# How does the soil moisture compare between the school prairie and the hill near the farmland?

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# Our Team

## Photographer

Nathan pfost

## Experimenter

Aiden Wilson

## Data Recorder

Brayden Bostater

## Consulter

Carter Weiss

# Why are Native Prairies Important?

Native prairies are important because they provide habitats for animals and plants. It also allows schools to interact and learn about prairie and all their cool features.

# Research Question & Hypothesis

RQ:How does the soil moisture compare between the school prairie and the hill near the farmland?

Hypothesis: If we test the soil moisture between the school prairie and the hill near the farmland, then the soil moisture of the hill will be wetter than the school prairie because it has more room to hold water.

# Variables

Independent variable:

Prairie vs Hill

Dependent Variable:

Soil moisture

# Materials

- Can
- Trowel
- Scale

# Step by Step Procedures:

1. Go to the hill next to the farmland.
2. Remove top layer grass with a trowel
3. Collect one half can of soil with a trowel

4 repeat steps 2 -3 in prairie

5. Compare results

# Data Table

| **Independent variables ----->** | **Tall Prairie Grass vs.** | **Hill next to farmland** |
|---|---|---|
| Spot 1 [Wet weight] | 105.00g | 123.00g |
| Check 1 | 95.70g | 111.00 |
| Check 2 [Dry weight] | 92.00g | 106.g |
| Soil Moisture Percent | **17.6%** | **18.5 %** |

We calculated the soil moisture by subtracting the wet weight by the dry weight. We then divided it by the wet weight minus the can weight. Finally, we times it by 100.

