# How does the soil temperature compare between the school prairie and a backyard?

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# Map of our Research Locations


## Description of Locations:

A. Location 1 - Prairie

B. Location 2 - Backyard

# Our Team

**Photographer**

**Claire Schneider**

**Experimenters**

**Lillian Barkholz**

**Lexi Vondeylen**

**Data Recorder**

**Gracie Smith**

# Why are Native Prairies Important?

Native prairies are important because they can provide habitats, and food for animals. The prairie also provides good soil for the native plants to grow.

# Research Question & Hypothesis

**RQ: How does the soil temperature compare between the school prairie and the backyard?**

**Hypothesis:If we test the soil temperature in the prairie and backyard, the backyard will be hotter because the prairie has plants to provide shade, and the backyard has none.**

# Variables

- Dependent Variable
- Soil Temperature


- Independent Variable
- Backyard


## Constants:

Our constants are the two locations which are the backyard and the big prairie, the time of day, the same tools, and the steps we followed. Those are our constants.

# Materials

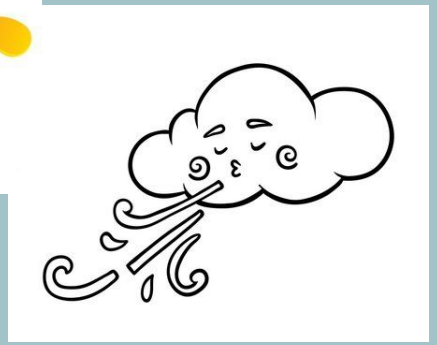
- We used A Digital Probe Thermometer.
- We also used a Soil Can.


# Step by Step Procedures:

1. Go to school prairie to take soil temperature measurements in the tall prairie grass using the Digital Probe Thermometer
2. Set the thermometer to degrees celsius (℃)
3. Take three ten centimeter measurements and 3 five centimeter measurements 1 foot apart.
4. Record your temperatures on your data sheet.
5. Repeat steps 1-4 for the backyard.

# Weather Conditions on the Day of Data Collection

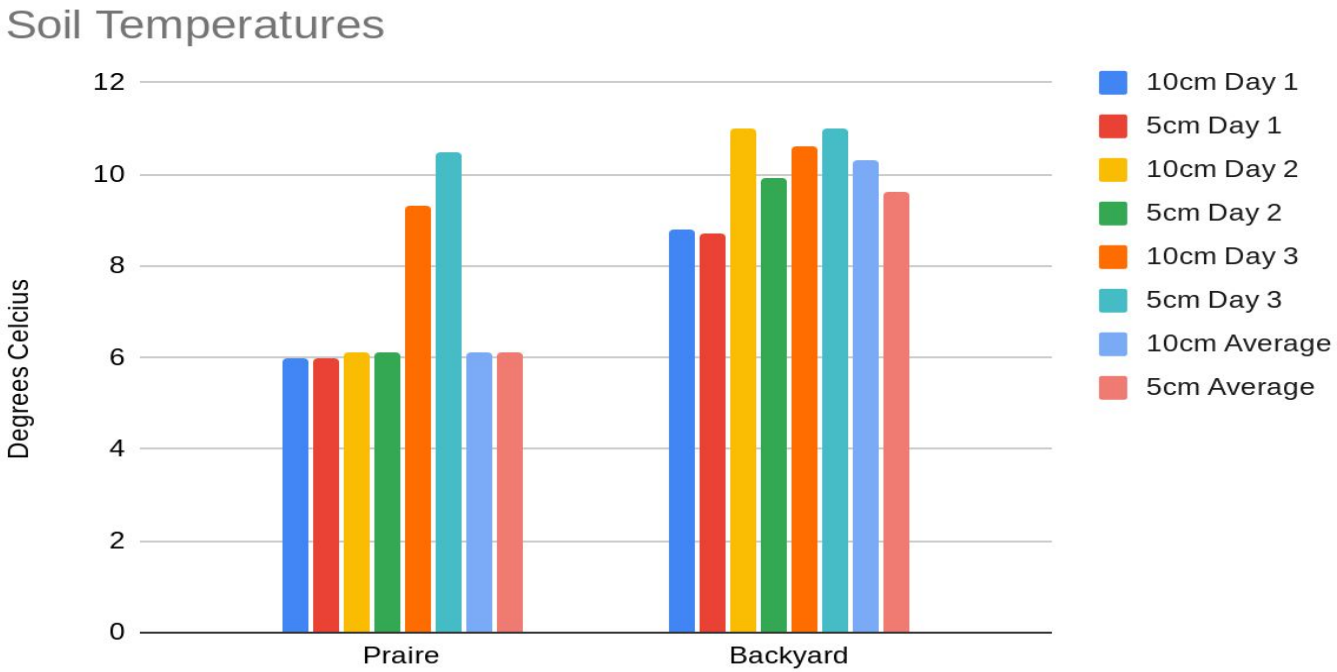
- Day one: Cold
- Day two: Cold, windy, and sunny
- Day three: Cold, sunny, cloudy, and windy

