Teaching Sustainability and Stewardship through Service

Using service learning as a tool for change at any age

By Emily Felker

For many middle schoolers, the prospect of school just doesn’t hold a candle to the enticements and temptations of friendships, video games, and after-school activities. Yet, at The Exploris School in Raleigh, North Carolina, there is one day a week when students are excited about learning: every Thursday after we clean up from lunch, students wiggle in their chairs and ask impatiently, “When does service learning start?!”

In seventh grade, we offer service learning electives twice a year: once in the fall, and once in the spring. On the day we announce the course choices for the season, students bubble with excitement as they read the descriptions. They frantically make eye contact with their friends as they write down their top choices onto the tiny white note cards that will determine their fate. We collect and analyze their choices as we sort them into groups balanced by both interest and personality. In the days that follow, the suspense is tangible, and when we finally announce our service learning groups, students simmer with anticipation as they wait to hear in which groups they have been placed. While not every student is fully satisfied with the final outcome, each is nonetheless excited, and for the remainder of the season, their expectations run high.

What is service learning?
What is it about service learning that gets students so excited? And, how is it different from community service? Service learning is a process in which participants develop civic responsibility by engaging in thoughtfully-organized service that meets the needs of a community. Service learning programs comprise a balance between community service and field education, and while they can include less-impactful aspects of volunteerism, the “learning” component is where students acquire knowledge relevant to both academic concepts and real-life scenarios. Because the learning is seamlessly integrated into enjoyable but meaningful situations, not only are students able to engage deeply with the content but they have fun doing it!

Service learning enhances an academic curriculum through providing interdisciplinary and student-centered learning opportunities. These experiential and concrete experiences benefit learners who are more impacted by doing than by thinking abstractly. Such first-hand experiences also make real more abstract concepts such as social justice or human impacts on the environment. Being able to influence, touch, and feel the impacts of their work allows students to make deeper connections to the topic at hand, and enables them to formulate their own opinions about an issue. As students begin to see how their efforts lead to visible positive outcomes, they build self-confidence in their ability to have an impact while engaged in sustained service, and their self-awareness grows as they construct their own sense of ethical responsibility both at school and in the community.
Incorporating into curricula

The beauty of service learning is that it is widely adaptable across subjects and age levels. Pair a visit to your local waste management facility with a litter pick-up in a nearby park. When learning about plants, reach out to a local arboretum or parks department and see how you can get involved in restoration projects. If learning about government, write letters to legislators or plan a voter registration drive. Volunteer at a retirement facility, and then have students interview residents and write short biographies or poems to document the memories of senior citizens. While learning chemistry, take a field trip to a nearby stream and pair water quality assessments with a creek cleanup. Advanced students could use this data to prepare a presentation for local stakeholders who are involved in keeping this ecosystem clean and healthy. If learning about invasive species, create flyers about how to reduce the introduction of non-native species, or seek out opportunities for students to participate in nearby invasive species removal projects.

Sometimes, service can be easily performed on your campus or in your neighborhood. At other times, finding an organization to partner with can be a painful part of the process. Reaching out to scouting organizations, museums, park systems, non-profits, or your local cooperative extension system is a good place to start, even if only some of the groups are open to working with students. As such, it is often easier to find service opportunities first and then align them with essential learning standards later than to work the other way around. Over time, you will find organizations that are eager to form partnerships. As you build relationships with local communities and organizations, those relationships can become part of a solid foundation from which longer-term projects can blossom in the future.

There are many ways to integrate technology into outdoor activities in meaningful ways. Apps such as Litterati (https://www.litterati.org/) can be used to map and geotag individual pieces of trash in public places, and citizen science programs like iNaturalist or eBird can be incorporated into lessons about biodiversity. Collecting the data alone provides a service to the larger scientific community by increasing the amount of data available to researchers. For older students, provide them with increased ownership of their community by having them collect from their very own “research site.” Students can use data trends to guide future service, or they could even design lessons, nature walks, or birdwatching tours of their "site" for other community members.

Do you know of a community or ecosystem that is threatened by pollution or development? Secondary school students could use StoryCorps (https://storycorps.org/) to interview people who are directly impacted. In addition to the learning that comes from studying such issues, students also practice and gain interpersonal skills. StoryCorps recordings are
archived in the Library of Congress, essentially preserving stories that may not otherwise be told for generations. While helping create a digital record is a form of service, students may also use perspectives gained from their interviews as motivation to perform a relevant activity to better the community.

