

# What's the buzz: Invertebrates of the Mill Creek Outdoor Classroom

Ms. Bentley's and Mrs. Sommer's 4<sup>th</sup> Grade Classes  
Mill Creek Elementary School

## Introduction

We are interested in learning about the invertebrates that live in the wetlands, forest and prairie ecosystem of the Mill Creek outdoor classroom. We are also interested in learning what different kinds of invertebrates come out in different seasons and why they come out that time of year. The wetland is a creek in the outdoor classroom, which only fills up with water when it rains. The forest ecosystem is a place with lots of plants and shade which gives home to many invertebrates. The prairie is a dry land with tall dry grass and has flowers like sunflowers.



Prairie

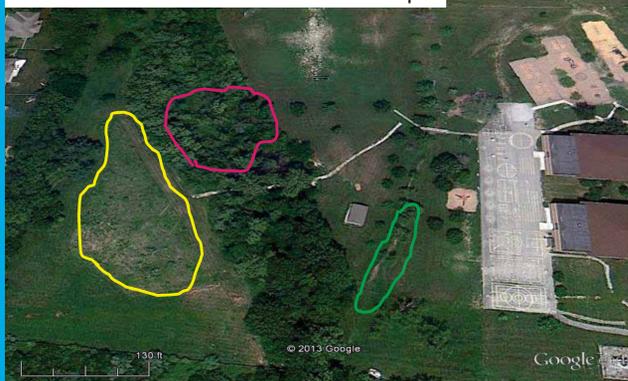


Forest



Wetland

Mill Creek Outdoor Classroom Map



= Prairie = Forest = Wetland

## Discussion

### What We Learned

- It's harder to find some animals in the winter than in the summer
- How to use the certain types of nets (aquatic net, butterfly net, and sweep nets), the Burlese funnel, and yellow sticky cards.
- It was hard to adjust the microscopes. We also learned that it was easy but took a lot of work to write in our science notebooks.
- The number for diversity of invertebrates and the number of invertebrates in all are not the same.

### Possible Errors

- Spending more time in one ecosystem than others.
- Scaring off invertebrates/vertebrates.
- Thinking you know what the invertebrate is when you don't and get it wrong.
- Not looking at the ecosystems in each season.
- Not being able to go out because of weather.

## Future Directions

- We are going to continue collecting invertebrates and use the same strategies to see if the population is still the same or if there are the same invertebrates or different invertebrates and how the invertebrates change during the year.
- We are going to use sticky cards and a minnow trap to collect more invertebrates
- We are going to see if the weather changes the invertebrates they see.

## Acknowledgements

➤ We would like to thank Tom Anderson, Lauren Diepenbrock, and Lizzie Wright for being our expert scientists. We would like to thank Betsy Blake from MDC for helping us learn about the prairie. We would like to thank our teachers, Ms. Bentley and Mrs. Sommer, and Ms. Tipton for helping us with our research. We would like to thank Dr. Galen and the GK-12 Show Me Nature for helping us get out supplies.



Lauren Diepenbrock



Tom Anderson



Lizzie Wright



Betsy Blake

## Research Questions

- What is the diversity of invertebrates in the prairie, wetland and forest?
- How many invertebrates are in each ecosystem?
- Do the number of invertebrates change in the outdoor classroom in spring and fall?

## Methods

- The tools we used in the pond ecosystem were aquatic nets.
- The tools we used in the prairie were sweep nets, pitfall traps and butterfly nets.
- The tools we used in the forest were pitfall traps, butterfly nets, and sticky cards.
- We did look under the microscope.
- Then we did also look through the guide to find out what invertebrates were.

### Tools



Sweep nets



Butterfly nets



Aquatic nets



Microscopes



Observations



Burlese Funnel

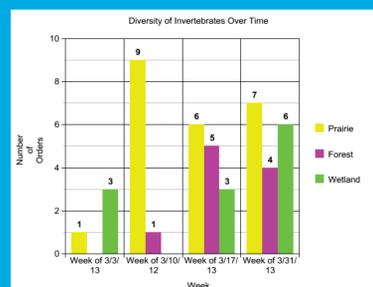
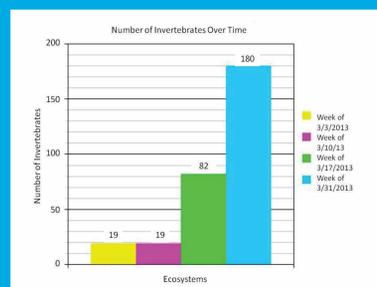
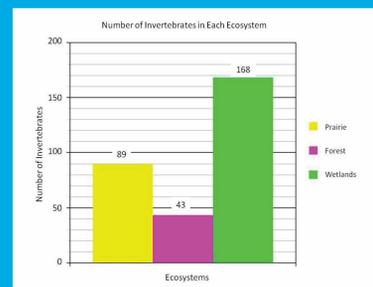
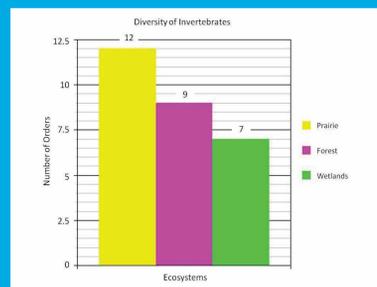


Pitfall Trap

### Dates We Sampled

3/6	3/7	3/13
3/14	3/20	3/21
4/2	4/3	4/4

## Results



## Most Common Invertebrates in Each Ecosystem

### Prairie



Grasshopper (Order Orthoptera)



Leafhopper (Order Hemiptera)

### Wetland



Crayfish (Order Decapoda) and Snail (Class Gastropoda)

### Forest



Spider (Order Araneae)



Springtail (Order Collembola)

