

The Effects of Body Temperature on Blacktop Surface Temperature.

By Jayne Durnin, Gwen Farber, Beth Kosmicki, Rebecca Oberrieder
Orchard Hill School

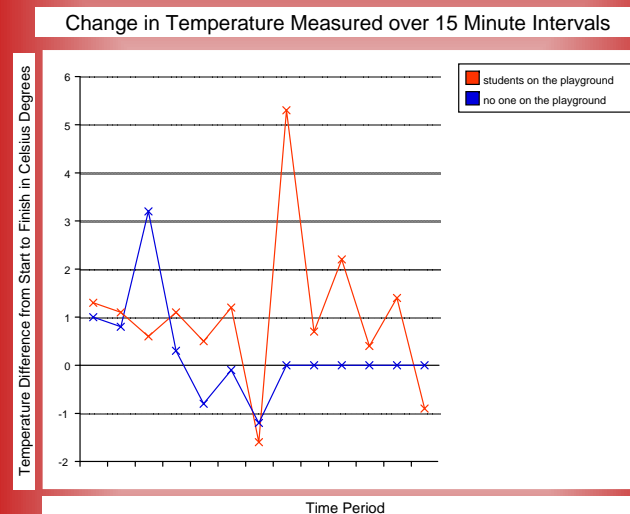
Abstract

The sun affects the surface temperature, and we wanted to know if body heat also had an effect on the surface temperature. Our objective was to prove that body heat does effect the surface temperature of the blacktop. Test the surface temperature during 15 minute intervals throughout the day. 85 % of the time that students are on the blacktop the surface temperature rose. 57% of the time when no one was on the blacktop the surface temperature rose. The surface temperature of the blacktop is affected by the number of students playing on it.

Procedures

1. Follow Globe protocol surface temperature
2. Arrange a schedule that collects data when students are on the blacktop (experiment data) and when no one is on the blacktop (control data)
3. Collect data in 15 minute intervals
4. Enter data
5. Revised where we collected the data to ensure accuracy
6. Reenter new data
7. Make graphs to understand the data
8. Draw conclusion

Results



Problem Statement

We have been collecting surface temperature readings for Dr. Kevin Czajkowski and decided to find out if body heat affects the temperature of the blacktop. Does the body's temperature affect the playground's blacktop temperature? That the blacktop temperature will increase when people have been on the playground in comparison to the same amount of time when no one is on the blacktop part of the playground. This hypothesis was chosen because we knew that the sun would affect the surface temperature, and we felt the body heat/friction of the students would make the blacktop warmer.

References & Acknowledgments

Surface Temperature Protocol- Globe website www.globe.gov

Kevin Czajkowski, Associate Professor (Geography and Lake Erie Center)

Director of the Geographic Information Science and Applied Geographics (GISAG) Lab, Department of Geography and Planning, University of Toledo

Marcy M. Seavey, Program Director, Iowa Academy of Science, Iowa Academy of Science, GLOBE, and Project WET, 175 Baker Hall, UNI, Cedar Falls, IA 50614



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Conclusions

The hypothesis is supported because the surface temperature of the blacktop increased 85% of the time when students were playing on it compared to 57% of the time when kids were not playing on it. The data proved correct but we don't feel it is accurate because there are too many uncontrollable variables.

The next time the experiment is done, it needs to be lengthened and variables controlled such as population on the blacktop, types of games played, check the cloud cover. Another problem was students forgetting to collect the data or going at incorrect times.