Beginning a school vegetable or pollinator garden is a great way to get students of all ages involved in service learning. There are tons of resources out there, including https://foodcorps.org/, http://www.csgn.org/, and https://kidsgardening.org/. Learning can be paired with plant biology, landscape design, or construction, and involving older students in the processes of garden design and species management gives them ownership of the projects. Service can be integrated seamlessly by collectively donating produce to local food banks or by having students teach others in the community about how to support pollinators.

Mapping can be paired with service and conducted by students of any age level. Students can practice cartography and map out school grounds, identifying locations that are underutilized, polluted, or otherwise significant to the student body. Maps may reveal patterns that need to be addressed, such as not enough trash cans or soil erosion. Maps can even document the features that make a school unique, and an artistic, student-created map can be published and recorded as a part of logging school history.

At any age, having students publish and share their learning is a valuable way to serve: presenting to a school board, writing letters to legislators, or sharing their knowledge with other youths helps students build a sense of civic responsibility in how to take active steps towards improving their surrounding community.

At an elementary level, service will likely need to be teacher-facilitated and structured, but at a secondary level, projects can be more easily student-facilitated and fluid. For example, students can survey neighborhood residents about problems they see in their respective communities before designing their own service activities. While this level of freedom can present its own set of challenges, allowing students to identify their own problems and design their own solutions is empowering, and it gives students a vested interest in performing service.

When implementing service learning into your curriculum, start small. Trying to implement a long-term project without experience and community support is difficult. With time and experience, our team has built up our service learning programs so that they progress over several months. Remember: it’s okay to start with a short-term goal in mind. Service can lead to immediate, improved outcomes for a community, but service can also be indirect, with outcomes that might not be obvious to students. It often doesn’t take as much as you’d think to transform a lesson into an activity that includes elements of service learning. However, instilling the “why” in students before beginning any service learning-oriented project is critical for students to make connections between the concepts learned in the classroom and the concrete impacts that their service can have on the outside world.

Service learning at Exploris

Because service learning is an indispensable part of our curriculum, my teaching team sits down together every year to plan out and discuss our ideas. Our seventh grade students are a heterogeneous, hormonal, and excitable bunch, so we try to provide a variety of opportunities that will meet their diverse needs and interests. Examples of past service learning opportunities include volunteering companionship and craftsmanship at a nearby retirement home, creating chalk art throughout downtown Raleigh to promote social justice, teaching about native species at the North Carolina Museum of Natural History, and using a specific design process to improve underused spaces on our campus. We have also facilitated student-driven projects that involved crafting, fundraising, and collaborating with local organizations to promote positive change in our community.
Connecting students to the community builds sense-of-place connections, and helping students form an attachment to nature can formulate a passion for conserving the land around them. One of our core values at Exploris is to facilitate students’ connections to nature: as they witness the power and elements of the natural world through adventure and stewardship, they begin to view themselves as just one species within a larger system. It is my belief that while not every project needs to be focused on the environment to be successful, providing opportunities that allow students to engage in the natural world can promote environmental awareness and development of a sustainability mindset. As a result, we have offered many projects that provide opportunities to engage with environmental issues in our community. Common themes across these projects include collaboration with local and state organizations, improvement of our school and community spaces, and opportunities for students to strengthen their connections to the environment while learning about and experiencing sustainability. Three of our most successful activities follow:

**Trash talking 101**

Students in this group learned how to “talk trash” through a variety of experiences and walked away from this project not only with knowledge about waste management but also having had personal experience counteracting the negative impacts of trash in our environment. Over a two-week period, students collected waste produced during lunch and recorded the daily amounts. This data was analyzed as part of a school-wide trash audit, and students considered the implications of this data on our efforts to be a green school.

Students also worked in partnership with our local parks department to clean up trash at a nearby park. Noticing large quantities of cigarette butts around our campus, some students made posters for the exterior of our building encouraging patrons of nearby businesses to properly dispose of their cigarettes, while others made posters for classrooms about items that could be recycled versus put in the trash. Students also visited the municipal recycling facility to see how plastic products can be repurposed and to learn about how improperly-recycled items like plastic bags and hazardous waste can damage equipment and put workers in danger.

