

Governance Analytics Final Project: Researching the Possible Connection of District Revenues and Graduation Rates

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Researching the Possible Connection of District Revenues and Graduation Rates

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Governance Analytics - Professor Magallanes

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Executive Summary:

For the purpose of this paper, I aim to determine if revenue sources, particularly local revenue sources, have a sizable effect on district graduation rates. Washington State School districts often struggle to acquire revenue sources that are large enough to provide the teacher salaries and quality of education needed throughout the state. Many districts rely on local levies to fund expenses. These levies can be difficult to pass and have expiration dates. While school districts receive revenues from both the State and Federal Governments, I aim to answer the question of how much of a difference local revenue sources have on the success of students. If local revenue sources are shown to have a large effect on success, additional data may prove useful in attempting to develop more permanent local revenue sources for public education.

Through my analysis, I hope to determine if there is a connection between Washington State School District graduation rates, school district revenue from state sources, school district revenue from local sources, and total school district revenue. Using statistical analysis through R, I will determine if there is a correlation between the aforementioned variables and will assess which school districts in Washington State have the highest rates of graduation. My analysis focuses on public school enrollment.

Getting the Data

For this research, I look at three forms of revenue: state, local and total revenue sources. The revenue information for this revenue source was taken from the US Census Annual Survey data. This survey was the 2015 Annual Survey of School System Finances, authorized by law under Title 13, United States Code, Sections 161 and 182. The most recent year available was 2015. The files were available in .csv format.

I also used information from the April 2015 Graduation and Dropout Statistics Annual Report from the Washington State Office of Superintendent of Public Instruction in order to determine district level graduation rates.

Lastly, I used the 2015-2016 Enrollment rates from the Washington State Office of Superintendent of Public Instruction.

```
# Libraries
library(readxl)

# This is the link to the first dataset. Washington State School District Graduation and Drop Out Rates

temp = tempfile(fileext = ".xlsx")
dataURL <- "https://github.com/awood59/PROJECT/raw/master/DropOut.xlsx"
download.file(dataURL, destfile=temp, mode='wb')

# Now we get the data:
DropOut = read_excel(temp, sheet =1)
```

```
## Warning in strptime(x, format, tz = tz): unknown timezone 'zone/tz/2018c.
## 1.0/zoneinfo/America/Los_Angeles'
```

```
head(DropOut,2)
```

```
## # A tibble: 2 x 3
##   `District Code` `Adjusted 5-Year Cohort Graduation ~` `Cohort dropout ra~
##   <chr>          <chr>                                <chr>
## 1 14005          77.685950413223139                      16.528925619834713
## 2 21226          91.111111111111114                      8.888888888888893
```

Now I will retrieve a second data file with information about Washington State Enrollment Statistics.

```
temp = tempfile(fileext = ".xlsx")
dataURL <- "https://github.com/awood59/PROJECT/raw/master/EnrollmentWA.xlsx"
download.file(dataURL, destfile=temp, mode='wb')
EnrollmentWA = read_excel(temp, sheet =1)
head(EnrollmentWA,2)
```

```
## # A tibble: 2 x 20
##   `School Year` `State` `District Code` `District Name`      `K-12 Total`
##   <dbl> <chr> <chr>          <chr>                                <dbl>
## 1 2015. WA 14005 Aberdeen School Distri~ 3221.
## 2 2015. WA 21226 Adna School District 608.
## # ... with 15 more variables: `PK Total` <dbl>, `Full K Total` <dbl>,
## # `Half K Total` <dbl>, `Gr 1 Total` <dbl>, `Gr 2 Total` <dbl>, `Gr 3
## # Total` <dbl>, `Gr 4 Total` <dbl>, `Gr 5 Total` <dbl>, `Gr 6
## # Total` <dbl>, `Gr 7 Total` <dbl>, `Gr 8 Total` <dbl>, `Gr 9
## # Total` <dbl>, `Gr 10 Total` <dbl>, `Gr 11 Total` <dbl>, `Gr 12
## # Total` <dbl>
```

Finally, one last data file. This is a file with financial statistics per school district. I will clean this data as the district names are coded with an attached number, which I need to remove before merging with the other files. In the end, I cleaned the file with Excel, but I will include information for cleaning via R below.

```
temp = tempfile(fileext = ".xlsx")
dataURL <- "https://github.com/awood59/PROJECT/raw/master/WAFinance1.xlsx"
download.file(dataURL, destfile=temp, mode='wb')
WAFinance1 = read_excel(temp, sheet =1)
head(WAFinance1,2)
```

```
## # A tibble: 2 x 6
##   State      `District Name`      Year `Total Revenue` `State Revenue`
##   <chr>      <chr>              <dbl>      <dbl>      <dbl>
## 1 Washington Benge School District 2015.      391.      314.
```

```
## 2 Washington Lind School District 2015. 4267. 2946.
## # ... with 1 more variable: `Local Revenue` <dbl>
```

Data Cleaning

For the purpose of data cleaning, first download the original data file. This data file has a school district column that includes numbers. In order to merge the datasets, the data is cleaned to remove the numbers from the column.

```
dataLink='https://raw.githubusercontent.com/awood59/data/gh-pages/SchoolFinanceEdit.csv'
```

```
# Now read the data.
```

```
theData=read.csv(dataLink,stringsAsFactors = F,strip.white = T)
```

```
# Check the names of the columns.
```

```
names(theData)
```

```
## [1] "STATE" "NAME" "YRDATA" "TOTALREV" "TFEDREV" "TSTREV"
## [7] "TLOCREV" "TOTALEXP" "TCURELSC" "TCURINST" "TCURSSVC" "TCUROTH"
## [13] "NONELSEC" "TCAPOUT"
```

Now let's view the data counts per state.

```
table(theData$STATE)
```

```
##
##      Alabama      Alaska      Arizona
##      134          53          237
##      Arkansas    California    Colorado
##      251          1057         196
##      Connecticut Delaware District of Columbia
##      174          19          1
##      Florida     Georgia       Hawaii
##      67           196          1
##      Idaho       Illinois      Indiana
##      116          992          313
##      Iowa        Kansas        Kentucky
##      347          286          173
##      Louisiana   Maine         Maryland
##      70           247          24
##      Massachusetts Michigan    Minnesota
##      323          601          391
##      Mississippi Missouri     Montana
##      146          520          432
##      Nebraska    Nevada        New Hampshire
##      262          17          175
##      New Jersey  New Mexico    New York
##      588          89          682
##      North Carolina North Dakota Ohio
##      115          204          733
##      Oklahoma    Oregon        Pennsylvania
##      522          216          596
##      Rhode Island South Carolina South Dakota
##      40           89          159
##      Tennessee   Texas          Utah
##      142          1046         41
```

##	Vermont	Virginia	Washington
##	318	133	304
##	West Virginia	Wisconsin	Wyoming
##	63	427	48

Now we remove data that isn't from Washington.

```
WData=theData[theData$STATE=='Washington',]
row.names(WData)=NULL
```

Now we can look at the Washington names.

```
WData$NAME
```

```
## [1] "BENGE SCHOOL DISTRICT 122"
## [2] "LIND SCHOOL DISTRICT 158"
## [3] "OTHELLO SCHOOL DISTRICT 147 163-55"
## [4] "RITZVILLE SCHOOL DISTRICT 160-67"
## [5] "WASHTUCNA SCHOOL DISTRICT 109-43"
## [6] "ASOTIN ANATONE SCHOOL DISTRICT 420"
## [7] "CLARKSTON SCHOOL DISTRICT J250-185"
## [8] "KENNEWICK SCHOOL DISTRICT 17"
## [9] "KIONA BENTON SCHOOL DISTRICT 52"
## [10] "PATERSON SCHOOL DISTRICT 50"
## [11] "PROSSER SCHOOL DISTRICT 116"
## [12] "RICHLAND SCHOOL DISTRICT 400"
## [13] "FINLEY SCHOOL DISTRICT 53"
## [14] "CASHMERE SCHOOL DISTRICT 222"
## [15] "LAKE CHELAN SCH DIST 129"
## [16] "ENTIAT SCHOOL DISTRICT 127"
## [17] "MANSON SCHOOL DISTRICT 19"
## [18] "CASCADE SCHOOL DISTRICT 228"
## [19] "STEHEKIN SCHOOL DISTRICT 69"
## [20] "WENATCHEE SCHOOL DISTRICT 246"
## [21] "NORTH CENTRAL EDUCATIONAL SERVICE DISTRICT"
## [22] "CAPE FLATTERY SCHOOL DISTRICT 401"
## [23] "CRESCENT SCHOOL DISTRICT 313"
## [24] "PORT ANGELES SCHOOL DISTRICT 121"
## [25] "QUILLAYUTE VALLEY SCHOOL DISTRICT"
## [26] "SEQUIM SCHOOL DISTRICT 323"
## [27] "BATTLE GROUND SCHOOL DISTRICT 119"
## [28] "CAMAS SCHOOL DISTRICT 117"
## [29] "EVERGREEN SCHOOL DISTRICT 114"
## [30] "GREEN MOUNTAIN SCHOOL DISTRICT 103"
## [31] "HOCKINSON SCHOOL DISTRICT 98"
## [32] "LA CENTER SCHOOL DISTRICT 101"
## [33] "RIDGEFIELD SCHOOL DISTRICT 122"
## [34] "VANCOUVER SCHOOL DISTRICT 37"
## [35] "WASHOUGAL SCHOOL DISTRICT 112-6"
## [36] "EDUCATIONAL SERVICE DISTRICT 112"
## [37] "DAYTON SCHOOL DISTRICT 2"
## [38] "STARBUCK SCHOOL DISTRICT 35"
## [39] "CASTLE ROCK SCHOOL DISTRICT 401"
## [40] "KALAMA SCHOOL DISTRICT 402"
## [41] "KELSO SCHOOL DISTRICT 458"
## [42] "LONGVIEW SCHOOL DISTRICT 122"
```

[43] "TOUTLE LAKE SCHOOL DISTRICT 130"
 ## [44] "WOODLAND SCHOOL DISTRICT 404"
 ## [45] "BRIDGEPORT SCHOOL DISTRICT 75"
 ## [46] "EASTMONT SCHOOL DISTRICT 206"
 ## [47] "MANSFIELD SCHOOL DISTRICT 207"
 ## [48] "ORONDO SCHOOL DISTRICT 13"
 ## [49] "PALISADES SCHOOL DISTRICT 102"
 ## [50] "WATERVILLE SCHOOL DISTRICT 209"
 ## [51] "CURLEW CONSOLIDATED SCHOOL DISTRICT 50"
 ## [52] "INCHELIUM SCHOOL DISTRICT 70"
 ## [53] "KELLER SCHOOL DISTRICT 3"
 ## [54] "ORIENT SCHOOL DISTRICT 65"
 ## [55] "REPUBLIC SCHOOL DISTRICT 309"
 ## [56] "KAHLOTUS SCHOOL DISTRICT 56"
 ## [57] "PASCO SCHOOL DISTRICT 1"
 ## [58] "STAR SCHOOL DISTRICT 54"
 ## [59] "NORTH FRANKLIN SCHOOL DISTRICT J51-162"
 ## [60] "POMEROY SCHOOL DISTRICT 110"
 ## [61] "COULEE HARTLINE SCHOOL DISTRICT 151"
 ## [62] "EPHRATA SCHOOL DISTRICT 165"
 ## [63] "GRAND COULEE DAM SCHOOL DISTRICT 301J"
 ## [64] "ROYAL SCHOOL DISTRICT 160"
 ## [65] "MOSES LAKE SCHOOL DISTRICT 161"
 ## [66] "QUINCY SCHOOL DISTRICT 144-101"
 ## [67] "SOAP LAKE SCHOOL DISTRICT 156"
 ## [68] "WARDEN SCHOOL DISTRICT 146-161"
 ## [69] "WILSON CREEK JOINT CONSOLIDATED SCHOOL DISTRICT 167 202"
 ## [70] "WAHLUKE SCHOOL DISTRICT 73"
 ## [71] "ABERDEEN SCHOOL DISTRICT 5"
 ## [72] "COSMOPOLIS SCHOOL DISTRICT 99"
 ## [73] "ELMA SCHOOL DISTRICT 68"
 ## [74] "HOQUIAM SCHOOL DISTRICT 28"
 ## [75] "MCCLEARY SCHOOL DISTRICT 65"
 ## [76] "MONTESANO SCHOOL DISTRICT 66"
 ## [77] "OAKVILLE SCHOOL DISTRICT 400"
 ## [78] "OCOSTA SCHOOL DISTRICT 172"
 ## [79] "QUINALT SCHOOL DISTRICT 97"
 ## [80] "SATSOP SCHOOL DISTRICT 104"
 ## [81] "TAHOLAH SCHOOL DISTRICT 77"
 ## [82] "WISHKAH VALLEY SCHOOL DISTRICT 117"
 ## [83] "NORTH BEACH SCHOOL DISTRICT 64"
 ## [84] "COUPEVILLE SCHOOL DISTRICT 204"
 ## [85] "OAK HARBOR SCHOOL DISTRICT 201"
 ## [86] "SOUTH WHIDBEY SCHOOL DISTRICT 206"
 ## [87] "BRINNON SCHOOL DISTRICT 46"
 ## [88] "CHIMACUM SCHOOL DISTRICT 49"
 ## [89] "PORT TOWNSEND SCHOOL DISTRICT 50"
 ## [90] "QUEETS CLEARWATER SCHOOL DISTRICT 20"
 ## [91] "QUILCENE SCHOOL DISTRICT 48"
 ## [92] "AUBURN SCHOOL DISTRICT 408"
 ## [93] "BELLEVUE SCHOOL DISTRICT 405"
 ## [94] "NORTHSHORE SCHOOL DISTRICT 417"
 ## [95] "ENUMCLAW SCHOOL DISTRICT 216"
 ## [96] "FEDERAL WAY SCHOOL DISTRICT 210"

[97] "HIGHLINE SCHOOL DISTRICT 401"
 ## [98] "ISSAQUAH SCHOOL DISTRICT 411"
 ## [99] "KENT SCHOOL DISTRICT 415"
 ## [100] "LAKE WASHINGTON SCHOOL DISTRICT 414"
 ## [101] "RIVERVIEW SCHOOL DISTRICT 407"
 ## [102] "MERCER ISLAND SCHOOL DISTRICT 400"
 ## [103] "RENTON SCHOOL DISTRICT 403"
 ## [104] "SEATTLE SCHOOL DISTRICT 1"
 ## [105] "SHORELINE SCHOOL DISTRICT 412"
 ## [106] "SKYKOMISH SCHOOL DISTRICT 404"
 ## [107] "SNOQUALMIE VALLEY SCHOOL DISTRICT 410"
 ## [108] "TUKWILA SCHOOL DISTRICT 406"
 ## [109] "TAHOMA SCHOOL DISTRICT 409"
 ## [110] "VASHON ISLAND SCHOOL DISTRICT 402"
 ## [111] "PUGET SOUND EDUCATIONAL SERVICE DISTRICT"
 ## [112] "BAINBRIDGE ISLAND SCHOOL DISTRICT 303"
 ## [113] "BREMERTON SCHOOL DISTRICT 100 C"
 ## [114] "CENTRAL KITSAP SCHOOL DISTRICT 401"
 ## [115] "NORTH KITSAP SCHOOL DISTRICT 400"
 ## [116] "SOUTH KITSAP SCHOOL DISTRICT 402"
 ## [117] "OLYMPIC EDUCATIONAL SERVICE DISTRICT 114"
 ## [118] "CLEELUM ROSLYN SCHOOL DISTRICT 404"
 ## [119] "DAMMAN SCHOOL DISTRICT 7"
 ## [120] "EASTON SCHOOL DISTRICT 28"
 ## [121] "ELLENSBURG SCHOOL DISTRICT 401"
 ## [122] "KITITITAS SCHOOL DISTRICT 403"
 ## [123] "THORP SCHOOL DISTRICT 400"
 ## [124] "BICKLETON SCHOOL DISTRICT 203"
 ## [125] "CENTERVILLE SCHOOL DISTRICT 215"
 ## [126] "GLENWOOD CONSOLIDATED SCHOOL DISTRICT 401"
 ## [127] "GOLDENDALE SCHOOL DISTRICT 404"
 ## [128] "KLICKITAT SCHOOL DISTRICT 402"
 ## [129] "LYLE SCHOOL DISTRICT 406"
 ## [130] "ROOSEVELT SCHOOL DISTRICT 403"
 ## [131] "TROUT LAKE SCHOOL DISTRICT 400"
 ## [132] "WHITE SALMON SCHOOL DISTRICT 405-17"
 ## [133] "WISHRAM SCHOOL DISTRICT 94"
 ## [134] "ADNA SCHOOL DISTRICT 226"
 ## [135] "BOISTFORT SCHOOL DISTRICT 234"
 ## [136] "CENTRALIA SCHOOL DISTRICT 401"
 ## [137] "CHEHALIS SCHOOL DISTRICT 302"
 ## [138] "EVALINE SCHOOL DISTRICT 36"
 ## [139] "MORTON SCHOOL DISTRICT 214"
 ## [140] "MOSSYROCK SCHOOL DISTRICT 206"
 ## [141] "NAPAVINE SCHOOL DISTRICT 14"
 ## [142] "ONALASKA SCHOOL DISTRICT 300"
 ## [143] "PE ELL SCHOOL DISTRICT 301"
 ## [144] "TOLEDO SCHOOL DISTRICT 237"
 ## [145] "WHITE PASS SCHOOL DISTRICT 303"
 ## [146] "WINLOCK SCHOOL DISTRICT 232"
 ## [147] "ALMIRA SCHOOL DISTRICT 17"
 ## [148] "CRESTON CONSOLIDATED SCHOOL DISTRICT 73"
 ## [149] "DAVENPORT SCHOOL DISTRICT 207"
 ## [150] "HARRINGTON SCHOOL DISTRICT 204"

[151] "ODESSA SCHOOL DISTRICT 105-157-166J"
 ## [152] "REARDAN-EDWALL SCHOOL DISTRICT 9"
 ## [153] "SPRAGUE CONSOLIDATED SCHOOL DISTRICT 8"
 ## [154] "WILBUR CONSOLIDATED SCHOOL DISTRICT 200"
 ## [155] "NORTH MASON SCHOOL DISTRICT 403"
 ## [156] "GRAPEVIEW SCHOOL DISTRICT 54"
 ## [157] "HOOD CANAL CONSOLIDATED SCHOOL DISTRICT 404"
 ## [158] "MARY M KNIGHT SCHOOL DISTRICT 311"
 ## [159] "PIONEER SCHOOL DISTRICT 402"
 ## [160] "SHELTON SCHOOL DISTRICT 309"
 ## [161] "SOUTHSIDE SCHOOL DISTRICT 42"
 ## [162] "BREWSTER SCHOOL DISTRICT 111"
 ## [163] "NESPELEM SCHOOL DISTRICT 14"
 ## [164] "OKANOGAN SCHOOL DISTRICT 105"
 ## [165] "OMAK SCHOOL DISTRICT 19"
 ## [166] "OROVILLE SCHOOL DISTRICT 410"
 ## [167] "PATEROS SCHOOL DISTRICT 122"
 ## [168] "TONASKET SCHOOL DISTRICT 404"
 ## [169] "METHOW VALLEY SCHOOL DISTRICT 350"
 ## [170] "OCEAN BEACH SCHOOL DISTRICT 101"
 ## [171] "NASELLE GRAYS RIVER VALLEY SCHOOL DISTRICT 155"
 ## [172] "NORTH RIVER SCHOOL DISTRICT 200"
 ## [173] "RAYMOND SCHOOL DISTRICT 116"
 ## [174] "SOUTH BEND SCHOOL DISTRICT 118"
 ## [175] "WILLAPA VAL SCHOOL DISTRICT 160"
 ## [176] "CUSICK CONSOLIDATED SCHOOL DISTRICT 59"
 ## [177] "NEWPORT SCHOOL DISTRICT 56-415"
 ## [178] "SELKIRK SCHOOL DISTRICT 70"
 ## [179] "BETHEL SCHOOL DISTRICT 403"
 ## [180] "CARBONADO SCHOOL DISTRICT 19"
 ## [181] "CLOVER PARK SCHOOL DISTRICT 400"
 ## [182] "DIERINGER SCHOOL DISTRICT 343"
 ## [183] "EATONVILLE SCHOOL DISTRICT 404"
 ## [184] "FIFE SCHOOL DISTRICT 417"
 ## [185] "FRANKLIN PIERCE SCHOOL DISTRICT 402"
 ## [186] "ORTING SCHOOL DISTRICT 344"
 ## [187] "PENINSULA SCHOOL DISTRICT 401"
 ## [188] "PUYALLUP SCHOOL DISTRICT 3"
 ## [189] "STEILACOOM HISTORICAL SCHOOL DISTRICT 1"
 ## [190] "SUMNER SCHOOL DISTRICT 320"
 ## [191] "TACOMA SCHOOL DISTRICT 10"
 ## [192] "UNIVERSITY PLACE SCH DIST 83"
 ## [193] "WHITE RIVER SCHOOL DISTRICT 416"
 ## [194] "LOPEZ ISLAND SCHOOL DISTRICT 144"
 ## [195] "ORCAS ISLAND SCHOOL DISTRICT 137"
 ## [196] "SAN JUAN ISLAND SCHOOL DISTRICT 149"
 ## [197] "SHAW ISLAND SCHOOL DISTRICT 10"
 ## [198] "ANACORTES SCHOOL DISTRICT 103"
 ## [199] "BURLINGTON EDISON SCHOOL DISTRICT 100"
 ## [200] "CONCRETE SCHOOL DISTRICT 11"
 ## [201] "CONWAY SCHOOL DISTRICT 317"
 ## [202] "LA CONNER SCHOOL DISTRICT 311"
 ## [203] "MT VERNON SCHOOL DISTRICT 320"
 ## [204] "SEDRO WOOLLEY SCHOOL DISTRICT 101"

