Overview

There were many sustainability highlights during the 2015–16 school year. Three highlights worth noting are the installation of a solar array on the roof of the Physical Plant, the extension of Lovett’s Education for Sustainability (EFS) initiative through the collective effort of a cohort comprised of more than 20 teachers, and even greater engagement in sustainability projects on the part of our students.

These three highlights align well with three commitments noted in Lovett’s Environmental Policy Statement, which are to:

- Minimize energy usage and carbon dioxide emissions and consider renewable energy sources where feasible.
- Foster environmental awareness within all academic, business, and operational areas with a view of increasing the entire Lovett community’s environmental literacy.
- Develop programs to harness students’ enthusiasm, encourage sustainability inspired innovation, and offer opportunities for students to collaborate on our journey toward sustainability.
Sustainability in the Classroom

Teachers and students in all divisions are continuing to develop creative lessons and projects which connect their classrooms with real world problems and challenges related to creating a sustainable world. Here are a few examples:

The Lower School
Lower School classes, Kinder-garten–Grade 5, focused on local wildlife. This theme was incorporated into the science curriculum and into classes in other disciplines. The goal was to help students develop an awareness of their surroundings and learn how to co-exist with “backyard animals.” This theme dovetailed nicely with the ongoing care of chickens in the “Chick-Inn”.

Fifth Grade “Green” Garage Project
Several fifth grade classes used a design-thinking process to create prototypes for a new parking garage on campus that would incorporate the principles of sustainable living. They interviewed teachers and administrators, did research, critiqued each other’s ideas, and created models using cardboard and other materials. Their enthusiasm and creativity were infectious!

Fifth Grade PBL Unit
Other fifth grade teachers created a Project Based Learning unit which incorporated history, science, art, technology, and language arts. Students explored the connections between Westward Expansion, sustainable architecture, and Lovett’s campus as they wrestled with the question “At what cost can we pursue a dream?” Jeff Rountree, Lovett’s director of plant operations, and Jeff Dinkle, a Lovett parent who builds ecologically designed homes, talked with the students and answered their questions.
Middle School

*Seventh Grade Sustainable T-Shirt Project*

An interdisciplinary project created by seventh grade science and Global Issues teachers focused on designing and procuring a sustainable polo shirt for Lovett’s campus shop. Students researched the materials, manufacturing process, labor conditions and carbon footprint associated with producing a polo shirt. They spoke with campus shop personnel and contacted four companies that manufacture shirts. Three prototypes of the polo shirt have been received and are being tested this summer to assess their comfort and durability.

Upper School

*Spanish VI You Tube Video Project*

Two groups of Honors Spanish VI students produced videos in conjunction with the TEDEd Club program. One group focused on how to reduce the consumption of bottled water on Lovett’s campus by replacing plastic bottles with boxed water or reusable water bottles. A second group concentrated on educating people about how to divest in fossil fuels and invest in renewable energy stocks and mutual funds. Both groups produced videos in English and Spanish which can be viewed on You Tube using these links:

Change the Package, Change the World: https://www.youtube.com/v/SdsTpuWrtL4

Divestment: https://www.youtube.com/v/ZDWXfve71-E

*Environmental Science*

Students researched and created Public Service Announcement videos about climate change and renewable energy. They worked with an art teacher to learn how to communicate their message effectively and inspire their audience. Students were encouraged to think broadly and to consider social, economic, and ecological factors in their research and artist’s statements.

*Honors French V*

Honors French V students researched how climate change and sea level rise are affecting the economic and social viability of low-lying islands in French Polynesia.
Education for Sustainability

Jaimie Cloud, CEO of the New York City based Cloud Institute for Sustainability Education, worked closely with 23 Upper and Middle School faculty members throughout the 2015–16 school year, helping them become familiar with EfS Enduring Understandings, and EfS Standards and Performance Indicators. Twelve Upper School teachers and 11 Middle School teachers received individual coaching from Ms. Cloud, and from Sandra Switzer or Joe DeLuca during the fall and spring semesters.

Members of the EfS teaching cohort learned that Educating for Sustainability is about much more than weaving environmental lessons into the curriculum. At a much deeper level it involves understanding how systems of all kinds (especially economic, social and environmental systems) interact and influence each other. EfS includes using multiple perspectives, imagination, and vision to solve problems and design a more sustainable future.

