

Each of the following examples would be appropriate for your Stat 1 project. Think about the types of questions asked - you may find you have a question similar to one of these, or that someone's question sparks an idea.

Thank you to Professor Robert L. Wardrop (University of Wisconsin-Madison) for the project examples. (Source: pages.stat.wisc.edu/~wardrop/papers/tmoore.pdf)

1 Projects with a Dichotomous Response

1. Lori worked as a waitress and wondered whether suggesting a specific appetizer upon greeting her customers would lead to an increase in the sales of appetizers. Her data ran counter to her belief — mentioning a specific appetizer decreased the sales of all appetizers!
2. Nell worked at a coffee cart which offered two sizes, small and large. Of course, some customers specified the size when they ordered, but Nell was interested in those who simply ordered coffee. She found that the question, “Would you like a large?” was superior to the question, “Would you like a small or a large?” at eliciting the purchase of a large cup of coffee.
3. Andre's work problem was similar to Nell's. He sold ice cream which could be served in a plain or a waffle cone. His store made a much larger profit on the waffle cones. For customers who did not specify the cone type in their order, Andre found that the question, “Would you like a plain cone or a homemade waffle cone?” elicited significantly more sales of waffle cones than did the same question with the adjective “homemade” deleted.
4. Mary's job duties included the purchase of used compact discs from customers. Mary wondered which of the following statements to the customer would be more effective.
 - I will give you \$X.
 - How does \$X sound?

(The value of X was appropriate for the number and quality of the compact discs offered for sale.) Mary found that the first statement performed better (at getting an acceptance of the first offer) than the second.

5. Tuan was interested in the problems an international student faces at the University of Wisconsin – Madison. He showed 25 college graduates part of an essay he said was written by “Jack McConnell, a student from Iowa”. He showed 25 other college graduates the same essay, but said it was written by “Hsiao-Ping Zhang, an international student from China”. When asked, “Do you detect any grammatical errors in this passage?” 64 percent who had read the Chinese student's essay said yes, compared to only 20 percent who had read the Iowa student's essay!
6. Ruth visited a minimum-security federal prison camp to obtain her subjects, first-time non-violent offenders. The first version of her question read,

“The prison is beginning a program in which inmates have the opportunity to volunteer for community service with developmentally disabled adults. Inmates who volunteer will receive a sentence reduction. Would you participate?”

The second version was the same, except that there was no mention of sentence reduction. Ruth was surprised when her data revealed that the second version received a much higher

proportion of yes responses than the first version, but the difference did not quite achieve statistical significance.

7. Erin's trial was an attempt at an axel (a figure skating jump with one and one-half completed turns). Erin found that she was much better at completing an axel off her right foot than an axel off her left foot.
8. Kathy found that she was much better at successfully completing a cartwheel if she led with her right hand rather than her left.
9. When signing the alphabet, it is standard to use one hand as the primary hand and the other as the assister. Diana found that choosing her right hand as primary made her a better signer than when her left hand was primary, but the difference just failed to achieve statistical significance.
10. Lisa S. found that she was a much better lacrosse shooter with her right hand than with her left.
11. Mike enjoyed riding his personal water craft very fast and making sharp turns. His pleasure was diminished, however, whenever he would be thrown from the craft and land 30 feet away from it. Mike found that he was much better at staying on-board if he turned left than if he turned right.

2 Projects with a Numerical Response

13. Sara enjoyed playing golf. Like many novice golfers, Sara wondered whether she was more effective at hitting a golf ball from a fairway lie with a 3 wood or with a 3 iron.
14. Brian was a student in the ROTC program. As part of his training, Brian was required to run in combat boots and in jungle boots. Brian wondered whether the type of boot affected his running.
15. Maria was a member of the UW's varsity soccer team. Her teams had two games per week, every Friday evening and Sunday morning. Maria wondered whether she played better in the evening or morning. As an indirect way of measuring this, she performed a study to see whether her ability to juggle a soccer ball was influenced by the time of day.
16. Jennifer E. was a softball player and wanted to investigate whether the type of bat, aluminum or wood, influenced how far she could hit a pitched ball.
17. Doug performed a study to investigate whether the type of dart he used, "bar darts" or his personal set, influenced how many rounds he required to complete the game "301".
18. Kymn was a member of the women's varsity crew and frequently worked out on a rowing simulation machine called an ergometer. She wanted to investigate whether the setting of the machine, there are two, influenced the time required to row a simulated 2,000 meters. No doubt because of her superb conditioning, Kymn's times on each setting showed little variation.

19. Mei Lan, Sin Fai, and Todd performed a study to investigate whether having a car's windows open or closed influenced the time required to accelerate from 40 to 65 miles per hour.
20. Damion performed a study to determine whether his smoking a cigarette or not influenced how long it took him to climb Bascom Hill on the Madison campus.
21. Lisa J., a former horticulturist in my class, performed a study to investigate the effect of temperature on the growth of *Rhizoctonia solani* fungus.
22. Jennifer C. swam competitively in college and was a high school swimming coach when she enrolled in my course. She performed a study to compare two methods of starting a freestyle swimming race. She found that, for her, the traditional start was superior to the new "track start."
23. Eric was a punter on the varsity football team and performed a project to estimate how much farther he would punt the ball with two steps (before kicking) rather than one step.