[205] "NORTHWEST EDUCATIONAL SERVICE DISTRICT 189"
[206] "MILL A SCHOOL DISTRICT 31"
[207] "MT PLEASANT SCHOOL DISTRICT 29-93"
[208] "SKAMANIA SCHOOL DISTRICT 2"
[209] "STEVENSON-CARSON SCHOOL DISTRICT 303"
[210] "ARLINGTON SCHOOL DISTRICT 16"
[211] "DARRINGTON CONSOLIDATED SCHOOL DISTRICT 330"
[212] "EDMONDS SCHOOL DISTRICT 15"
[213] "EVERETT SCHOOL DISTRICT 2"
[214] "GRANITE FALLS SCHOOL DISTRICT 332"
[215] "INDEX SCHOOL DISTRICT 63"
[216] "LAKE STEVENS SCHOOL DISTRICT 4"
[217] "LAKEWOOD SCHOOL DISTRICT 306"
[218] "MARYSVILLE SCHOOL DISTRICT 25"
[219] "MONROE SCHOOL DISTRICT 103"
[220] "MUKILTEO SCHOOL DISTRICT 6"
[221] "SNOHOMISH SCHOOL DISTRICT 201"
[222] "SULTAN SCHOOL DISTRICT 311"
[223] "STANWOOD SCHOOL DISTRICT 401"
[224] "CENTRAL VALLEY SCHOOL DISTRICT 356"
[225] "CHENEY SCHOOL DISTRICT 360"
[226] "DEER PARK SCHOOL DISTRICT 414"
[227] "LIBERTY SCHOOL DISTRICT 362"
[228] "FREEMAN SCHOOL DISTRICT 358"
[229] "MEAD CONSOLIDATED SCHOOL DISTRICT 354"
[230] "MEDICAL LAKE SCHOOL DISTRICT 326"
[231] "NINE MILE FALLS SCHOOL DISTRICT 325"
[232] "ORCHARD PRAIRIE SCHOOL DISTRICT 123"
[233] "RIVERSIDE SCHOOL DISTRICT 416"
[234] "SPOKANE SCHOOL DISTRICT 81"
[235] "WEST VALLEY SCHOOL DISTRICT 363"
[236] "EDUCATIONAL SERVICE DISTRICT 101"
[237] "EAST VALLEY SCHOOL DISTRICT 361"
[238] "GREAT NORTHERN SCHOOL DISTRICT 312"
[239] "CHEWELAH SCHOOL DISTRICT 36"
[240] "COLVILLE SCHOOL DISTRICT 115"
[241] "COLUMBIA SCHOOL DISTRICT 206"
[242] "EVERGREEN SCHOOL DISTRICT 205"
[243] "KETTLE FALLS SCHOOL DISTRICT 212"
[244] "LOON LAKE SCHOOL DISTRICT 183"
[245] "NORTHPORT SCHOOL DISTRICT 211"
[246] "ONION CREEK SCHOOL DISTRICT 30"
[247] "MARY WALKER SCHOOL DISTRICT 207"
[248] "SUMMIT VALLEY SCHOOL DISTRICT 202"
[249] "VALLEY SCHOOL DISTRICT 70"
[250] "WELLPINIT SCHOOL DISTRICT 49"
[251] "GRIFFIN SCHOOL DISTRICT 324"
[252] "NORTH THURSTON SCHOOL DISTRICT 3"
[253] "OLYMPIA SCHOOL DISTRICT 111"
[254] "RAINIER SCHOOL DISTRICT 307"
[255] "ROCHESTER SCHOOL DISTRICT 401"
[256] "TENINO SCHOOL DISTRICT 402"
[257] "TUMWATER SCHOOL DISTRICT 33"
[258] "YELM SCHOOL DISTRICT 2"


```
## [259] "EDUCATIONAL SERVICE DISTRICT 113"
## [260] "WAHKIAKUM SCHOOL DISTRICT 200"
## [261] "COLLEGE PLACE SCHOOL DISTRICT 250"
## [262] "COLUMBIA SCHOOL DISTRICT 400"
## [263] "DIXIE SCHOOL DISTRICT 101"
## [264] "PRESCOTT SCHOOL DISTRICT 402 37"
## [265] "TOUCHET SCHOOL DISTRICT 300"
## [266] "WAITSBURG SCHOOL DISTRICT 401-100"
## [267] "WALLA WALLA SCHOOL DISTRICT 140"
## [268] "EDUCATIONAL SERVICE DISTRICT 123"
## [269] "BELLINGHAM SCHOOL DISTRICT 501"
## [270] "BLAINE SCHOOL DISTRICT 503"
## [271] "FERNDAL SCHOOL DISTRICT 502"
## [272] "LYNDEN SCHOOL DISTRICT 504"
## [273] "MERIDIAN SCHOOL DISTRICT 505"
## [274] "MOUNT BAKER SCHOOL DISTRICT 507"
## [275] "NOOKSACK VALLEY SCHOOL DISTRICT 506"
## [276] "COLFAX SCHOOL DISTRICT 300"
## [277] "COLTON SCHOOL DISTRICT 306"
## [278] "ENDICOTT SCHOOL DISTRICT 308"
## [279] "GARFIELD SCHOOL DISTRICT 302"
## [280] "LACROSSE SCHOOL DISTRICT 126"
## [281] "LAMONT SCHOOL DISTRICT 264"
## [282] "OAKESDALE SCHOOL DISTRICT 324"
## [283] "PALOUSE SCHOOL DISTRICT 301"
## [284] "PULLMAN SCHOOL DISTRICT 267"
## [285] "ROSALIA SCHOOL DISTRICT 320"
## [286] "ST JOHN SCHOOL DISTRICT 322"
## [287] "STEPTOE SCHOOL DISTRICT 304"
## [288] "TEKOA SCHOOL DISTRICT 265"
## [289] "GRANDVIEW SCHOOL DISTRICT 116-200"
## [290] "GRANGER SCHOOL DISTRICT 204"
## [291] "HIGHLAND SCHOOL DISTRICT 203"
## [292] "MABTON SCHOOL DISTRICT 120"
## [293] "EAST VALLEY SCHOOL DISTRICT 90"
## [294] "NACHES VALLEY JOINT SCHOOL DISTRICT 3"
## [295] "SELAH SCHOOL DISTRICT 119"
## [296] "SUNNYSIDE SCHOOL DISTRICT 201"
## [297] "TOPPENISH SCHOOL DISTRICT 202"
## [298] "UNION GAP SCHOOL DISTRICT 2"
## [299] "WAPATO SCHOOL DISTRICT 207"
## [300] "WEST VALLEY SCHOOL DISTRICT 208"
## [301] "YAKIMA SCHOOL DISTRICT 7"
## [302] "ZILLAH SCHOOL DISTRICT 205"
## [303] "EDUCATIONAL SERVICE DISTRICT 105"
## [304] "MOUNT ADAMS SCHOOL DISTRICT 209"
```

Next remove the unnecessary numbers

```
library(stringr)
```

```
## Warning: package 'stringr' was built under R version 3.4.3
```

```
(WData$NAMEbad=unlist(lapply(WData$NAME,word,-1)))
```

```
##      [1] "122"           "158"           "163-55"        "160-67"
```

##	[5]	"109-43"	"420"	"J250-185"	"17"
##	[9]	"52"	"50"	"116"	"400"
##	[13]	"53"	"222"	"129"	"127"
##	[17]	"19"	"228"	"69"	"246"
##	[21]	"DISTRICT"	"401"	"313"	"121"
##	[25]	"DISTRICT"	"323"	"119"	"117"
##	[29]	"114"	"103"	"98"	"101"
##	[33]	"122"	"37"	"112-6"	"112"
##	[37]	"2"	"35"	"401"	"402"
##	[41]	"458"	"122"	"130"	"404"
##	[45]	"75"	"206"	"207"	"13"
##	[49]	"102"	"209"	"50"	"70"
##	[53]	"3"	"65"	"309"	"56"
##	[57]	"1"	"54"	"J51-162"	"110"
##	[61]	"151"	"165"	"301J"	"160"
##	[65]	"161"	"144-101"	"156"	"146-161"
##	[69]	"202"	"73"	"5"	"99"
##	[73]	"68"	"28"	"65"	"66"
##	[77]	"400"	"172"	"97"	"104"
##	[81]	"77"	"117"	"64"	"204"
##	[85]	"201"	"206"	"46"	"49"
##	[89]	"50"	"20"	"48"	"408"
##	[93]	"405"	"417"	"216"	"210"
##	[97]	"401"	"411"	"415"	"414"
##	[101]	"407"	"400"	"403"	"1"
##	[105]	"412"	"404"	"410"	"406"
##	[109]	"409"	"402"	"DISTRICT"	"303"
##	[113]	"C"	"401"	"400"	"402"
##	[117]	"114"	"404"	"7"	"28"
##	[121]	"401"	"403"	"400"	"203"
##	[125]	"215"	"401"	"404"	"402"
##	[129]	"406"	"403"	"400"	"405-17"
##	[133]	"94"	"226"	"234"	"401"
##	[137]	"302"	"36"	"214"	"206"
##	[141]	"14"	"300"	"301"	"237"
##	[145]	"303"	"232"	"17"	"73"
##	[149]	"207"	"204"	"105-157-166J"	"9"
##	[153]	"8"	"200"	"403"	"54"
##	[157]	"404"	"311"	"402"	"309"
##	[161]	"42"	"111"	"14"	"105"
##	[165]	"19"	"410"	"122"	"404"
##	[169]	"350"	"101"	"155"	"200"
##	[173]	"116"	"118"	"160"	"59"
##	[177]	"56-415"	"70"	"403"	"19"
##	[181]	"400"	"343"	"404"	"417"
##	[185]	"402"	"344"	"401"	"3"
##	[189]	"1"	"320"	"10"	"83"
##	[193]	"416"	"144"	"137"	"149"
##	[197]	"10"	"103"	"100"	"11"
##	[201]	"317"	"311"	"320"	"101"
##	[205]	"189"	"31"	"29-93"	"2"
##	[209]	"303"	"16"	"330"	"15"
##	[213]	"2"	"332"	"63"	"4"
##	[217]	"306"	"25"	"103"	"6"

```
## [221] "201"      "311"      "401"      "356"
## [225] "360"      "414"      "362"      "358"
## [229] "354"      "326"      "325"      "123"
## [233] "416"      "81"       "363"      "101"
## [237] "361"      "312"      "36"       "115"
## [241] "206"      "205"      "212"      "183"
## [245] "211"      "30"       "207"      "202"
## [249] "70"       "49"       "324"      "3"
## [253] "111"      "307"      "401"      "402"
## [257] "33"       "2"        "113"      "200"
## [261] "250"      "400"      "101"      "37"
## [265] "300"      "401-100"  "140"      "123"
## [269] "501"      "503"      "502"      "504"
## [273] "505"      "507"      "506"      "300"
## [277] "306"      "308"      "302"      "126"
## [281] "264"      "324"      "301"      "267"
## [285] "320"      "322"      "304"      "265"
## [289] "116-200"  "204"      "203"      "120"
## [293] "90"       "3"        "119"      "201"
## [297] "202"      "2"        "207"      "208"
## [301] "7"        "205"      "105"      "209"
```

Conintue with the rest of data cleaning.

```
WData$NAMEOK=NA
for (pos in 1:nrow(WData)){
  if (WData$NAMEbad[pos]!="DISTRICT"){
    cleanValue=sub(WData$NAMEbad[pos],',',WData$NAME[pos])
    WData$NAMEOK[pos]=trimws(cleanValue)
  }else{WData$NAMEOK[pos]=WData$NAME[pos]}}
```

```
table(unlist(lapply(WData$NAMEOK,word,-1)))
```

```
##
##      147      167      402      C      DIST DISTRICT
##      1       1       1       1       2       298
```

```
WData[word(WData$NAMEOK,-1)=='DIST',]
```

```
##          STATE          NAME YRDATA TOTALREV TFEDREV TSTREV
## 15 Washington LAKE CHELAN SCH DIST 129  2015   18058   1502 11433
## 192 Washington UNIVERSITY PLACE SCH DIST 83  2015   64898   3559 39937
##          TLOCREV TOTALEXP TCURELSC TCURINST TCURSSVC TCUROTH NONELSEC TCAPOUT
## 15      5123    19158    16240     9258    6039     943      9    2885
## 192    21402    60766    56274    31799    21704    2771      0    1355
##          NAMEbad          NAMEOK
## 15      129 LAKE CHELAN SCH DIST
## 192     83 UNIVERSITY PLACE SCH DIST
```

```
WData$NAMEbad=unlist(lapply(WData$NAMEOK,word,-1))
```

```
for (pos in 1:nrow(WData)){
  if (WData$NAMEbad[pos]=='DIST'){
    cleanValue=sub("DIST", 'DISTRICT', WData$NAMEOK[pos])
    WData$NAMEOK[pos]=trimws(cleanValue)}}}
```

```

table(unlist(lapply(WAData$NAMEOK,word,-1)))

##
##      147      167      402      C DISTRICT
##      1       1       1       1       300

(lastBad=names(table(unlist(lapply(WAData$NAMEOK,word,-1))))[-c(4,5)])

## [1] "147" "167" "402"

for (pos in 1:nrow(WAData)){
  if (WAData$NAMEbad[pos]%in% lastBad){
    cleanValue=sub(WAData$NAMEbad[pos],',',WAData$NAMEOK[pos])
    WAData$NAMEOK[pos]=trimws(cleanValue) }}

table(unlist(lapply(WAData$NAMEOK,word,-1)))

##
##      C DISTRICT
##      1       303

WAData[word(WAData$NAMEOK,-1)=='C',]

##      STATE      NAME YRDATA TOTALREV TFEDREV
## 113 Washington BREMERTON SCHOOL DISTRICT 100 C 2015 65743 6250
##      TSTREV TLOCREV TOTALEXP TCURELSC TCURINST TCURSSVC TCUROTH NONELSEC
## 113 40421 19072 61934 56699 32267 22048 2384 599
##      TCAPOUT NAMEbad      NAMEOK
## 113 2811 C BREMERTON SHOOL DISTRICT 100 C

WAData[word(WAData$NAMEOK,-1)=='C',]$NAMEOK='BREMERTON SCHOOL DISTRICT'

table(unlist(lapply(WAData$NAMEOK,word,-1)))

##
## DISTRICT
##      304

length(WAData$NAMEOK)

## [1] 304

length(unique(WAData$NAMEOK))

## [1] 296

names(WAData)

## [1] "STATE" "NAME" "YRDATA" "TOTALREV" "TFEDREV" "TSTREV"
## [7] "TLOCREV" "TOTALEXP" "TCURELSC" "TCURINST" "TCURSSVC" "TCUROTH"
## [13] "NONELSEC" "TCAPOUT" "NAMEbad" "NAMEOK"

numericColumns =names(WAData)[4:14]
aggregateBY='NAMEOK'
(cleanWA=aggregate(WAData[,numericColumns], by=list(WAData[,aggregateBY]), sum ))

```

Merging the Data

As the Enrollment and Drop Out Rate datasets both had district codes, merge via “District Code”.

```
gradenr=merge(EnrollmentWA,DropOut,by.x='District Code',by.y="District Code" )
```

```
DropOutData <- merge(DropOut, EnrollmentWA, by="District Code")
```

As the Financials and the new datasets both had district codes, merge via “District Name”.

```
FullData <- merge(WAFinance1, DropOutData, by="District Name")
```

Now we can take a look at the data frame variable.

```
str(FullData)
```

```
## 'data.frame': 210 obs. of 27 variables:
## $ District Name : chr "Aberdeen School District" "Adna School District" "A
## $ State.x : chr "Washington" "Washington" "Washington" "Washington"
## $ Year : num 2015 2015 2015 2015 2015 ...
## $ Total Revenue : num 42595 6316 33541 60963 207809 ...
## $ State Revenue : num 28758 4670 18256 38934 127492 ...
## $ Local Revenue : num 9145 1140 13808 19327 65340 ...
## $ District Code : chr "14005" "21226" "29103" "31016" ...
## $ Adjusted 5-Year Cohort Graduation Rate: chr "77.685950413223139" "91.11111111111114" "87.053571
## $ Cohort dropout rate : chr "16.528925619834713" "8.8888888888888893" "10.714285
## $ School Year : num 2015 2015 2015 2015 2015 ...
## $ State.y : chr "WA" "WA" "WA" "WA" ...
## $ K-12 Total : num 3221 608 2721 5479 15222 ...
## $ PK Total : num 49 4 31 56 226 49 87 118 68 243 ...
## $ Full K Total : num 266 0 192 71 1200 ...
## $ Half K Total : num 0 42 4 285 16 ...
## $ Gr 1 Total : num 265 47 210 368 1202 ...
## $ Gr 2 Total : num 264 34 218 424 1181 ...
## $ Gr 3 Total : num 257 42 196 397 1134 ...
## $ Gr 4 Total : num 202 35 209 392 1157 ...
## $ Gr 5 Total : num 236 42 185 424 1122 ...
## $ Gr 6 Total : num 240 51 218 411 1058 ...
## $ Gr 7 Total : num 217 47 222 440 1090 ...
## $ Gr 8 Total : num 235 56 202 437 1085 ...
## $ Gr 9 Total : num 248 48 189 436 1278 ...
## $ Gr 10 Total : num 266 61 214 443 1168 ...
## $ Gr 11 Total : num 227 60 235 475 1205 ...
## $ Gr 12 Total : num 298 43 227 476 1326 ...
```

Now we can look at a summary of the data.

```
summary(FullData)
```

```
## District Name      State.x      Year      Total Revenue
## Length:210      Length:210      Min.   :2015      Min.   : 1694
## Class :character  Class :character  1st Qu.:2015      1st Qu.: 7496
## Mode  :character  Mode  :character  Median :2015      Median : 17644
##                                     Mean  :2015      Mean   : 52931
##                                     3rd Qu.:2015      3rd Qu.: 53008
##                                     Max.   :2015      Max.   :415924
## State Revenue      Local Revenue      District Code
## Min.   : 504      Min.   : 74      Length:210
## 1st Qu.: 4841      1st Qu.: 1541      Class :character
## Median : 12090      Median : 3850      Mode  :character
## Mean   : 32659      Mean   : 16428
```

```

## 3rd Qu.: 36285    3rd Qu.: 16189
## Max.    :263848    Max.    :169681
## Adjusted 5-Year Cohort Graduation Rate Cohort dropout rate School Year
## Length:210                                Length:210                Min.    :2015
## Class :character                            Class :character            1st Qu.:2015
## Mode  :character                            Mode  :character            Median :2015
##                                           Mean    :2015
##                                           3rd Qu.:2015
##                                           Max.    :2015
## State.y          K-12 Total          PK Total          Full K Total
## Length:210      Min.    : 44.0      Min.    : 0.0      Min.    : 0.00
## Class :character 1st Qu.: 566.2      1st Qu.: 5.0      1st Qu.: 14.25
## Mode  :character Median : 1521.5      Median : 17.0      Median : 60.50
##                               Mean    : 4208.6      Mean    : 51.0      Mean    : 214.14
##                               3rd Qu.: 4400.2      3rd Qu.: 55.5      3rd Qu.: 196.25
##                               Max.    :29851.0      Max.    :464.0      Max.    :2479.00
## Half K Total      Gr 1 Total          Gr 2 Total          Gr 3 Total
## Min.    : 0.00      Min.    : 0.00      Min.    : 2.0      Min.    : 1.00
## 1st Qu.: 0.00      1st Qu.: 41.25      1st Qu.: 39.0      1st Qu.: 39.25
## Median : 2.00      Median : 106.50      Median : 108.0      Median : 105.00
## Mean    : 104.80      Mean    : 330.68      Mean    : 330.5      Mean    : 321.32
## 3rd Qu.: 77.75      3rd Qu.: 352.75      3rd Qu.: 341.2      3rd Qu.: 348.00
## Max.    :2005.00      Max.    :2567.00      Max.    :2573.0      Max.    :2445.00
## Gr 4 Total      Gr 5 Total          Gr 6 Total          Gr 7 Total
## Min.    : 1.0      Min.    : 3.0      Min.    : 0.0      Min.    : 0.00
## 1st Qu.: 40.0      1st Qu.: 39.5      1st Qu.: 41.0      1st Qu.: 39.25
## Median : 108.5      Median : 106.0      Median : 117.5      Median : 115.00
## Mean    : 314.5      Mean    : 315.2      Mean    : 312.7      Mean    : 311.75
## 3rd Qu.: 342.2      3rd Qu.: 342.2      3rd Qu.: 350.8      3rd Qu.: 349.25
## Max.    :2266.0      Max.    :2252.0      Max.    :2225.0      Max.    :2227.00
## Gr 8 Total      Gr 9 Total          Gr 10 Total         Gr 11 Total
## Min.    : 2.0      Min.    : 1.00      Min.    : 1.0      Min.    : 1.00
## 1st Qu.: 42.0      1st Qu.: 41.25      1st Qu.: 44.0      1st Qu.: 39.25
## Median : 125.0      Median : 128.50      Median : 125.0      Median : 124.50
## Mean    : 319.2      Mean    : 335.70      Mean    : 328.0      Mean    : 324.31
## 3rd Qu.: 362.5      3rd Qu.: 388.75      3rd Qu.: 369.8      3rd Qu.: 381.50
## Max.    :2200.0      Max.    :2489.00      Max.    :2238.0      Max.    :2107.00
## Gr 12 Total
## Min.    : 2.00
## 1st Qu.: 40.25
## Median : 125.50
## Mean    : 345.78
## 3rd Qu.: 415.50
## Max.    :2330.00

```

Now we see if the updated data set has any missing values.

```
table(is.na(FullData))
```

```

##
## FALSE
## 5670

```

Now let's remove NA's.

```
FullData <- na.omit(FullData)
```

Perfect, and now I want to set the graduation and dropout rates to numeric values.

```
FullData$`Adjusted 5-Year Cohort Graduation Rate` <- as.numeric(as.character(FullData$`Adjusted 5-Year Cohort Graduation Rate`))
```

```
## Warning: NAs introduced by coercion
```

```
FullData$`Cohort dropout rate` <- as.numeric(as.character(FullData$`Cohort dropout rate`))
```

```
## Warning: NAs introduced by coercion
```

Good, no missing values. Now let's see which districts have the highest and lowest Local, State, and Total Revenues

```
FullData[which.max(FullData$`State Revenue`),]
```

```
##           District Name      State.x Year Total Revenue State Revenue
## 170 Spokane School District Washington 2015      403857      263848
##      Local Revenue District Code Adjusted 5-Year Cohort Graduation Rate
## 170      105747      32081      86.41783
##      Cohort dropout rate School Year State.y K-12 Total PK Total
## 170      11.76776      2015      WA      29851      464
##      Full K Total Half K Total Gr 1 Total Gr 2 Total Gr 3 Total Gr 4 Total
## 170      2479      76      2544      2559      2394      2266
##      Gr 5 Total Gr 6 Total Gr 7 Total Gr 8 Total Gr 9 Total Gr 10 Total
## 170      2192      2225      2227      2200      2254      2169
##      Gr 11 Total Gr 12 Total
## 170      2107      2159
```

```
FullData[which.max(FullData$`Total Revenue`),]
```

```
##           District Name      State.x Year Total Revenue State Revenue
## 175 Tacoma School District Washington 2015      415924      223785
##      Local Revenue District Code Adjusted 5-Year Cohort Graduation Rate
## 175      154048      27010      82.46753
##      Cohort dropout rate School Year State.y K-12 Total PK Total
## 175      15.36797      2015      WA      29144      264
##      Full K Total Half K Total Gr 1 Total Gr 2 Total Gr 3 Total Gr 4 Total
## 175      1799      657      2567      2573      2445      2266
##      Gr 5 Total Gr 6 Total Gr 7 Total Gr 8 Total Gr 9 Total Gr 10 Total
## 175      2223      1996      2085      1998      2124      2080
##      Gr 11 Total Gr 12 Total
## 175      2001      2330
```

```
FullData[which.max(FullData$`Local Revenue`),]
```

```
##           District Name      State.x Year Total Revenue State Revenue
## 8 Bellevue School District Washington 2015      307196      127047
##      Local Revenue District Code Adjusted 5-Year Cohort Graduation Rate
## 8      169681      17405      94.89933
##      Cohort dropout rate School Year State.y K-12 Total PK Total Full K Total
## 8      4.295302      2015      WA      19362      118      93
##      Half K Total Gr 1 Total Gr 2 Total Gr 3 Total Gr 4 Total Gr 5 Total
## 8      1296      1368      1534      1458      1415      1454
##      Gr 6 Total Gr 7 Total Gr 8 Total Gr 9 Total Gr 10 Total Gr 11 Total
## 8      1488      1498      1457      1589      1545      1585
##      Gr 12 Total
```

8 1582

```
FullData[which.min(FullData$`State Revenue`),]
```

```
##           District Name      State.x Year Total Revenue
## 205 Wishkah Valley School District Washington 2015      2241
##      State Revenue Local Revenue District Code
## 205          504          1634          14117
##      Adjusted 5-Year Cohort Graduation Rate Cohort dropout rate School Year
## 205                                95.2381              4.761905      2015
##      State.y K-12 Total PK Total Full K Total Half K Total Gr 1 Total
## 205      WA          148          0          9          0          10
##      Gr 2 Total Gr 3 Total Gr 4 Total Gr 5 Total Gr 6 Total Gr 7 Total
## 205          9          8          14          13          19          16
##      Gr 8 Total Gr 9 Total Gr 10 Total Gr 11 Total Gr 12 Total
## 205          6          8          13          9          14
```

```
FullData[which.min(FullData$`Total Revenue`),]
```

```
##           District Name      State.x Year Total Revenue
## 112 North River School District Washington 2015      1694
##      State Revenue Local Revenue District Code
## 112          1554          89          25200
##      Adjusted 5-Year Cohort Graduation Rate Cohort dropout rate School Year
## 112                                NA              NA      2015
##      State.y K-12 Total PK Total Full K Total Half K Total Gr 1 Total
## 112      WA          52          0          0          5          0
##      Gr 2 Total Gr 3 Total Gr 4 Total Gr 5 Total Gr 6 Total Gr 7 Total
## 112          3          4          1          3          2          6
##      Gr 8 Total Gr 9 Total Gr 10 Total Gr 11 Total Gr 12 Total
## 112          3          7          3          10          5
```

```
FullData[which.min(FullData$`Local Revenue`),]
```

```
##           District Name      State.x Year Total Revenue State Revenue
## 206 Wishram School District Washington 2015      1898      1701
##      Local Revenue District Code Adjusted 5-Year Cohort Graduation Rate
## 206          74          20094              NA
##      Cohort dropout rate School Year State.y K-12 Total PK Total
## 206              NA      2015      WA          85          1
##      Full K Total Half K Total Gr 1 Total Gr 2 Total Gr 3 Total Gr 4 Total
## 206          7          0          6          5          5          6
##      Gr 5 Total Gr 6 Total Gr 7 Total Gr 8 Total Gr 9 Total Gr 10 Total
## 206          7          8          5          9          8          8
##      Gr 11 Total Gr 12 Total
## 206          4          7
```

Ok, now let's look at the districts with the lowest graduation rates.

```
FullData[which.min(FullData$`Adjusted 5-Year Cohort Graduation Rate`),]
```

```
##           District Name      State.x Year Total Revenue State Revenue
## 166 Soap Lake School District Washington 2015      6389      4429
##      Local Revenue District Code Adjusted 5-Year Cohort Graduation Rate
## 166          1063          13156      38.88889
##      Cohort dropout rate School Year State.y K-12 Total PK Total
## 166      55.55556      2015      WA          440          6
##      Full K Total Half K Total Gr 1 Total Gr 2 Total Gr 3 Total Gr 4 Total
```


