# Fragile Families
# Stanford Education Data
# Archive
# Restricted Use Data Appendage

Year 9 and Year 15 Follow-Up Waves

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***Bendheim-Thoman***
***Center for Research on Child Wellbeing***
Wallace Hall
Princeton University
Princeton, NJ 08544
http://crcw.princeton.edu

***Columbia Population Research Center***
1255 Amsterdam Avenue, Room 715
Columbia University
New York, NY 10027
http://cupop.columbia.edu/

Prepared by staff in the Bendheim-Thoman Center for Research on Child Wellbeing (CRCW), Princeton University. For more information about Fragile Families, please visit our web site at http://fragilefamilies.princeton.edu/ or email ffdata@princeton.edu

## DATA APPENDAGE OVERVIEW

The Fragile Families Stanford Educational Data Archive Restricted Use Data Appendage contains district level data on schools attended by focal children at the Year 9 and Year 15 follow-up interviews. All data on districts in the appendage was obtained from the Stanford Education Data Archive (SEDA; seda.stanford.edu). The data contained in this archive describe 1) average test scores (on state standardized tests) for nearly all school districts in the United States; 2) academic achievement gaps between whites and blacks and whites and Hispanics for the majority of ethnic minority students in the United States; and 3) socioeconomic, demographic and segregation characteristics of these districts. The raw test score data come from the EdFacts data system at the U.S. Department of Education, which collects aggregated test score data from each state's standardized testing program. No individual student-level data is included in the raw data. The EdFacts data includes aggregated data based on over 200 million standardized tests in English/Language Arts (ELA) and Math taken by students in grades 3-8 from the 2008-2009 to 2012-2013 school years.

## FILE LAYOUT

The file contains 4,898 observations (one per family) and is sorted by *idnum*.

## VARIABLE NAMING CONVENTION

District variable names vary based on the original SEDA data file that they derive from. The variable names are constructed as follows:

| Position | Character | Indicates |
|---|---|---|
| 1 | r | Restricted data |
| 2 | s | School measure |
| 3 | 5 | Fifth wave (Year 9) |
| 3 | 6 | Sixth wave (Year 15) |
| 4-8 | seda_ | Stanford Educational Data Archive (SEDA) source data |

The names then vary as follows, by source file type:

**Pooled across grades, separate by subject:**

| Position | Character | Indicates |
|---|---|---|
| 9-11 | mn_ | Geo District Mean |
| 12-15 | avg_ | Mean Achievement |
| 12-15 | grd_ | Grade Slope of Mean Achievement |
| 16-19 | mth_ | Math |
| 16-19 | ela_ | English/Language Arts |
| 20-22 | ol_ | Ordinary Least Squares Estimation |

| | | |
|---|---|---|
| 23-26 | all_ | All races |
| 23-26 | blk_ | Black |
| 23-26 | hsp_ | Hispanic |
| 23-26 | wht_ | White |
| 23-26 | mal_ | Male |
| 23-26 | fem_ | Female |
| 23-26 | mfg_ | Male-Female gap |
| 23-26 | wbg_ | White-Black gap |
| 23-26 | whg_ | White-Hispanic gap |
| 26-end | subGCS | Pooled with subjects separate, Grade-Cohort Standardized |
| 26-end | subCS | Pooled with subjects separate, Cohort Standardized |

**Pooled across grades and subjects:**

| Position | Character | Indicates |
|---|---|---|
| 9-11 | mn_ | Geo District Mean |
| 12-15 | avg_ | Mean Achievement |
| 12-15 | grd_ | Grade Slope of Mean Achievement |
| 16-18 | ol_ | Ordinary Least Squares Estimation |
| 19-22 | all_ | All races |
| 19-22 | blk_ | Black |
| 19-22 | hsp_ | Hispanic |
| 19-22 | wht_ | White |
| 19-22 | mal_ | Male |
| 19-22 | fem_ | Female |
| 19-22 | mfg_ | Male-Female gap |
| 19-22 | wbg_ | White-Black gap |
| 19-22 | whg_ | White-Hispanic gap |
| 23-end | poolGCS | Pooled with pooled subjects, Grade-Cohort Standardized |
| 23-end | poolCS | Pooled with pooled subjects, Cohort-Standardized |

