How Does The Soil Temperature Compare Between the Prairie and Under the Swings

Team Member Names: Tess Born, Clementine Schindler, Harper Williamson, Gianna Queen

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School: Hull Prairie Intermediate, Perrysburg, OH

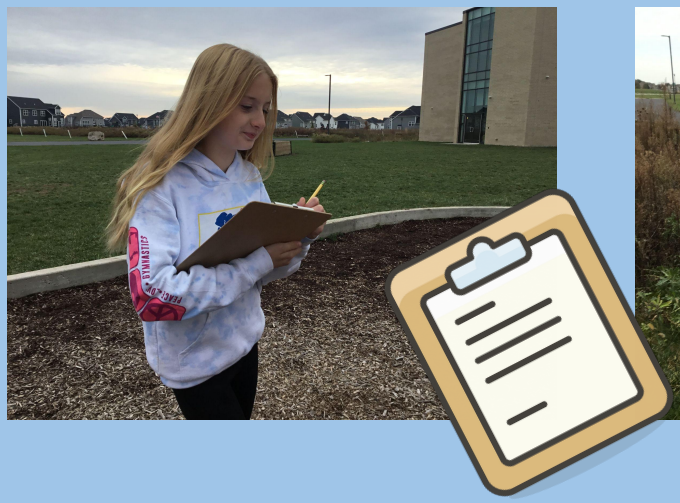
Advisor's Name: Dr. Jodi Haney

Everyone

Tess

Our Team

Data Recorder:
Harper Williamson



Experimenters:
Tess Born and
Gianna Queen

Photographer:
Clementine
Schindler

Why are Native Prairies Important?

Prairies are important because they provide habitats to native animals and plants. They hold food for the animals and shelters for them. They also are important because they hold topsoil together and reduce soil erosion.

Top right: Harper and Tess walking to the prairie.
Bottom left: Tess walking from the prairie.

Clementine

Research Question & Hypothesis

RQ: How does soil temperature compare between the prairie and under the swings?

Hypothesis: The soil temp. under the swings will be hotter than in the prairie.

Gianna

Variables

Dependent Variable

- Prairie
- Under the swings

Independent Variable

- Temperature

Constants:
Day of data collection, time of day, tools used, procedures followed.

Harper

Map of our Research Locations

Description of Locations:

A. Location 1 - Prairie

B. Location 2 - Swing Area

Materials

- Soil can
- Digital probe thermometer
- Auger
- Clipboard
- Ipad

Tess

Step by Step Procedures:

1. Walk into the Prairie
2. Get out our tools: red digital probe thermometer
3. Turn it on and change it to Celsius if needed
4. Take air temperature in Celsius and Fahrenheit
5. Record our data
6. Use the auger to make a hole in the ground
7. Stick it in the ground to 10 cm.
8. Read what it says and record our data
9. Stick it in the ground to 5 cm
10. Read what it says and record our data
11. Go to location two
12. Take air temperature in Celsius and Fahrenheit
13. Record our data
14. Use the auger to make a hole in the ground
15. Stick in the ground to 10 cm.
16. Read what it says and record our data
17. Stick it in the ground to 5 cm.
18. Read what it says and record our data

Clementine

Weather Conditions on the Day of Data Collection-

Gianna

Prairie-

- Cold
- Cloudy
- Windy
- Sunny
- Misty

Under The Swings-

- Chilly
- Bright
- Cloudy
- Windy
- Cold

Data- How Does The Soil Temperature Compare Between the Prairie and Under the Swings?