## 166	26	0	34	28	33	30
##	Gr 5 Total	Gr 6 Total	Gr 7 Total	Gr 8 Total	Gr 9 Total	Gr 10 Total
## 166	33	29	33	32	39	37
##	Gr 11 Total	Gr 12 Total				
## 166	37	49				

```
FullData[order(FullData$`Adjusted 5-Year Cohort Graduation Rate`),]
```

##		District Name	State.x	Year	Total Revenue
## 166		Soap Lake School District	Washington	2015	6389
## 176		Taholah School District	Washington	2015	4624
## 183		Toppenish School District	Washington	2015	45050
## 121		Okanogan School District	Washington	2015	12532
## 75		Klickitat School District	Washington	2015	3086
## 27		Clarkston School District	Washington	2015	29235
## 101		Mount Adams School District	Washington	2015	13810
## 33		Concrete School District	Washington	2015	7179
## 187		Tukwila School District	Washington	2015	45517
## 117		Oakville School District	Washington	2015	3950
## 178		Tekoa School District	Washington	2015	3245
## 201		Wenatchee School District	Washington	2015	92265
## 193		Wahluke School District	Washington	2015	25240
## 50		Ferndale School District	Washington	2015	57235
## 63		Highline School District	Washington	2015	248401
## 208		Yakima School District	Washington	2015	213556
## 195		Wapato School District	Washington	2015	40180
## 57	Grand Coulee Dam	School District	Washington	2015	12915
## 58	Grandview	School District	Washington	2015	38912
## 84	Lyle	School District	Washington	2015	4350
## 142	Quillayute Valley	School District	Washington	2015	26614
## 83	Longview	School District	Washington	2015	78721
## 128	Othello	School District	Washington	2015	47232
## 105	Newport	School District	Washington	2015	13213
## 19	Castle Rock	School District	Washington	2015	13683
## 181	Toledo	School District	Washington	2015	7878
## 60	Granite Falls	School District	Washington	2015	26846
## 65	Hoquiam	School District	Washington	2015	21174
## 99	Moses Lake	School District	Washington	2015	94144
## 86	Mabton	School District	Washington	2015	10591
## 143	Quincy	School District	Washington	2015	32975
## 119	Ocosta	School District	Washington	2015	9613
## 1	Aberdeen	School District	Washington	2015	42595
## 91	Marysville	School District	Washington	2015	137969
## 130	Pasco	School District	Washington	2015	236614
## 7	Battle Ground	School District	Washington	2015	142945
## 98	Morton	School District	Washington	2015	4898
## 111	North Mason	School District	Washington	2015	25988
## 202	White Pass	School District	Washington	2015	7167
## 22	Centralia	School District	Washington	2015	39625
## 188	Tumwater	School District	Washington	2015	80477
## 190	Vancouver	School District	Washington	2015	269135
## 151	Ritzville	School District	Washington	2015	4769
## 179	Tenino	School District	Washington	2015	12756
## 207	Woodland	School District	Washington	2015	40236
## 107	Nooksack Valley	School District	Washington	2015	19280

## 171	Stevenson-Carson School District	Washington	2015	11197
## 154	Rochester School District	Washington	2015	26046
## 156	Royal School District	Washington	2015	24706
## 5	Auburn School District	Washington	2015	207809
## 49	Federal Way School District	Washington	2015	278629
## 12	Blaine School District	Washington	2015	27894
## 28	Clover Park School District	Washington	2015	194044
## 23	Chehalis School District	Washington	2015	33044
## 138	Prosser School District	Washington	2015	31140
## 9	Bellingham School District	Washington	2015	146654
## 168	South Kitsap School District	Washington	2015	101567
## 14	Bridgeport School District	Washington	2015	8943
## 118	Ocean Beach School District	Washington	2015	15007
## 175	Tacoma School District	Washington	2015	415924
## 147	Renton School District	Washington	2015	218285
## 135	Port Angeles School District	Washington	2015	42680
## 34	Coupeville School District	Washington	2015	11764
## 71	Kennewick School District	Washington	2015	197862
## 32	Colville School District	Washington	2015	19649
## 209	Yelm School District	Washington	2015	61637
## 197	Washougal School District	Washington	2015	36063
## 158	Selah School District	Washington	2015	54181
## 123	Omak School District	Washington	2015	44368
## 39	Eastmont School District	Washington	2015	67670
## 149	Richland School District	Washington	2015	151245
## 124	Onalaska School District	Washington	2015	8519
## 152	Riverside School District	Washington	2015	17210
## 160	Sequim School District	Washington	2015	29253
## 96	Monroe School District	Washington	2015	78025
## 161	Shelton School District	Washington	2015	51449
## 102	Mount Baker School District	Washington	2015	24235
## 25	Chewelah School District	Washington	2015	9527
## 72	Kent School District	Washington	2015	324455
## 46	Enumclaw School District	Washington	2015	48679
## 56	Goldendale School District	Washington	2015	11581
## 26	Chimacum School District	Washington	2015	13555
## 141	Quilcene School District	Washington	2015	5514
## 43	Ellensburg School District	Washington	2015	34769
## 16	Cape Flattery School District	Washington	2015	8808
## 62	Highland School District	Washington	2015	14023
## 59	Granger School District	Washington	2015	17474
## 103	Mukilteo School District	Washington	2015	184170
## 13	Brewster School District	Washington	2015	11581
## 110	North Kitsap School District	Washington	2015	74997
## 45	Entiat School District	Washington	2015	6271
## 145	Raymond School District	Washington	2015	8245
## 4	Arlington School District	Washington	2015	60963
## 170	Spokane School District	Washington	2015	403857
## 169	South Whidbey School District	Washington	2015	17814
## 77	La Conner School District	Washington	2015	13340
## 90	Mary Walker School District	Washington	2015	6322
## 136	Port Townsend School District	Washington	2015	15156
## 42	Edmonds School District	Washington	2015	269240
## 174	Sunnyside School District	Washington	2015	77509

## 53	Franklin Pierce School District	Washington	2015	98705
## 85	Lynden School District	Washington	2015	28724
## 173	Sumner School District	Washington	2015	106380
## 74	Kittitas School District	Washington	2015	7951
## 10	Bethel School District	Washington	2015	228415
## 20	Central Kitsap School District	Washington	2015	140263
## 3	Anacortes School District	Washington	2015	33541
## 51	Fife School District	Washington	2015	41583
## 76	La Center School District	Washington	2015	16020
## 157	San Juan Island School District	Washington	2015	10389
## 133	Peninsula School District	Washington	2015	97503
## 35	Crescent School District	Washington	2015	3380
## 94	Meridian School District	Washington	2015	18976
## 164	Snohomish School District	Washington	2015	129135
## 52	Finley School District	Washington	2015	10780
## 196	Warden School District	Washington	2015	11704
## 80	Lakewood School District	Washington	2015	28273
## 70	Kelso School District	Washington	2015	53366
## 41	Eatonville School District	Washington	2015	21503
## 24	Cheney School District	Washington	2015	51936
## 125	Orcas Island School District	Washington	2015	10345
## 204	Winlock School District	Washington	2015	8093
## 108	North Beach School District	Washington	2015	9115
## 38	Deer Park School District	Washington	2015	27191
## 97	Montesano School District	Washington	2015	15636
## 172	Sultan School District	Washington	2015	21918
## 140	Puyallup School District	Washington	2015	252248
## 92	Medical Lake School District	Washington	2015	21235
## 127	Orting School District	Washington	2015	27091
## 203	White River School District	Washington	2015	45854
## 122	Olympia School District	Washington	2015	124664
## 69	Kalama School District	Washington	2015	8939
## 185	Toutle Lake School District	Washington	2015	6793
## 109	North Franklin School District	Washington	2015	24371
## 162	Shoreline School District	Washington	2015	127624
## 2	Adna School District	Washington	2015	6316
## 100	Mossyrock School District	Washington	2015	7066
## 104	Napavine School District	Washington	2015	8052
## 29	Colfax School District	Washington	2015	7489
## 165	Snoqualmie Valley School District	Washington	2015	76110
## 44	Elma School District	Washington	2015	17451
## 153	Riverview School District	Washington	2015	39050
## 21	Central Valley School District	Washington	2015	146436
## 115	Oak Harbor School District	Washington	2015	63483
## 64	Hockinson School District	Washington	2015	20855
## 191	Vashon Island School District	Washington	2015	22726
## 47	Ephrata School District	Washington	2015	25806
## 167	South Bend School District	Washington	2015	8481
## 132	Pe Ell School District	Washington	2015	4173
## 200	Wellpinit School District	Washington	2015	8603
## 177	Tahoma School District	Washington	2015	99295
## 126	Oroville School District	Washington	2015	7517
## 17	Cascade School District	Washington	2015	15997
## 150	Ridgefield School District	Washington	2015	26791

## 114	Northshore School District	Washington	2015	266155
## 79	Lake Washington School District	Washington	2015	347870
## 67	Issaquah School District	Washington	2015	246417
## 18	Cashmere School District	Washington	2015	17142
## 93	Mercer Island School District	Washington	2015	60785
## 182	Tonasket School District	Washington	2015	12408
## 89	Mary M Knight School District	Washington	2015	3246
## 210	Zillah School District	Washington	2015	14040
## 31	Colton School District	Washington	2015	5808
## 139	Pullman School District	Washington	2015	29734
## 48	Everett School District	Washington	2015	248748
## 194	Waitsburg School District	Washington	2015	4232
## 78	Lake Stevens School District	Washington	2015	90036
## 8	Bellevue School District	Washington	2015	307196
## 205	Wishkah Valley School District	Washington	2015	2241
## 6	Bainbridge Island School District	Washington	2015	50391
## 144	Rainier School District	Washington	2015	9614
## 148	Republic School District	Washington	2015	4368
## 36	Davenport School District	Washington	2015	7780
## 199	Waterville School District	Washington	2015	4288
## 15	Camas School District	Washington	2015	78015
## 95	Methow Valley School District	Washington	2015	7969
## 106	Nine Mile Falls School District	Washington	2015	16573
## 73	Kettle Falls School District	Washington	2015	9383
## 134	Pomeroy School District	Washington	2015	5057
## 184	Touchet School District	Washington	2015	4961
## 81	Liberty School District	Washington	2015	6222
## 37	Dayton School District	Washington	2015	6197
## 54	Freeman School District	Washington	2015	10831
## 88	Manson School District	Washington	2015	9465
## 120	Odessa School District	Washington	2015	3799
## 129	Palouse School District	Washington	2015	2736
## 131	Pateros School District	Washington	2015	6284
## 137	Prescott School District	Washington	2015	5016
## 146	Reardan-Edwall School District	Washington	2015	6955
## 155	Rosalia School District	Washington	2015	3886
## 159	Selkirk School District	Washington	2015	4750
## 192	Wahkiakum School District	Washington	2015	5888
## 11	Bickleton School District	Washington	2015	3407
## 30	College Place School District	Washington	2015	24958
## 40	Easton School District	Washington	2015	2666
## 55	Garfield School District	Washington	2015	2519
## 61	Harrington School District	Washington	2015	2485
## 66	Inchelium School District	Washington	2015	4321
## 68	Kahlotus School District	Washington	2015	1973
## 82	Lind School District	Washington	2015	4267
## 87	Mansfield School District	Washington	2015	2123
## 112	North River School District	Washington	2015	1694
## 113	Northport School District	Washington	2015	3411
## 116	Oakesdale School District	Washington	2015	2628
## 163	Skykomish School District	Washington	2015	2158
## 180	Thorp School District	Washington	2015	2499
## 186	Trout Lake School District	Washington	2015	3005
## 189	Valley School District	Washington	2015	10253

## 198	Washtucna School District Washington 2015	2097
## 206	Wishram School District Washington 2015	1898
##	State Revenue Local Revenue District Code	
## 166	4429 1063 13156	
## 176	2371 260 14077	
## 183	35179 2446 39202	
## 121	9160 2083 24105	
## 75	2245 162 20402	
## 27	20690 5895 02250	
## 101	7857 916 39209	
## 33	4703 1741 29011	
## 187	22232 17736 17406	
## 117	2629 410 14400	
## 178	2651 434 38265	
## 201	63995 19520 04246	
## 193	18237 2976 13073	
## 50	34794 18541 37502	
## 63	144694 79360 17401	
## 208	163171 25149 39007	
## 195	29194 2686 39207	
## 57	9170 1458 13301	
## 58	29943 3671 39200	
## 84	2621 1213 20406	
## 142	23046 2097 05402	
## 83	48576 23504 08122	
## 128	36654 5950 01147	
## 105	8429 2784 26056	
## 19	9950 2610 08401	
## 181	5917 1300 21237	
## 60	16617 9026 31332	
## 65	13780 5043 14028	
## 99	67763 19759 13161	
## 86	8365 555 39120	
## 143	21080 8698 13144	
## 119	5125 3605 14172	
## 1	28758 9145 14005	
## 91	88554 39642 31025	
## 130	182516 38391 11001	
## 7	97371 38527 06119	
## 98	3120 1269 21214	
## 111	16153 8080 23403	
## 202	3776 2838 21303	
## 22	28855 6790 21401	
## 188	48414 28590 34033	
## 190	172414 78524 06037	
## 151	2768 1743 01160	
## 179	8515 3387 34402	
## 207	30099 8514 08404	
## 107	12655 5116 37506	
## 171	6565 2656 30303	
## 154	18019 6281 34401	
## 156	19780 2887 13160	
## 5	127492 65340 17408	
## 49	168792 89037 17210	

## 12	15314	11008	37503
## 28	111752	30739	27400
## 23	23074	7486	21302
## 138	23489	4611	03116
## 9	79572	59434	37501
## 168	68533	26519	18402
## 14	6973	518	09075
## 118	7882	6131	25101
## 175	223785	154048	27010
## 147	109635	92672	17403
## 135	28289	10840	05121
## 34	6290	4915	15204
## 71	144979	38419	03017
## 32	14651	3283	33115
## 209	40955	16656	34002
## 197	22639	11506	06112
## 158	43294	8259	39119
## 123	38108	3250	24019
## 39	45347	16078	09206
## 149	103767	38583	03400
## 124	6091	1520	21300
## 152	12016	3795	32416
## 160	19701	7593	05323
## 96	50585	24522	31103
## 161	34342	13040	23309
## 102	14596	7626	37507
## 25	7021	1480	33036
## 72	193893	106928	17415
## 46	29386	16818	17216
## 56	6915	3715	20404
## 26	7939	4701	16049
## 141	4356	852	16048
## 43	21454	10931	19401
## 16	5146	895	05401
## 62	10039	2424	39203
## 59	13435	1125	39204
## 103	112858	60165	31006
## 13	7945	1356	24111
## 110	42129	28140	18400
## 45	4673	1194	04127
## 145	5704	1913	25116
## 4	38934	19327	31016
## 170	263848	105747	32081
## 169	10397	6579	15206
## 77	6432	3833	29311
## 90	4824	726	33207
## 136	8506	5323	16050
## 42	145808	111061	31015
## 174	60825	3261	39201
## 53	60933	28536	27402
## 85	20198	6676	37504
## 173	61838	39157	27320
## 74	5166	2314	19403
## 10	152462	62230	27403

## 20	82894	37549	18401
## 3	18256	13808	29103
## 51	24361	14648	27417
## 76	10918	4771	06101
## 157	5907	4001	28149
## 133	61804	31716	27401
## 35	2456	591	05313
## 94	12163	5791	37505
## 164	71637	52797	31201
## 52	7666	2128	03053
## 196	8077	2133	13146
## 80	16421	10714	31306
## 70	37707	11425	08458
## 41	13235	7205	27404
## 24	32349	15594	32360
## 125	6328	3571	28137
## 204	5712	1515	21232
## 108	5188	3320	14064
## 38	19671	5887	32414
## 97	9664	5050	14066
## 172	15346	5216	31311
## 140	159061	82867	27003
## 92	14481	3299	32326
## 127	17143	8845	27344
## 203	25835	17998	27416
## 122	74176	45223	34111
## 69	5891	2688	08402
## 185	4893	1616	08130
## 109	17647	3750	11051
## 162	67014	55418	17412
## 2	4670	1140	21226
## 100	4670	1790	21206
## 104	5850	1612	21014
## 29	4675	2419	38300
## 165	42096	31870	17410
## 44	12189	3868	14068
## 153	21607	16226	17407
## 21	97279	41439	32356
## 115	39113	15838	15201
## 64	12746	7442	06098
## 191	11302	9627	17402
## 47	18911	4679	13165
## 167	6120	1648	25118
## 132	3032	785	21301
## 200	4992	221	33049
## 177	59707	36095	17409
## 126	4562	2074	24410
## 17	9470	5582	04228
## 150	16768	9409	06122
## 114	141061	114501	17417
## 79	172776	161630	17414
## 67	120607	119613	17411
## 18	11410	4572	04222
## 93	28428	31158	17400

## 182	8996	2041	24404
## 89	2235	736	23311
## 210	10551	2228	39205
## 31	4745	963	38306
## 139	17007	11385	38267
## 48	145326	89368	31002
## 194	2930	1031	36401
## 78	61304	25199	31004
## 8	127047	169681	17405
## 205	504	1634	14117
## 6	25609	22458	18303
## 144	6251	2814	34307
## 148	3049	644	10309
## 36	5309	2026	22207
## 199	2731	1307	09209
## 15	45362	30658	06117
## 95	4816	2731	24350
## 106	11011	4852	32325
## 73	7133	1484	33212
## 134	2933	1807	12110
## 184	3366	1412	36300
## 81	3756	2110	32362
## 37	3908	1905	07002
## 54	6952	3535	32358
## 88	6398	2058	04019
## 120	2546	995	22105
## 129	1981	603	38301
## 131	4072	1736	24122
## 137	3495	1079	36402
## 146	4982	1518	22009
## 155	2441	1156	38320
## 159	2734	1641	26070
## 192	4038	1507	35200
## 11	1743	1603	20203
## 30	18192	5631	36250
## 40	1691	887	19028
## 55	2012	369	38302
## 61	1803	579	22204
## 66	2634	160	10070
## 68	1721	170	11056
## 82	2946	1070	01158
## 87	1828	175	09207
## 112	1554	89	25200
## 113	2593	501	33211
## 116	1910	627	38324
## 163	1501	579	17404
## 180	1645	741	19400
## 186	2283	622	20400
## 189	6634	3204	33070
## 198	1840	201	01109
## 206	1701	74	20094
##	Adjusted 5-Year Cohort Graduation Rate Cohort dropout rate School Year		
## 166		38.88889	55.555556 2015
## 176		54.54545	36.363636 2015

## 183	55.16129	36.774194	2015
## 121	57.54717	32.075472	2015
## 75	64.28571	35.714286	2015
## 27	65.00000	28.750000	2015
## 101	67.56757	25.675676	2015
## 33	68.75000	31.250000	2015
## 187	68.84422	29.145729	2015
## 117	69.23077	23.076923	2015
## 178	70.00000	30.000000	2015
## 201	70.26087	25.739130	2015
## 193	70.86614	26.771654	2015
## 50	72.19101	23.595506	2015
## 63	72.29978	22.556943	2015
## 208	73.47866	24.523161	2015
## 195	73.68421	24.812030	2015
## 57	74.41860	20.930233	2015
## 58	75.00000	20.588235	2015
## 84	75.00000	18.750000	2015
## 142	75.00000	17.708333	2015
## 83	75.15030	18.837675	2015
## 128	75.41667	22.916667	2015
## 105	76.00000	23.000000	2015
## 19	76.31579	20.175439	2015
## 181	76.31579	21.052632	2015
## 60	76.92308	16.410256	2015
## 65	76.98413	22.222222	2015
## 99	77.04348	18.956522	2015
## 86	77.04918	19.672131	2015
## 143	77.24868	22.751323	2015
## 119	77.58621	20.689655	2015
## 1	77.68595	16.528926	2015
## 91	78.38150	17.456647	2015
## 130	78.43719	17.804154	2015
## 7	78.49246	16.984925	2015
## 98	78.57143	21.428571	2015
## 111	78.57143	20.918367	2015
## 202	78.57143	21.428571	2015
## 22	78.62903	18.951613	2015
## 188	79.06198	19.262982	2015
## 190	79.08654	16.766827	2015
## 151	79.31034	20.689655	2015
## 179	79.34783	20.652174	2015
## 207	79.67914	17.112299	2015
## 107	80.35714	16.964286	2015
## 171	80.45977	17.241379	2015
## 154	80.91603	12.977099	2015
## 156	81.13208	16.981132	2015
## 5	81.51042	15.711806	2015
## 49	81.63636	16.060606	2015
## 12	81.69935	16.339869	2015
## 28	81.92771	14.056225	2015
## 23	81.93833	15.418502	2015
## 138	82.05128	14.871795	2015
## 9	82.09607	15.502183	2015

## 168	82.14748	12.807245	2015
## 14	82.25806	16.129032	2015
## 118	82.35294	15.686275	2015
## 175	82.46753	15.367965	2015
## 147	82.54122	14.936954	2015
## 135	82.58065	15.483871	2015
## 34	82.85714	17.142857	2015
## 71	82.98246	14.649123	2015
## 32	83.05085	15.819209	2015
## 209	83.29356	14.319809	2015
## 197	83.33333	15.000000	2015
## 158	83.61345	13.025210	2015
## 123	83.65385	16.346154	2015
## 39	83.67347	14.795918	2015
## 149	83.75000	11.562500	2015
## 124	84.09091	11.363636	2015
## 152	84.09091	12.878788	2015
## 160	84.09091	14.545455	2015
## 96	84.09704	13.746631	2015
## 161	84.25414	13.812155	2015
## 102	84.56790	14.197531	2015
## 25	84.61538	14.102564	2015
## 72	84.71233	12.821918	2015
## 46	84.74576	14.124294	2015
## 56	84.84848	15.151515	2015
## 26	84.88372	15.116279	2015
## 141	85.00000	10.000000	2015
## 43	85.04274	14.102564	2015
## 16	85.29412	11.764706	2015
## 62	85.39326	14.606742	2015
## 59	85.57692	13.461538	2015
## 103	85.63485	10.750695	2015
## 13	85.71429	12.698413	2015
## 110	86.17886	10.772358	2015
## 45	86.20690	13.793103	2015
## 145	86.27451	11.764706	2015
## 4	86.29442	11.421320	2015
## 170	86.41783	11.767755	2015
## 169	86.52482	12.765957	2015
## 77	86.53846	9.615385	2015
## 90	86.53846	13.461538	2015
## 136	86.60714	13.392857	2015
## 42	86.66237	10.695876	2015
## 174	86.66667	11.904762	2015
## 53	86.81733	10.546139	2015
## 85	86.81818	8.636364	2015
## 173	86.90476	10.863095	2015
## 74	86.95652	13.043478	2015
## 10	87.01634	10.748065	2015
## 20	87.02929	10.146444	2015
## 3	87.05357	10.714286	2015
## 51	87.05882	11.372549	2015
## 76	87.12121	11.363636	2015
## 157	87.17949	8.974359	2015

## 133	87.29947	10.695187	2015
## 35	87.50000	12.500000	2015
## 94	87.61905	12.380952	2015
## 164	87.73585	9.080189	2015
## 52	87.80488	12.195122	2015
## 196	88.05970	10.447761	2015
## 80	88.39779	9.944751	2015
## 70	88.49315	10.684932	2015
## 41	88.57143	10.000000	2015
## 24	88.62069	9.655172	2015
## 125	88.88889	7.407407	2015
## 204	89.09091	9.090909	2015
## 108	89.18919	8.108108	2015
## 38	89.37198	10.628019	2015
## 97	89.41176	8.235294	2015
## 172	89.83051	8.474576	2015
## 140	89.91860	8.829054	2015
## 92	89.92806	7.913669	2015
## 127	89.94413	9.497207	2015
## 203	89.96656	8.361204	2015
## 122	89.97253	8.104396	2015
## 69	90.00000	8.750000	2015
## 185	90.56604	7.547170	2015
## 109	90.66667	9.333333	2015
## 162	90.90909	7.451565	2015
## 2	91.11111	8.888889	2015
## 100	91.17647	8.823529	2015
## 104	91.30435	4.347826	2015
## 29	91.48936	8.510638	2015
## 165	91.75532	6.648936	2015
## 44	91.80328	8.196721	2015
## 153	91.82692	6.730769	2015
## 21	91.83908	6.321839	2015
## 115	92.00000	5.230769	2015
## 64	92.12121	7.272727	2015
## 191	92.12598	7.086614	2015
## 47	92.13483	5.617978	2015
## 167	92.50000	5.000000	2015
## 132	92.59259	7.407407	2015
## 200	92.85714	7.142857	2015
## 177	92.94756	5.424955	2015
## 126	93.02326	4.651163	2015
## 17	93.26923	3.846154	2015
## 150	93.28859	5.369128	2015
## 114	93.30176	4.330176	2015
## 79	93.35022	5.256491	2015
## 67	93.36456	5.620609	2015
## 18	93.40659	5.494505	2015
## 93	93.43284	4.179104	2015
## 182	93.47826	6.521739	2015
## 89	93.75000	6.250000	2015
## 210	93.93939	4.040404	2015
## 31	94.11765	0.000000	2015
## 139	94.26752	3.821656	2015

