Marshfield High School Youth Garden Grant Proposal:

Requesting Funds from the Whole Kids Foundation Garden Grant Program

Anna Proctor | Eng379 | Fall 2019

Marshfield High School
167 Forest Street
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December 13, 2019

Whole Kids Foundation
Garden Grant Program
550 Bowie Street
Austin, TX, 78703

Dear Nona Evans,

I am writing on behalf of Marshfield High School, a public school located in eastern Massachusetts, to request the Garden Grant in the amount of $2,000. The money from this grant would go towards the creation of an afterschool youth garden.

The purpose of this garden is to increase student interest and engagement in environmental studies. MHS is located in a seaside community that has been hit with increasingly dangerous storms due to climate change. Large winter storms are occurring more frequently and consistently cause large flooding. Essentially, Marshfield has become a community where the effects of climate change can be seen first-hand. However, across much of America, climate change has become a political debate rather than a scientific one. As a result, children and teenagers are not being educated about this issue, even though it is a problem created by humans that must be fixed by humans.

MHS wishes to find more ways to educate its students about environmental issues. The school already has both Environmental Science classes and a club known as the Green Team. However, only a small group of students participate in these classes because they are not part of the required curriculum. A youth garden would increase the visibility of these programs and offer a unique and fun way to engage students with environmental studies.

Gardening reminds us that we are a part of the natural world. It also teaches people about how the environment works and forces them to consider how climate change is affecting our everyday lives. We hope that you see the educational benefits a youth garden could have for Marshfield High School and we thank you for consideration.

Sincerely,
Anna Proctor

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1 STATEMENT OF THE PROBLEM

1.1 ENVIRONMENTAL ISSUES IN EASTERN MASSACHUSETTS

It is undeniable that climate change is one of the biggest issues facing the world today. Despite constant debate amongst politicians, the scientists researching the issue are certain that global temperatures are increasing, and it is causing rising sea-levels, extreme weather, and much more. According to NASA's climate change website, "Multiple studies published in peer-reviewed scientific journals show that 97 percent or more of actively publishing climate scientists agree: Climate-warming trends over the past century are extremely likely due to human activities" (*NASA*). Not only is there consensus amongst climate experts, but the effects of global warming can be seen in our everyday lives, especially in coastal communities. These areas are being hit by bigger and bigger storms at an alarming rate. The Mass Audubon reports,

> "Driven mostly by rising sea levels, the frequency of coastal 100-year floods (a severe flood with a 1% likelihood of occurring in a given year) is expected to increase greatly throughout the coming century. By mid- to late-century, floods of this severity could plausibly occur almost once per year, a change driven mostly by rising sea levels" ("Effects of Climate…").

Given enough time, towns like Marshfield, MA will be underwater.

Despite the overwhelming evidence that climate change is an issue today, most students are not being properly taught about climate change and the effects it can have on their lives. The subject is often overlooked in science curriculums and the information being taught can be too vague for students to fully understand the danger climate change poses to their futures. According to an article from NPR, "Roughly 3 in 4 [middle and high school science teachers] say they talk about global warming in class, though typically only for an hour or two" (Turner). The article goes on to say that many of the teachers are not well-equipped to teach students about the climate as their own educations did not cover it. Therefore, even when environmental science is taught, many students are getting the wrong information and it is not always the teachers' faults. Even teachers who try to talk about climate change are hindered by outdated textbooks.