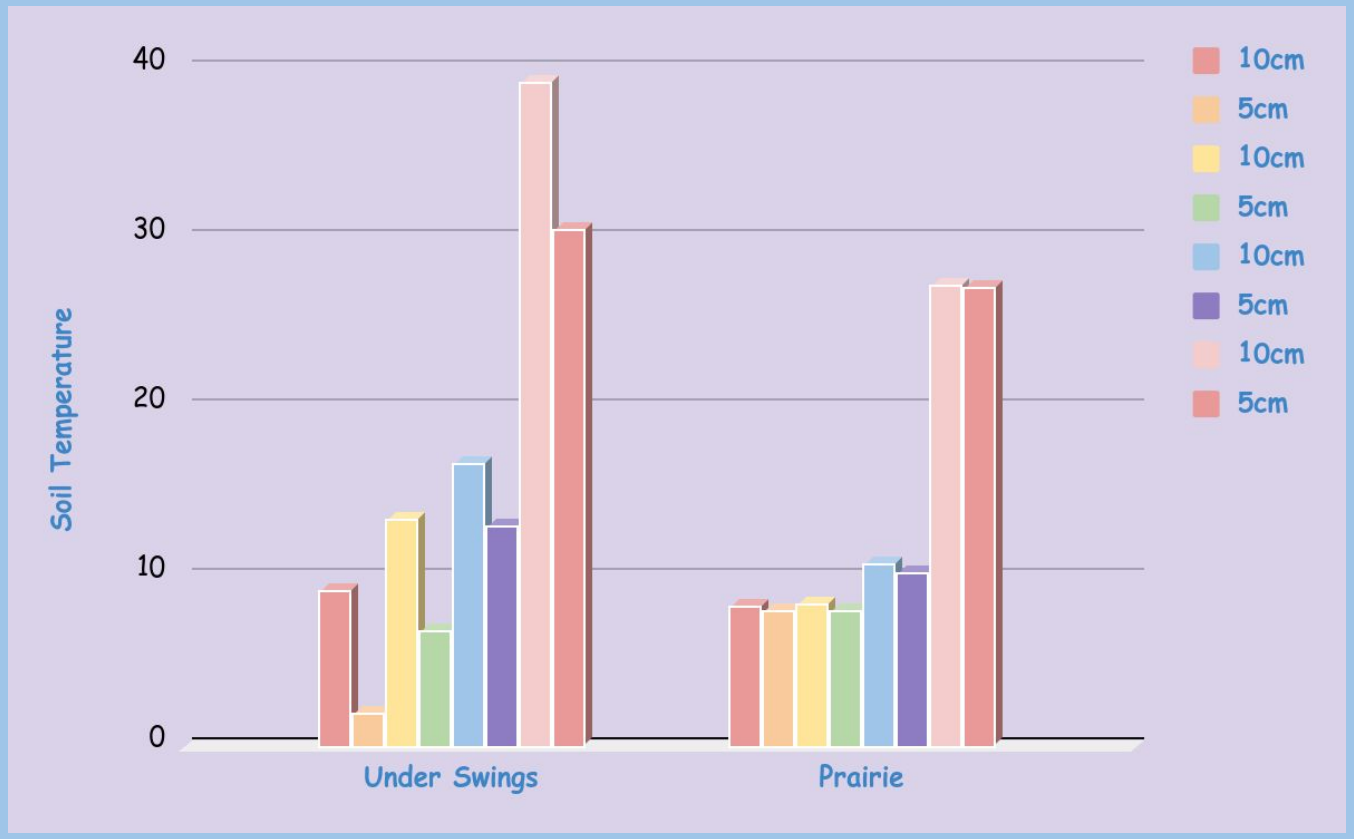
Soil temperature

Height	10cm	5cm	10cm	5cm	10cm	5cm	10cm	5cm
Under Swings	9.1	1.9	13.3	6.8	16.7	13	39.1	30.4
Prairie	8.2	8	8.3	8	10.7	10.2	27.2	27

Harper

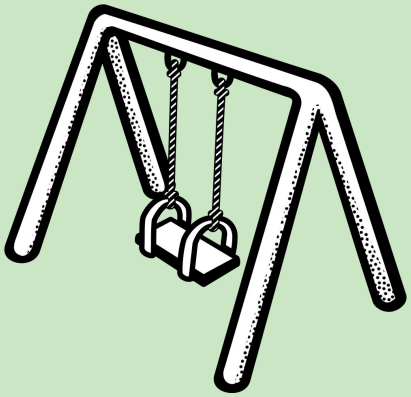
Results: How does the soil temperature compare between our school prairie and under the swings?