## 48	94.46254	3.338762	2015			
## 194	94.73684	0.000000	2015			
## 78	94.75728	5.242718	2015			
## 8	94.89933	4.295302	2015			
## 205	95.23810	4.761905	2015			
## 6	95.38905	4.034582	2015			
## 144	95.45455	3.030303	2015			
## 148	95.45455	0.000000	2015			
## 36	95.55556	2.222222	2015			
## 199	95.65217	4.347826	2015			
## 15	95.80713	3.563941	2015			
## 95	96.15385	3.846154	2015			
## 106	96.22642	3.773585	2015			
## 73	96.29630	3.703704	2015			
## 134	96.55172	3.448276	2015			
## 184	96.96970	3.030303	2015			
## 81	97.14286	2.857143	2015			
## 37	100.00000	0.000000	2015			
## 54	100.00000	0.000000	2015			
## 88	100.00000	0.000000	2015			
## 120	100.00000	0.000000	2015			
## 129	100.00000	0.000000	2015			
## 131	100.00000	0.000000	2015			
## 137	100.00000	0.000000	2015			
## 146	100.00000	0.000000	2015			
## 155	100.00000	0.000000	2015			
## 159	100.00000	0.000000	2015			
## 192	100.00000	0.000000	2015			
## 11	NA	NA	2015			
## 30	NA	NA	2015			
## 40	NA	NA	2015			
## 55	NA	NA	2015			
## 61	NA	NA	2015			
## 66	NA	NA	2015			
## 68	NA	NA	2015			
## 82	NA	NA	2015			
## 87	NA	NA	2015			
## 112	NA	NA	2015			
## 113	NA	NA	2015			
## 116	NA	NA	2015			
## 163	NA	NA	2015			
## 180	NA	NA	2015			
## 186	NA	NA	2015			
## 189	NA	NA	2015			
## 198	NA	NA	2015			
## 206	NA	NA	2015			
##	State.y	K-12 Total	PK Total	Full K Total	Half K Total	Gr 1 Total
## 166	WA	440	6	26	0	34
## 176	WA	186	3	23	0	11
## 183	WA	4248	52	350	0	320
## 121	WA	1059	14	65	0	68
## 75	WA	80	0	0	2	8
## 27	WA	2639	38	186	0	200
## 101	WA	959	4	81	0	86

## 33	WA	530	3	41	0	28
## 187	WA	3059	0	275	1	241
## 117	WA	224	6	20	0	14
## 178	WA	191	2	8	0	12
## 201	WA	7899	88	593	15	623
## 193	WA	2308	22	197	0	234
## 50	WA	4888	64	345	7	334
## 63	WA	19136	239	1616	0	1721
## 208	WA	15818	285	1338	0	1329
## 195	WA	3326	34	259	1	290
## 57	WA	730	12	48	0	67
## 58	WA	3630	33	320	1	321
## 84	WA	221	3	21	0	17
## 142	WA	3068	15	95	5	79
## 83	WA	6595	124	521	2	550
## 128	WA	4049	48	349	1	397
## 105	WA	1063	17	78	0	61
## 19	WA	1245	10	99	0	114
## 181	WA	732	4	41	0	51
## 60	WA	2041	23	0	133	121
## 65	WA	1646	18	116	0	116
## 99	WA	8221	134	686	0	657
## 86	WA	938	6	89	0	82
## 143	WA	2874	42	249	0	261
## 119	WA	622	2	43	0	42
## 1	WA	3221	49	266	0	265
## 91	WA	11289	148	468	345	961
## 130	WA	16987	118	881	565	1485
## 7	WA	13465	87	124	664	947
## 98	WA	300	6	22	0	14
## 111	WA	2106	53	159	2	144
## 202	WA	415	3	24	0	22
## 22	WA	3628	77	322	2	283
## 188	WA	6153	73	187	198	379
## 190	WA	23294	186	1823	18	1889
## 151	WA	357	7	0	26	26
## 179	WA	1206	18	95	0	86
## 207	WA	2253	14	145	3	154
## 107	WA	1585	41	140	0	148
## 171	WA	941	21	68	0	73
## 154	WA	2217	33	170	1	163
## 156	WA	1660	19	158	0	166
## 5	WA	15222	226	1200	16	1202
## 49	WA	22211	331	1651	0	1799
## 12	WA	2157	49	0	155	160
## 28	WA	12346	337	910	383	1288
## 23	WA	3002	16	189	0	203
## 138	WA	2807	30	209	0	199
## 9	WA	11060	68	791	0	887
## 168	WA	9559	98	537	189	695
## 14	WA	828	14	75	0	87
## 118	WA	986	20	76	0	82
## 175	WA	29144	264	1799	657	2567
## 147	WA	15331	260	1286	48	1338

## 135	WA	3752	52	254	2	293
## 34	WA	909	16	0	49	60
## 71	WA	17187	187	162	1245	1372
## 32	WA	1779	35	118	1	132
## 209	WA	5570	68	416	2	437
## 197	WA	3148	21	222	0	231
## 158	WA	3511	32	261	4	264
## 123	WA	5325	46	151	209	390
## 39	WA	5772	64	417	1	487
## 149	WA	12471	161	70	836	940
## 124	WA	744	9	54	11	55
## 152	WA	1435	15	83	3	93
## 160	WA	2860	52	0	170	197
## 96	WA	7250	62	194	287	469
## 161	WA	4161	107	292	0	259
## 102	WA	1863	32	59	93	151
## 25	WA	856	9	47	0	41
## 72	WA	27439	264	2067	9	2111
## 46	WA	4055	40	4	295	297
## 56	WA	917	9	64	0	59
## 26	WA	1069	16	74	2	72
## 141	WA	332	0	0	10	23
## 43	WA	3102	56	248	6	259
## 16	WA	446	10	30	0	42
## 62	WA	1191	11	81	0	87
## 59	WA	1496	27	120	0	137
## 103	WA	15012	127	0	1078	1231
## 13	WA	980	24	98	0	89
## 110	WA	5997	117	248	180	432
## 45	WA	351	4	31	0	31
## 145	WA	639	6	27	0	48
## 4	WA	5479	56	71	285	368
## 170	WA	29851	464	2479	76	2544
## 169	WA	1463	10	1	77	71
## 77	WA	622	5	0	31	45
## 90	WA	501	3	33	5	31
## 136	WA	1223	17	56	26	88
## 42	WA	20570	340	1037	544	1634
## 174	WA	6615	50	533	21	550
## 53	WA	7500	84	625	2	615
## 85	WA	2886	54	0	221	231
## 173	WA	8914	79	319	323	662
## 74	WA	637	9	46	0	38
## 10	WA	18234	243	1314	85	1460
## 20	WA	10970	116	42	723	839
## 3	WA	2721	31	192	4	210
## 51	WA	3595	57	301	0	268
## 76	WA	1621	10	105	2	108
## 157	WA	795	6	0	48	43
## 133	WA	8852	116	0	533	513
## 35	WA	285	0	12	14	26
## 94	WA	1738	27	0	129	137
## 164	WA	10100	94	0	620	639
## 52	WA	906	9	68	0	62

## 196	WA	989	14	85	0	82
## 80	WA	2345	27	19	131	215
## 70	WA	4912	31	363	2	359
## 41	WA	1891	16	121	3	107
## 24	WA	4362	103	262	104	370
## 125	WA	885	7	0	69	71
## 204	WA	649	10	44	0	51
## 108	WA	667	8	50	0	57
## 38	WA	2403	17	127	21	171
## 97	WA	1281	24	23	55	90
## 172	WA	2021	23	50	96	153
## 140	WA	21339	310	1608	0	1554
## 92	WA	1876	35	67	88	151
## 127	WA	2402	34	192	1	191
## 203	WA	3603	38	237	83	259
## 122	WA	9601	156	416	251	670
## 69	WA	927	7	0	58	70
## 185	WA	611	9	40	0	46
## 109	WA	2082	34	174	0	148
## 162	WA	9213	118	654	40	734
## 2	WA	608	4	0	42	47
## 100	WA	532	2	41	0	48
## 104	WA	784	8	39	17	66
## 29	WA	591	5	0	39	39
## 165	WA	6571	114	263	271	530
## 44	WA	1469	32	104	0	93
## 153	WA	3238	44	44	166	226
## 21	WA	12810	101	545	347	981
## 115	WA	5558	120	155	321	495
## 64	WA	1896	12	0	126	129
## 191	WA	1562	10	0	85	90
## 47	WA	2400	18	174	2	185
## 167	WA	544	13	39	0	49
## 132	WA	259	0	21	0	19
## 200	WA	557	3	47	0	29
## 177	WA	7984	77	169	423	613
## 126	WA	560	11	47	0	42
## 17	WA	1295	10	0	90	102
## 150	WA	2312	18	19	160	185
## 114	WA	20653	228	0	1475	1662
## 79	WA	26934	236	0	2005	2289
## 67	WA	19184	238	915	474	1493
## 18	WA	1547	10	0	124	119
## 93	WA	4413	36	190	59	290
## 182	WA	1087	11	90	1	81
## 89	WA	172	2	12	0	13
## 210	WA	1332	9	97	0	95
## 31	WA	163	3	0	13	8
## 139	WA	2632	53	0	204	236
## 48	WA	19372	244	1176	379	1685
## 194	WA	295	2	18	0	17
## 78	WA	8354	76	219	434	673
## 8	WA	19362	118	93	1296	1368
## 205	WA	148	0	9	0	10

## 6	WA	3851	49	87	84	257
## 144	WA	823	9	61	3	55
## 148	WA	304	4	13	1	22
## 36	WA	585	5	47	1	47
## 199	WA	265	1	14	0	14
## 15	WA	6566	50	0	392	448
## 95	WA	630	8	0	46	45
## 106	WA	1468	20	0	78	83
## 73	WA	922	6	60	0	54
## 134	WA	314	3	23	0	23
## 184	WA	234	4	20	0	12
## 81	WA	412	5	32	0	29
## 37	WA	436	7	38	0	31
## 54	WA	913	7	0	56	55
## 88	WA	663	5	55	0	64
## 120	WA	220	3	20	0	13
## 129	WA	175	3	6	0	18
## 131	WA	295	0	17	0	24
## 137	WA	337	4	27	0	32
## 146	WA	589	7	40	0	40
## 155	WA	199	3	10	0	15
## 159	WA	242	5	15	1	21
## 192	WA	455	5	33	0	31
## 11	WA	88	1	0	7	7
## 30	WA	1101	8	113	0	106
## 40	WA	109	2	8	0	8
## 55	WA	102	0	0	8	10
## 61	WA	90	1	5	0	5
## 66	WA	226	6	15	0	19
## 68	WA	44	3	2	0	1
## 82	WA	176	3	15	0	14
## 87	WA	87	0	2	5	3
## 112	WA	52	0	0	5	0
## 113	WA	250	0	17	0	15
## 116	WA	93	0	0	6	4
## 163	WA	44	0	0	6	3
## 180	WA	81	0	9	0	12
## 186	WA	219	1	0	16	14
## 189	WA	689	5	21	35	54
## 198	WA	46	1	0	2	1
## 206	WA	85	1	7	0	6
##	Gr 2 Total	Gr 3 Total	Gr 4 Total	Gr 5 Total	Gr 6 Total	Gr 7 Total
## 166	28	33	30	33	29	33
## 176	12	16	11	16	15	11
## 183	309	323	298	294	317	305
## 121	92	68	84	83	80	99
## 75	6	8	5	6	0	10
## 27	192	211	187	186	180	203
## 101	83	83	85	85	69	69
## 33	42	42	28	39	52	37
## 187	243	232	237	219	237	244
## 117	17	17	24	17	12	12
## 178	9	16	17	19	21	12
## 201	558	612	575	564	554	587

## 193	213	216	216	176	173	139
## 50	342	362	330	362	371	359
## 63	1593	1496	1432	1389	1310	1368
## 208	1361	1250	1163	1178	1102	1127
## 195	273	303	274	258	281	260
## 57	63	56	48	55	51	53
## 58	302	326	265	284	276	277
## 84	16	16	19	17	14	11
## 142	96	88	99	80	83	87
## 83	519	519	487	492	471	491
## 128	355	352	334	307	301	295
## 105	75	82	65	84	92	81
## 19	74	108	102	79	95	94
## 181	39	49	53	45	48	46
## 60	142	130	120	158	142	136
## 65	129	114	125	113	118	140
## 99	645	630	669	592	610	622
## 86	78	84	62	75	62	71
## 143	222	235	184	221	193	201
## 119	48	49	48	41	53	51
## 1	264	257	202	236	240	217
## 91	886	848	827	817	801	825
## 130	1487	1416	1380	1319	1313	1210
## 7	943	956	946	1010	1030	1040
## 98	29	17	26	27	26	33
## 111	140	153	139	144	128	147
## 202	23	34	40	24	25	39
## 22	284	280	263	235	255	275
## 188	383	400	433	445	467	475
## 190	1965	1847	1775	1754	1689	1689
## 151	32	30	19	20	21	30
## 179	103	93	105	99	78	106
## 207	185	151	176	173	176	166
## 107	133	117	115	103	121	117
## 171	76	75	59	57	67	73
## 154	186	164	168	170	187	150
## 156	117	139	116	141	122	117
## 5	1181	1134	1157	1122	1058	1090
## 49	1675	1636	1578	1669	1684	1579
## 12	178	153	171	146	153	185
## 28	1227	1122	1040	941	902	830
## 23	187	183	201	213	205	224
## 138	224	188	200	203	215	222
## 9	767	816	837	774	816	785
## 168	711	700	719	748	726	726
## 14	74	64	68	60	52	60
## 118	84	78	72	74	84	83
## 175	2573	2445	2266	2223	1996	2085
## 147	1326	1251	1177	1104	1078	1059
## 135	292	284	257	287	261	293
## 34	76	59	73	72	66	81
## 71	1414	1380	1273	1278	1300	1256
## 32	132	106	127	127	132	123
## 209	422	387	409	400	432	407

## 197	229	233	266	219	241	249
## 158	268	247	247	289	237	281
## 123	351	416	407	450	421	565
## 39	446	449	414	425	442	424
## 149	960	953	856	965	991	930
## 124	55	62	61	60	45	45
## 152	108	112	90	106	110	130
## 160	195	194	195	223	207	209
## 96	503	479	493	471	480	485
## 161	267	307	274	277	259	251
## 102	142	132	156	142	140	115
## 25	55	53	54	54	53	64
## 72	2175	2055	1935	2102	2006	2091
## 46	286	288	283	301	288	292
## 56	66	64	69	70	67	68
## 26	70	77	68	84	89	75
## 141	46	26	27	32	25	27
## 43	243	224	222	236	227	224
## 16	33	34	26	32	40	27
## 62	88	91	92	103	77	85
## 59	117	111	122	120	117	95
## 103	1239	1200	1141	1227	1133	1145
## 13	82	89	62	73	65	80
## 110	423	450	430	438	452	450
## 45	30	22	25	19	26	32
## 145	33	41	37	47	73	64
## 4	424	397	392	424	411	440
## 170	2559	2394	2266	2192	2225	2227
## 169	97	100	107	106	102	115
## 77	49	44	44	50	51	40
## 90	42	32	32	39	34	49
## 136	75	90	110	80	89	76
## 42	1568	1486	1459	1493	1520	1468
## 174	592	520	542	522	483	474
## 53	609	601	538	546	540	538
## 85	211	264	206	209	217	194
## 173	638	647	602	613	624	642
## 74	42	49	43	59	58	63
## 10	1491	1414	1392	1352	1370	1330
## 20	788	805	800	847	841	848
## 3	218	196	209	185	218	222
## 51	300	273	259	275	289	272
## 76	108	104	111	127	128	118
## 157	50	58	65	56	51	66
## 133	567	619	644	631	650	684
## 35	27	20	27	25	17	24
## 94	157	134	133	144	117	152
## 164	683	618	749	695	792	744
## 52	62	56	68	71	60	79
## 196	78	86	59	69	65	64
## 80	183	184	168	178	174	182
## 70	339	380	379	346	387	372
## 41	137	122	145	139	144	144
## 24	353	336	345	331	320	320

## 125	76	74	94	73	93	71
## 204	38	59	53	47	45	47
## 108	54	48	46	62	39	45
## 38	196	179	204	191	184	200
## 97	115	76	103	106	108	113
## 172	154	137	149	126	155	158
## 140	1627	1537	1513	1564	1603	1605
## 92	173	136	151	131	133	138
## 127	183	193	166	173	174	184
## 203	245	247	242	265	243	268
## 122	702	681	699	697	682	656
## 69	68	69	82	77	65	73
## 185	38	45	45	43	52	46
## 109	165	152	177	162	160	150
## 162	752	686	661	746	672	692
## 2	34	42	35	42	51	47
## 100	43	39	41	35	27	39
## 104	60	72	56	57	65	52
## 29	38	44	53	32	47	40
## 165	557	517	509	541	514	483
## 44	90	99	97	75	115	113
## 153	234	261	268	235	264	237
## 21	977	975	981	970	1005	959
## 115	462	437	409	410	372	415
## 64	119	129	126	137	131	160
## 191	99	98	115	79	127	118
## 47	188	207	173	148	186	176
## 167	39	50	64	37	41	36
## 132	19	18	19	27	18	16
## 200	35	25	36	22	26	25
## 177	645	600	625	579	642	622
## 126	55	36	40	46	41	34
## 17	96	85	74	91	101	101
## 150	182	186	169	184	182	176
## 114	1622	1667	1603	1551	1577	1502
## 79	2284	2266	2256	2252	2123	2018
## 67	1552	1480	1545	1554	1513	1497
## 18	119	119	105	105	129	118
## 93	318	320	364	360	361	360
## 182	83	100	93	84	78	85
## 89	10	7	14	18	15	12
## 210	82	103	91	108	119	96
## 31	9	11	8	13	16	13
## 139	241	199	202	203	206	206
## 48	1619	1533	1506	1552	1402	1370
## 194	17	26	28	17	14	30
## 78	659	604	707	630	652	615
## 8	1534	1458	1415	1454	1488	1498
## 205	9	8	14	13	19	16
## 6	247	260	288	313	312	316
## 144	64	57	57	67	56	59
## 148	27	24	24	29	19	23
## 36	43	32	45	45	43	59
## 199	19	12	14	15	20	17

## 15	437	527	470	504	570	536
## 95	55	40	53	58	46	37
## 106	92	88	92	112	133	107
## 73	55	50	44	60	48	59
## 134	22	26	21	18	20	27
## 184	14	20	16	17	15	14
## 81	30	39	27	36	28	35
## 37	35	36	32	34	30	20
## 54	64	55	55	61	77	88
## 88	52	51	56	45	56	47
## 120	18	18	22	15	18	22
## 129	13	11	17	16	12	10
## 131	21	23	19	24	23	19
## 137	29	38	23	19	23	25
## 146	46	38	40	48	36	54
## 155	10	12	21	17	19	11
## 159	15	12	23	11	13	24
## 192	27	36	40	32	38	30
## 11	7	4	6	4	5	6
## 30	94	102	84	103	92	100
## 40	11	11	2	14	10	11
## 55	9	8	7	8	8	9
## 61	4	4	12	5	12	0
## 66	26	25	20	14	18	15
## 68	4	7	5	4	3	5
## 82	18	11	9	15	13	18
## 87	8	9	9	6	6	8
## 112	3	4	1	3	2	6
## 113	29	15	19	17	20	16
## 116	7	6	7	8	5	12
## 163	4	3	1	3	4	2
## 180	9	4	7	12	9	6
## 186	24	15	16	21	28	15
## 189	83	71	75	70	75	81
## 198	2	1	3	6	7	5
## 206	5	5	6	7	8	5
##	Gr 8 Total	Gr 9 Total	Gr 10 Total	Gr 11 Total	Gr 12 Total	
## 166	32	39	37	37	49	
## 176	17	12	16	11	15	
## 183	286	353	335	336	422	
## 121	80	71	91	89	89	
## 75	8	4	6	8	9	
## 27	168	220	224	227	255	
## 101	66	70	51	50	81	
## 33	43	50	49	49	30	
## 187	208	239	226	208	249	
## 117	13	17	18	19	24	
## 178	12	12	22	13	18	
## 201	652	642	572	650	702	
## 193	156	168	138	158	124	
## 50	384	449	414	433	396	
## 63	1272	1653	1491	1359	1436	
## 208	1156	1183	1172	1102	1357	
## 195	254	243	185	218	227	

## 57	59	63	50	50	67
## 58	259	255	241	227	276
## 84	19	26	21	12	12
## 142	83	250	460	581	982
## 83	484	529	501	494	535
## 128	280	258	288	258	274
## 105	71	93	101	85	95
## 19	94	95	93	92	106
## 181	66	65	68	82	79
## 60	153	146	219	177	264
## 65	136	161	138	124	116
## 99	598	627	626	588	671
## 86	67	73	59	62	74
## 143	213	233	195	216	251
## 119	57	37	41	59	53
## 1	235	248	266	227	298
## 91	867	863	926	867	988
## 130	1294	1182	1140	1176	1139
## 7	1088	1246	1188	1137	1146
## 98	20	21	20	26	19
## 111	156	177	186	194	237
## 202	42	39	44	34	25
## 22	265	316	284	265	299
## 188	525	532	535	550	644
## 190	1762	1795	1788	1643	1857
## 151	19	38	33	31	32
## 179	84	88	99	87	83
## 207	172	169	183	177	223
## 107	102	132	109	122	126
## 171	74	80	88	70	81
## 154	191	174	168	153	172
## 156	133	125	119	119	88
## 5	1085	1278	1168	1205	1326
## 49	1657	1711	1883	1793	1896
## 12	158	168	184	167	179
## 28	823	774	777	681	648
## 23	217	233	254	304	389
## 138	211	223	230	251	232
## 9	832	889	939	919	1008
## 168	775	716	701	741	875
## 14	62	62	47	61	56
## 118	68	73	62	81	69
## 175	1998	2124	2080	2001	2330
## 147	1115	1117	1132	1066	1234
## 135	283	277	300	314	355
## 34	73	77	75	73	75
## 71	1230	1370	1333	1235	1339
## 32	136	144	153	144	204
## 209	436	408	468	466	480
## 197	249	274	238	239	258
## 158	288	290	301	260	274
## 123	689	396	351	305	224
## 39	452	430	447	475	463
## 149	926	1071	981	975	1017

## 124	55	64	56	66	55
## 152	136	128	110	107	119
## 160	227	231	275	265	272
## 96	502	630	587	559	1111
## 161	284	432	418	408	433
## 102	161	130	152	137	153
## 25	74	85	84	88	104
## 72	2080	2489	2238	2091	1990
## 46	324	342	320	360	375
## 56	72	89	76	75	78
## 26	92	92	92	97	85
## 141	25	21	23	27	20
## 43	233	258	235	237	250
## 16	31	42	38	37	34
## 62	106	67	87	108	119
## 59	126	122	107	101	101
## 103	1107	1119	1143	1123	1126
## 13	73	73	64	63	69
## 110	503	476	484	493	538
## 45	24	24	29	22	36
## 145	86	40	43	57	43
## 4	437	436	443	475	476
## 170	2200	2254	2169	2107	2159
## 169	115	129	129	154	160
## 77	41	62	69	58	38
## 90	44	40	42	44	34
## 136	82	98	121	107	125
## 42	1473	1625	1578	1686	1999
## 174	519	491	447	477	444
## 53	544	578	584	576	604
## 85	238	219	213	222	241
## 173	677	876	867	741	683
## 74	50	60	58	31	40
## 10	1422	1454	1308	1364	1478
## 20	839	876	893	884	945
## 3	202	189	214	235	227
## 51	270	310	247	271	260
## 76	146	159	134	140	131
## 157	66	65	70	76	81
## 133	713	769	792	879	858
## 35	16	23	22	14	18
## 94	134	136	110	125	130
## 164	775	943	938	910	994
## 52	69	88	81	72	70
## 196	78	86	86	86	65
## 80	175	168	196	184	188
## 70	388	413	376	383	425
## 41	158	173	171	179	148
## 24	328	346	309	313	325
## 125	66	52	55	57	34
## 204	52	50	59	55	49
## 108	47	44	57	60	58
## 38	189	177	180	205	179
## 97	72	132	110	83	95