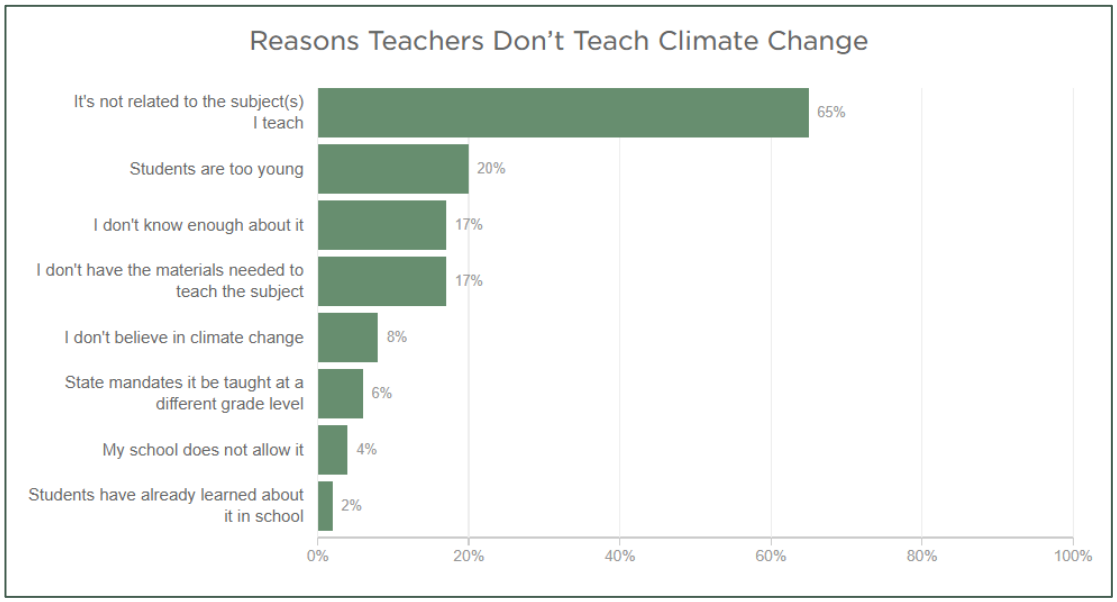

Figure 1: "Reasons Teachers Don't Teach Climate Change"

In towns like Marshfield, climate change is having real effects on students' lives. People's homes flood with increased frequency and dangerous storms put safety at risk. Although there are some initiatives at Marshfield High School to educate students about climate—they offer an Environmental Science elective and have a club known as the Green Team—they are not part of the core curriculum and do not reach a majority of the students. With a problem as universal and complex as climate change, more needs to be done to educate students about climate change and get them involved in programs that could make a difference.

1.2 Benefits of Youth Gardening

One way to get high school students more interested in environmental issues is to create a youth garden. As mentioned previously, there are a few environmental programs at MHS. However, these are electives and not a part of the common core meaning that a majority of students are not involved. A youth garden could work in conjunction with these programs to increase their visibility as well as offer a hands-on way to learn about the environment. After all, it makes sense that teaching teenagers to garden would increase their awareness of nature and the environment. In her book, *Growing a Life: Teen Gardeners Harvest Food, Health, and Joy*, author Illène Pevec argues that "By providing food and planting trees to reduce global warming, they find hope for themselves and their communities through their own agency" (103).

Gardening also has long-lasting benefits on teenagers beyond the realm of education. Gardens can function as "sanctuaries, a place where they [students] experience peace and safety from the problems some of their communities hold outside the garden fence" (Pevec 103). In a safe, welcoming environment, students can build relationships, express creativity, and develop leadership skills. They can also learn to care deeply about the natural world, so that they are more motivated to help make changes and work towards a better future.

2 STATEMENT OF REQUEST

Marshfield High School is a public school in the state of Massachusetts and is therefore a nonprofit. According to the school's mission statement, "Marshfield High School provides a safe, healthy, and collaborative learning environment that fosters respect and responsibility, empowering all to achieve their maximum potential" (*Marshfield High School*). Their core values are as follows:

- Respect oneself and others
- Hold and reach high standards
- Promote collaboration in the school community
- Employ a comprehensive approach to continuous learning
- Embrace innovative practices
- Demonstrate responsibility
- Ensure a safe and healthy environment (*Marshfield High School*).

As an extension of their existing environmental science classes and the aforementioned Green Team, they wish to start an after-school youth garden that would promote learning, environmental consciousness, and mental health.

The school is seeking funds from the Whole Kids Foundation through their Garden Grant Program. Marshfield High School believes that the foundation's mission

to “turn outdoor spaces into powerful hands-on learning gardens that connect kids with food, spark their curiosity and support classroom curriculum” (“Whole Kids Foundation…”) combines with the school’s desire to educate children in new and unique ways. At a school where hands-on learning has always been valued—as seen with their culinary, technical education, art, and music courses—creating a youth garden would be fully supported and would be able to thrive for years to come.

3 Description of Proposed Work

3.1 Objectives and goals

The Marshfield High School youth gardening program aims to:

- Create a sustainable garden that produces healthy, fresh foods.
- Promote both leadership and teamwork by involving students in hands-on work.
- Promote interest and participation in environmental studies.
- Encourage students to spend more time in and connect with nature.
- Teach students about science through practical, hands-on lesssons.
- Improve the school's surroundings/environment.

