**Module 4 Challenge**

After replacing the reading and math scores, there were facts that stayed the same and there were facts that differ.

* **How is the district summary affected?**

According to the district summary, the number of total students stayed the same, which is 39,170. The school total budget also stayed the same which is $24,649,428.0. However, what did change are the Average Math Score, Average Reading Score, Passing Math Percentage, Passing Reading Percentage and the Overall Passing Percentage. You can see in the graph below that the graph in the “PyCitySchool\_Challenge” graph, the scores were lowered for reading and math. For example, the average math score in the “PyCitySchools” challenge graph was 81.9 and in the “PyCitySchool\_Challenge” graph was 78.9. What also lowered are the Average Reading Score, Passing Math Percentage, Passing Reading Percentage and the Overall Passing Percentage. In the “PyCitySchools” graph, the scores are 81.9 for Average Reading Score, the Passing Math Percentage is 75%, the Passing Reading Percentage is 86% and the Overall Passing Percentage is 65%. The “PyCitySchool\_Challenge” for Average Reading Score 81.9, Passing Math Percentage is 74%, Passing Reading Percentage is 85% and the Overall Passing Percentage is 64%. As you can see the reading and math score and percentage went down from .1 to 1 whole point.

A screenshot of a cell phone

Description automatically generated

PYCitySchools

A screenshot of a cell phone

Description automatically generated

PYCitySchools\_Challenge

* **How is the school summary affected?**

According to the two school summary graphs, the total students, the total budget, the per student budget, school type and the school size were not affected by the change. What was affected by the change was the math and reading scores and percentages. The average math score in the PyCitySchools was 83.418349. But when the scores were changed, which is in the PyCitySchool\_Challenge, the average math score became 83.350937. There were significant drops in the passing math percentage, passing reading percentage and the overall percentage. As you can see from the graphs, the math percentage went from 93.272171% to 66.911315%. The passing reading percentage went from 97.308869% to 69.663609% and the overall passing percentage went from 90.948012% to 65.076453. However, there was a very small increase average reading score. The average reading score went from 83.848930 to 83.896082.

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|  | PYCitySchool | | | | | | | | | |  |
|  | School Type | Total Students | Total School Budget | Per Student Budget | Average Math Score | Average Reading Score | % Passing Math | % Passing Reading | % Overall Passing | Spending Ranges (Per Student) | School Size |
| Thomas High School | Charter | 1635 | $1,043,130.00 | $638.00 | 83.418349 | 83.848930 | 93.272171 | 97.308869 | 90.948012 | $630-644 | Medium (1000-2000) |

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|  | PyCitySchool\_Challenge | | | | | | | | | |  |
|  | **School Type** | **Total Students** | **Total School Budget** | **Per Student Budget** | **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** | **Spending Ranges (Per Student)** | **School Size** |
| **Thomas High School** | Charter | 1635 | $1,043,130.00 | $638.00 | 83.350937 | 83.896082 | 66.911315 | 69.663609 | 65.076453 | $630-644 | Medium (1000-2000) |

* **Recalculate the high- and low-performing schools.**

When the high and low performing schools were recalculated, Thomas High School was no longer in the top five. Originally, Thomas High School was number 2. After the change, it dropped down to number 8. In addition, when the data was recalculated, the overall 9th grade reading and math scores became NaN. For example, Lori Moore who was a student in Thomas high school, had a math score of 98. After the new recalculations, it went to Nan. She also had a reading score of 84 and after the recalculations, the score is now Nan. However, the other grades, 10th, 11th, and 12th, were not affected. Another part that was affected by the change is the number of students who passed reading and math. Before the change, there were 1,525 students passing math and 1,592 passing reading. After the change, there were 1,094 students who were passing math and 1,139 passing reading. Therefore, this shows that the students who received NaN as their score were considered as “not passing.”