## 172	152	182	172	140	197
## 140	1724	1728	1735	1771	1770
## 92	140	120	146	149	153
## 127	205	187	187	182	184
## 203	289	297	294	296	338
## 122	716	873	830	841	887
## 69	71	81	70	74	69
## 185	41	48	61	54	52
## 109	154	156	172	155	157
## 162	703	813	735	726	599
## 2	56	48	61	60	43
## 100	42	32	45	48	52
## 104	66	66	55	48	65
## 29	41	70	41	56	51
## 165	508	489	469	459	461
## 44	99	115	143	146	180
## 153	264	274	250	246	269
## 21	1048	1042	985	969	1026
## 115	401	413	397	408	463
## 64	140	189	147	188	175
## 191	143	164	158	145	141
## 47	188	192	195	197	189
## 167	43	41	32	39	34
## 132	22	22	19	19	20
## 200	34	45	44	62	127
## 177	618	626	581	606	635
## 126	40	54	52	35	38
## 17	103	113	100	126	113
## 150	190	167	189	166	157
## 114	1571	1510	1616	1551	1746
## 79	2060	1935	1852	1827	1767
## 67	1442	1532	1395	1447	1345
## 18	124	122	131	114	118
## 93	374	364	334	377	342
## 182	81	78	72	68	93
## 89	16	13	13	10	19
## 210	101	116	111	107	106
## 31	18	15	13	9	17
## 139	203	204	181	175	172
## 48	1448	1444	1408	1408	1442
## 194	23	27	32	22	24
## 78	708	619	611	614	609
## 8	1457	1589	1545	1585	1582
## 205	6	8	13	9	14
## 6	280	367	347	345	348
## 144	73	71	66	75	59
## 148	20	29	24	25	24
## 36	47	53	45	39	39
## 199	27	32	21	34	26
## 15	541	567	553	513	508
## 95	54	47	48	45	56
## 106	128	143	134	139	139
## 73	54	113	118	82	125
## 134	33	22	25	24	30

## 184	17	27	22	24	16
## 81	35	34	31	27	29
## 37	37	29	45	28	41
## 54	75	84	86	76	81
## 88	44	41	62	40	50
## 120	15	13	18	13	15
## 129	14	20	7	14	17
## 131	24	20	29	21	31
## 137	23	18	26	27	27
## 146	35	55	49	48	60
## 155	16	21	8	20	19
## 159	27	22	20	26	12
## 192	34	33	31	35	55
## 11	5	12	11	8	6
## 30	82	118	18	39	50
## 40	8	12	8	3	3
## 55	9	6	9	1	10
## 61	8	10	8	10	7
## 66	18	17	13	16	10
## 68	4	3	1	2	3
## 82	18	13	10	16	6
## 87	9	6	6	4	6
## 112	3	7	3	10	5
## 113	20	22	20	17	23
## 116	13	6	8	8	3
## 163	3	5	4	4	2
## 180	2	1	2	4	4
## 186	14	15	13	15	13
## 189	95	9	10	5	5
## 198	4	2	5	3	5
## 206	9	8	8	4	7

I am curious what the order of School Districts with highest revenue rates looks like.

```
FullData[order(-FullData$`Total Revenue`),]
```

##	District Name	State.x	Year	Total Revenue
## 175	Tacoma School District	Washington	2015	415924
## 170	Spokane School District	Washington	2015	403857
## 79	Lake Washington School District	Washington	2015	347870
## 72	Kent School District	Washington	2015	324455
## 8	Bellevue School District	Washington	2015	307196
## 49	Federal Way School District	Washington	2015	278629
## 42	Edmonds School District	Washington	2015	269240
## 190	Vancouver School District	Washington	2015	269135
## 114	Northshore School District	Washington	2015	266155
## 140	Puyallup School District	Washington	2015	252248
## 48	Everett School District	Washington	2015	248748
## 63	Highline School District	Washington	2015	248401
## 67	Issaquah School District	Washington	2015	246417
## 130	Pasco School District	Washington	2015	236614
## 10	Bethel School District	Washington	2015	228415
## 147	Renton School District	Washington	2015	218285
## 208	Yakima School District	Washington	2015	213556
## 5	Auburn School District	Washington	2015	207809

## 71	Kennewick School District	Washington	2015	197862
## 28	Clover Park School District	Washington	2015	194044
## 103	Mukilteo School District	Washington	2015	184170
## 149	Richland School District	Washington	2015	151245
## 9	Bellingham School District	Washington	2015	146654
## 21	Central Valley School District	Washington	2015	146436
## 7	Battle Ground School District	Washington	2015	142945
## 20	Central Kitsap School District	Washington	2015	140263
## 91	Marysville School District	Washington	2015	137969
## 164	Snohomish School District	Washington	2015	129135
## 162	Shoreline School District	Washington	2015	127624
## 122	Olympia School District	Washington	2015	124664
## 173	Sumner School District	Washington	2015	106380
## 168	South Kitsap School District	Washington	2015	101567
## 177	Tahoma School District	Washington	2015	99295
## 53	Franklin Pierce School District	Washington	2015	98705
## 133	Peninsula School District	Washington	2015	97503
## 99	Moses Lake School District	Washington	2015	94144
## 201	Wenatchee School District	Washington	2015	92265
## 78	Lake Stevens School District	Washington	2015	90036
## 188	Tumwater School District	Washington	2015	80477
## 83	Longview School District	Washington	2015	78721
## 96	Monroe School District	Washington	2015	78025
## 15	Camas School District	Washington	2015	78015
## 174	Sunnyside School District	Washington	2015	77509
## 165	Snoqualmie Valley School District	Washington	2015	76110
## 110	North Kitsap School District	Washington	2015	74997
## 39	Eastmont School District	Washington	2015	67670
## 115	Oak Harbor School District	Washington	2015	63483
## 209	Yelm School District	Washington	2015	61637
## 4	Arlington School District	Washington	2015	60963
## 93	Mercer Island School District	Washington	2015	60785
## 50	Ferndale School District	Washington	2015	57235
## 158	Selah School District	Washington	2015	54181
## 70	Kelso School District	Washington	2015	53366
## 24	Cheney School District	Washington	2015	51936
## 161	Shelton School District	Washington	2015	51449
## 6	Bainbridge Island School District	Washington	2015	50391
## 46	Enumclaw School District	Washington	2015	48679
## 128	Othello School District	Washington	2015	47232
## 203	White River School District	Washington	2015	45854
## 187	Tukwila School District	Washington	2015	45517
## 183	Toppenish School District	Washington	2015	45050
## 123	Omak School District	Washington	2015	44368
## 135	Port Angeles School District	Washington	2015	42680
## 1	Aberdeen School District	Washington	2015	42595
## 51	Fife School District	Washington	2015	41583
## 207	Woodland School District	Washington	2015	40236
## 195	Wapato School District	Washington	2015	40180
## 22	Centralia School District	Washington	2015	39625
## 153	Riverview School District	Washington	2015	39050
## 58	Grandview School District	Washington	2015	38912
## 197	Washougal School District	Washington	2015	36063
## 43	Ellensburg School District	Washington	2015	34769

## 3	Anacortes School District	Washington	2015	33541
## 23	Chehalis School District	Washington	2015	33044
## 143	Quincy School District	Washington	2015	32975
## 138	Prosser School District	Washington	2015	31140
## 139	Pullman School District	Washington	2015	29734
## 160	Sequim School District	Washington	2015	29253
## 27	Clarkston School District	Washington	2015	29235
## 85	Lynden School District	Washington	2015	28724
## 80	Lakewood School District	Washington	2015	28273
## 12	Blaine School District	Washington	2015	27894
## 38	Deer Park School District	Washington	2015	27191
## 127	Orting School District	Washington	2015	27091
## 60	Granite Falls School District	Washington	2015	26846
## 150	Ridgefield School District	Washington	2015	26791
## 142	Quillayute Valley School District	Washington	2015	26614
## 154	Rochester School District	Washington	2015	26046
## 111	North Mason School District	Washington	2015	25988
## 47	Ephrata School District	Washington	2015	25806
## 193	Wahluke School District	Washington	2015	25240
## 30	College Place School District	Washington	2015	24958
## 156	Royal School District	Washington	2015	24706
## 109	North Franklin School District	Washington	2015	24371
## 102	Mount Baker School District	Washington	2015	24235
## 191	Vashon Island School District	Washington	2015	22726
## 172	Sultan School District	Washington	2015	21918
## 41	Eatonville School District	Washington	2015	21503
## 92	Medical Lake School District	Washington	2015	21235
## 65	Hoquiam School District	Washington	2015	21174
## 64	Hockinson School District	Washington	2015	20855
## 32	Colville School District	Washington	2015	19649
## 107	Nooksack Valley School District	Washington	2015	19280
## 94	Meridian School District	Washington	2015	18976
## 169	South Whidbey School District	Washington	2015	17814
## 59	Granger School District	Washington	2015	17474
## 44	Elma School District	Washington	2015	17451
## 152	Riverside School District	Washington	2015	17210
## 18	Cashmere School District	Washington	2015	17142
## 106	Nine Mile Falls School District	Washington	2015	16573
## 76	La Center School District	Washington	2015	16020
## 17	Cascade School District	Washington	2015	15997
## 97	Montesano School District	Washington	2015	15636
## 136	Port Townsend School District	Washington	2015	15156
## 118	Ocean Beach School District	Washington	2015	15007
## 210	Zillah School District	Washington	2015	14040
## 62	Highland School District	Washington	2015	14023
## 101	Mount Adams School District	Washington	2015	13810
## 19	Castle Rock School District	Washington	2015	13683
## 26	Chimacum School District	Washington	2015	13555
## 77	La Conner School District	Washington	2015	13340
## 105	Newport School District	Washington	2015	13213
## 57	Grand Coulee Dam School District	Washington	2015	12915
## 179	Tenino School District	Washington	2015	12756
## 121	Okanogan School District	Washington	2015	12532
## 182	Tonasket School District	Washington	2015	12408

## 34	Coupeville School District	Washington 2015	11764
## 196	Warden School District	Washington 2015	11704
## 13	Brewster School District	Washington 2015	11581
## 56	Goldendale School District	Washington 2015	11581
## 171	Stevenson-Carson School District	Washington 2015	11197
## 54	Freeman School District	Washington 2015	10831
## 52	Finley School District	Washington 2015	10780
## 86	Mabton School District	Washington 2015	10591
## 157	San Juan Island School District	Washington 2015	10389
## 125	Orcas Island School District	Washington 2015	10345
## 189	Valley School District	Washington 2015	10253
## 144	Rainier School District	Washington 2015	9614
## 119	Ocosta School District	Washington 2015	9613
## 25	Chewelah School District	Washington 2015	9527
## 88	Manson School District	Washington 2015	9465
## 73	Kettle Falls School District	Washington 2015	9383
## 108	North Beach School District	Washington 2015	9115
## 14	Bridgeport School District	Washington 2015	8943
## 69	Kalama School District	Washington 2015	8939
## 16	Cape Flattery School District	Washington 2015	8808
## 200	Wellpinit School District	Washington 2015	8603
## 124	Onalaska School District	Washington 2015	8519
## 167	South Bend School District	Washington 2015	8481
## 145	Raymond School District	Washington 2015	8245
## 204	Winlock School District	Washington 2015	8093
## 104	Napavine School District	Washington 2015	8052
## 95	Methow Valley School District	Washington 2015	7969
## 74	Kittitas School District	Washington 2015	7951
## 181	Toledo School District	Washington 2015	7878
## 36	Davenport School District	Washington 2015	7780
## 126	Oroville School District	Washington 2015	7517
## 29	Colfax School District	Washington 2015	7489
## 33	Concrete School District	Washington 2015	7179
## 202	White Pass School District	Washington 2015	7167
## 100	Mossyrock School District	Washington 2015	7066
## 146	Reardan-Edwall School District	Washington 2015	6955
## 185	Toutle Lake School District	Washington 2015	6793
## 166	Soap Lake School District	Washington 2015	6389
## 90	Mary Walker School District	Washington 2015	6322
## 2	Adna School District	Washington 2015	6316
## 131	Pateros School District	Washington 2015	6284
## 45	Entiat School District	Washington 2015	6271
## 81	Liberty School District	Washington 2015	6222
## 37	Dayton School District	Washington 2015	6197
## 192	Wahkiakum School District	Washington 2015	5888
## 31	Colton School District	Washington 2015	5808
## 141	Quilcene School District	Washington 2015	5514
## 134	Pomeroy School District	Washington 2015	5057
## 137	Prescott School District	Washington 2015	5016
## 184	Touchet School District	Washington 2015	4961
## 98	Morton School District	Washington 2015	4898
## 151	Ritzville School District	Washington 2015	4769
## 159	Selkirk School District	Washington 2015	4750
## 176	Taholah School District	Washington 2015	4624

## 148	Republic School District	Washington	2015	4368
## 84	Lyle School District	Washington	2015	4350
## 66	Inchelium School District	Washington	2015	4321
## 199	Waterville School District	Washington	2015	4288
## 82	Lind School District	Washington	2015	4267
## 194	Waitsburg School District	Washington	2015	4232
## 132	Pe Ell School District	Washington	2015	4173
## 117	Oakville School District	Washington	2015	3950
## 155	Rosalia School District	Washington	2015	3886
## 120	Odessa School District	Washington	2015	3799
## 113	Northport School District	Washington	2015	3411
## 11	Bickleton School District	Washington	2015	3407
## 35	Crescent School District	Washington	2015	3380
## 89	Mary M Knight School District	Washington	2015	3246
## 178	Tekoa School District	Washington	2015	3245
## 75	Klickitat School District	Washington	2015	3086
## 186	Trout Lake School District	Washington	2015	3005
## 129	Palouse School District	Washington	2015	2736
## 40	Easton School District	Washington	2015	2666
## 116	Oakesdale School District	Washington	2015	2628
## 55	Garfield School District	Washington	2015	2519
## 180	Thorp School District	Washington	2015	2499
## 61	Harrington School District	Washington	2015	2485
## 205	Wishkah Valley School District	Washington	2015	2241
## 163	Skykomish School District	Washington	2015	2158
## 87	Mansfield School District	Washington	2015	2123
## 198	Washtucna School District	Washington	2015	2097
## 68	Kahlotus School District	Washington	2015	1973
## 206	Wishram School District	Washington	2015	1898
## 112	North River School District	Washington	2015	1694
##	State Revenue	Local Revenue	District Code	
## 175	223785	154048	27010	
## 170	263848	105747	32081	
## 79	172776	161630	17414	
## 72	193893	106928	17415	
## 8	127047	169681	17405	
## 49	168792	89037	17210	
## 42	145808	111061	31015	
## 190	172414	78524	06037	
## 114	141061	114501	17417	
## 140	159061	82867	27003	
## 48	145326	89368	31002	
## 63	144694	79360	17401	
## 67	120607	119613	17411	
## 130	182516	38391	11001	
## 10	152462	62230	27403	
## 147	109635	92672	17403	
## 208	163171	25149	39007	
## 5	127492	65340	17408	
## 71	144979	38419	03017	
## 28	111752	30739	27400	
## 103	112858	60165	31006	
## 149	103767	38583	03400	
## 9	79572	59434	37501	

## 21	97279	41439	32356
## 7	97371	38527	06119
## 20	82894	37549	18401
## 91	88554	39642	31025
## 164	71637	52797	31201
## 162	67014	55418	17412
## 122	74176	45223	34111
## 173	61838	39157	27320
## 168	68533	26519	18402
## 177	59707	36095	17409
## 53	60933	28536	27402
## 133	61804	31716	27401
## 99	67763	19759	13161
## 201	63995	19520	04246
## 78	61304	25199	31004
## 188	48414	28590	34033
## 83	48576	23504	08122
## 96	50585	24522	31103
## 15	45362	30658	06117
## 174	60825	3261	39201
## 165	42096	31870	17410
## 110	42129	28140	18400
## 39	45347	16078	09206
## 115	39113	15838	15201
## 209	40955	16656	34002
## 4	38934	19327	31016
## 93	28428	31158	17400
## 50	34794	18541	37502
## 158	43294	8259	39119
## 70	37707	11425	08458
## 24	32349	15594	32360
## 161	34342	13040	23309
## 6	25609	22458	18303
## 46	29386	16818	17216
## 128	36654	5950	01147
## 203	25835	17998	27416
## 187	22232	17736	17406
## 183	35179	2446	39202
## 123	38108	3250	24019
## 135	28289	10840	05121
## 1	28758	9145	14005
## 51	24361	14648	27417
## 207	30099	8514	08404
## 195	29194	2686	39207
## 22	28855	6790	21401
## 153	21607	16226	17407
## 58	29943	3671	39200
## 197	22639	11506	06112
## 43	21454	10931	19401
## 3	18256	13808	29103
## 23	23074	7486	21302
## 143	21080	8698	13144
## 138	23489	4611	03116
## 139	17007	11385	38267

## 160	19701	7593	05323
## 27	20690	5895	02250
## 85	20198	6676	37504
## 80	16421	10714	31306
## 12	15314	11008	37503
## 38	19671	5887	32414
## 127	17143	8845	27344
## 60	16617	9026	31332
## 150	16768	9409	06122
## 142	23046	2097	05402
## 154	18019	6281	34401
## 111	16153	8080	23403
## 47	18911	4679	13165
## 193	18237	2976	13073
## 30	18192	5631	36250
## 156	19780	2887	13160
## 109	17647	3750	11051
## 102	14596	7626	37507
## 191	11302	9627	17402
## 172	15346	5216	31311
## 41	13235	7205	27404
## 92	14481	3299	32326
## 65	13780	5043	14028
## 64	12746	7442	06098
## 32	14651	3283	33115
## 107	12655	5116	37506
## 94	12163	5791	37505
## 169	10397	6579	15206
## 59	13435	1125	39204
## 44	12189	3868	14068
## 152	12016	3795	32416
## 18	11410	4572	04222
## 106	11011	4852	32325
## 76	10918	4771	06101
## 17	9470	5582	04228
## 97	9664	5050	14066
## 136	8506	5323	16050
## 118	7882	6131	25101
## 210	10551	2228	39205
## 62	10039	2424	39203
## 101	7857	916	39209
## 19	9950	2610	08401
## 26	7939	4701	16049
## 77	6432	3833	29311
## 105	8429	2784	26056
## 57	9170	1458	13301
## 179	8515	3387	34402
## 121	9160	2083	24105
## 182	8996	2041	24404
## 34	6290	4915	15204
## 196	8077	2133	13146
## 13	7945	1356	24111
## 56	6915	3715	20404
## 171	6565	2656	30303

## 54	6952	3535	32358
## 52	7666	2128	03053
## 86	8365	555	39120
## 157	5907	4001	28149
## 125	6328	3571	28137
## 189	6634	3204	33070
## 144	6251	2814	34307
## 119	5125	3605	14172
## 25	7021	1480	33036
## 88	6398	2058	04019
## 73	7133	1484	33212
## 108	5188	3320	14064
## 14	6973	518	09075
## 69	5891	2688	08402
## 16	5146	895	05401
## 200	4992	221	33049
## 124	6091	1520	21300
## 167	6120	1648	25118
## 145	5704	1913	25116
## 204	5712	1515	21232
## 104	5850	1612	21014
## 95	4816	2731	24350
## 74	5166	2314	19403
## 181	5917	1300	21237
## 36	5309	2026	22207
## 126	4562	2074	24410
## 29	4675	2419	38300
## 33	4703	1741	29011
## 202	3776	2838	21303
## 100	4670	1790	21206
## 146	4982	1518	22009
## 185	4893	1616	08130
## 166	4429	1063	13156
## 90	4824	726	33207
## 2	4670	1140	21226
## 131	4072	1736	24122
## 45	4673	1194	04127
## 81	3756	2110	32362
## 37	3908	1905	07002
## 192	4038	1507	35200
## 31	4745	963	38306
## 141	4356	852	16048
## 134	2933	1807	12110
## 137	3495	1079	36402
## 184	3366	1412	36300
## 98	3120	1269	21214
## 151	2768	1743	01160
## 159	2734	1641	26070
## 176	2371	260	14077
## 148	3049	644	10309
## 84	2621	1213	20406
## 66	2634	160	10070
## 199	2731	1307	09209
## 82	2946	1070	01158

## 194	2930	1031	36401
## 132	3032	785	21301
## 117	2629	410	14400
## 155	2441	1156	38320
## 120	2546	995	22105
## 113	2593	501	33211
## 11	1743	1603	20203
## 35	2456	591	05313
## 89	2235	736	23311
## 178	2651	434	38265
## 75	2245	162	20402
## 186	2283	622	20400
## 129	1981	603	38301
## 40	1691	887	19028
## 116	1910	627	38324
## 55	2012	369	38302
## 180	1645	741	19400
## 61	1803	579	22204
## 205	504	1634	14117
## 163	1501	579	17404
## 87	1828	175	09207
## 198	1840	201	01109
## 68	1721	170	11056
## 206	1701	74	20094
## 112	1554	89	25200

##	Adjusted 5-Year Cohort Graduation Rate	Cohort dropout rate	School Year
## 175	82.46753	15.367965	2015
## 170	86.41783	11.767755	2015
## 79	93.35022	5.256491	2015
## 72	84.71233	12.821918	2015
## 8	94.89933	4.295302	2015
## 49	81.63636	16.060606	2015
## 42	86.66237	10.695876	2015
## 190	79.08654	16.766827	2015
## 114	93.30176	4.330176	2015
## 140	89.91860	8.829054	2015
## 48	94.46254	3.338762	2015
## 63	72.29978	22.556943	2015
## 67	93.36456	5.620609	2015
## 130	78.43719	17.804154	2015
## 10	87.01634	10.748065	2015
## 147	82.54122	14.936954	2015
## 208	73.47866	24.523161	2015
## 5	81.51042	15.711806	2015
## 71	82.98246	14.649123	2015
## 28	81.92771	14.056225	2015
## 103	85.63485	10.750695	2015
## 149	83.75000	11.562500	2015
## 9	82.09607	15.502183	2015
## 21	91.83908	6.321839	2015
## 7	78.49246	16.984925	2015
## 20	87.02929	10.146444	2015
## 91	78.38150	17.456647	2015
## 164	87.73585	9.080189	2015

## 162	90.90909	7.451565	2015
## 122	89.97253	8.104396	2015
## 173	86.90476	10.863095	2015
## 168	82.14748	12.807245	2015
## 177	92.94756	5.424955	2015
## 53	86.81733	10.546139	2015
## 133	87.29947	10.695187	2015
## 99	77.04348	18.956522	2015
## 201	70.26087	25.739130	2015
## 78	94.75728	5.242718	2015
## 188	79.06198	19.262982	2015
## 83	75.15030	18.837675	2015
## 96	84.09704	13.746631	2015
## 15	95.80713	3.563941	2015
## 174	86.66667	11.904762	2015
## 165	91.75532	6.648936	2015
## 110	86.17886	10.772358	2015
## 39	83.67347	14.795918	2015
## 115	92.00000	5.230769	2015
## 209	83.29356	14.319809	2015
## 4	86.29442	11.421320	2015
## 93	93.43284	4.179104	2015
## 50	72.19101	23.595506	2015
## 158	83.61345	13.025210	2015
## 70	88.49315	10.684932	2015
## 24	88.62069	9.655172	2015
## 161	84.25414	13.812155	2015
## 6	95.38905	4.034582	2015
## 46	84.74576	14.124294	2015
## 128	75.41667	22.916667	2015
## 203	89.96656	8.361204	2015
## 187	68.84422	29.145729	2015
## 183	55.16129	36.774194	2015
## 123	83.65385	16.346154	2015
## 135	82.58065	15.483871	2015
## 1	77.68595	16.528926	2015
## 51	87.05882	11.372549	2015
## 207	79.67914	17.112299	2015
## 195	73.68421	24.812030	2015
## 22	78.62903	18.951613	2015
## 153	91.82692	6.730769	2015
## 58	75.00000	20.588235	2015
## 197	83.33333	15.000000	2015
## 43	85.04274	14.102564	2015
## 3	87.05357	10.714286	2015
## 23	81.93833	15.418502	2015
## 143	77.24868	22.751323	2015
## 138	82.05128	14.871795	2015
## 139	94.26752	3.821656	2015
## 160	84.09091	14.545455	2015
## 27	65.00000	28.750000	2015
## 85	86.81818	8.636364	2015
## 80	88.39779	9.944751	2015
## 12	81.69935	16.339869	2015

