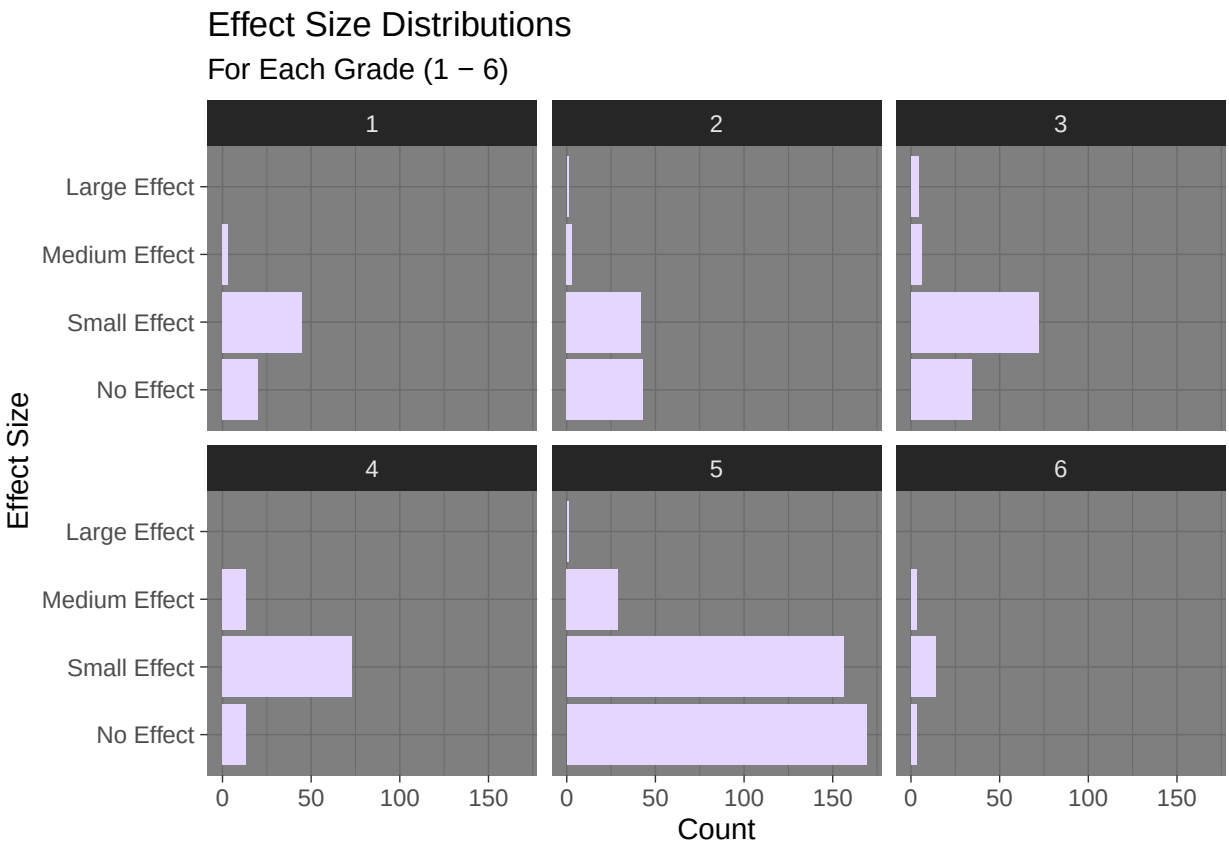
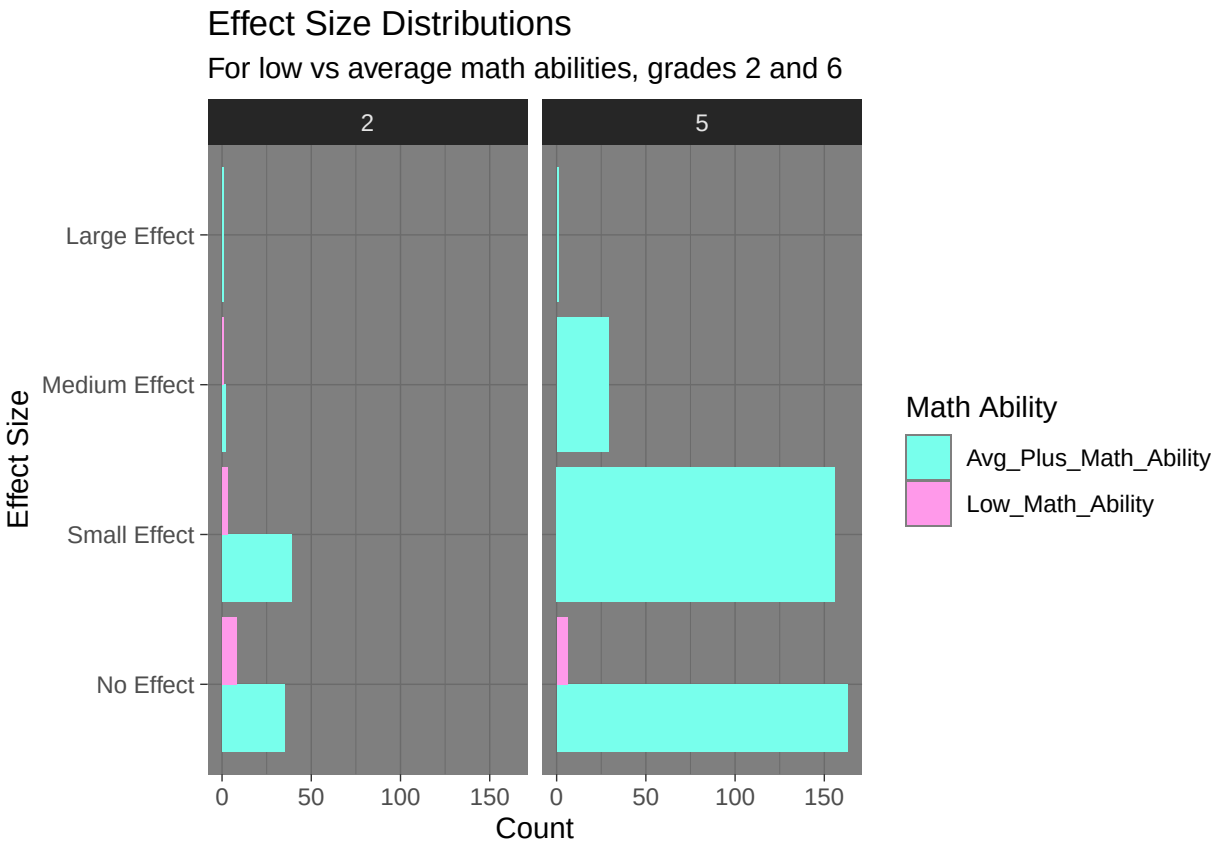
Assignment 4

- For this assignment, I will be analyzing data from the barroso2021 data set. This data set is from the psymetadata package, and it observes the relationship between math achievement and math anxiety (https://psycnet.apa.org/record/2020-80018-001). Participants are in grades 1 through 6, and math ability is characterized as either low or not low. Grade 5 has a significantly larger sample size than the other grades, which will likely impact effect size measurements. Note: only grades 2 and 5 have students in the low math ability condition.
- The focus of this analysis will be analyzing differences in effect size across different parameters, where the absolute value was calculated, so values range from 0 (no effect) to 1 (strongest possible effect)





Conclusion

There is a significantly smaller effect size for low math ability participants compared to average-above average students. This is likely impacted by the small sample sizes in these conditions. There is a less obvious (but still important) difference in effect sizes for each grade. Grade 5 has the highest number of scores for each effect size condition except "large effect". This is likely due to its significantly higher sample size than that of the other grades.