**Written Report**

The combined dataset includes academic results, specifically reading and math scores, for a total of 39,170 students ranging from grade 9th to grade 10th. These students are enrolled in 15 high schools, encompassing both District and Charter schools.

An analysis was conducted both on the district level as a whole and by categorizing schools into different types. This approach allows for a comprehensive examination of academic performance, providing insights into overall district trends as well as variations among different school types, such as Charter and District schools. This dual perspective enables a more detailed understanding of academic outcomes, offering valuable information for educational assessments and improvements.

From the district-level analysis using aggregated data from all 15 schools, the results indicate the following averages and passing rates:

Average Math Score: 78.99

Passing Rate for Math: 74.98%

Average Reading Score: 85.81

Passing Rate for Reading: 65.17%

The provided statistics offer a district-wide summary of academic performance in math and reading. The passing rates, indicating the percentage of students scoring above 70, give a measure of the overall success rate in each subject. The findings indicate an interesting dynamic in student performance, particularly in the subject of reading. Despite the relatively high average reading score of 85.81, the passing rate is lower at 65.17%. This suggests a wider spread of individual scores, with a notable proportion of students falling below the passing threshold. The disparity between the average score and the passing rate in reading may imply that while a significant number of students perform well, there is also a substantial portion facing challenges in reaching the satisfactory level.

The selected county comprises of 8 charter schools and 7 District schools. From the by school-type-summary, the results are as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type** | **Avg Math Score** | **Avg Reading Score** | **% Passing Math** | **% Passing Reading** | **% Passing Overall** |
| Charter | 83.47 | 83.90 | 93.62% | 96.59% | 90.43% |
| District | 76.96 | 80.97 | 66.55% | 80.80% | 53.67% |

These results provide a detailed breakdown of academic performance and passing rates for both Charter and District schools. It's evident that Charter schools, on average, have higher scores and passing rates in both math and reading compared to District schools. The overall passing rates take into account performance in both subjects. To further investigate underlying correlations, an additional analysis was performed on the average school size for Charter schools and District schools, respectively. The average school size for charter schools was 1524, while for district schools, it was 3854. Based on the analysis of scores by school size, a pattern emerges indicating that large schools with 2000-5000 students do not perform as well as medium-sized schools (1000-2000) and small schools (less than 1000).