Science & Environmental Grants 2022-2023 PROGRAM DEADLINE : March 01 2023 at 05:00 PM EST CLOSED			
Applicant Information			
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# **Applicant Information**

# Applicant

First Name	
Last Name	
Email	
MCCSC school or building where you work.	Arlington Heights
Your position / title within MCCSC	Classroom teacher
Grade level you teach or support?	4/5
Phone number or extension	
Project Partners/Other Persons Involved in Program	

# **Program/Project Information**

### **Proposal Content**

**Title of Project** 

Garden Renewal and Composting

Provide a 3-6 sentence summary to communicate the substance of your proposal to reviewer, media, and use in FMCCS print materials.

For a number of years the raised bed garden at Arlington has fallen into disrepair and disuse. This project aims to help 4th and 5th grade students revitalize the garden, while integrating concepts such as composting, environmental impact of human systems, and renewable resources. Students will work together to plan the project, prepare beds for planting, plant and maintain the beds, and in the end, enjoy the fruits of their labors. Students will create a sustainable and impactful composting system. At each step of the project, students will make connections to the core ideas and cross-cutting concepts we are discussing in the classroom.

# of Students Impacted annually/one time	28	
Who will your project serve? (target population)	4th and 5th graders in my class; potentially other two 4th/5th grade classrooms	
Amount of Funding Requested - Range \$100 to \$1,000	499.72	
Detail your project, need, and how funds will be used to impact science and/or environmental education. Include specifics such as school development plans and educational standards and/or research based information your project will help achieve.		

This project aims to help 4th and 5th grade students revitalize the school's raised bed garden, which has been dormant for a number of years. Students will integrate concepts such as composting, environmental impact of human systems, and renewable resources. The class will begin by discussing the impact long distance food transportation has on the environment. Students will study and analyze the environmental cost of such transportation, and using that information, formulate a compelling argument for our garden project. (4-ESS3-1: Earth and Human Activity)

Students will analyze the current state of the garden and create a plan of action. Students will need tools such as gloves, spades, buckets, soil, and composted manure to prepare beds for planting. We will plant seeds and seedlings in the spring, connecting our actions to life science standards (4-LS1-1: From Molecules to Organisms). Students will maintain the beds, and in the end, enjoy the fruits of their labors. At each step of the project, students will make connections to the core ideas and cross-cutting concepts we are discussing in the classroom.

In previous years, my classes have been highly motivated to reduce school food waste by composting. My class has engaged in vermicomposting, connecting this to core concepts of plant and animal life cycles and the role of decomposers. My students were so disheartened to realize that at the most, they could only compost several handfuls of leftover lunch food each week using our classroom worm composting bin. This project will allow students to have a much greater impact, using an outdoor tumbler-style composting system. Students will need to work together to strategize the most efficient ways to communicate the needs and requirements for the composting system (e.g. How will we collect lunch scraps? Who will collect them? What will we use to collect them? How will we communicate important information? etc.). All of this will support students in creating a more sustainable and impactful composting project.

This kind of project-based learning has significant positive effects on students' understanding of core ideas as well as cross-cutting concepts such as cause and effect. Hands-on, outdoor learning has also been shown to have great benefits for students' academic success as well as their social-emotional growth and wellbeing. I strongly believe that every student needs and deserves outdoor education--every child deserves to get their hands dirty digging in a garden bed.

What are your expected goals and outcomes of the project and for students?

My expected goals for the project and for the students is for students to gain a deep understanding of the human impact on our environment as well as greater knowledge and understanding of plant life cycles, structures and functions, and the interconnectedness of natural resources, plants, decomposers, and human beings. I expect students to be able to explain and model the ways in which these concepts are at work in our project. I also aim to help students learn to analyze problems, develop solutions, enact their plans cooperatively, analyze the outcome of their project, and share their experience with peers and families. Students will document their project along the way and determine the most effective way to share their knowledge with others.

In terms of tangible outcomes, I expect students to harvest their produce in the spring and eat it!

How will you measure your goals and success? Please use quantitative data and list measurement tools you will use to define student improvement, value and expected results. Example: 30 students will be engaged in our environment by observing wildlife in its natural habitat. They will learn the names of local birds and write about them in creative stories.

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One of the ways in which I will measure the efficacy of the project for student learning is with a short pre- and post-test. I expect that many of the concepts will be unfamiliar to most students. By the end of the project, I expect students to exhibit a thorough and deep understanding of the ideas connected to the project. As mentioned above, students will document the progress of their project. Their discussions, questions, predictions, observations, and analyses will be collected in portfolios, which I believe will be the most significant measure of student success.

Define the timeline for implementing accomplishing the stated outcomes. Include in your timeline if the project investment is sustainable and will be used for students beyond one year. This project will begin as soon as the approval process is complete, beginning most immediately with the pre-test. Classroom-related learning has already begun, is ongoing, and will continue throughout the school year. The initial student analysis, planning, and bed preparation will be accomplished by the end of the Fall semester, as will the set up of the composting system.

In the Spring, students will research which crops can be planted early, at what times, and the specific details of how they must be planted. Students will cooperatively plan their garden map. Students can begin sowing certain crops as early as February, and into March and April. Some crops (e.g. snap peas, radishes, and lettuce) can be harvested by April, possibly even March. By the end of Spring semester, students will have documented every step of the process, taken the post-test, demonstrated their growth and learning, and shared their experience with peers and families.

The project is absolutely sustainable and can be experienced by students for many years to come. Almost every aspect of the project can be used repeatedly. The only exception are the seeds, which are the least costly part of the project, easily funded by me privately or from other funding sources such as our PTO. I see this as an investment in our students both today and the future.

Please upload any attachment that may help define your project, specific goals, or objectives.				
Grant Budget				
Upload budget file.	Grant Budget	2022.xlsx		
If your budget is different from amount requested please explain.				
n/a Have other funding options been				
explored?	No			
List any other sources of funding for this project. Indicate if sources are secure or potential.	I have not yet made any related requests, but I know that our PTO can provide small amounts for related unanticipated small requests			
To what extent is the project achievable if you were to receive less than the full amount requested?				

If we were to receive less than the full amount, parts of the project could still proceed, but the interconnectedness between sustainability of composting and production of food would be lost. We could proceed with just the garden beds and planting, with the related learning, discussions, and activities.

I would like to apply for option to renew funding of this grant for the following school year. I agree to submit an impact report at the conclusion of this school year and additional information if needed.

No I do not wish to apply for the renewable option.

#### **Grant Approvals**

#### **Building Representative Approval**

Building Representative's First Name First Name	Amanda
Building Representative's Last Name Last Name	Memering
Building Representative Email Address	amemerin@mccsc.edu
Building Representative Phone Number	812-330-7747

#### **Principal Approval**

Principal's First Name First Name	Micah
Principal's Last Name Last Name	Heath
Principal's Email Address Email Address	mheath@mccsc.edu
Principal's Phone Number	812-330-7747

### Submission

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# **Electronic Signature / Approval**

By typing my name, I confirm that I have written this grant and if funded agree to implement in my school or classroom during this school year.