**Long by grade and year:**

| Position | Character | Indicates |
|---|---|---|
| 9-11 | mn_ | Geo District Achievement Mean |
| 12-15 | all_ | All races |
| 12-15 | blk_ | Black |
| 12-15 | hsp_ | Hispanic |
| 12-15 | wht_ | White |
| 12-15 | mal_ | Male |
| 12-15 | fem_ | Female |
| 12-15 | mfg_ | Male-Female gap |
| 12-15 | wbg_ | White-Black gap |
| 12-15 | whg_ | White-Hispanic gap |
| 16-19 | mth_ | Math |
| 16-19 | ela_ | English/Language Arts |
| 20-23 | (year) | Year of data collection |
| 24-25 | g# | Grade # |
| 26-end | NAEP | National Assessment of Education Progress Raw score |

**Covariates**

The SEDA covariates files contained variables that varied by year and grade (e.g. percentage blacks in the grade), some that varied only by year (e.g. Number of schools in the district) and some that did not vary at all (e.g. Percent unemployed by race). There were two files used, a long file by grade and year, and a pooled file pooling across years and grades. For those that varied by year and grade, a suffix was attached in the same format as the "Long by grade and year" file. For those that varied only by year, a suffix with the year was attached. For any variables from the pooled file, a suffix "_pooled" was added. No suffix was added for those variables that did not vary across grades or years.

## MISSING VALUES

Variables containing data from the Stanford Educational Data Archive (SEDA) may be missing due to a lack of a Local Education Agency (LEA) code, used to identify school districts, or because of missing cell values in the SEDA source data. The variables in this data appendage have the following Stata missing codes, to indicate missing data:

| Value | Label | Indicates |
|---|---|---|
| .m | Not in wave | Focal child's caregiver did not participate in FFCWS survey |
| .h | Not applicable (Home schooled) | Focal child was home schooled and therefore does not have a LEA identifier |
| .s | Skip (Not in school) | Focal child was not in school at the time of the survey and therefore does not have a LEA identifier |
| .p | Private school | Focal child was in a private school and therefore does not have a LEA identifier |
| .d | Missing district code | The focal child was missing a LEA identifier for an unknown reason. |
| .m | Missing SEDA Data | Public school did not report information for question that was applicable to school |

**For measurements of the gap in mean achievement between two demographic subgroups, for example males and females, the gap measure was set to missing if either of the subgroup measures was missing. This only affected a small portion (.02-1%) of cases in 17 variables. For the list of variables that affected by this, please contact ffdata@princeton.edu

## ABOUT STANFORD EDUCATIONAL DATA ARCHIVE

The following section comes from the "SEDA data construction documentation v01", available with the data files on the SEDA website: https://cepa.stanford.edu/seda/data-archive

### *Data Cleaning*

The raw EdFacts data contain counts of students scoring in each of the state's proficiency categories. For instance, a state may categorize students' scores into 4 categories: "below basic," "basic," "proficient," and "advanced." The EdFacts data record the number of students in a school-year-grade-subject that scored in each of the respective 4 categories. Each file that we received contains counts of students scoring in the respective proficiency category for a specific year, grade and subject. Within each file, we also observe counts of student subgroups falling in the respective category. That is, for any given school, year, grade, and test subject we know the total number of students scoring in 1 of the 4 hypothetical categories, as well as the total number of white, black, Hispanic, etc. students scoring in the categories. The raw data include no suppressed cells nor do they have a minimum cell size. Not all schools report the same subgroups. The data presented in the archive has information about all students (total students), whites, blacks and Hispanics.

We first define a set of crosswalks that link schools to districts, districts to counties, and counties to commuting zones and metros. The following describes those data cleaning decisions and the crosswalks that were constructed.

*Charter Crosswalk*

Many charter schools have a unique school district identifier (an LEAID, in the data) that is different than the LEAID of the traditional school district in which they are geographically located. Rather than treat charter schools as separate school districts, we assign charter schools to the traditional school district in which they are physically located. We do so in order that they can relate average district test scores to local community and socio-demographic characteristics (the sociodemographic data come from the American Community Survey data, which are tabulated by school district geography; there are no ACS tabulations for schools that do not have a geographic catchment area).

