# Change Over Time Correlation Comparison Characteristics

#### Example Dataset



SurveyWorks data allow us to see how students feel about their school's culture and climate. Annually, for most years since 1997, RI has administered an opinions-and-perceptions survey to parents, teachers and students.

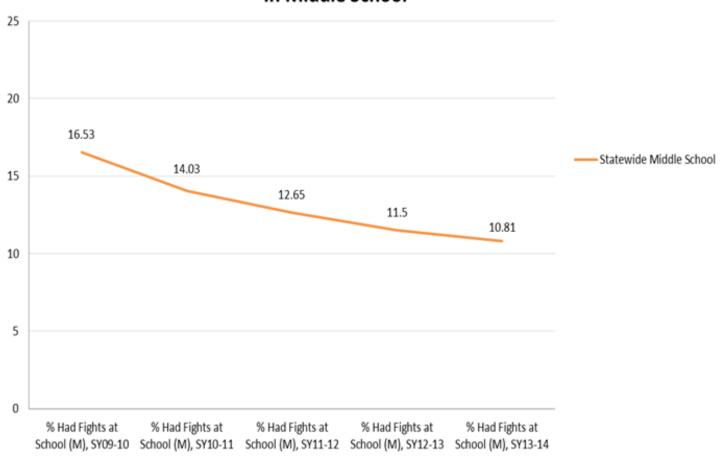
# Change Over Time

How does it change?

Does the data have multiple years?

If it does have multiple years is there a trend?

#### State Wide Average % of Students Who Reported Being in A Fight In Middle School



#### **Unemployment By State**



## Correlation

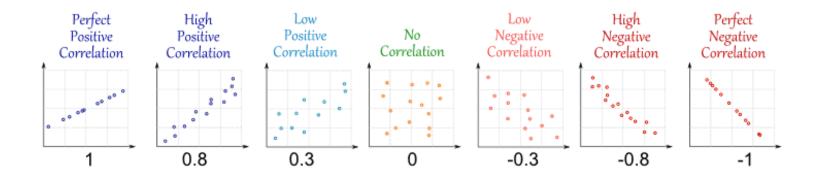
Interaction

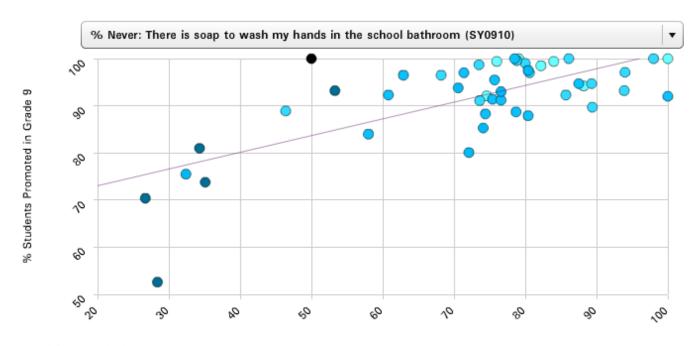
How does the data **interact**?

If one measure goes **up**, the other goes **up too**. If one goes **down**, the other goes **down**.

Noun. Interaction of two or more things, parts, etc.

**Statistics.** the degree to which two or more measurements on the same group of elements show a tendency to vary together.

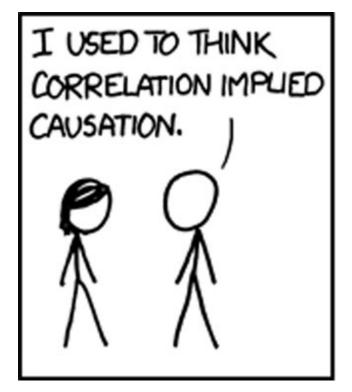




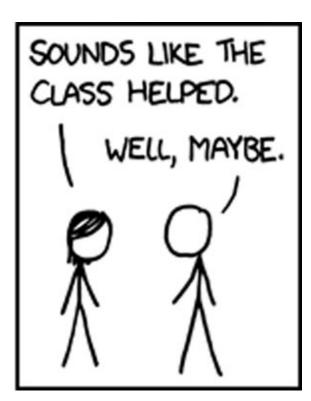
y = 0.3545x + 65.97 $R^2 = 0.5038$ 

% Never: There is soap to wash my hands in the school bathroom (SY0910)

