



Frequently Asked Questions About the 2023 Study of Nature-Based Interventions Designed to Improve Student Performance on their Standardized Testing

Who is conducting the study?

Elizabeth Gross of Sam Houston State University and Jo Watson Hackl, Founder of <https://Outdoorosity.org> and author of *Smack Dab in the Middle of Maybe* (Random House Children's Books). Both Elizabeth and Jo are experienced researchers and their studies have been published in scholarly journals including the *Peabody Journal of Education*, *Journal of Continuing Higher Education*, *International Journal of Engineering Education*, and *The Yale Law Journal*.

What is the purpose of the study?

The study is designed to measure the impact of nature interventions intended to improve student performance on, and to decrease student stress associated with, with their standardized testing. We selected the interventions below based on data that we've seen in workplace and college settings. Schools can select from one or more (or all) of the following nature interventions:

- Diffusing a certified pure essential oil blend of natural scents during each hour of instruction during the review period and test administration;
- Providing students during the test administration with a gum containing natural mint oil, with replenishment of gum provided upon request;
- Playing recordings of nature sounds in the background during the review period and test administration; and
- Leading students on a fifteen-minute walk in an outdoor environment within 30 minutes before the beginning of test administration.

Who can participate in the study?

Participation in the study is free and open to all K-12 schools throughout the world.

What steps do you have in place to allow parents to opt out of their children participating in the nature interventions and the study?


Parents may opt out and we have a form to allow them to exercise that choice.

How can I apply to participate in the study?

Here's a link to the application form: <https://forms.gle/8hF4iyihvXwrMY8D7>

What support will be provided to schools participating in the study?

Schools participating in the study will be able to participate in Zoom sessions with the researchers to answer questions and receive ongoing support throughout the duration of the study.



Does the study involve any additional student testing?

No. The nature interventions are designed to provide support to schools during the review period for, and administration of, whatever standardized tests the school is using. No extra testing is required.

How will data be collected and analyzed?

Our data will be collected by participating schools and provided to us on an aggregated basis, with no identifying student data included. We will not do any separate testing. We have undergone the rigorous review process of Sam Houston State University's Internal Review Board and we are committed to ensuring that the study meets the highest ethical standards. Once we have input data from individual schools into our system, it will be destroyed.

How will results be used?

We plan to compare the data of groups that received the intervention to data for groups that did not. If we see a statistically significant difference, we will report our findings in a scholarly paper.