



District: *Potter's House School*

Building: *Potters House School*

Teacher(s): *Nathan Colley*

Main Contact: *Nathan Colley*

Email: *giftfromthefather@gmail.com*

Grade Level: *6th and 7th*

Subject(s): *Science*

First Trimester:

Second Trimester:

Third Trimester:

First Semester:

Second Semester:

All Year: *x*

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**Name of Project:** *This Land is Our Land*

### **Project Overview**

*Give a brief overview of the project you are planning.*

*We will be investigating the degree of pollution and flooding in Plaster Creek while looking for appropriate and beneficial local responses that we could have on it. Our intended goal is to make small steps towards the advanced health of Plaster Creek.*

*The Potter's House Middle School sits very closely in proximity to Plaster Creek. We would like to begin focusing our attention to this 'in need' watershed by not only providing helpful data, but also addressing the concerns of the river by making necessary changes to our topography.*

*In this first run, our goal will be to assess the highs and lows of water volume flowing through the creek in our neighborhood. This information is relative to the concern about the flash flooding that occurs in the creek due to storm water. The flooding causes erosion and leads to sediment pollution.*

*While increasing student connection with the creek, we will be assessing the size of the problem and hopefully providing accurate data to watershed plan managers in the process. Our hope would be to see the volume become more stabilized through additional efforts in the upcoming years.*

*Our school sits right on Plaster Creek. This creek happens to be one of the most polluted creeks in Michigan. Through discussions with community partners it seems that storm water flooding is one of the biggest concerns as it increases the amount of erosion and turbidity. We would like to discover what we can do where we are as we begin collecting data.*

### **Effective Practice: MEANINGFUL SERVICE**

*Service learning actively engages participants in meaningful and personally relevant service activities.*

**What community need will you address and how did you determine the need?**

*Our school sits right on Plaster Creek. This creek happens to be one of the most polluted creeks in Michigan. Through discussions with community partners it seems that storm water flooding is one of the biggest*

concerns as it increases the amount of erosion and turbidity. We would like to discover what we can do where we are as we begin collecting data.

The need was brought to us by the community. Roosevelt Park CRC originally invited us to partner with them regarding our area. They have been connected with Calvin College regarding the creek as part of an initiative to improve the water quality of Plaster Creek. Dave Warners at Calvin College has been a further resource regarding the issues of sedimentation and storm water pollution.

### **What service will you provide to address the need?**

*Of interest in this first run, would be to map out our grounds, track water flow, and decide on locations for future sites of rain gardens and re-vegetation.*

*The intention is to begin collecting data as soon as we are able weather wise and have some initial training. As we collect data we will also be learning about what that data may be telling us and ways to respond to such information. For example, if the stream volume is fluctuating at an unhealthy level, which it will, why is it happening and what are some possible responses to bring it back to health? Through this input and the mapping of our grounds, the students will decide on appropriate action and where that action should be conducted.*

### **Effective Practice: LINK TO CURRICULUM**

*Service learning is intentionally used as an instructional strategy to meet learning goals and/or content standards.*

### **How is this project related to your curriculum?**

*It relates to our study of ecosystems, water cycles, watersheds, and scientific inquiry.*

### **What are the educational goals?**

*For students to understand and implement the process of scientific inquiry and reasoning through observation, questioning, recording, communicating, and developing solutions to problems.*

### **Curriculum Crafter Connections** [www.curriculumcrafter.com](http://www.curriculumcrafter.com)

**Strand:** 06SCI: (Earth Science)

**TLW:** Identify the interactions and interdependence of populations, communities, and ecosystems and explain the factors that affect ecosystems. (Gist: Environmental Impact of Organisms)

### **Additional State Standards and Benchmarks**

List standards and benchmarks met by this project.

**Strand:** 07SCI: (Earth Science)

**TLW:** Explain how human activities have consequences on the environment. (Gist: Human Impact on the environment.)

**Strand:** 07SCI: (Earth Science)

**TLW:** Explain the water cycle and analyze the flow of water in the environment. (Gist: Water Cycle)

### **Effective Practice: REFLECTION**

*Service learning incorporates multiple challenging reflection activities that are ongoing and that prompt deep thinking and analysis about oneself and one's relationship to society.*

## What form(s) of reflection will you use with the students to help them identify what they have learned and accomplished?

Progress will be monitored by frequent reflection opportunities such as discussions with students, conversations with partners, and video taken and reviewed throughout the process.

### Effective Practice: DIVERSITY

*Service learning promotes understanding of diversity and mutual respect among all participants.*

## What types of diverse perspectives and experiences will be explored as part of your project? (i.e.: cultural, generational, abilities/disabilities, learning styles, etc)

*I intend to bring in community partners to deepen their understanding of the world around them and get a bigger sense for the impact they could have.*

### Effective Practice: YOUTH VOICE

*Service learning provides youth with a strong voice in planning, implementing, and evaluating service learning experiences with guidance from adults.*

## How will students gain ownership of the project?

*Students have already begun making observations on our area. My hope is to place students in contact with the grounds much more by beginning data collection. In the classroom we will discuss the meaning of our data and how it shows Plaster Creek as being unhealthy. Students will research as well as hear from speakers regarding what some possible solutions are. Students will submit proposals and vote on appropriate response.*

### Effective Practice: RECIPROCAL PARTNERSHIPS

*Service learning partnerships are collaborative, mutually beneficial, and address community needs.*

## Who will you partner with for this project?

- *Ranger Steve Mueller*
- *Mary Jane Robinson, City of Wyoming*
- *Andrea Lubbers, Roosevelt Park CRC*
- *Dave Warners, Calvin College*

## How will students benefit from this partnership?

*Students will learn from the experts:*

- *Testing training in a safe environment*
- *How to become the “eyes for the city”*
- *Plaster Creek Watershed research*

## How will the partner benefit from this collaboration?

*The information gathered will be shared with those that have partnered with us. We would like to present the findings in some form to the church when we are done and also as we have opportunities for partnering.*

### Effective Practice: PROGRESS MONITORING

*Service learning engages participants in an ongoing process to assess the quality of implementation and progress toward meeting specified goals, and uses results for improvement and sustainability.*

## How will you assess the student learning goals?

- *Pre and post questionnaires of student learning, interest and impact*
- *Quizzes and tests of content material*
- *Sampled content from created portfolios*

## How will you assess your service goals?

*Continued measuring of above mentioned aspects will provide long term insight into the creeks progress*

## **Effective Practice: DURATION AND INTENSITY**

*Service learning has sufficient duration and intensity to address community needs and meet specified outcomes.*

### **How will you prepare students for this experience?**

- *Study of the process of scientific inquiry*
- *Learn history of Plaster Creek and surrounding area*
- *Study watersheds and the water cycle in order to apply that knowledge to the Plaster Creek area*

### **What are some sample possible activities students might do as part of this project?**

- *Conduct water tests. Of particular interest will be stream volume, velocity, turbidity and bacteria counts.*
- *Research methods to reduce storm water flooding and erosion.*
- *Develop plans to reduce the amount of pollution in the creek*
- *Develop plans to minimize creek flooding*
- *Document entire process using video recordings*

For more information about Groundswell go to [www.groundswellmi.org](http://www.groundswellmi.org)

For more information about the Great Lakes Stewardship Initiative go to [www.glstewardship.org](http://www.glstewardship.org)