3.2 Methods and practices

The Marshfield High School youth garden aims to create a fully sustainable, student-run garden. The program will run alongside the school's environmental science classes and will be considered a part of the existing Marshfield High School Green Team. As a result, work on or in the garden will be part of an afterschool program and will require a group of volunteers and school employees to work together and oversee its creation and use.

We will create a Garden Committee starting with the existing members of the Green Team. The purpose of this committee will be to supervise and promote successful

completion of the garden. The creation of a Garden Committee is suggested by the Kids Gardening organization. As per their recommendation, it will include at least an administrator, a teacher, a support staff member, a parent, a student, and a community volunteer (Kids Gardening). One member of this group will be appointed as the committee chair and will be responsible for delegating tasks and organizing regular meetings. This committee chair will likely be the faculty advisor for the Green Team, science teacher Jim Merrit.

An important aspect of this committee will be student involvement. Students will be encouraged to join so that they can be active members of the garden even before any planting is possible. This way they will feel a sense of ownership over the garden space that will keep them involved:

> "If the students are not involved until planting day, they miss out on a very important part of the gardening program. True feelings of ownership in the garden will create a strong sense of responsibility and will result in students that respect the garden space and are eager to learn" (Kids Gardening).

Rather than trying to create the garden before opening the program to students, planning and building the garden will be part of the program. Luckily, there is already a small group of students who are part of the Green Team, although the garden will be promoted throughout the school to encourage more students to join.

The official planting day for the garden will occur in April. Therefore, the garden committee will begin meeting in January so that they will have time to plan the garden as well as recruit more students to join before planting begins. After doing some recruiting, the next step will be to gather any necessary equipment and materials. This will include everything from fencing and fertilizer for building the garden to spades and gloves for actual planting.

The garden committee will also need to determine exactly where the garden will be on the MHS property and how it will be constructed. Luckily, there is plenty of space so the garden will be planted directly in the ground rather than requiring an raised beds. The considerations to take into account when choosing a garden site is its exposure to sunlight as a spot that receives 6 hours and direct light is preferable. There will also need to be drainage, a spot to store tools, and no herbicides. There is a space on the MHS campus that would fit these requirements which is described in the "Description of Available Facilities" section of this proposal. For storing tools and supplies, the committee will need to acquire a small shed. Further preparation like tilling the soil and spreading out mulch and compost will take place either in March or directly before planting.

Another task that will be completed before actual planting is choosing which plants to grow and how the garden will be organized. Choosing plants will be based upon three basic factors: what plants grow well in Massachusetts, how much space is

needed to grow these plants, and what plants the students themselves are interested in growing. It is important to involve students in choosing the plants so that they feel fully involved in the garden. It is also a useful for teaching the students which plants are possible to grow in different climates. The only criteria for the plants will be that they are all edible.

When the garden has been constructed and planting begins, its operations will be overseen by the advisors of the Green Team—Jim Merritt and Debbie Sullivan—and work such as planting and garden maintenance will preferably be done by students. This day to day maintenance will be the primary activity during club meetings. The advisors will delegate specific jobs to different groups of students within the club. These tasks will not be the same at every meeting but will rotate so that every student has a chance to try something new and learning as much as possible. One of the goals for this work is that students will progressively need less supervision and will be able to maintain that garden mostly on their own. If students are able to complete general garden maintenance without the help of supervisors by the end of the semester, it will be a marker of the project's success.

Club meetings will also contain lessons on the biology of plants and their connections to environmental science. Essentially, each meeting will have a guiding topic to educate students about both the science behind gardening, as well as its benefits. These topics may include pollination, composting, photosynthesis,

categorizing plants, and much more. Hopefully, the garden will also become a space that other teachers can take their students to for labs or more hands-on learning opportunities. Biology and chemistry classes may be obvious examples of who can use the garden in their curriculum, but it may also be an opportunity for other subjects. The culinary classes at MHS could come out to talk about what types of food are being grown (and potentially harvest some for their dishes). The increased visibility for environmental studies that the garden will provide could even encourage English teachers to educate their students about the environmental humanities. It is the hope of those in charge of this project that the youth garden will promote interdisciplinary interest in environmental studies.

If the program receives enough traction, then it can continue over the summer. Students will be welcome to visit the garden and continue growing and harvesting produce as long as the advisors or other volunteers are able to be there to help them.