To link charter schools to local traditional school districts, we constructed a crosswalk using data from the Common Core of Data (CCD). For every charter school that has an LEAID that does not correspond to a traditional school district, we assign a local LEAID that is the LEAID of the traditional district in which it is geographically located. The geographically located district-level identifier is constructed based on the latitude and longitude coordinates for the charter school in question, available from the CCD.

This charter-LEAID crosswalk is then merged onto the school-level achievement data file we received from EdFacts. We use the local LEAID variable when we aggregate school data to the district level for our analyses (so charter schools are aggregated into their local school district). In the data files, this local LEAID is named "leaidC"; the "C" indicates that charter schools are combined with local school districts.

*New York City Crosswalk*

EdFacts achievement data are disaggregated into New York City's 33 supervisory school districts. We combine these disaggregated supervisory districts into a single district for NYC Public Schools. To do this, we construct a crosswalk with the 33 unique supervisory district IDs and a corresponding aggregated identifier. This crosswalk is merged onto the school-level file, and the new aggregated identifier replaced the 33 original identifiers. Any charter schools that were geographically located in one of the 33 supervisory districts now also belong in the aggregated NYC Public Schools identifier.

*County Crosswalk & Permanent County ID*

We constructed a crosswalk that links district-level identifiers to their counties. We merge this onto the charter-included district-level identifier ("leaidC" from above) so that our data now has an additional geographic coordinate. In total, we have the school-id, the charter included district id, the original district id, and now a county id. Three issues arise with this linking.

The first is that some districts stop existing or the counties to which they were attached in

one year change in the following year. So that each district is associated with only one county, we take the county id associated with the district in the last year we observe the district (the vast majority of districts are observed in the last year that we have data, 2013). This county id is then used as the permanent county id associated with the district, which we refer to as "conum_perm."

The second issue was that some district county ids were incorrect. This occurred almost exclusively with charter schools that were members of large, multi-state charter organizations. For these schools, most of which were found in Arizona and Indiana, the county id placed schools in the wrong states, which meant that scores attributed to those schools would be benchmarked to the wrong test. To identify the correct county id and state to which the school belonged, NCES records were inadequate. We ended up doing an online search to find the school—often times going to the school's website directly. From this information, we could find out the school's geographic address and with this address we could find its county of origin. This county of origin was manually inserted for the respective districts. In total, this affected 18 districts.

Finally, Hawaii and DC are treated as consolidated school districts, but their associated schools have multiple county ids. We gave schools in Hawaii and DC the primary county ids associated with them.

*Miscellaneous Corrections*

A few additional states and schools had data that were not amenable for cross-country or cross-time comparisons. For one district, grade and year in Arkansas and Louisiana, respectively, scores changed too abruptly for that year to be plausible. These data were removed. In California, in grades 7 and 8 in Math, not all students are administered the same math test (they take the math test corresponding to the level of math course they are enrolled in). Because students take different tests, math proficiency category counts are not amenable for comparison. In Nebraska, in 2009 (for both Math and ELA) and in 2010 (in Math), districts were permitted to administer locally-designed or determined tests. For these years in Nebraska, data are not amenable for comparison or estimation and were therefore dropped. Finally, in South Dakota, in 2013 grade 3 and math, too few students scored in the lowest proficiency category for our models to estimate an average score. Students scoring in the bottom category were added to the category above. This affected a very small number of students—fewer than 10 in the state.

*Metropolitan and Commuting Zone Crosswalk*

We now have a dataset with one county identifier per district, as well as multiple achievement scores. These data are then merged onto a metropolitan and commuting zone crosswalk dataset that contains a unique commuting zone identifier and three metropolitan identifiers. There are three metropolitan area identifiers (coded as 03, 09, and 13), because the Census published new metropolitan area definitions in the years 2003, 2009, and 2013.

