade science teacher at Westwood. “You can learn about erosion from a book, but it’s more memorable if you see it while standing in a creek.”

Finding a way to integrate the science curriculum into the program eased the administrators’ concerns, and they are enthusiastic supporters of Kids in the Woods. The KIW team and teachers say that support is a must.

Hermansen-Baez said community partners have played an essential role in growing the Kids in the Woods program. “The strong partnerships we’ve created through this program will hopefully help us expand this opportunity to more students,” she said. “I think this is a model other schools and districts can follow.”

The Westwood Kids in the Woods program shows the power of a community coming together to introduce kids to science and nature. The collaboration creates a cascade of benefits from student learning and enrichment to new, creative community collaborations.

And, in the end it’s all just simply about getting kids outside.

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## Upcoming Events

Date	Description	Location	Contact
On-going	<b>Nature Explore Workshops</b>	Varies	<a href="http://natureexplore.org/workshops/">natureexplore.org/workshops/</a>
September 13-15 , 2017	<b>10th Annual Great NC Tree Conference</b>	Raleigh, NC	<a href="http://www.ncufc.org/conference.php">http://www.ncufc.org/conference.php</a>
September 27-29, 2017	<b>37th Texas Tree Conference</b>	Waco, TX	<a href="http://isatexas.com/events/texas-tree-conference/">http://isatexas.com/events/texas-tree-conference/</a>
November 15-16, 2017	<b>Partners in Community Forestry</b>	Tulsa, OK	<a href="http://www.arboday.org/programs/pcf/">www.arboday.org/programs/pcf/</a>
May 3-4, 2018	<b>Green Schools Conference &amp; Expo 2018</b>	Denver, CO	<a href="http://greenschoolsconference.org/">greenschoolsconference.org/</a>



Note: Urban Forestry South is a science delivery center associated with the USFS Southern Research Station work unit, *SRS-4952: Integrating Human and Natural Systems* ([www.srs.fs.usda.gov/humanandnaturalsystems/](http://www.srs.fs.usda.gov/humanandnaturalsystems/)), and the USFS Southern Region.

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