## 38	89.37198	10.628019	2015
## 127	89.94413	9.497207	2015
## 60	76.92308	16.410256	2015
## 150	93.28859	5.369128	2015
## 142	75.00000	17.708333	2015
## 154	80.91603	12.977099	2015
## 111	78.57143	20.918367	2015
## 47	92.13483	5.617978	2015
## 193	70.86614	26.771654	2015
## 30	NA	NA	2015
## 156	81.13208	16.981132	2015
## 109	90.66667	9.333333	2015
## 102	84.56790	14.197531	2015
## 191	92.12598	7.086614	2015
## 172	89.83051	8.474576	2015
## 41	88.57143	10.000000	2015
## 92	89.92806	7.913669	2015
## 65	76.98413	22.222222	2015
## 64	92.12121	7.272727	2015
## 32	83.05085	15.819209	2015
## 107	80.35714	16.964286	2015
## 94	87.61905	12.380952	2015
## 169	86.52482	12.765957	2015
## 59	85.57692	13.461538	2015
## 44	91.80328	8.196721	2015
## 152	84.09091	12.878788	2015
## 18	93.40659	5.494505	2015
## 106	96.22642	3.773585	2015
## 76	87.12121	11.363636	2015
## 17	93.26923	3.846154	2015
## 97	89.41176	8.235294	2015
## 136	86.60714	13.392857	2015
## 118	82.35294	15.686275	2015
## 210	93.93939	4.040404	2015
## 62	85.39326	14.606742	2015
## 101	67.56757	25.675676	2015
## 19	76.31579	20.175439	2015
## 26	84.88372	15.116279	2015
## 77	86.53846	9.615385	2015
## 105	76.00000	23.000000	2015
## 57	74.41860	20.930233	2015
## 179	79.34783	20.652174	2015
## 121	57.54717	32.075472	2015
## 182	93.47826	6.521739	2015
## 34	82.85714	17.142857	2015
## 196	88.05970	10.447761	2015
## 13	85.71429	12.698413	2015
## 56	84.84848	15.151515	2015
## 171	80.45977	17.241379	2015
## 54	100.00000	0.000000	2015
## 52	87.80488	12.195122	2015
## 86	77.04918	19.672131	2015
## 157	87.17949	8.974359	2015
## 125	88.88889	7.407407	2015

## 189	NA	NA	2015
## 144	95.45455	3.030303	2015
## 119	77.58621	20.689655	2015
## 25	84.61538	14.102564	2015
## 88	100.00000	0.000000	2015
## 73	96.29630	3.703704	2015
## 108	89.18919	8.108108	2015
## 14	82.25806	16.129032	2015
## 69	90.00000	8.750000	2015
## 16	85.29412	11.764706	2015
## 200	92.85714	7.142857	2015
## 124	84.09091	11.363636	2015
## 167	92.50000	5.000000	2015
## 145	86.27451	11.764706	2015
## 204	89.09091	9.090909	2015
## 104	91.30435	4.347826	2015
## 95	96.15385	3.846154	2015
## 74	86.95652	13.043478	2015
## 181	76.31579	21.052632	2015
## 36	95.55556	2.222222	2015
## 126	93.02326	4.651163	2015
## 29	91.48936	8.510638	2015
## 33	68.75000	31.250000	2015
## 202	78.57143	21.428571	2015
## 100	91.17647	8.823529	2015
## 146	100.00000	0.000000	2015
## 185	90.56604	7.547170	2015
## 166	38.88889	55.555556	2015
## 90	86.53846	13.461538	2015
## 2	91.11111	8.888889	2015
## 131	100.00000	0.000000	2015
## 45	86.20690	13.793103	2015
## 81	97.14286	2.857143	2015
## 37	100.00000	0.000000	2015
## 192	100.00000	0.000000	2015
## 31	94.11765	0.000000	2015
## 141	85.00000	10.000000	2015
## 134	96.55172	3.448276	2015
## 137	100.00000	0.000000	2015
## 184	96.96970	3.030303	2015
## 98	78.57143	21.428571	2015
## 151	79.31034	20.689655	2015
## 159	100.00000	0.000000	2015
## 176	54.54545	36.363636	2015
## 148	95.45455	0.000000	2015
## 84	75.00000	18.750000	2015
## 66	NA	NA	2015
## 199	95.65217	4.347826	2015
## 82	NA	NA	2015
## 194	94.73684	0.000000	2015
## 132	92.59259	7.407407	2015
## 117	69.23077	23.076923	2015
## 155	100.00000	0.000000	2015
## 120	100.00000	0.000000	2015

## 113		NA	NA	2015
## 11		NA	NA	2015
## 35		87.50000	12.500000	2015
## 89		93.75000	6.250000	2015
## 178		70.00000	30.000000	2015
## 75		64.28571	35.714286	2015
## 186		NA	NA	2015
## 129		100.00000	0.000000	2015
## 40		NA	NA	2015
## 116		NA	NA	2015
## 55		NA	NA	2015
## 180		NA	NA	2015
## 61		NA	NA	2015
## 205		95.23810	4.761905	2015
## 163		NA	NA	2015
## 87		NA	NA	2015
## 198		NA	NA	2015
## 68		NA	NA	2015
## 206		NA	NA	2015
## 112		NA	NA	2015

##	State.y	K-12	Total	PK	Total	Full	K	Total	Half	K	Total	Gr 1	Total
## 175	WA		29144		264			1799			657		2567
## 170	WA		29851		464			2479			76		2544
## 79	WA		26934		236			0			2005		2289
## 72	WA		27439		264			2067			9		2111
## 8	WA		19362		118			93			1296		1368
## 49	WA		22211		331			1651			0		1799
## 42	WA		20570		340			1037			544		1634
## 190	WA		23294		186			1823			18		1889
## 114	WA		20653		228			0			1475		1662
## 140	WA		21339		310			1608			0		1554
## 48	WA		19372		244			1176			379		1685
## 63	WA		19136		239			1616			0		1721
## 67	WA		19184		238			915			474		1493
## 130	WA		16987		118			881			565		1485
## 10	WA		18234		243			1314			85		1460
## 147	WA		15331		260			1286			48		1338
## 208	WA		15818		285			1338			0		1329
## 5	WA		15222		226			1200			16		1202
## 71	WA		17187		187			162			1245		1372
## 28	WA		12346		337			910			383		1288
## 103	WA		15012		127			0			1078		1231
## 149	WA		12471		161			70			836		940
## 9	WA		11060		68			791			0		887
## 21	WA		12810		101			545			347		981
## 7	WA		13465		87			124			664		947
## 20	WA		10970		116			42			723		839
## 91	WA		11289		148			468			345		961
## 164	WA		10100		94			0			620		639
## 162	WA		9213		118			654			40		734
## 122	WA		9601		156			416			251		670
## 173	WA		8914		79			319			323		662
## 168	WA		9559		98			537			189		695
## 177	WA		7984		77			169			423		613

## 53	WA	7500	84	625	2	615
## 133	WA	8852	116	0	533	513
## 99	WA	8221	134	686	0	657
## 201	WA	7899	88	593	15	623
## 78	WA	8354	76	219	434	673
## 188	WA	6153	73	187	198	379
## 83	WA	6595	124	521	2	550
## 96	WA	7250	62	194	287	469
## 15	WA	6566	50	0	392	448
## 174	WA	6615	50	533	21	550
## 165	WA	6571	114	263	271	530
## 110	WA	5997	117	248	180	432
## 39	WA	5772	64	417	1	487
## 115	WA	5558	120	155	321	495
## 209	WA	5570	68	416	2	437
## 4	WA	5479	56	71	285	368
## 93	WA	4413	36	190	59	290
## 50	WA	4888	64	345	7	334
## 158	WA	3511	32	261	4	264
## 70	WA	4912	31	363	2	359
## 24	WA	4362	103	262	104	370
## 161	WA	4161	107	292	0	259
## 6	WA	3851	49	87	84	257
## 46	WA	4055	40	4	295	297
## 128	WA	4049	48	349	1	397
## 203	WA	3603	38	237	83	259
## 187	WA	3059	0	275	1	241
## 183	WA	4248	52	350	0	320
## 123	WA	5325	46	151	209	390
## 135	WA	3752	52	254	2	293
## 1	WA	3221	49	266	0	265
## 51	WA	3595	57	301	0	268
## 207	WA	2253	14	145	3	154
## 195	WA	3326	34	259	1	290
## 22	WA	3628	77	322	2	283
## 153	WA	3238	44	44	166	226
## 58	WA	3630	33	320	1	321
## 197	WA	3148	21	222	0	231
## 43	WA	3102	56	248	6	259
## 3	WA	2721	31	192	4	210
## 23	WA	3002	16	189	0	203
## 143	WA	2874	42	249	0	261
## 138	WA	2807	30	209	0	199
## 139	WA	2632	53	0	204	236
## 160	WA	2860	52	0	170	197
## 27	WA	2639	38	186	0	200
## 85	WA	2886	54	0	221	231
## 80	WA	2345	27	19	131	215
## 12	WA	2157	49	0	155	160
## 38	WA	2403	17	127	21	171
## 127	WA	2402	34	192	1	191
## 60	WA	2041	23	0	133	121
## 150	WA	2312	18	19	160	185
## 142	WA	3068	15	95	5	79

## 154	WA	2217	33	170	1	163
## 111	WA	2106	53	159	2	144
## 47	WA	2400	18	174	2	185
## 193	WA	2308	22	197	0	234
## 30	WA	1101	8	113	0	106
## 156	WA	1660	19	158	0	166
## 109	WA	2082	34	174	0	148
## 102	WA	1863	32	59	93	151
## 191	WA	1562	10	0	85	90
## 172	WA	2021	23	50	96	153
## 41	WA	1891	16	121	3	107
## 92	WA	1876	35	67	88	151
## 65	WA	1646	18	116	0	116
## 64	WA	1896	12	0	126	129
## 32	WA	1779	35	118	1	132
## 107	WA	1585	41	140	0	148
## 94	WA	1738	27	0	129	137
## 169	WA	1463	10	1	77	71
## 59	WA	1496	27	120	0	137
## 44	WA	1469	32	104	0	93
## 152	WA	1435	15	83	3	93
## 18	WA	1547	10	0	124	119
## 106	WA	1468	20	0	78	83
## 76	WA	1621	10	105	2	108
## 17	WA	1295	10	0	90	102
## 97	WA	1281	24	23	55	90
## 136	WA	1223	17	56	26	88
## 118	WA	986	20	76	0	82
## 210	WA	1332	9	97	0	95
## 62	WA	1191	11	81	0	87
## 101	WA	959	4	81	0	86
## 19	WA	1245	10	99	0	114
## 26	WA	1069	16	74	2	72
## 77	WA	622	5	0	31	45
## 105	WA	1063	17	78	0	61
## 57	WA	730	12	48	0	67
## 179	WA	1206	18	95	0	86
## 121	WA	1059	14	65	0	68
## 182	WA	1087	11	90	1	81
## 34	WA	909	16	0	49	60
## 196	WA	989	14	85	0	82
## 13	WA	980	24	98	0	89
## 56	WA	917	9	64	0	59
## 171	WA	941	21	68	0	73
## 54	WA	913	7	0	56	55
## 52	WA	906	9	68	0	62
## 86	WA	938	6	89	0	82
## 157	WA	795	6	0	48	43
## 125	WA	885	7	0	69	71
## 189	WA	689	5	21	35	54
## 144	WA	823	9	61	3	55
## 119	WA	622	2	43	0	42
## 25	WA	856	9	47	0	41
## 88	WA	663	5	55	0	64

## 73	WA	922	6	60	0	54
## 108	WA	667	8	50	0	57
## 14	WA	828	14	75	0	87
## 69	WA	927	7	0	58	70
## 16	WA	446	10	30	0	42
## 200	WA	557	3	47	0	29
## 124	WA	744	9	54	11	55
## 167	WA	544	13	39	0	49
## 145	WA	639	6	27	0	48
## 204	WA	649	10	44	0	51
## 104	WA	784	8	39	17	66
## 95	WA	630	8	0	46	45
## 74	WA	637	9	46	0	38
## 181	WA	732	4	41	0	51
## 36	WA	585	5	47	1	47
## 126	WA	560	11	47	0	42
## 29	WA	591	5	0	39	39
## 33	WA	530	3	41	0	28
## 202	WA	415	3	24	0	22
## 100	WA	532	2	41	0	48
## 146	WA	589	7	40	0	40
## 185	WA	611	9	40	0	46
## 166	WA	440	6	26	0	34
## 90	WA	501	3	33	5	31
## 2	WA	608	4	0	42	47
## 131	WA	295	0	17	0	24
## 45	WA	351	4	31	0	31
## 81	WA	412	5	32	0	29
## 37	WA	436	7	38	0	31
## 192	WA	455	5	33	0	31
## 31	WA	163	3	0	13	8
## 141	WA	332	0	0	10	23
## 134	WA	314	3	23	0	23
## 137	WA	337	4	27	0	32
## 184	WA	234	4	20	0	12
## 98	WA	300	6	22	0	14
## 151	WA	357	7	0	26	26
## 159	WA	242	5	15	1	21
## 176	WA	186	3	23	0	11
## 148	WA	304	4	13	1	22
## 84	WA	221	3	21	0	17
## 66	WA	226	6	15	0	19
## 199	WA	265	1	14	0	14
## 82	WA	176	3	15	0	14
## 194	WA	295	2	18	0	17
## 132	WA	259	0	21	0	19
## 117	WA	224	6	20	0	14
## 155	WA	199	3	10	0	15
## 120	WA	220	3	20	0	13
## 113	WA	250	0	17	0	15
## 11	WA	88	1	0	7	7
## 35	WA	285	0	12	14	26
## 89	WA	172	2	12	0	13
## 178	WA	191	2	8	0	12

## 75	WA	80	0	0	2	8
## 186	WA	219	1	0	16	14
## 129	WA	175	3	6	0	18
## 40	WA	109	2	8	0	8
## 116	WA	93	0	0	6	4
## 55	WA	102	0	0	8	10
## 180	WA	81	0	9	0	12
## 61	WA	90	1	5	0	5
## 205	WA	148	0	9	0	10
## 163	WA	44	0	0	6	3
## 87	WA	87	0	2	5	3
## 198	WA	46	1	0	2	1
## 68	WA	44	3	2	0	1
## 206	WA	85	1	7	0	6
## 112	WA	52	0	0	5	0
##	Gr 2 Total	Gr 3 Total	Gr 4 Total	Gr 5 Total	Gr 6 Total	Gr 7 Total
## 175	2573	2445	2266	2223	1996	2085
## 170	2559	2394	2266	2192	2225	2227
## 79	2284	2266	2256	2252	2123	2018
## 72	2175	2055	1935	2102	2006	2091
## 8	1534	1458	1415	1454	1488	1498
## 49	1675	1636	1578	1669	1684	1579
## 42	1568	1486	1459	1493	1520	1468
## 190	1965	1847	1775	1754	1689	1689
## 114	1622	1667	1603	1551	1577	1502
## 140	1627	1537	1513	1564	1603	1605
## 48	1619	1533	1506	1552	1402	1370
## 63	1593	1496	1432	1389	1310	1368
## 67	1552	1480	1545	1554	1513	1497
## 130	1487	1416	1380	1319	1313	1210
## 10	1491	1414	1392	1352	1370	1330
## 147	1326	1251	1177	1104	1078	1059
## 208	1361	1250	1163	1178	1102	1127
## 5	1181	1134	1157	1122	1058	1090
## 71	1414	1380	1273	1278	1300	1256
## 28	1227	1122	1040	941	902	830
## 103	1239	1200	1141	1227	1133	1145
## 149	960	953	856	965	991	930
## 9	767	816	837	774	816	785
## 21	977	975	981	970	1005	959
## 7	943	956	946	1010	1030	1040
## 20	788	805	800	847	841	848
## 91	886	848	827	817	801	825
## 164	683	618	749	695	792	744
## 162	752	686	661	746	672	692
## 122	702	681	699	697	682	656
## 173	638	647	602	613	624	642
## 168	711	700	719	748	726	726
## 177	645	600	625	579	642	622
## 53	609	601	538	546	540	538
## 133	567	619	644	631	650	684
## 99	645	630	669	592	610	622
## 201	558	612	575	564	554	587
## 78	659	604	707	630	652	615

## 188	383	400	433	445	467	475
## 83	519	519	487	492	471	491
## 96	503	479	493	471	480	485
## 15	437	527	470	504	570	536
## 174	592	520	542	522	483	474
## 165	557	517	509	541	514	483
## 110	423	450	430	438	452	450
## 39	446	449	414	425	442	424
## 115	462	437	409	410	372	415
## 209	422	387	409	400	432	407
## 4	424	397	392	424	411	440
## 93	318	320	364	360	361	360
## 50	342	362	330	362	371	359
## 158	268	247	247	289	237	281
## 70	339	380	379	346	387	372
## 24	353	336	345	331	320	320
## 161	267	307	274	277	259	251
## 6	247	260	288	313	312	316
## 46	286	288	283	301	288	292
## 128	355	352	334	307	301	295
## 203	245	247	242	265	243	268
## 187	243	232	237	219	237	244
## 183	309	323	298	294	317	305
## 123	351	416	407	450	421	565
## 135	292	284	257	287	261	293
## 1	264	257	202	236	240	217
## 51	300	273	259	275	289	272
## 207	185	151	176	173	176	166
## 195	273	303	274	258	281	260
## 22	284	280	263	235	255	275
## 153	234	261	268	235	264	237
## 58	302	326	265	284	276	277
## 197	229	233	266	219	241	249
## 43	243	224	222	236	227	224
## 3	218	196	209	185	218	222
## 23	187	183	201	213	205	224
## 143	222	235	184	221	193	201
## 138	224	188	200	203	215	222
## 139	241	199	202	203	206	206
## 160	195	194	195	223	207	209
## 27	192	211	187	186	180	203
## 85	211	264	206	209	217	194
## 80	183	184	168	178	174	182
## 12	178	153	171	146	153	185
## 38	196	179	204	191	184	200
## 127	183	193	166	173	174	184
## 60	142	130	120	158	142	136
## 150	182	186	169	184	182	176
## 142	96	88	99	80	83	87
## 154	186	164	168	170	187	150
## 111	140	153	139	144	128	147
## 47	188	207	173	148	186	176
## 193	213	216	216	176	173	139
## 30	94	102	84	103	92	100

## 156	117	139	116	141	122	117
## 109	165	152	177	162	160	150
## 102	142	132	156	142	140	115
## 191	99	98	115	79	127	118
## 172	154	137	149	126	155	158
## 41	137	122	145	139	144	144
## 92	173	136	151	131	133	138
## 65	129	114	125	113	118	140
## 64	119	129	126	137	131	160
## 32	132	106	127	127	132	123
## 107	133	117	115	103	121	117
## 94	157	134	133	144	117	152
## 169	97	100	107	106	102	115
## 59	117	111	122	120	117	95
## 44	90	99	97	75	115	113
## 152	108	112	90	106	110	130
## 18	119	119	105	105	129	118
## 106	92	88	92	112	133	107
## 76	108	104	111	127	128	118
## 17	96	85	74	91	101	101
## 97	115	76	103	106	108	113
## 136	75	90	110	80	89	76
## 118	84	78	72	74	84	83
## 210	82	103	91	108	119	96
## 62	88	91	92	103	77	85
## 101	83	83	85	85	69	69
## 19	74	108	102	79	95	94
## 26	70	77	68	84	89	75
## 77	49	44	44	50	51	40
## 105	75	82	65	84	92	81
## 57	63	56	48	55	51	53
## 179	103	93	105	99	78	106
## 121	92	68	84	83	80	99
## 182	83	100	93	84	78	85
## 34	76	59	73	72	66	81
## 196	78	86	59	69	65	64
## 13	82	89	62	73	65	80
## 56	66	64	69	70	67	68
## 171	76	75	59	57	67	73
## 54	64	55	55	61	77	88
## 52	62	56	68	71	60	79
## 86	78	84	62	75	62	71
## 157	50	58	65	56	51	66
## 125	76	74	94	73	93	71
## 189	83	71	75	70	75	81
## 144	64	57	57	67	56	59
## 119	48	49	48	41	53	51
## 25	55	53	54	54	53	64
## 88	52	51	56	45	56	47
## 73	55	50	44	60	48	59
## 108	54	48	46	62	39	45
## 14	74	64	68	60	52	60
## 69	68	69	82	77	65	73
## 16	33	34	26	32	40	27

## 200	35	25	36	22	26	25
## 124	55	62	61	60	45	45
## 167	39	50	64	37	41	36
## 145	33	41	37	47	73	64
## 204	38	59	53	47	45	47
## 104	60	72	56	57	65	52
## 95	55	40	53	58	46	37
## 74	42	49	43	59	58	63
## 181	39	49	53	45	48	46
## 36	43	32	45	45	43	59
## 126	55	36	40	46	41	34
## 29	38	44	53	32	47	40
## 33	42	42	28	39	52	37
## 202	23	34	40	24	25	39
## 100	43	39	41	35	27	39
## 146	46	38	40	48	36	54
## 185	38	45	45	43	52	46
## 166	28	33	30	33	29	33
## 90	42	32	32	39	34	49
## 2	34	42	35	42	51	47
## 131	21	23	19	24	23	19
## 45	30	22	25	19	26	32
## 81	30	39	27	36	28	35
## 37	35	36	32	34	30	20
## 192	27	36	40	32	38	30
## 31	9	11	8	13	16	13
## 141	46	26	27	32	25	27
## 134	22	26	21	18	20	27
## 137	29	38	23	19	23	25
## 184	14	20	16	17	15	14
## 98	29	17	26	27	26	33
## 151	32	30	19	20	21	30
## 159	15	12	23	11	13	24
## 176	12	16	11	16	15	11
## 148	27	24	24	29	19	23
## 84	16	16	19	17	14	11
## 66	26	25	20	14	18	15
## 199	19	12	14	15	20	17
## 82	18	11	9	15	13	18
## 194	17	26	28	17	14	30
## 132	19	18	19	27	18	16
## 117	17	17	24	17	12	12
## 155	10	12	21	17	19	11
## 120	18	18	22	15	18	22
## 113	29	15	19	17	20	16
## 11	7	4	6	4	5	6
## 35	27	20	27	25	17	24
## 89	10	7	14	18	15	12
## 178	9	16	17	19	21	12
## 75	6	8	5	6	0	10
## 186	24	15	16	21	28	15
## 129	13	11	17	16	12	10
## 40	11	11	2	14	10	11
## 116	7	6	7	8	5	12

## 55	9	8	7	8	8	9
## 180	9	4	7	12	9	6
## 61	4	4	12	5	12	0
## 205	9	8	14	13	19	16
## 163	4	3	1	3	4	2
## 87	8	9	9	6	6	8
## 198	2	1	3	6	7	5
## 68	4	7	5	4	3	5
## 206	5	5	6	7	8	5
## 112	3	4	1	3	2	6
##	Gr 8 Total	Gr 9 Total	Gr 10 Total	Gr 11 Total	Gr 12 Total	
## 175	1998	2124	2080	2001	2330	
## 170	2200	2254	2169	2107	2159	
## 79	2060	1935	1852	1827	1767	
## 72	2080	2489	2238	2091	1990	
## 8	1457	1589	1545	1585	1582	
## 49	1657	1711	1883	1793	1896	
## 42	1473	1625	1578	1686	1999	
## 190	1762	1795	1788	1643	1857	
## 114	1571	1510	1616	1551	1746	
## 140	1724	1728	1735	1771	1770	
## 48	1448	1444	1408	1408	1442	
## 63	1272	1653	1491	1359	1436	
## 67	1442	1532	1395	1447	1345	
## 130	1294	1182	1140	1176	1139	
## 10	1422	1454	1308	1364	1478	
## 147	1115	1117	1132	1066	1234	
## 208	1156	1183	1172	1102	1357	
## 5	1085	1278	1168	1205	1326	
## 71	1230	1370	1333	1235	1339	
## 28	823	774	777	681	648	
## 103	1107	1119	1143	1123	1126	
## 149	926	1071	981	975	1017	
## 9	832	889	939	919	1008	
## 21	1048	1042	985	969	1026	
## 7	1088	1246	1188	1137	1146	
## 20	839	876	893	884	945	
## 91	867	863	926	867	988	
## 164	775	943	938	910	994	
## 162	703	813	735	726	599	
## 122	716	873	830	841	887	
## 173	677	876	867	741	683	
## 168	775	716	701	741	875	
## 177	618	626	581	606	635	
## 53	544	578	584	576	604	
## 133	713	769	792	879	858	
## 99	598	627	626	588	671	
## 201	652	642	572	650	702	
## 78	708	619	611	614	609	
## 188	525	532	535	550	644	
## 83	484	529	501	494	535	
## 96	502	630	587	559	1111	
## 15	541	567	553	513	508	
## 174	519	491	447	477	444	

