



## Think Globally Act Locally

### *Youth Initiative*

The Fayette Academy Ecology Club is a close knit group of high school students who recognize the environmental challenge the world is facing. In a society where the environment is often forgotten, we strive to educate our families, school, and community about what it means to be an environmental steward. **NATURE is everywhere!** It is all around us. During the last two years we designed apps, established a new recycling program, challenged our School Board to save trees, participated in seven community festivals, and provided over 1800 venison meals for local families in need. We declared 2015 the **Year of the Garden**, celebrating the 10th anniversary of our outdoor classroom while raising funds for much needed renovations. To this day, we continue to maintain our 59 bat habitats, reducing pesticide run off in water sheds due to increased bat populations. While channeling our innovative and artistic minds, members created educational displays and children's books! The club also established a school wide collection of tens of thousands of recycled bottle caps for our green mural. Furthermore, recycling collection increased by 10% to 1.8 tons with our purchase of 75 larger recycling bins. We have presented our programs at state conferences and were highlighted in the March issue of Tennessee Wildlife Conservation magazine. We use creative, fun, hands-on activities to promote energy and environmental education at school and local festivals. Reaching our goals has taught us many valuable leadership and team-building skills along the way. Our monthly team building activities that celebrate our successes are just down right fun.

When our group sets goals, we start off with an environmental retreat that brings forty-two multitalented teens together. Participating in the low COPE course used by the military, we establish goals and objectives, form committees, and develop leadership skills all the while bonding in an encouraging environment.

Not only have we received numerous state and national recognitions for our efforts, but we are also proud to say that one of our sponsors, Ms. Donna Burrus, was named the 2015 Tennessee Wildlife Federation Educator of the Year. Ms. Burrus had a state proclamation read on the floor of the Tennessee House of Representatives recognizing her accomplishments in the BAT STEM Study! Our club is currently the Tennessee Department of Conservation's Senior School of the Year for our NEED Energy Conservation Project.

When we heard our school board had planned to cut down all of the trees in front of the school, including the living fossil Ginko Tree, we went into action. The club discussed it and drafted a letter requesting the board to reconsider because of our appreciation for the green space. To our surprise, the board visited one of our meetings and thanked us for expressing our concerns. A board member showed us the revised engineering plans that changed the angles of the parking spaces providing extra parking and saving our trees! We were recognized for caring about our

“We love to work as citizen scientists conducting our bat STEM study that has increased bat populations and educated our community.”

*Melissa Rinks, President*



campus enough to reach out and make a difference. One of our mottos is, “We don’t want to protect the environment. We want to create a world where the environment does not need protecting.”

### **Environmental Need and Impact**

Our club has reached thousands through our community outreach campaign, including the establishment of our own website. We have a committee responsible for social media updates on Twitter and Facebook, helping us to put articles in the local newspaper and on the school website so that we can reach even more!

**Vision:** To live in a world where all members of society are environmental stewards.

**Mission:** To promote environmental sustainability in a fun, hands-on, creative way in our home, school, and community while learning the skills to be a valuable, effective leader and team member.

### **This year’s goals are:**

**Goal 1:** Continue to build our team through monthly team building activities, weekly meetings, setting annual goals and attending an annual retreat.

**Goal 2:** Reach 1,000 community members, teaching energy and environmental literacy.

**Goal 3:** Increase our school’s recycling by 5%.

**Goal 4:** Educate our students, school, and faculty about the environment and energy conservation— promoting environmental stewardship.

**Goal 5:** To raise \$5,000 for garden renovation and repair, we declared 2015-2016 the “Year of the Garden” in honor of the 10th anniversary of the student created learning environment.

## **Mary Margaret's Garden**

Our school's garden provides a safe place for wildlife and is certified by the National Wildlife Federation. It is the recipient of the National Gardening Association's Youth Garden Award. Given that, it also provides a place for students to grow fruits and vegetables while conducting STEM plant studies. The club members take time out of their schedule to take care of Mary Margaret's Garden.

## **Completion of Goals**

Ten years ago, our community did not have any recycling programs. Considering that, the Ecology Club decided to make a change by establishing our own recycling program. As of today, our program has flourished not only at our school, but at four other locations around our community. We have an annual activity that helps us fund our projects by taking the class who raises the most money through our green fundraiser to an all-expense paid trip to the Memphis Zoo. This year, we mentored two pre-school classes for the entire school year. We want to develop relationships with these young ones, and we believe that by spending a day at the zoo is a great start. We raised enough money this year to support the Zoo's new Hippo Camp, completing the Zoo's Master Plan. Being responsible for these little ones for the entire day was not a normal duty for a lot of high schoolers, but we all felt accomplishment at the end of this project.