3.3 SCHEDULE

Month	Tasks
January	Form the Garden Committee, hosted by the Green Team; gather tools/materials; promote club
February	Plan garden construction
March	Construct garden (till soil, build fences, set up the shed, etc.); choose which plants to grow
April	Acquire seeds and starters; plan how the garden will be organized; begin planting

4 Description of Available Facilities

Figure 2: Marshfield High School

The garden will be located directly on the site of Marshfield High School which holds over 1,300 students. The grounds that the high school is on also contains the town's middle school and one of its elementary schools. As can be seen in Figure 2 which depicts the MHS campus, there is a large empty space of grass directly behind the school. This space would be ideal for the creating and maintaining the garden. It has space both for the garden itself as well as for a shed where gardening supplies would be stored. There would also be full access to the school's facilities such as a water system.

The space is also ideal because it is on the site of the school and therefore easy for students to go to after school. The garden will be an extension of the Green Team,

which is an afterschool program, so it makes sense for students to not have to leave the MHS campus to get there. It also creates an opportunity for the garden to be used during the school day. Various classes, such as the environmental science and biology classes, could go out to the garden to use it as an educational resource. Finally, it could become a public space for students and other residents to enjoy because it is in a central location for the town.

5 QUALIFICATIONS OF PERSONNEL

Marshfield High School is a public secondary school that is part of the Marshfield Public School District. The people who will be overseeing the creation of the youth garden are both the school's administrators and those in charge of the Green Team. The most important people in this project will be the Green Team's advisors: Jim Merritt and Debbie Sullivan.

5.1 ADMINISTRATION

- Jeffrey W. Granatino, Superintendent of Marshfield Public School District
- Robert Keuther, Principal
- Kristin Brandt, Assistant Principle
- Dominic Centorino, Assistant Principle

5.2 GREEN TEAM ADVISORS

Jim Merritt and Debbie Sullivan are the advisors for the Marshfield High School Green Team, as mentioned above. They are both well qualified to lead the club and to lead the creation of a youth garden due to their careers and interest in environmental issues. Merritt is one of MHS's science teachers and is certified to teach Advanced Placement Environmental Science. He also teaches other science classes like biology. Sullivan is not a teacher but instead works as a solid waste and recycling enforcement officer. Along with their work experience, they have both been running the Green Team

for multiple years, assisting students with projects like improving how the school recycles and creating a ram sculpture out of used plastic to increase awareness of plastic waste in the community.

Figure 3: Marshfield High School Green Team

6 BUDGET

Marshfield High School is requesting the Whole Kids Foundation Garden Grant which amounts to $2,000.

The creation of a youth garden requires a large amount of equipment. This includes a variety of gardening tools such as stakes, wheelbarrows, hoses, shovels, etc. The project would also require larger materials like fencing for the construction of the garden and a shed to hold the tools. The advisors for the Green Team are already compensated by the school for advising an afterschool program, so they will not be considered in this budget. I have gathered my cost estimates from the Vermont Community Garden Network. I followed their start-up estimates and omitted any costs that are not necessary—like a watering system—due to the existing resources at MHS.

Tools/Materials	$800
Compost	$450
Mulch	$200
Shed	$400
Seeds/starters	$200
Total	**$2,050**

("Sample Garden Start-Up Cost Estimate")

7 SUMMARY

Climate change is no longer a problem that can be ignored. Temperatures *are* rising, entire species *are* going extinct, and 100-year floods are happening *more and more frequently*. The only way to prevent the problem from growing worse is for human beings to make changes to how they live on global scale. The first step to these changes is education. Despite the urgency felt by climate scientists and activists, most American schools are not adequately teaching teenagers about this cause.

If we are going to prepare future generations for a rapidly changing world that they will soon inherit, we need to educate them sooner rather than later. Creating unique and visible educational resources like a youth garden can help. It will remind students that nature is not what happens outside of the school building or their houses but is a part of us. If students are given the opportunity and space to interact with their environments, they will learn to care for them and will be motivated to make a difference. Not only will they learn about the climate, but they will grow into informed adults.

Although a single garden may appear small, it is the hope of Marshfield High School that its creation will have significant educational benefits. If there are even a few more students who are properly educated about climate change than there were before, great things could happen. That is why we are respectfully urging action on the part of

the Whole Kids Foundation. With your help, we could begin creating a more environmentally conscious future.

8 APPENDIX

8.1 FIGURES AND TABLES

8.2 BIBLIOGRAPHY

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