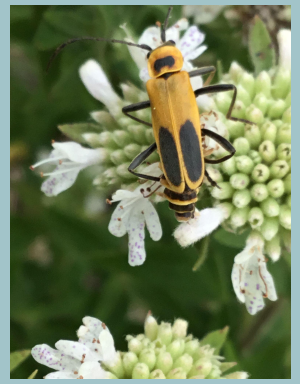
# Data - How does the soil temperature compare between the school prairie and a backyard?

| | Day 1 | | Day 2 | | Day 3 | | Averages | |
|---|---|---|---|---|---|---|---|---|
| | 10cm | 5cm | 10cm | 5cm | 10cm | 5cm | 10cm | 5cm |
| Prairie | 6 | 6 | 6.1 | 6.1 | 9.3 | 10.5 | 6.1 | 6.1 |
| Backyard | 8.8 | 8.7 | 11 | 9.9 | 10.6 | 11 | 10.3 | 9.6 |

# Results: How does the soil temperature compare between the school prairie and a backyard?



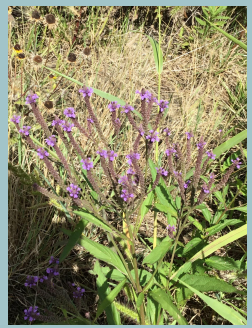
# Conclusions:



- Our results show that the backyard is hotter.
- Temperature in the prairie is cooler than the backyard
- Looking at the averages, for all three days in the prairie for 5cm and 10cm is 7.4 degrees℃ and 7.1 degrees℃. The averages for all three days in the backyard for 5cm and 10cm is 9.6 degrees℃ and 10.5 degrees℃.

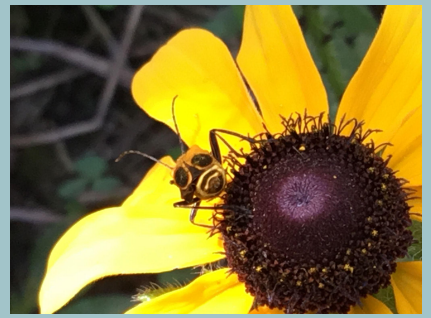
# Discussion: What does this mean?

This data is important because it shows that the backyard is hotter than the Prairie, just like our hypothesis said. The data finding are important because if they weren't there, then there would be no proof as to the fact that the school prairie is cooler than a backyard.



# Discussion: Possible solutions!

More people should install native prairies because they help the environment in many ways such as helping animals find habitats and food to help them survive. Native prairies also help the soil temperature go down which helps plants grow and seedlings stay alive. It's also helps with the vegetation which provides a lot for the environment.



# Questions? Collaboration? Thank You.

- The people who helped with this project is
- Claire Schneider, Lexi Von Deylen, Gracie Smith, and Lillian Barkholz
- We would also like to thanks Mrs. Boros for helping us with this project.
- Any questions?

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