As Sandra Switzer, Lovett’s director for sustainable education, has noted: “To put it simply, educating FOR a sustainable future requires us to intentionally identify and cultivate the content knowledge, practical skills, and habits of mind that empower our students to create economic, social, and ecological conditions which will support the long-term flourishing of life. This becomes a guiding question in developing curriculum-- how will this unit/lesson provide my students with the knowledge, skills, and beliefs that will empower them to create a sustainable world?”

In keeping with this approach, 6th grade science students studied tectonic plates and volcanic activity not just from the perspective of how they impact human life, but also how they contribute to creating and re-creating healthy, diverse ecosystems.

American Studies lessons were designed to strengthen students’ ability to understand multiple perspectives by having them read Ta-Nihisi Coates’ memoir Between the World and Me and asking them to reflect upon their own perspectives about race and racism.

Another member of the Upper School EfS cohort had his geometry students use their math skills to calculate how much space packaging takes up in a landfill and to design alternative ways to package products which would reduce waste and save money.

During the 2016–17 school year we will continue to support last year’s EfS cohort as they refine and implement their lesson plans, while we also recruit a new cohort of teachers from all divisions who will receive coaching from Jamie Cloud and Sandra Switzer.
Student Leadership and Involvement

Upper School Green Team Highlights
The US Green Team, led by Meredith Bond and Emma Pollard (co-presidents for the past two years), had more students involved than ever during 2015–16. There were six active subcommittees devoted to the following topics: a living wall, bee hives, pond restoration, Earth Week planning, terracycling and carbon offsets for the Athletic Department. The Athletic Department Carbon Offset Committee, led by James Packman and Chris Ocana, had nine members who did a great deal of research and calculated that 1.699 metric tons of CO2 were emitted transporting Lovett athletes to and from competitions throughout the year. Students on that subcommittee are working with Alex Reynolds, who oversees Lovett’s Siempre Verde program, to see whether new plantings at the school’s cloud forest research station in Ecuador can offset these emissions. This is a good example of the kind of concern for the environment and creative thinking that is fostered by the Lovett’s sustainability program and by the Green Team, in particular!

Makers Space
The Makers Space is a special area in the Community Center where students can design and build things, and get help and advice from faculty with engineering and computer design skills. Several projects last year had a sustainability focus and were pursued in concert with the Upper School Green Team. One project involved trying to design the optimal place on campus for a bee hive, which is in keeping with the Lower School’s 2014–15 Earth Week pollinator theme. Led by Josh Eiland, students consulted with Jeff Rountree, director of plant operations, and learned about health and liability issues connected with bees on campus. It remains to be seen whether this project will come to fruition. Makers Space and Green Team students also spent a lot of time researching and discussing how to design and construct an aquaponics tank. Work will continue on both of these projects during the 2016–17 school year.
LERIG
The Lovett Environmentally Responsible Investment Group (LERIG) is devoted to investing in fossil fuel free stocks and mutual funds. LERIG’s goal is to persuade the Board of Trustees to divest in fossil fuels by demonstrating that “green” investments can earn returns equal to, or better than, stocks and funds connected to the fossil fuel industry. LERIG manages a small, but growing portfolio of investments, which they have purchased using funds donated by generous patrons. Last year, seven students, including seniors Hollis Rhodes and Estée Park, who joined LERIG as sophomores, monitored the portfolio and researched other potential fossil fuel free investments. The students made two detailed presentations to a panel composed of Lovett Trustees, Headmaster Billy Peebles, and members of the Business Office. As a result, the students’ recommendations for the purchase of additional stocks and mutual funds were approved in May.

Earth Week
Lovett’s annual Earth Week festival was jam packed with activities. The Chattahoochie Nature Center brought animals to the Lower School and talked with the children about local wildlife. Students made flags to celebrate Earth Day and made bird feeders to take home. They also listened to a special story teller.

Stephanie Benfield, director of sustainability for the city of Atlanta, spoke at an Upper School assembly.
During three Earth Week lunches, free pizza was served to Upper School students who attended a screening of the provocative film, Racing Extinction. Appropriately, Earth Week coincided this year with the annual RAFT (River Awareness for Tenth Graders) raft excursion and trash pickup on the Chattahoochie. And, of course, botany students held their annual plant sale.