## 165	508	489	469	459	461
## 110	503	476	484	493	538
## 39	452	430	447	475	463
## 115	401	413	397	408	463
## 209	436	408	468	466	480
## 4	437	436	443	475	476
## 93	374	364	334	377	342
## 50	384	449	414	433	396
## 158	288	290	301	260	274
## 70	388	413	376	383	425
## 24	328	346	309	313	325
## 161	284	432	418	408	433
## 6	280	367	347	345	348
## 46	324	342	320	360	375
## 128	280	258	288	258	274
## 203	289	297	294	296	338
## 187	208	239	226	208	249
## 183	286	353	335	336	422
## 123	689	396	351	305	224
## 135	283	277	300	314	355
## 1	235	248	266	227	298
## 51	270	310	247	271	260
## 207	172	169	183	177	223
## 195	254	243	185	218	227
## 22	265	316	284	265	299
## 153	264	274	250	246	269
## 58	259	255	241	227	276
## 197	249	274	238	239	258
## 43	233	258	235	237	250
## 3	202	189	214	235	227
## 23	217	233	254	304	389
## 143	213	233	195	216	251
## 138	211	223	230	251	232
## 139	203	204	181	175	172
## 160	227	231	275	265	272
## 27	168	220	224	227	255
## 85	238	219	213	222	241
## 80	175	168	196	184	188
## 12	158	168	184	167	179
## 38	189	177	180	205	179
## 127	205	187	187	182	184
## 60	153	146	219	177	264
## 150	190	167	189	166	157
## 142	83	250	460	581	982
## 154	191	174	168	153	172
## 111	156	177	186	194	237
## 47	188	192	195	197	189
## 193	156	168	138	158	124
## 30	82	118	18	39	50
## 156	133	125	119	119	88
## 109	154	156	172	155	157
## 102	161	130	152	137	153
## 191	143	164	158	145	141
## 172	152	182	172	140	197

## 41	158	173	171	179	148
## 92	140	120	146	149	153
## 65	136	161	138	124	116
## 64	140	189	147	188	175
## 32	136	144	153	144	204
## 107	102	132	109	122	126
## 94	134	136	110	125	130
## 169	115	129	129	154	160
## 59	126	122	107	101	101
## 44	99	115	143	146	180
## 152	136	128	110	107	119
## 18	124	122	131	114	118
## 106	128	143	134	139	139
## 76	146	159	134	140	131
## 17	103	113	100	126	113
## 97	72	132	110	83	95
## 136	82	98	121	107	125
## 118	68	73	62	81	69
## 210	101	116	111	107	106
## 62	106	67	87	108	119
## 101	66	70	51	50	81
## 19	94	95	93	92	106
## 26	92	92	92	97	85
## 77	41	62	69	58	38
## 105	71	93	101	85	95
## 57	59	63	50	50	67
## 179	84	88	99	87	83
## 121	80	71	91	89	89
## 182	81	78	72	68	93
## 34	73	77	75	73	75
## 196	78	86	86	86	65
## 13	73	73	64	63	69
## 56	72	89	76	75	78
## 171	74	80	88	70	81
## 54	75	84	86	76	81
## 52	69	88	81	72	70
## 86	67	73	59	62	74
## 157	66	65	70	76	81
## 125	66	52	55	57	34
## 189	95	9	10	5	5
## 144	73	71	66	75	59
## 119	57	37	41	59	53
## 25	74	85	84	88	104
## 88	44	41	62	40	50
## 73	54	113	118	82	125
## 108	47	44	57	60	58
## 14	62	62	47	61	56
## 69	71	81	70	74	69
## 16	31	42	38	37	34
## 200	34	45	44	62	127
## 124	55	64	56	66	55
## 167	43	41	32	39	34
## 145	86	40	43	57	43
## 204	52	50	59	55	49

## 104	66	66	55	48	65
## 95	54	47	48	45	56
## 74	50	60	58	31	40
## 181	66	65	68	82	79
## 36	47	53	45	39	39
## 126	40	54	52	35	38
## 29	41	70	41	56	51
## 33	43	50	49	49	30
## 202	42	39	44	34	25
## 100	42	32	45	48	52
## 146	35	55	49	48	60
## 185	41	48	61	54	52
## 166	32	39	37	37	49
## 90	44	40	42	44	34
## 2	56	48	61	60	43
## 131	24	20	29	21	31
## 45	24	24	29	22	36
## 81	35	34	31	27	29
## 37	37	29	45	28	41
## 192	34	33	31	35	55
## 31	18	15	13	9	17
## 141	25	21	23	27	20
## 134	33	22	25	24	30
## 137	23	18	26	27	27
## 184	17	27	22	24	16
## 98	20	21	20	26	19
## 151	19	38	33	31	32
## 159	27	22	20	26	12
## 176	17	12	16	11	15
## 148	20	29	24	25	24
## 84	19	26	21	12	12
## 66	18	17	13	16	10
## 199	27	32	21	34	26
## 82	18	13	10	16	6
## 194	23	27	32	22	24
## 132	22	22	19	19	20
## 117	13	17	18	19	24
## 155	16	21	8	20	19
## 120	15	13	18	13	15
## 113	20	22	20	17	23
## 11	5	12	11	8	6
## 35	16	23	22	14	18
## 89	16	13	13	10	19
## 178	12	12	22	13	18
## 75	8	4	6	8	9
## 186	14	15	13	15	13
## 129	14	20	7	14	17
## 40	8	12	8	3	3
## 116	13	6	8	8	3
## 55	9	6	9	1	10
## 180	2	1	2	4	4
## 61	8	10	8	10	7
## 205	6	8	13	9	14
## 163	3	5	4	4	2

```
## 87          9          6          6          4          6
## 198         4          2          5          3          5
## 68          4          3          1          2          3
## 206         9          8          8          4          7
## 112         3          7          3         10          5
```

Now I'd like to see descriptive statistics for total revenue.

```
summary(FullData$`Total Revenue`)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      1694   7496   17644   52931   53008   415924
```

Standard deviation:

```
library(DescTools)
```

```
## Warning: package 'DescTools' was built under R version 3.4.3
```

```
sd(FullData$`Total Revenue`,na.rm = T)
```

```
## [1] 80461.45
```

Coefficient of Variation

```
sd(FullData$`Total Revenue`,na.rm = T)/mean(FullData$`Total Revenue`,na.rm = T)
```

```
## [1] 1.520114
```

Skewness

```
Skew(FullData$`State Revenue`,na.rm = T)
```

```
## [1] 2.246316
```

Kurtosis

```
Kurt(FullData$`State Revenue`,na.rm = T)
```

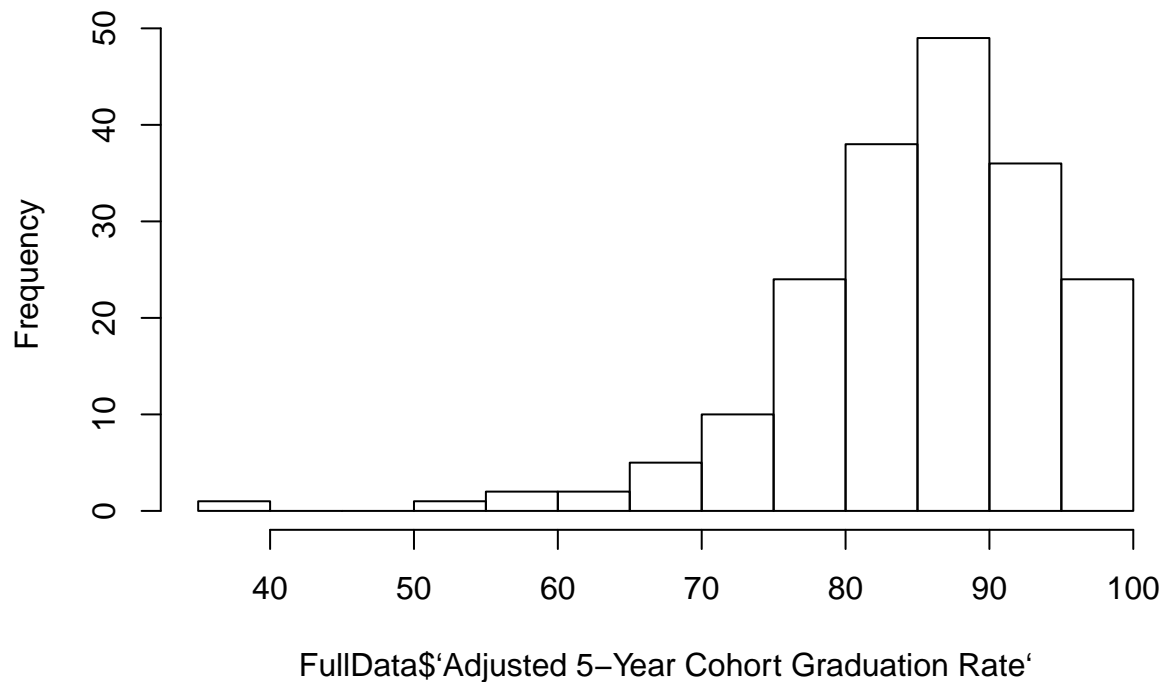
```
## [1] 4.856858
```

Now let's look for a possible correlation.

```
data=FullData[is.finite(FullData$`Adjusted 5-Year Cohort Graduation Rate`),]
```

```
hist(FullData$`Adjusted 5-Year Cohort Graduation Rate`)
```


Histogram of FullData\$'Adjusted 5-Year Cohort Graduation Rate'



```
explanans=names(FullData)[c(3,4,9)]
for (x in explanans){
  par=cbind(FullData[,x],FullData$`Adjusted 5-Year Cohort Graduation Rate`)
  p=cor.test(FullData[,x],FullData$`Adjusted 5-Year Cohort Graduation Rate`)
  print(paste("Pearson:",p$estimate," - Is significant?",p$p.value<0.05))
}
```

```
## Warning in cor(x, y): the standard deviation is zero
```

```
## [1] "Pearson: NA - Is significant? NA"
```

```
## [1] "Pearson: -0.0304517916739964 - Is significant? FALSE"
```

```
## [1] "Pearson: -0.980426774306284 - Is significant? TRUE"
```

```
cor(FullData[explanans])
```

```
## Warning in cor(FullData[explanans]): the standard deviation is zero
```

```
##           Year Total Revenue Cohort dropout rate
## Year           1           NA           NA
## Total Revenue  NA           1           NA
## Cohort dropout rate  NA           NA           1
```

```
row.names(FullData)=FullData$`District Name`
```

```
names(FullData)
```

```
## [1] "District Name"
## [2] "State.x"
## [3] "Year"
## [4] "Total Revenue"
## [5] "State Revenue"
## [6] "Local Revenue"
## [7] "District Code"
```

```
## [8] "Adjusted 5-Year Cohort Graduation Rate"
## [9] "Cohort dropout rate"
## [10] "School Year"
## [11] "State.y"
## [12] "K-12 Total"
## [13] "PK Total"
## [14] "Full K Total"
## [15] "Half K Total"
## [16] "Gr 1 Total"
## [17] "Gr 2 Total"
## [18] "Gr 3 Total"
## [19] "Gr 4 Total"
## [20] "Gr 5 Total"
## [21] "Gr 6 Total"
## [22] "Gr 7 Total"
## [23] "Gr 8 Total"
## [24] "Gr 9 Total"
## [25] "Gr 10 Total"
## [26] "Gr 11 Total"
## [27] "Gr 12 Total"
```

Let's run a linear regression to see if there are any correlations.

```
LinRegEPI = lm(`Adjusted 5-Year Cohort Graduation Rate` ~ `Total Revenue` + `State Revenue` + `Local Revenue`,
               data = FullData)
```

Now we can view a summary.

```
summary(LinRegEPI)
```

```
##
## Call:
## lm(formula = `Adjusted 5-Year Cohort Graduation Rate` ~ `Total Revenue` +
##     `State Revenue` + `Local Revenue` + `K-12 Total`, data = FullData)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -46.967  -4.647   0.633   5.933  14.122
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)   86.1761798  0.8172087  105.452  <2e-16 ***
## `Total Revenue` -0.0003388  0.0001880  -1.801   0.0732 .
## `State Revenue`  0.0003606  0.0002604   1.385   0.1678
## `Local Revenue`  0.0005006  0.0001998   2.506   0.0131 *
## `K-12 Total`   -0.0006479  0.0011588  -0.559   0.5767
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 9 on 187 degrees of freedom
## (18 observations deleted due to missingness)
## Multiple R-squared:  0.07621,    Adjusted R-squared:  0.05645
## F-statistic: 3.857 on 4 and 187 DF,  p-value: 0.004909
```

Now we will collect the results of the regression.

```
results=coef(summary(LinRegEPI))
```

```
data.frame(Coefficient=results[,1],Significant=results[,4]<0.05)
```

```
##              Coefficient Significant
## (Intercept)    86.1761797589      TRUE
## `Total Revenue` -0.0003387524     FALSE
## `State Revenue`  0.0003605731     FALSE
## `Local Revenue`  0.0005006454      TRUE
## `K-12 Total`    -0.0006479249     FALSE
```

```
summary(LinRegEPI)$adj.r.squared
```

```
## [1] 0.0564482
```

Next let's develop scatter plots to visualize our data. First, we need to assign variables.

```
var2=data$`State Revenue`
```

```
# Saving mean and sd:
```

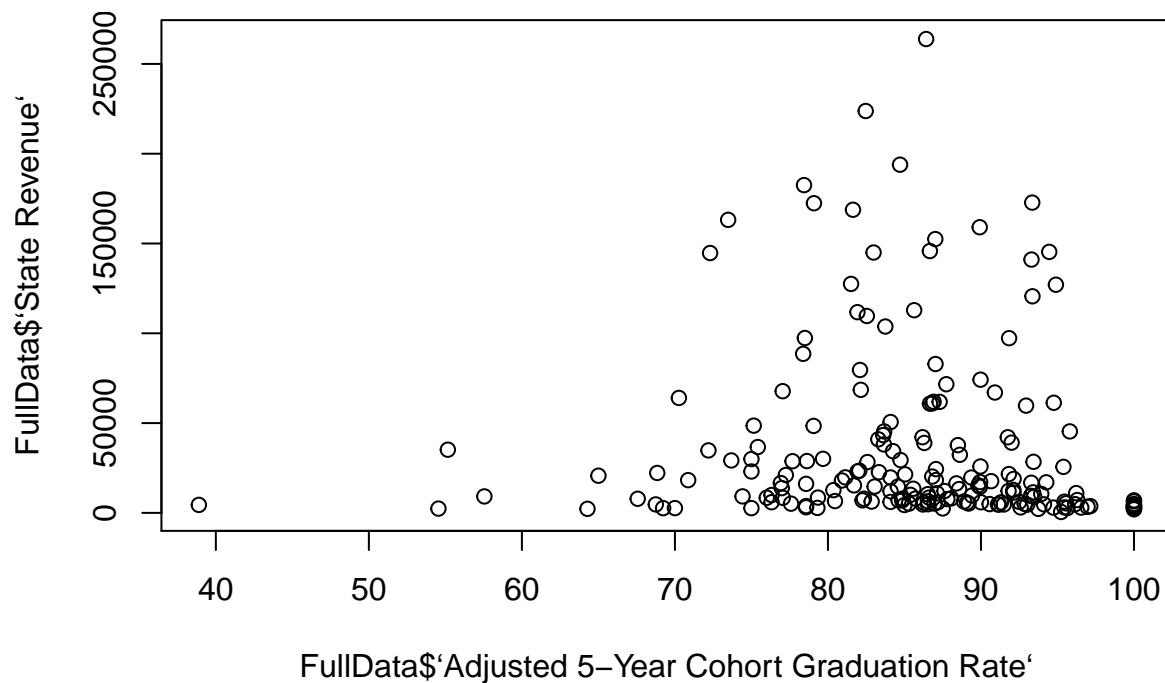
```
mnVar2=mean(var2,na.rm = T)
```

```
sdVar2=sd(var2,na.rm = T)
```

```
library(ggplot2)
```

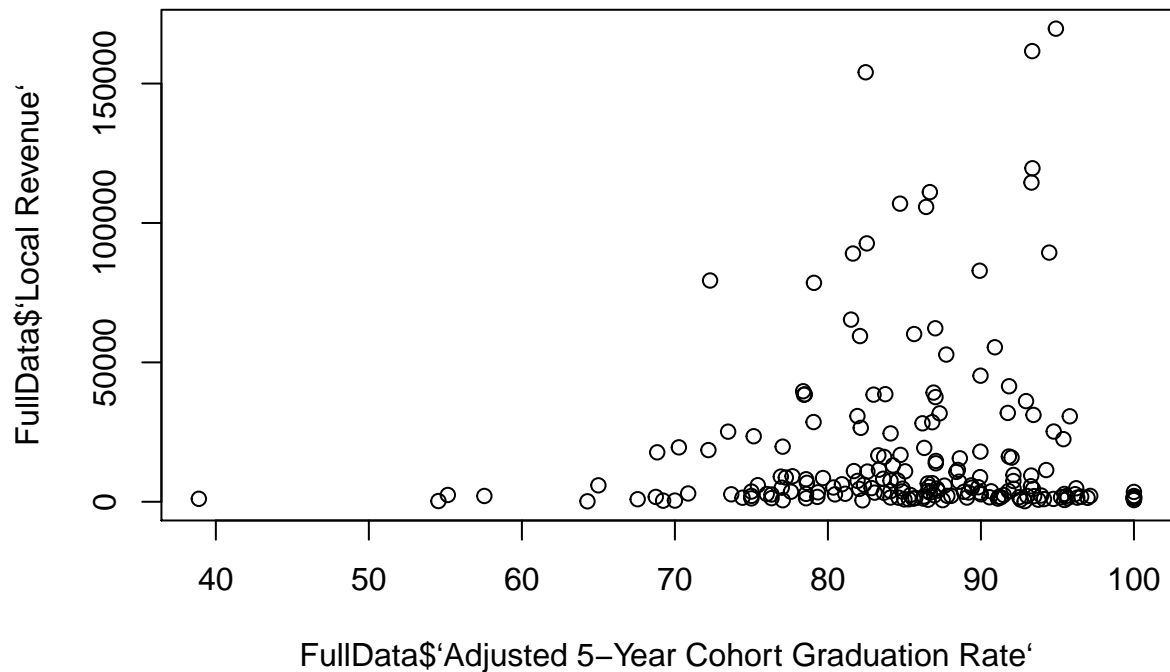
```
#Multivariate Scatter Plot State Revenue.
```

```
plot(x=FullData$`Adjusted 5-Year Cohort Graduation Rate`,y=FullData$`State Revenue`)
```



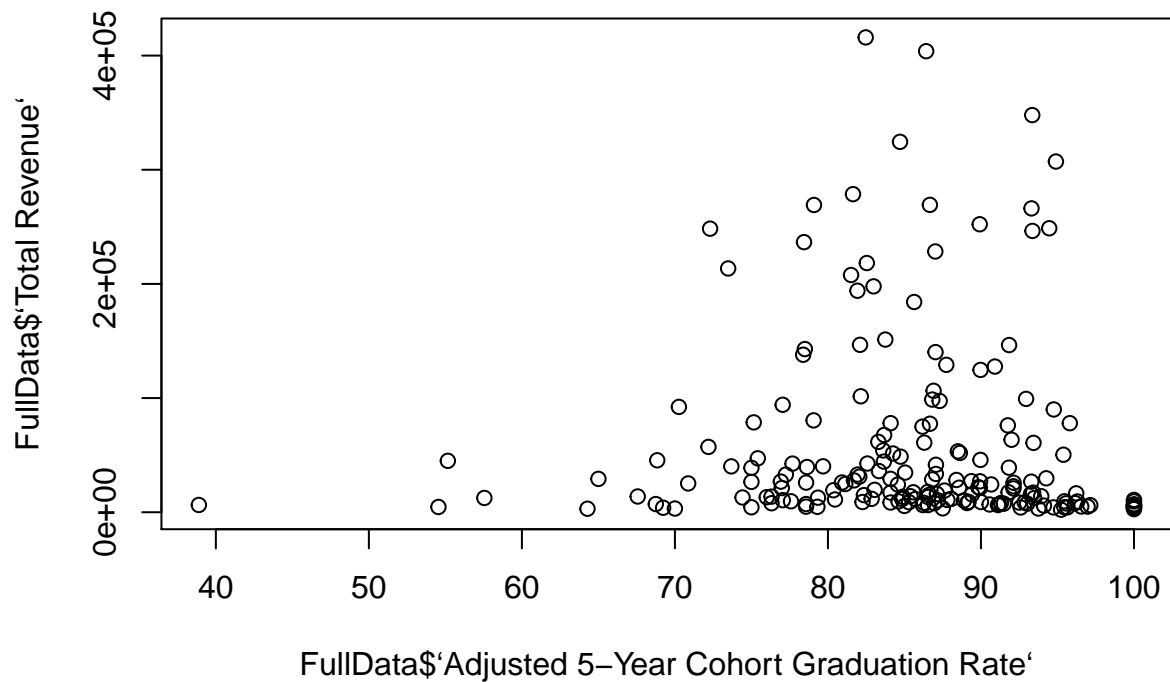
```
#Multivariate Scatter Plot Local Revenue.
```

```
plot(x=FullData$`Adjusted 5-Year Cohort Graduation Rate`,y=FullData$`Local Revenue`)
```



#Multivariate Scatter Plot Total Revenue.

```
plot(x=FullData$`Adjusted 5-Year Cohort Graduation Rate`,y=FullData$`Total Revenue`)
```



Now plot a histogram of Graduation Rates.

```
data=FullData[is.finite(FullData$`State Revenue`),]
```

```
var=data$`Adjusted 5-Year Cohort Graduation Rate`
```

```
mnVar=mean(var,na.rm = T)
```

```
sdVar=sd(var,na.rm = T)
```

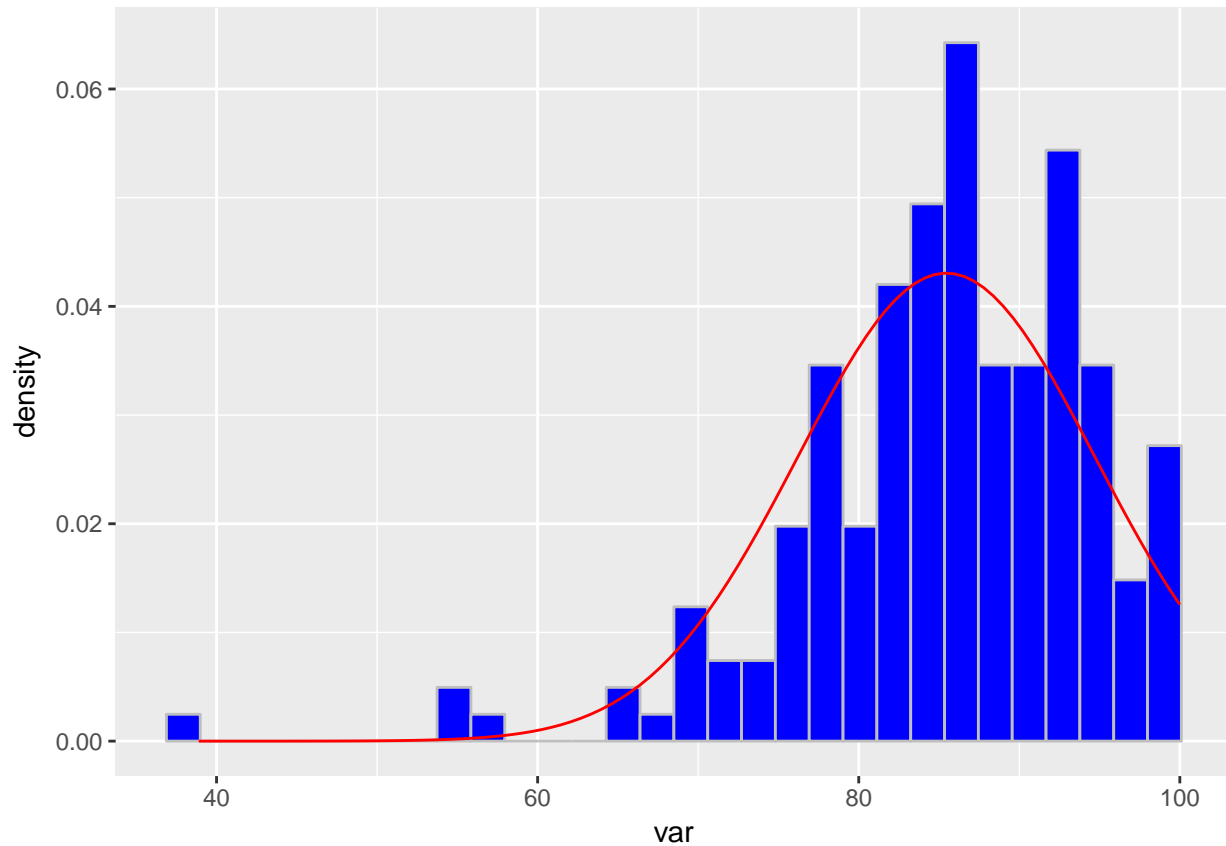
```
base = ggplot(data, aes(x=var))
hist = base + geom_histogram(fill="blue",
                             color='grey',
                             aes(y=..density..))
```

```
histAndNormal = hist + stat_function(fun=dnorm,
                                     color="red",
                                     args=list(mean=mnVar,sd=sdVar))
```

```
histAndNormal
```

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```

```
## Warning: Removed 18 rows containing non-finite values (stat_bin).
```



Import Washington State School Districts Map

I want to use a map to visualize the district graduation rates and revenue levels.

```
# Import Map Files
```

```
compressedMap= 'https://github.com/awood59/PROJECT/raw/master/WAOFM%20-%20GIS%20-%20School%20District%20'
```

```
library(utils)
temp=tempfile()
download.file(compressedMap, temp)
unzip(temp)
```

```
(maps=list.files(pattern = 'shp'))

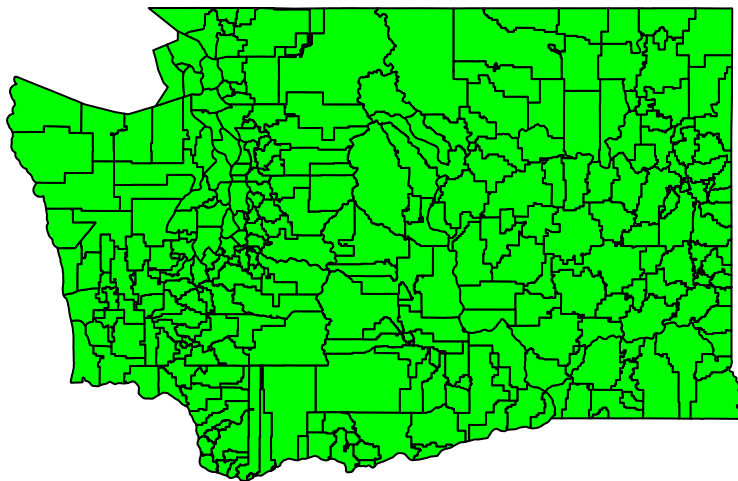
## [1] "geo_export_4f6f751a-05f3-48de-adf9-962964ba024e.shp"
library(rgdal)

## Warning: package 'rgdal' was built under R version 3.4.3
## Loading required package: sp
## Warning: package 'sp' was built under R version 3.4.3
## rgdal: version: 1.2-16, (SVN revision 701)
##   Geospatial Data Abstraction Library extensions to R successfully loaded
##   Loaded GDAL runtime: GDAL 2.1.3, released 2017/20/01
##   Path to GDAL shared files: /Library/Frameworks/R.framework/Versions/3.4/Resources/library/rgdal/gdal
##   GDAL binary built with GEOS: FALSE
##   Loaded PROJ.4 runtime: Rel. 4.9.3, 15 August 2016, [PJ_VERSION: 493]
##   Path to PROJ.4 shared files: /Library/Frameworks/R.framework/Versions/3.4/Resources/library/rgdal/proj
##   Linking to sp version: 1.2-5

wazipMap <- rgdal::readOGR("geo_export_4f6f751a-05f3-48de-adf9-962964ba024e.shp",stringsAsFactors=F)

## OGR data source with driver: ESRI Shapefile
## Source: "geo_export_4f6f751a-05f3-48de-adf9-962964ba024e.shp", layer: "geo_export_4f6f751a-05f3-48de"
## with 295 features
## It has 7 fields

plot(wazipMap,col='green')
```



Next Step

I will follow up by linking the map and plotting graduation rates via district.