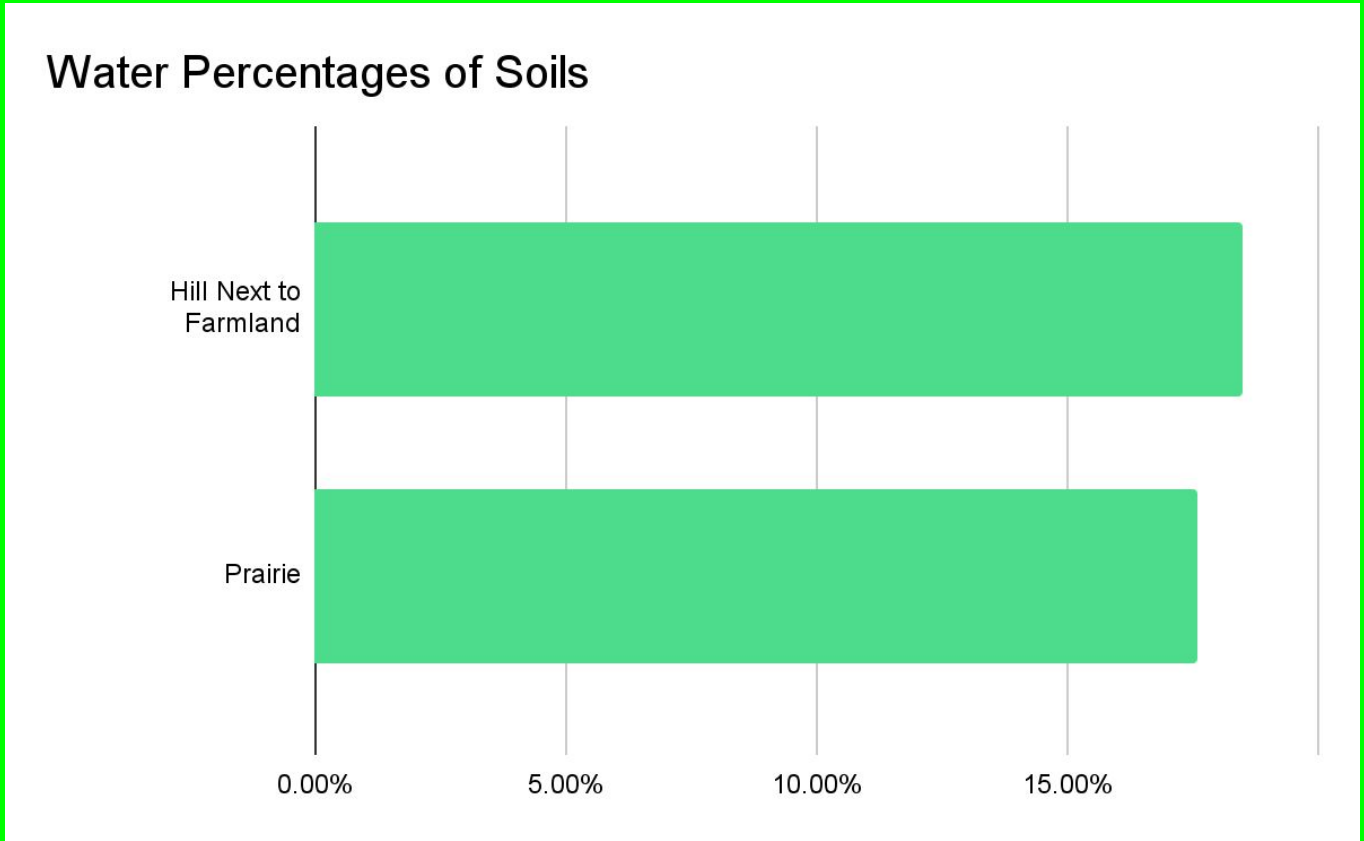
Prairie

Hill

# Weather Conditions on the Day of Data Collection

Weather: Windy, cloudy and cold (real picture of sky)

**Results**: How does the soil moisture compare between the school prairie.The hill near the farm is 18.5% water. The prairie is 17.6% water



# Conclusions:

- The soil moisture was greater in the hill than in the Prairie
- The hill and the prairie both had a soil moisture of close to 20% (20% is needed for good plant growth.)
- The prairie has more animals and plants than the hill. (found 4 worms in prairie while digging).

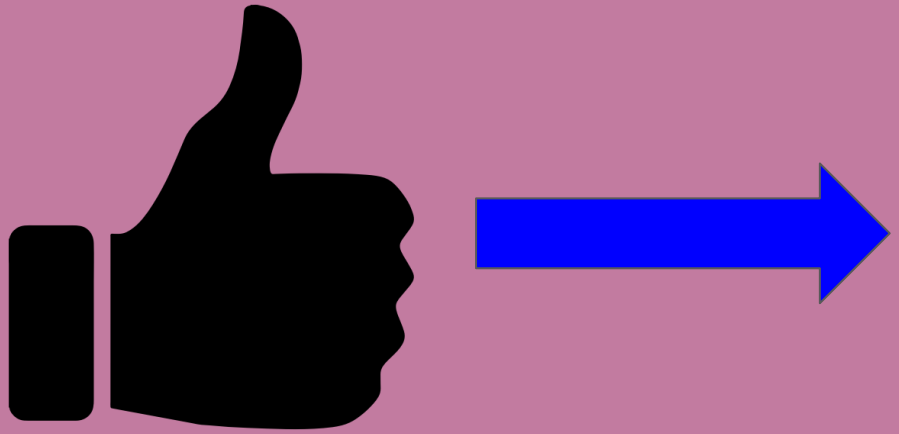
# **Discussion**: What does this mean?

**This data is important because if you want to plant something there, you would want to know the soil moisture. An example would be, if you want to plant a plant then it can't have too much water in the soil and it can't have to little water in the soil or the plant will likely die. If prairies have less moisture than farmland, then they will help prevent flooding - which is a big problem in our area.**

# **Discussion**: Possible solutions!

- **One or two ideas of solutions to get more people to install native prairies**

**You should install prairies at schools because they offer homes to many different native plants and animals. People can also learn a lot from prairies and kids really like when we get to go outside and learn about prairies. To get people to install prairies, tell people about the positive effects of prairies and the learning opportunities**



# Questions? Collaboration? Thank You.

**Without the help of everyone we wouldn't have finished this project in time. If there are any questions or concerns we would gladly answer them. Finally, if you need to talk to are teacher Mrs.Boros at HPI.**

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