Middle and Upper School students competed in a plastic water bottle recycling contest and students from all divisions participated in the annual e-waste drive. The whole school got involved in the outdoor barbeque and electric car expo on April 21.

Earth Day, itself, (Friday, April 22) was the grand finale, starting with many people walking or carpooling to school in the morning. A special NUD (non-uniform day) featuring Earth Day costumes added to the festive atmosphere. Earth Day also was an “Action Day” on campus. All members of the community were encouraged to sign petitions to replace campus water fountains with refillable water stations, to raise money to offset the Athletic Department’s carbon footprint, to create a Living Wall, and to acquire an educational bee hive. By the end of school Friday afternoon, everyone needed a rest!
Capital Projects and Campus Improvements

Solar Panels on Physical Plant Rooftop
With the help of Trey Jarrard, a Lovett parent who is the CEO and Co-Founder of Renewvia Energy, an array consisting of 200 solar panels was installed on the roof of the Physical Plant (maintenance building) just up the hill from Lovett’s baseball field. This is the second solar array on campus made possible by the generosity of the Jarrard family. As you may recall, in 2014 Trey and his wife, Juliette, donated the panels that cover the walkway from the Lower School to the chapel.

The new 50 KW installation began generating power on Friday, April 15. Real time data on the production of energy by this array can be found on the Lovett webpage (click on the sustainability tab under the heading “Campus Life”) or by using this link: https://monitoringpublic.solaredge.com/solaredge-web/p/site/public?name=Lovett%20Maintenance#/dashboard

Every clean, renewable electron that is created will be used to power the Physical Plant. It is estimated that annual production will be about 76,800 kWh, which means that Lovett will be reducing CO2 emissions by 46.8 metric tons every year for the next twenty to twenty five years. That is the equivalent of planting more than 38 acres of trees every year, or taking ten cars off the road and burning 5,264 fewer gallons of gasoline every year for the next quarter century. Lovett extends its sincere thanks to Trey Jarrard, Renewvia Energy, Jeff Rountree (Lovett’s director of plant operations) and others who made this wonderful achievement possible.

Murray Athletic Center Gets LEED Gold
The Murray Athletic Center, which was dedicated last fall, has received a LEED Gold rating. It is the second LEED Gold building on campus. (The Portman Family Middle School was the first.) The Murray Athletic Center has low flow showers, hand driers instead of paper towels, motion sensor lighting, supplemental solar hot water, reflective insulated windows and other energy saving features.
LED retrofit in Wallace Gym
During the summer of 2015 new, energy efficient LED lights were installed in Wallace Gymnasium. As a result of this retrofit, energy consumption in the gym has been reduced by more than 50 percent and the brightness and quality of the lighting has been greatly improved. Based upon the success of this project, plans are moving ahead to do a similar upgrade in the Glover Gymnasium and, perhaps, the Pope Gymnasium.

REC Purchase
Last December Lovett purchased Renewable Energy Certificates (REC) for 3,937,000kWH from Sterling Planet in Atlanta. These RECs will offset approximately 25 percent of the school’s total electricity consumption for the 2016 and 2017 calendar years. The purchase also contributed to the Murray Athletic Center earning its LEED Gold rating. This is the third year in a row that Lovett has purchased Renewable Energy Certificates. Lovett is one of just 24 schools nation-wide that are part of the Renewable Energy Purchasing Consortium, a collaboration between the Green Schools Alliance and Sterling Planet.
Acknowledgements

Special thanks are due to the following people and organizations that have devoted time, energy, and resources to supporting Lovett’s sustainability program: Angie Carrano, Mona Dodia, Dave Meriwether, and other Business Office personnel; Mike Lanning, who continues to brew biodiesel fuel from used cooking oil from the dining room; Jeff Rountree, and all members of the Physical Plant and Housekeeping staffs, who assist with our composting and recycling programs; Dwight Bell and Kirsten Bell of Eco-Metrix Environmental Management; Trey and Juliette Jarrard, and Renewvia Energy Corporation; and Jim Meyer, chairman, and all members of the Buildings & Grounds Committee.

The Sustainability Advisory and Outreach Board, 2015–16
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“In the end, we will only conserve what we love. We will only love what we understand. We will only understand what we are taught.”

—Baba Dioum, Senegalese conservationist