Tess



Conclusions:

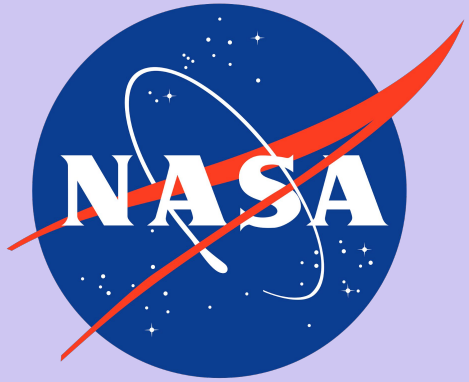
- We were correct. The swing area was hotter than the prairie. Our data observations show that the average temperature under the swings was 39.1, and the average temperature from the prairie was 27.2.

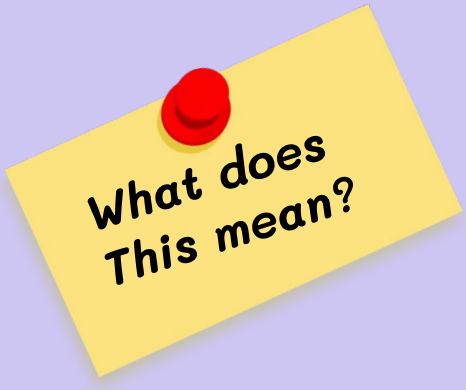


Discussion: What does this mean?

Gianna

- This data find is important because they help NASA determine if the prairie is working well.
- Data Findings are also important because it helps NASA to improve their research.



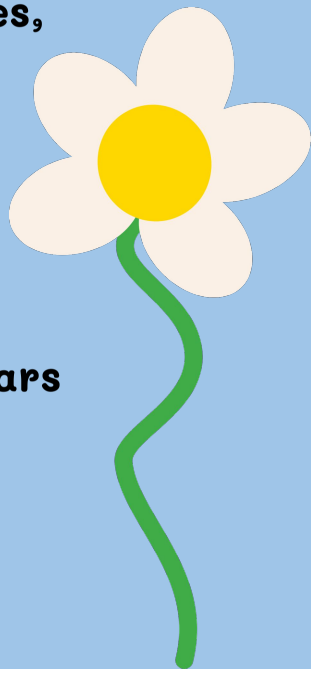


Discussion: Possible solutions!

Harper

-Prairies are great to the environment! Here's why...

- Prairies recycle nutrients and make other nutrients with them!
- Prairies roots are able to reach water very far down under the surface, and live for a long time.
- You will be able to spot a lot of cool wildlife around; butterflies, bees, birds, insects, reptiles.
- A lot of prairies are used for growing wheat, rye, and oats.

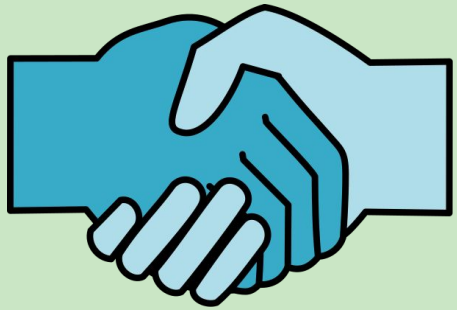


-Things we can do to help the Earth:

1.) We can plant more prairies to the world with native plants that help the environment in that area.
2.) We can reduce the amount of pollution in the air; don't drive your cars as much.
3.) Buy recyclable plastics instead of single use plastics.
4.) Don't litter as much.
5.) Reduce that amount of water; take shorter showers

Questions? Collaboration? Thank You.

Thanks to Mrs. Amy Boros for helping us out with this project. Now is the time for any questions or comments. Thank you!



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Everyone