Metropolitan areas and commuting zones, in some cases, cross state lines. Because the estimation of student means is relative to state-specific scores, and because measures of achievement gaps are estimated using information between groups (whites and blacks and whites and Hispanics) taking the same test, we construct a second identifier for metros and commuting zones that specifies the metro/commuting zone identifier as well as the state in which it falls.

Thus, two districts in the same metro may have different state identifiers, and this variable captures that. For metros and commuting zones, this metro/commuting zone-by-state id variable is used to collapse the data for metropolitan area and commuting zone analyses.

*Collapsing*

We construct multiple datasets for years, grades and subjects for different levels of geographic aggregation. The lowest level of aggregation we have is the school. These are the primary files. We then collapse using five other levels of aggregation: counties [1], metropolitan area-by-state id using metropolitan coding in years 2003, 2009, and 2013 [2-4], and commuting zones-by-state ids [5]. The collapse command sums the counts of students scoring in the various proficiency categories. These data can then be used to estimate means and achievement gaps for different levels of geographic aggregation in the United States.

## *Estimating Means*

We estimate district-level means for approximately 13,000 school districts in the United States. We do so by fitting heteroskedastic ordered probit (HETOP) models to the ordered proficiency counts of each district in a give state-grade-year-subject, using the methods described in Reardon, Shear, Castellano and Ho (2016). Specifically, we use their PHOP model, constraining district's standard deviations of scores to be constant for cells with 50 or fewer tested students. When there are only two proficiency categories, we use the HOMOP model instead, since the PHOP model required 3 or more categories. The resulting estimates are scaled in units of state-grade-year-subject student-level test score standard deviations. Reardon, Shear, Castellano and Ho (2016) describe these methods in more detail.

*Observations where Estimates are Impossible*

We do not estimate means in cells (e.g., district-year-grade-subject cells) in which the number of students is fewer than 20. We also drop estimated mean scores in cases where the estimated standard errors are greater than 2 (meaning the confidence interval of a district's mean is 4 student-level standard deviations wide; essentially meaning we have no information). This happens very rarely, and is generally a result of insufficient information for the PHOP model to identify the district's test score distribution.

*Adding Noise to Estimates*

Our agreement with the Department of Education requires us to add a small amount of random noise to each published estimate in order to make recovery of specific cell counts—i.e., the specific counts of students scoring in a specific proficiency category for a given district-year-grade-subject—impossible. The noise we add is based on the number of students in the district, as well as the sampling variance of the estimated achievement gap and its standard error. Random noise is added to each estimate in proportion to the sampling variance of the respective estimate; thus, districts with less precision will have greater noise added, and districts with greater precision (and more students) will have less noise added. Specifically, we add random

error to each estimate, where the error is drawn from a normal distribution with mean 0 and variance $\widehat{\omega}^2/n$ (where $\widehat{\omega}^2$ is the squared estimated standard error of the estimate and $n$ in the number of students in the cell to which the parameter applies).

*Placing State-Specific Means on National Scale*

The method described by Reardon, Shear, Castellano and Ho (2016) estimates a district's average achievement and standard deviation relative to a state-(and grade-year-subject-)specific distribution. To make these state-specific estimates comparable to those in other states, grades, and years, Reardon, Kalogrides and Ho (2016) describe and validate a linking method that links the distribution of state test scores to the distribution of state-specific scores on the National Assessment of Educational Progress (NAEP). Because we know a given state's mean and standard deviation from the NAEP, and because the same NAEP test is taken across all states, each state's estimated test scores can be placed on a NAEP metric.

*Standardizing Variables for Interpretability*

In order to make these linked estimates usefully interpretable, they are standardized in three ways. The first takes the linked NAEP scores and standardizes within each grade-year-subject. This metric is interpretable as an effect size, within a grade-year-subject. The second standardizes the linked means by dividing by the grade-subject-specific standard deviation for the middle cohort of our data. This metric is interpretable as an effect size, relative to the grade-specific standard deviation of scores in one cohort. This has the advantage of being able to describe aggregated changed over time in test scores. The third standardization divides the linked scores by the average difference in NAEP scores between students one grade level apart. A one-unit difference in this grade-equivalent unit scale is interpretable as equivalent to the average difference in skills between students one grade level apart in school. The standardization and interpretation of the scores is described in more detail in Reardon, Kalogrides and Ho (2016).

