Data Analysis Report

As the newly appointed Chief Data Scientist for our city's school district, my role entails assisting the school board and the mayor in making informed strategic decisions pertaining to future school budgets and priorities.

Data Summary

To commence our tasks, we will initiate an analysis of the district-wide data and subsequently provide a comprehensive summary of the information, categorizing it into two main groups: district-level data and school-level data.

I. **District Summary**

Total Schools	15
Total Students	39,170
Total Budget	$24,649,428.00
Average Math Score	78.98
Average Reading Score	81.87
% Passing Math	74.98%
% Passing Reading	85.80%
% Overall Passing	65.17%

II. **School Summary**

'School Type

'Total Students

'Total School Budget

'Per Student Budget

'Average Math Score

'Average Reading Score

'% Passing Math

'% Passing Reading

'% Overall Passing

Result Analysis

In our data analysis, drawing upon the outcomes of various analyses, we can deduce the following conclusions:

I. **Highest-Performing Schools (by % Overall Passing)**

School	Type
Cabrera High School	[Charter]
Thomas High School	[Charter]
Griffin High School	[Charter]
Wilson High School	[Charter]
Pena High School	[Charter]

It is evident from our data analysis that the top-performing schools are of the **Charter type.** Notably, the foremost position is secured by **Cabrera High School**, boasting an impressive overall passing rate of **91.33%.**

II. **Lowest-Performing Schools (by % Overall Passing)**

School	Type
Rodriguez High School	[District]
Figueroa High School	[District]
Huang High School	[District]
Hernandez High School	[District]
Johnson High School	[District]

Based on our analysis, we can definitively infer that the schools at the lower end of the performance spectrum belong to the **District type**.
Notably, **Johnson High School** emerges as the weakest performer among these schools, with an overall passing rate of merely **53.53%.**

III. **Math Scores by Grade level (9th, 10th, 11th, 12th) at each school**

Notably, the mean Math scores exhibit remarkable consistency throughout the grades, ranging from grade nine through twelve. This suggests that the proficiency levels of students in Math remain relatively stable within the same grade range. However, variations in Math scores become apparent when transitioning between different schools.

IV. **Reading Scores by Grade level (9th, 10th, 11th, 12th) at each school**

Analogous to the findings for Math scores, our conclusions align with regard to reading proficiency. Notably, the levels of reading proficiency demonstrate minimal fluctuations between grades nine and twelve. The notable shifts occur primarily when students transition between different schools.

V. **Scores by School Spending**

V. The data indicates a noteworthy trend: as the Spending Ranges (Per Student) decrease, the corresponding outcomes tend to be more favorable.
Remarkably, the schools that excel in performance are those that operate with a spending allocation of **less than <$585** per student.

VI. **Scores by School Size**

An observable pattern emerges: a decrease in school size correlates with an increase in scores. Particularly, schools with a relatively small student population **(*Small* category, defined as <1000 students)** consistently exhibit the highest scores.

VII. Scores by School Type

The charter school achieves a higher score than the district school.