## **Community Involvement**

With the creation of Mary Margaret's Garden, we reached out in our local community to the Farm Bureau Women's Club, University of Tennessee Extension Office, and received the Regional Soil Conservation District Office Community Development Grant. With this help, we have received numerous grants from the Tennessee Environmental Education Association and other state agencies. The local master gardeners and others have volunteered in the garden to help with maintenance. This year, we received a generous donation from Bark's Heirloom Seed company, providing one hundred seed packs. The local Fayette County Art and Garden Club also donated a Japanese cherry tree, while a local manufacturer donated the telescopic bat house poles for the maternity habitats. This same company put our club logo on the sides of their thirty foot recycling trailers that are carried to local fairs and festivals. Moreover, we received decorations and support by meeting with county school boards and city and county mayors. We are also excited to report that the city and county government buildings and some local businesses are participating in the LED lighting upgrade which will significantly improve our community's biological footprint. After years of presentations and programs, we are also proud to report that all government agencies, including the public school system, are currently receiving LED lighting upgrade proposals, ensuring energy efficiency solutions and massive electrical consumption reductions. We are proud of these community members for making this positive environmental change.

Without the constant support of our community, this club would not be as productive as it is. We are so thankful for all that they do for us. This past October we opened up the garden to the whole community for a harvest festival celebration. We conducted games, arts and crafts, a scarecrow competition and the members even bought snacks such as hot dogs and chili. It was a grand celebration held in our outdoor classroom that recognized our agricultural heritage.

## **Soundness of Approach**

We try to channel our inner innovative spirit through diverse collaboration. We conducted a campus energy audit, leading to the school's LED energy evaluation program which will reduce our school's energy consumption by 70%. Six years ago, we started the energy upgrade journey by monitoring energy consumption. Because of this, our board is ready to involve us in a 56 acres campus upgrade. The Tennessee Department of Economic and Community Development provided us with a grant to fund the University of Memphis electrical engineer that verified results. If we had not educated ourselves about lumens, footcandles, kilowatts, energy loans, etc., we would not have been in a place to insure our campus was receiving the best opportunity to make meaningful LED upgrades. We also recommended the inclusion of motion sensors in classrooms, hallways, and bathrooms along with programmable thermostats, allowing for different temperature setting for the weekends. This LED and thermostat upgrade will reduce our campus's energy consumption by 70%! We are excited to be able to generate new graphs of our six years of energy use on this campus and to compare the new data of energy consumption. We know these scatterplots graphs will indicate a dramatic reduction of energy consumption provided by these new technologies. Our data from last year's energy consumption predicts an energy savings of at least \$100,000 a year. This savings will allow our school to pay for all of the new equipment with these savings and even have over ten thousand extra dollars for other expenses.

The bat STEM project started after we heard about a mysterious illness, white nose syndrome. We studied the maps and identified how quickly it was spreading south. We knew our community was a rural agricultural one and wondered what effect bats could have on farmers' pesticide use. When we learned of the enormous impact just a few bats had on insect populations we decided to take a proactive approach before it hit Tennessee. We were very concerned about the millions of bats that were dying of starvation in the Northeast, so we decided to build and install 50+ bat maternity houses. This program continues to be monitored today.

# **PEER REVIEW**

## **1. What have I learned while being in Ecology Club?**

"While I have been a member, the Ecology Club has shown me the importance of environmental sustainability all the while coping with communication, leadership, and social skills. These skills have not only benefited me through the friendships within the club, but also with my outlook at everyday experiences. I no longer look at my surroundings with disregard, but instead I focus on the beauty God has bestowed upon us and how better I can contribute—even if it is a friendly hello." - Melissa Rinks (President)

## **2. What do you feel like some of the main goals of the Fayette Academy Ecology Club are?**

"Education - we want the younger children to understand that they have the power to make change if they don't like something. We did a school-wide and community environmental audit and we built off of what they already knew. It is very nice to know that our environmental outreach is helping educate the people of Tennessee because when we met with Senators Corker and Alexander's staff; they identified this lack of environmental knowledge as a state-wide challenge. "  
- Katie Crenshaw (Garden Director)

## **3. Do you feel like you are making a difference, no matter how small, in the community as a part of the Ecology Club? If so, what kind of differences are you making?**

“Yes. We reach out to our community in many different ways and teach everyone how to care for the only planet we have.” - Caleb Weatherly (Vice President)

**4. Do you feel like you will benefit from the Ecology Club later in life?**

“I think as soon as you join Ecology Club you are already benefitting from it. You come in contact with so many people that have different interests, are different ages, and are in different grades.” - Meredith Dowdle (Treasurer)

**5. How do you feel the Ecology Club will affect your relationships in life?**

“I think it will benefit me in being a leader and how I do and think in other aspects of my life. “  
- Emily Waldon (Dedicated Member)

**6. What have you learned about yourself as a part of the Ecology Club?**

“Every year the Ecology Club gains a different number of new and old faces with helping hands, therefore, participating with different numbers each year has exposed my sense of confidence in smaller groups than in large groups. Speaking in front of a larger group of people usually intimidates me, however, this year I have found a sense of confidence supported by the smiling faces each Tuesday.”  
- Melissa Rinks (President)

**7. Do you think ecology club will continue to prosper once you leave?**

“I feel that the next group of leaders have a lot to learn for the club to continue to be as productive as it is now, but I think with a little hard work on their part they can learn how to run the club efficiently and inspire the leaders of tomorrow. “ -Katie Crenshaw (Garden Director)