**PyCity Schools Analysis**

**District level:**

There are 39170 students in 15 schools in PyCity, share a total budget $24,649,428.

Passing rates of math and reading are 74.98% and 85.80% (65.17% for passing both).

**School level:**

* # of students: Bailey High School is the highest (4976), Holden High School is the lowest (427).
* Budget: Bailey High School is the highest (over $3.1 million), Holden High School is the lowest ($0.25 million).
  + If spend budget evenly on each student, Huang High School is the highest ($655), Wilson High School is the lowest ($578).
* Math test:
  + Average: Pena High School is the highest (83.84), Huang High School is the lowest average (76.63).
  + Passing rate: Pena High School is the best (94.59%), Huang High School is the worst (65.68%).
  + Grade average:
    - Holden High School wins both 9th and 11th grades
    - 10th grade champion is Griffin High School
    - Pena High School tops among 12th grades.
* Reading test:
  + Average: Pena High School is the highest (84.04), Rodriguez High School is the lowest (80.74).
  + Passing rate, Thomas High School is the best (97.31%), Ford High School is the worst (79.30%).
  + Grade average:
    - Shelton High School wins both 9th and 11th grades
    - 10th grade champion is Thomas High School
    - Holden High School tops among 12th grades
* Rate of passing both math and reading:
  + Cabrera High School, Thomas High School, Griffin High School, Wilson High School, and Pena High School are top 5.
  + Rodriguez High School, Figueroa High School, Huang High School, Hernandez High School, and Johnson High School are bottom 5.

Finding:

Interestingly, we see an inverse relationship between per student spending category and overall passing rate. With the highest range of $645-680 spending per student, overall passing rate is the lowest (52.53%). While the highest overall passing rate (90.37%) resides in lowest spending category < $585. This is doubtful as we did not take other key factors like school type, size and other education resources into consideration.

**Conclusion:**

1. When compare test passing rate by size, small and medium schools are much better than large schools (over 2000 students).

This makes sense to me as more student means lower teacher-student rate, which means less time and effort for teacher to put on each student.

1. Charter schools' rate is much higher than District schools.

This is obvious as Charter schools tends to have ‘better’ students at the beginning and always have more freedom on daily operations than regular public schools. Usually this leads to higher flexibility and more opportunities on individual learning.