I need to see which columns can be connected in the data and the map. We can see we have the column 'name' in the map file.

```
names(wazipMap)

## [1] "ccddd"      "et_id"      "esd"        "cenid"      "longitude"  "latitude"
## [7] "name"
```

Fortunately, they are the same as the District Name in the Data file.

```
list(wazipMap@data$name)
```

```
## [[1]]
##   [1] "Aberdeen School District"
##   [2] "Adna School District"
##   [3] "Almira School District"
##   [4] "Anacortes School District"
##   [5] "Arlington School District"
##   [6] "Asotin-Anatone School District"
##   [7] "Auburn School District"
##   [8] "Bainbridge Island School District"
##   [9] "Battle Ground School District"
##  [10] "Bellevue School District"
##  [11] "Bellingham School District"
##  [12] "Benge School District"
##  [13] "Bethel School District"
##  [14] "Bickleton School District"
##  [15] "Blaine School District"
##  [16] "Boistfort School District"
##  [17] "Bremerton School District"
##  [18] "Brewster School District"
##  [19] "Bridgeport School District"
##  [20] "Brinnon School District"
##  [21] "Burlington-Edison School District"
##  [22] "Camas School District"
##  [23] "Cape Flattery School District"
##  [24] "Carbonado School District"
##  [25] "Cascade School District"
##  [26] "Cashmere School District"
##  [27] "Castle Rock School District"
##  [28] "Centerville School District"
##  [29] "Central Kitsap School District"
##  [30] "Central Valley School District"
##  [31] "Centralia School District"
##  [32] "Chehalis School District"
##  [33] "Cheney School District"
##  [34] "Chewelah School District"
##  [35] "Chimacum School District"
##  [36] "Clarkston School District"
##  [37] "Cle Elum-Roslyn School District"
##  [38] "Clover Park School District"
##  [39] "Colfax School District"
##  [40] "College Place School District"
##  [41] "Colton School District"
##  [42] "Columbia School District (Stevens)"
##  [43] "Columbia School District (Walla Walla)"
##  [44] "Colville School District"
##  [45] "Concrete School District"
##  [46] "Conway School District"
##  [47] "Cosmopolis School District"
##  [48] "Coulee-Hartline School District"
##  [49] "Coupeville School District"
##  [50] "Crescent School District"
```

[51] "Creston School District"
 ## [52] "Curlew School District"
 ## [53] "Cusick School District"
 ## [54] "Damman School District"
 ## [55] "Darrington School District"
 ## [56] "Davenport School District"
 ## [57] "Dayton School District"
 ## [58] "Deer Park School District"
 ## [59] "Dieringer School District"
 ## [60] "Dixie School District"
 ## [61] "East Valley School District (Spokane)"
 ## [62] "East Valley School District (Yakima)"
 ## [63] "Eastmont School District"
 ## [64] "Easton School District"
 ## [65] "Eatonville School District"
 ## [66] "Edmonds School District"
 ## [67] "Ellensburg School District"
 ## [68] "Elma School District"
 ## [69] "Endicott School District"
 ## [70] "Entiat School District"
 ## [71] "Enumclaw School District"
 ## [72] "Ephrata School District"
 ## [73] "Evaline School District"
 ## [74] "Everett School District"
 ## [75] "Evergreen School District (Clark)"
 ## [76] "Evergreen School District (Stevens)"
 ## [77] "Federal Way School District"
 ## [78] "Ferndale School District"
 ## [79] "Fife Public Schools"
 ## [80] "Finley School District"
 ## [81] "Franklin Pierce School District"
 ## [82] "Freeman School District"
 ## [83] "Garfield School District"
 ## [84] "Glenwood School District"
 ## [85] "Goldendale School District"
 ## [86] "Grand Coulee Dam School District"
 ## [87] "Grandview School District"
 ## [88] "Granger School District"
 ## [89] "Granite Falls School District"
 ## [90] "Grapeview School District"
 ## [91] "Great Northern School District"
 ## [92] "Green Mountain School District"
 ## [93] "Griffin School District"
 ## [94] "Harrington School District"
 ## [95] "Highland School District"
 ## [96] "Highline School District"
 ## [97] "Hockinson School District"
 ## [98] "Hood Canal School District"
 ## [99] "Hoquiam School District"
 ## [100] "Inchelium School District"
 ## [101] "Index School District"
 ## [102] "Issaquah School District"
 ## [103] "Kahlotus School District"
 ## [104] "Kalama School District"

[105] "Keller School District"
 ## [106] "Kelso School District"
 ## [107] "Kennewick School District"
 ## [108] "Kent School District"
 ## [109] "Kettle Falls School District"
 ## [110] "Kiona-Benton School District"
 ## [111] "Kittitas School District"
 ## [112] "Klickitat School District"
 ## [113] "La Center School District"
 ## [114] "La Conner School District"
 ## [115] "LaCrosse School District"
 ## [116] "Lake Chelan School District"
 ## [117] "Lake Quinalt School District"
 ## [118] "Lake Stevens School District"
 ## [119] "Lake Washington School District"
 ## [120] "Lakewood School District"
 ## [121] "Lamont School District"
 ## [122] "Liberty School District"
 ## [123] "Lind School District"
 ## [124] "Longview Public Schools"
 ## [125] "Loon Lake School District"
 ## [126] "Lopez School District"
 ## [127] "Lyle School District"
 ## [128] "Lynden School District"
 ## [129] "Mabton School District"
 ## [130] "Mansfield School District"
 ## [131] "Manson School District"
 ## [132] "Mary M. Knight School District"
 ## [133] "Mary Walker School District"
 ## [134] "Marysville School District"
 ## [135] "McCleary School District"
 ## [136] "Mead School District"
 ## [137] "Medical Lake School District"
 ## [138] "Mercer Island School District"
 ## [139] "Meridian School District"
 ## [140] "Methow Valley School District"
 ## [141] "Mill A School District"
 ## [142] "Monroe School District"
 ## [143] "Montesano School District"
 ## [144] "Morton School District"
 ## [145] "Moses Lake School District"
 ## [146] "Mosseyrock School District"
 ## [147] "Mount Adams School District"
 ## [148] "Mount Baker School District"
 ## [149] "Mount Pleasant School District"
 ## [150] "Mount Vernon School District"
 ## [151] "Mukilteo School District"
 ## [152] "Naches Valley School District"
 ## [153] "Napavine School District"
 ## [154] "Naselle-Grays River Valley School District"
 ## [155] "Nespelem School District"
 ## [156] "Newport School District"
 ## [157] "Nine Mile Falls School District"
 ## [158] "Nooksack Valley School District"

[159] "North Beach School District"
[160] "North Franklin School District"
[161] "North Kitsap School District"
[162] "North Mason School District"
[163] "North River School District"
[164] "North Thurston Public Schools"
[165] "Northport School District"
[166] "Northshore School District"
[167] "Oak Harbor School District"
[168] "Oakesdale School District"
[169] "Oakville School District"
[170] "Ocean Beach School District"
[171] "Ocosta School District"
[172] "Odessa School District"
[173] "Okanogan School District"
[174] "Olympia School District"
[175] "Omak School District"
[176] "Onalaska School District"
[177] "Onion Creek School District"
[178] "Orcas Island School District"
[179] "Orchard Prairie School District"
[180] "Orient School District"
[181] "Orondo School District"
[182] "Oroville School District"
[183] "Orting School District"
[184] "Othello School District"
[185] "Palisades School District"
[186] "Palouse School District"
[187] "Pasco School District"
[188] "Pateros School District"
[189] "Paterson School District"
[190] "Pe Ell School District"
[191] "Peninsula School District"
[192] "Pioneer School District"
[193] "Pomeroy School District"
[194] "Port Angeles School District"
[195] "Port Townsend School District"
[196] "Prescott School District"
[197] "Prosser School District"
[198] "Pullman School District"
[199] "Puyallup School District"
[200] "Queets-Clearwater School District"
[201] "Quilcene School District"
[202] "Quillayute Valley School District"
[203] "Quincy School District"
[204] "Rainier School District"
[205] "Raymond School District"
[206] "Reardan-Edwall School District"
[207] "Renton School District"
[208] "Republic School District"
[209] "Richland School District"
[210] "Ridgefield School District"
[211] "Ritzville School District"
[212] "Riverside School District"

[213] "Riverview School District"
[214] "Rochester School District"
[215] "Roosevelt School District"
[216] "Rosalia School District"
[217] "Royal School District"
[218] "San Juan Island School District"
[219] "Satsop School District"
[220] "Seattle School District"
[221] "Sedro-Woolley School District"
[222] "Selah School District"
[223] "Selkirk School District"
[224] "Sequim School District"
[225] "Shaw Island School District"
[226] "Shelton School District"
[227] "Shoreline School District"
[228] "Skamania School District"
[229] "Skykomish School District"
[230] "Snohomish School District"
[231] "Snoqualmie Valley School District"
[232] "Soap Lake School District"
[233] "South Bend School District"
[234] "South Kitsap School District"
[235] "South Whidbey School District"
[236] "Southside School District"
[237] "Spokane Public Schools"
[238] "Sprague School District"
[239] "St. John School District"
[240] "Stanwood-Camano School District"
[241] "Star School District"
[242] "Starbuck School District"
[243] "Stehekin School District"
[244] "Steilacoom Historical School District"
[245] "Steptoe School District"
[246] "Stevenson-Carson School District"
[247] "Sultan School District"
[248] "Summit Valley School District"
[249] "Sumner School District"
[250] "Sunnyside School District"
[251] "Tacoma Public Schools"
[252] "Taholah School District"
[253] "Tahoma School District"
[254] "Tekoa School District"
[255] "Tenino School District"
[256] "Thorp School District"
[257] "Toledo School District"
[258] "Tonasket School District"
[259] "Toppenish School District"
[260] "Touchet School District"
[261] "Toutle Lake School District"
[262] "Trout Lake School District"
[263] "Tukwila School District"
[264] "Tumwater School District"
[265] "Union Gap School District"
[266] "University Place School District"

```
## [267] "Valley School District"
## [268] "Vancouver Public Schools"
## [269] "Vashon Island School District"
## [270] "Wahkiakum School District"
## [271] "Wahluke School District"
## [272] "Waitsburg School District"
## [273] "Walla Walla School District"
## [274] "Wapato School District"
## [275] "Warden School District"
## [276] "Washougal School District"
## [277] "Washtucna School District"
## [278] "Waterville School District"
## [279] "Wellpinit School District"
## [280] "Wenatchee School District"
## [281] "West Valley School District (Spokane)"
## [282] "West Valley School District (Yakima)"
## [283] "White Pass School District"
## [284] "White River School District"
## [285] "White Salmon Valley School District"
## [286] "Wilbur School District"
## [287] "Willapa Valley School District"
## [288] "Wilson Creek School District"
## [289] "Winlock School District"
## [290] "Wishkah Valley School District"
## [291] "Wishram School District"
## [292] "Woodland School District"
## [293] "Yakima School District"
## [294] "Yelm Community Schools"
## [295] "Zillah School District"
```

We can check that to verify.

```
names(FullData)
```

```
## [1] "District Name"
## [2] "State.x"
## [3] "Year"
## [4] "Total Revenue"
## [5] "State Revenue"
## [6] "Local Revenue"
## [7] "District Code"
## [8] "Adjusted 5-Year Cohort Graduation Rate"
## [9] "Cohort dropout rate"
## [10] "School Year"
## [11] "State.y"
## [12] "K-12 Total"
## [13] "PK Total"
## [14] "Full K Total"
## [15] "Half K Total"
## [16] "Gr 1 Total"
## [17] "Gr 2 Total"
## [18] "Gr 3 Total"
## [19] "Gr 4 Total"
## [20] "Gr 5 Total"
## [21] "Gr 6 Total"
```

```
## [22] "Gr 7 Total"
## [23] "Gr 8 Total"
## [24] "Gr 9 Total"
## [25] "Gr 10 Total"
## [26] "Gr 11 Total"
## [27] "Gr 12 Total"
```

Let's run one last string to be absolutely sure.

```
str(wazipMap$name)
```

```
## chr [1:295] "Aberdeen School District" "Adna School District" ...
```

```
str(FullData$`District Name`)
```

```
## chr [1:210] "Aberdeen School District" "Adna School District" ...
```

Everything looks good. Now we merge the map file with the data file by District Name.

```
contribWAmmap=merge(wazipMap,FullData, by.x='name', by.y='District Name',all.x=F)
```

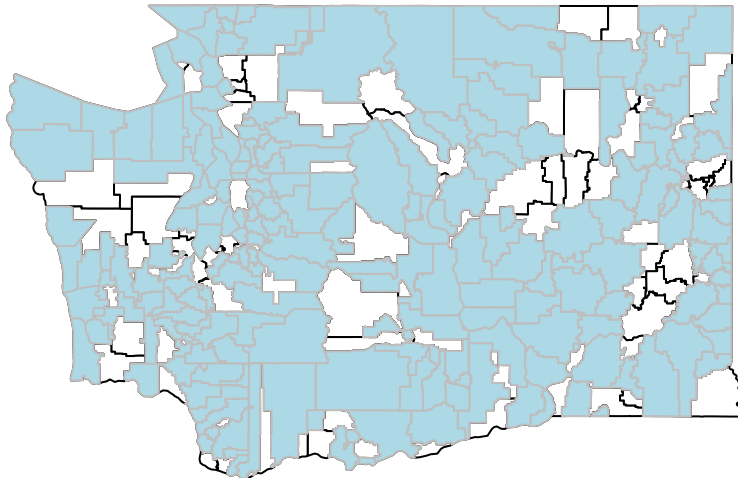
I want to see the number of rows in the new map.

```
nrow(contribWAmmap)
```

```
## [1] 203
```

Now we plot the map to see that we are representing missing data correctly.

```
plot(wazipMap,col='white')
plot(contribWAmmap,col='light blue',border='grey',add=T)
```



We need to install the correct libraries.

```
library(RColorBrewer)
library(classInt)
```

Next we assign the variable for plotting.

```
varToPlot=contribWAmmap$`Adjusted 5-Year Cohort Graduation Rate`

numberOfClasses = 7
colorForScale='YlGnBu'
colors = brewer.pal(numberOfClasses, colorForScale)
intervals <- classIntervals(varToPlot, numberOfClasses,
```

```

        style = "quantile",
        dataPrecision=2)

## Warning in classIntervals(varToPlot, numberOfClasses, style = "quantile", :
## var has missing values, omitted in finding classes

colorPalette <- findColours(intervals, colors)

This code is used to assign legend text, colors, and location.

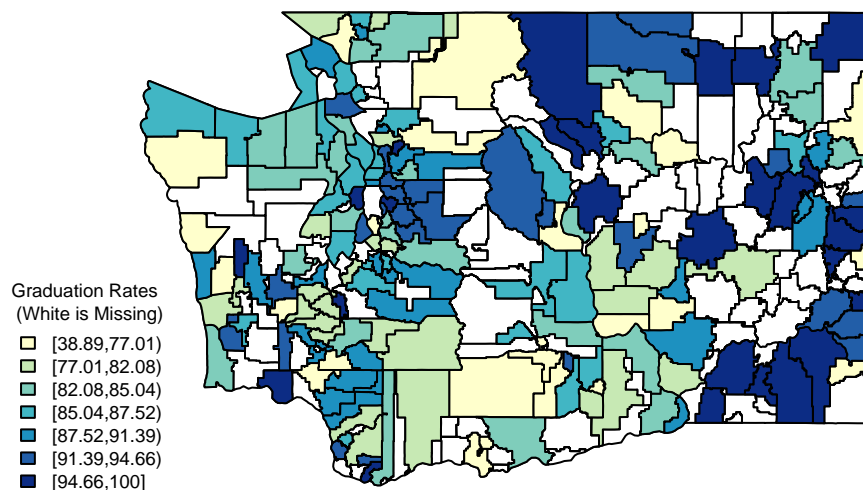
legendText="Graduation Rates \n (White is Missing)"
shrinkLegend=0.6
title="Graduation Rates Via School District in Washington State 2015"

plot(wazipMap,col='white',main=title)

# Second change: col = colors[varToPlot]
plot(contribWAmmap, col = colorPalette,border='black',add=TRUE)
legend('bottomleft', legend = names(attr(colorPalette, "table")),
      fill = attr(colorPalette, "palette"), cex = shrinkLegend,
      bty = "n",
      title=legendText)

```

Graduation Rates Via School District in Washington State 2015



Now I want to see a map of Local Revenue. We create a new variable to plot. I also chose to change the colors.

```

varToPlot2=contribWAmmap$`Local Revenue`

numberOfClasses = 7
colorForScale='YlOrRd'
colors = brewer.pal(numberOfClasses, colorForScale)
intervals <- classIntervals(varToPlot2, numberOfClasses,
                             style = "quantile",
                             dataPrecision=2)
colorPalette <- findColours(intervals, colors)

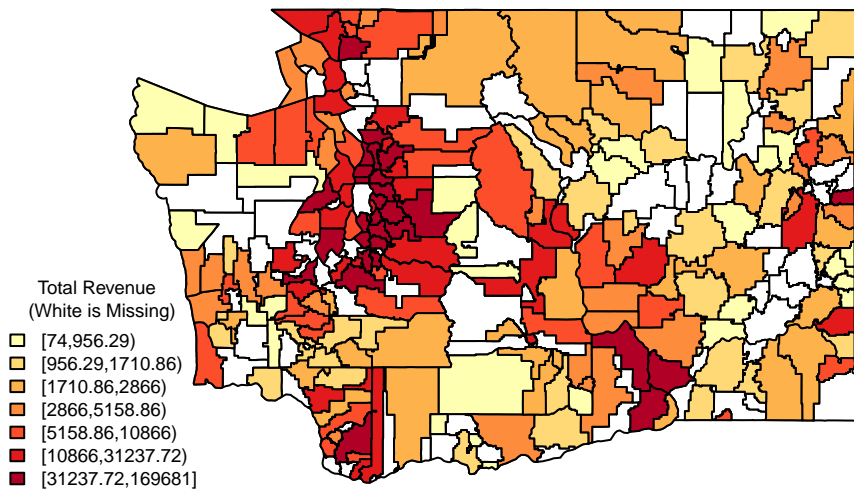
legendText="Total Revenue \n (White is Missing)"

```

```
shrinkLegend=0.6
title="Local Revenue Via School District in Washington State 2015"

plot(wazipMap,col='white',main=title)
# second change: col = colors[varToPlot]
plot(contribWAmmap, col = colorPalette,border='black',add=TRUE)
legend('bottomleft', legend = names(attr(colorPalette, "table")),
      fill = attr(colorPalette, "palette"), cex = shrinkLegend,
      bty = "n",
      title=legendText)
```

Local Revenue Via School District in Washington State 2015



Lastly, I wanted to see a map of Total Revenue. Again, we create a new variable, and rerun the map.

```
varToPlot3=contribWAmmap$`Total Revenue`

numberOfClasses = 7
colorForScale='YlGnBu'
colors = brewer.pal(numberOfClasses, colorForScale)
intervals <- classIntervals(varToPlot3, numberOfClasses,
                             style = "quantile",
                             dataPrecision=2)
colorPalette <- findColours(intervals, colors)

legendText="Total Revenue \n (White is Missing)"
shrinkLegend=0.6
title="Total Revenue Via School District in Washington State 2015"

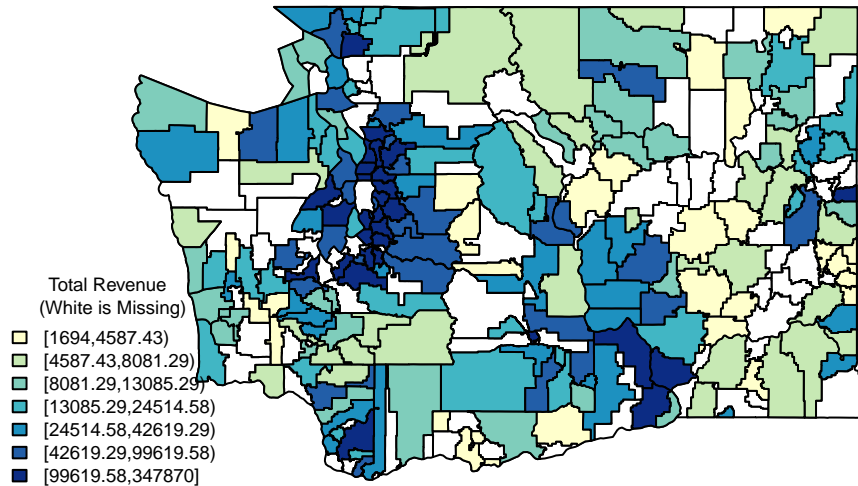
plot(wazipMap,col='white',main=title)

# second change: col = colors[varToPlot]

plot(contribWAmmap, col = colorPalette,border='black',add=TRUE)
legend('bottomleft', legend = names(attr(colorPalette, "table")),
      fill = attr(colorPalette, "palette"), cex = shrinkLegend,
      bty = "n",
```

```
title=legendText)
```

Total Revenue Via School District in Washington State 2015



While this analysis has given us some insight as to whether there is a connection between revenue sources and graduation rates, the next step would be to determine possible correlations between graduation rates and other variables. Some of these variables may include: school size, town income levels, family status, gender, etc. It would be interesting to see what other elements may be effecting graduation rates.