http://ridatahub.org/datastories/middle-school-experiences/10/



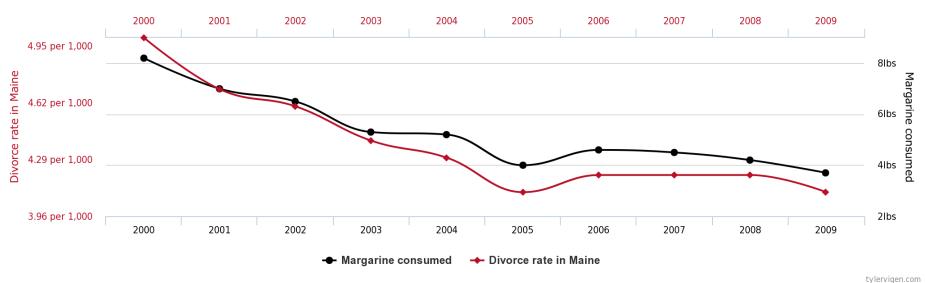




#### **Divorce rate in Maine**

correlates with

#### Per capita consumption of margarine



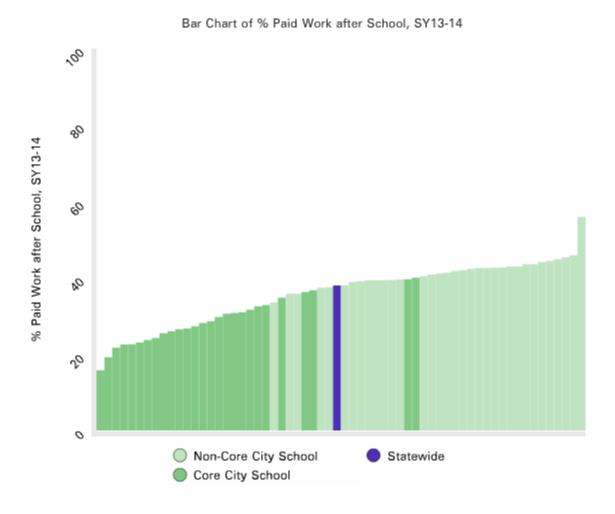
# Comparison

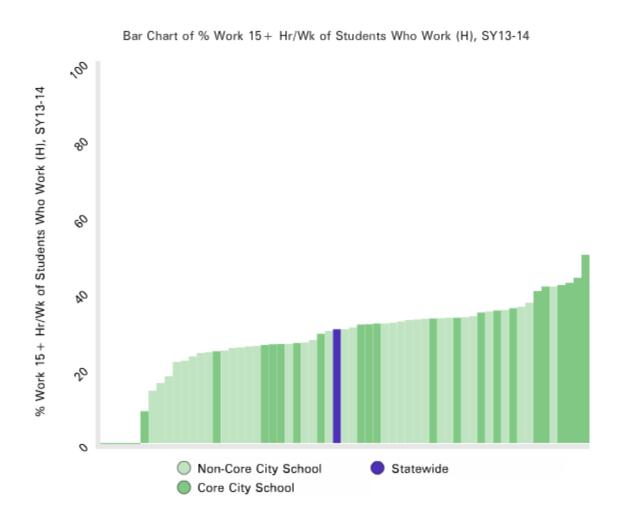
Compare

What are the groups within the data? Are the similar or different?

Often **one part** of your data tells one story, but **another part** tells a totally different story.

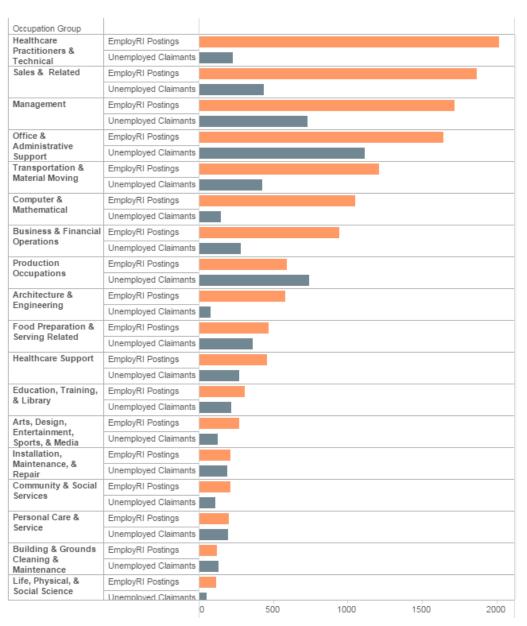
Or maybe there is a **smaller portion** of your data that serves as an example of an **overall** pattern.





#### **Labor Supply and Demand**

Third Quarter 2014 EmployRI Postings and Unemployment Claimants



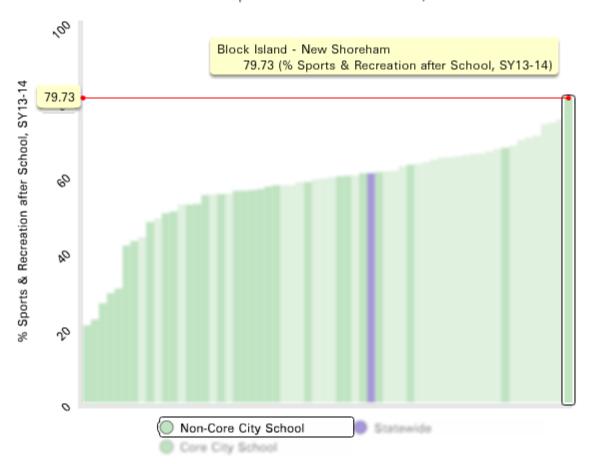
## Characteristics

What stands out?

Is there **one** particular **data point** that stands out and is an interesting **story**.

What is **unique**? What **piece** might have a fascinating story that help you **understand** the data?

Bar Chart of % Sports & Recreation after School, SY13-14





y = 0.3545x + 65.97 R^2 = 0.5038 1 Records Selected

% Never: There is soap to wash my hands in the school bathroom (SY0910)