## Colorado Science and Engineering Fair

## 2023 <br> Team Project Abstract Form

## Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook

 and submit 1 copy to your Regional Fair Director with your other paperwork.Title of Project: Does the Student-Teacher Ratio in Middle School Affect How Connected Students Feel to Their Teachers?
Team Leader's Name: Ryler Horansky
Team Member 1: Ryler Horansky
Team Member 2: Liam Yee
School and City: Horizons K-8, Boulder
Sponsor's Name: Caley gallison
Category: Behavioral \& Social Sciences
Division: Junior (6th - 8th grades)
Abstract (250 words or less):
Over the last few years, mental health has decreased due to the Covid-19 pandemic. Teen depression and suicide have also increased. Even as students are returning to school, many still feel isolated and disconnected.
This investigation evaluates research to prove or disprove the hypothesis that the student-to-teacher ratio in middle school affects how connected students feel to their teachers, an important relationship for students' emotional well-being. If our hypothesis is correct, the country could take measures to reduce student-teacher ratios, and support mental well-being in youth. However, if my research proves irrelevant, funds already being given to schools to hire more staff could be allocated to other crucial elements of education.
We analyzed the comparison between public databases containing the student-teacher ratio in individual schools and State or District-administered wellness surveys given to students. The results gathered from an estimated 15 to 20 thousand students showed that the correlation is slightly negative. Students with higher student-teacher ratios had a marginally higher connection to their teachers. However, the noise of the data was greater than the trendline, which shows that there is no evident correlation between the student-teacher ratio.
Continuing our project, we would analyze this data in comparison to area wealth, teacher training, and access to resources.
We would investigate class size instead of student-teacher ratio because it would be more accurate in showing the connection developed between students and teachers. Still, the data does accurately represent that the student-teacher ratio has no effect on students' connection to their teacher.

We hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. We also attest that the above properly reflects our own work.

Team Leader's Signature: $\qquad$
Team Member 1's Signature:
Team Member 2's Signature:

Date:
Date:
Date:

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[^0]:    In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES of all of these forms to your Regional Fair Director with your Finalist Verification/Permission Form. A signed copy of this form must be included in your notebook.