The culminating experience was through a collaboration with the nearby Walnut Creek Wetland Park. Staff taught a lesson about the importance of wetlands, while also describing the historical relationship between the landfill and nearby low-income communities. Students had the chance to get dirty when cleaning up the wetland, and they chatted excitedly about their discoveries while carrying bags of cans and rolling tires back to the main facility. They were led in sorting out their findings and ultimately found that about 50% of the trash they found could have been recycled! Using knowledge from their previous experiences, student groups designed pamphlets about trash and recycling, and their products were compiled and transformed by staff into a pamphlet that is now distributed at the wetland center.

**Garden Gurus**

The Garden Gurus nurture our small school garden. As we are located in the urban core of downtown Raleigh, we don’t have the luxury of large green spaces in which to plant. Instead, students are exposed to theories of garden design before learning how to plant in container gardens. We entrust our students to plant seeds and care for their plants in their miniature assigned spaces and to craft ways to make our school garden more sustainable. For example, students organized a paper towel composting system for our school classrooms and bathrooms, and taking care of this system has now become a part of our classroom-cleaning ritual. In the off season, students get excited about watering their plants, and they love to watch their plants thrive. At the same time, when plants die off, students are asked to think and problem-solve: are they getting enough sunlight? Is the soil poor? What can be done to improve next time? The Garden Gurus take ownership of our garden spaces, and they have created an urban garden out of our asphalt surroundings.
Beyond caring for spaces at our school, students are exposed to green spaces in our community. For instance, we visited the local arboretum and were given a tour by a university graduate student, and then, in partnership with the City of Raleigh Parks Department, students planted trees in the community. Now, whenever we visit the park, you can hear the sound of students exclaiming, “That’s my tree!”

**Leopold Society**

Inspired by Aldo Leopold, this group focuses on student-selected conservation projects. While some service learning projects are more teacher-facilitated, students in this group brainstorm topics they want to learn about and apply in various conservation projects in our community. At one point, students wanted to learn how to fish in a nearby lake that maintains a sustainable population of fish for sport. They also wanted to work with their hands, so they spent time building wooden bluebird houses. Later in the year, students visited William B. Umstead State Park to install their birdhouses on public lands. Students hiked around the park while learning from rangers, and on a subsequent outing they took the opportunity to clean up trash from the park. Students happily tramped into the river to pick up trash, and they were able to take pride in collecting over 50 pounds of waste! Healthy public lands improve water and air quality as well as provide habitat for wildlife, and through their service, our Leopold Society group helped improve conditions in the state park.

These hands-on, active learning experiences are a way to combat nature deficit disorder. Children who have regular contact with the natural world can nurture an affinity for nature, which can in turn lead to the development of a pro-environmental ethic and a foundation of stewardship to build on in future years.

**Reflections and assessment**

Effective service learning curricula require facilitating connections to the community, and they include components where students are able to apply their learning and skills to real-life situations. Reflection is valuable in assessing desired learning outcomes, especially when service learning has been incorporated as a part of a specific curriculum. Students often need help making connections and thinking critically, and they require guidance in how these real-life experiences are relevant in a rapidly-changing world. Providing opportunities for structured reflection after the conclusion of service learning promotes self-awareness and allows participants to link their community experience with academic learning. Reflection can be incorporated through the processes of group discussions, journaling, narrative writing, or guided questioning. These assessments allow students to deepen their understanding of the experience and to make sense of how their experience can be contextualized.

There are always going to be bumps along the way. Each time my team concludes a service learning program, we ourselves begin our own process of reflection and improvement. We think about what went well, what could have been better, and what should be improved for the next time — the same questions, in fact, that we hope our students will consider.

We analyze the impacts of the project, and consider whether or not the overall outcome was valuable enough to warrant future reiterations. Lastly, we look at what learning targets we were able to meet and what topics could be removed or added in the future. This process is essential in order to meet the interests and needs, not only of our students but of our community.

Service enhances learning for our students in a compelling and experiential way. It incorporates project-based, problem-based, and place-based learning, while simultaneously engaging students in their own emotional and personal growth. Our students get excited about learning. They get excited about making a difference in their community. They get excited about getting out of their seats and into the world. Strong service learning curricula have the power to generate a new generation of civically-engaged and environmentally-empowered citizens, and we must use our capacity as educators to foster and enable these students to be capable and compassionate stewards of our local and global communities.

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**References:**