*Pooling Estimates*

In order to make a more parsimonious dataset, as well as to "shrink" unreliable estimates of district means towards the average, we fit a set of random coefficient (multi-level) models. These models take the up to 60 estimates and pool them, adjusting for grade and cohort, and weighting by the precision of each of the 60 estimates. The models allow each district to have a district-specific intercept (average score), a district-specific linear grade slope (rate at which scores change across grades, within a cohort), and a district-specific cohort trend (the rate at which scores change across student cohorts, within a grade). We include the Empirical Bayes (EB) estimates of the intercept, grade slope, and cohort trend in the SEDA archice. These EB estimates correspond to the shrunken average achievement scores in a district for the median grade and cohort in our data (students in grade 5.5 in 2011). We fit these models separately for ELA and Math, and once pooling both subjects to obtain pooled estimates.

***Estimating Achievement Gaps***

We estimate achieve gaps using the V-statistic described by Ho and Reardon (2012) ;

Reardon and Ho 2015). Of the approximately 13,000 school districts in the United States, we can estimate a white-black and white-Hispanic achievement gap for approximately 2,600 and 2,900 districts, respectively. The remaining districts have insufficient minority students per grade for an achievement gap to be reliably estimated and reported. Our agreement with the Department of Education restricts publication of average scores or gaps to cases where at least 20 students' test scores are available (in each group reported).

*Adding Noise to Estimates*

As above, we add a small amount of noise to the gap estimates in order to make recovery of specific cell counts—i.e., the specific counts of students scoring in a specific proficiency category for a given district-year-grade-subject—impossible. The procedure is the same as described above.

*Pooling Estimates*

For a given district, we have up to 60 estimated white-black and white-Hispanic achievement gaps (up 5 years, 6 grades, and 2 subjects, so long as there are at least 20 white and 20 black/Hispanic students tested in the district-year-grade-subject). These data—with noise added—are available in the SEDA archive. However, we also aggregate these observations in order to have a more reliable, precisely estimated and parsimonious description of achievement inequality for a given district. To this end, we construct meta-analytic averages of a district's achievement gap, pooling across years and grades (and, in half the cases, across subjects).

The meta-analytic average is estimated by using Stata's –metareg- command for each district, where the outcome variable is a district's achievement gap, and the dependent variables are the (centered) grade, year, and subject. We provide three estimates of the average achievement gap: the average gaps in math and in ELA (averaged over years and grades), and a pooled estimate (the average over all grades, years, and both subjects). The meta-analytic averages are regression adjusted to account for differences in among districts in the pattern of which grades, years, and subjects have available achievement gaps.

## DATA CLEANING

### *Reshaping the SEDA Data*

The source files were stored in a long format, with multiple rows of information for each district. To fit the core Fragile Families data, the source data was flattened so that each district would represent one row. For the source files that had the data pooled across grades and years, this meant reshaping the data by demographic subgroup. For the source files that were long by grade, year and subject, a separate file was created for each year and grade combination, then reshaped using subject, since the source variables were already split by demographic subgroup. These files were then merged together for each grade and year combination. (2009-2015, grades 3-8)

### *Merging with Fragile Families*

Merging the SEDA data to our Fragile Families family identifiers was done in three steps. First, the crosswalk file from the SEDA archive that provided the original LEA district identifier for each "leaidC" (the modified district identifier used in the archive) was loaded in. This original district identifier was then merged to the district code that for each family, for wave 5 (Year 9) and wave 6 (Year 15), creating a file with the family identifier, the original district code, and the district code used in the main SEDA files (leaidC). This file was used to merge the SEDA data to our families' districts at each wave. For security, a 7- digit pseudo identifier for the district was generater to replace the leaidC code. This pseudo identifier, called rs{w}pseudoLEA, is the same for both waves if the family had the same leaidC in both waves.

If the family did not have a district identifier for either wave of data collection, then the missing SEDA data was replaced with the appropriate missing data code. The suffix of each variable name describes which flattened source file it comes from. (e.g. poolCS represents the pooled file using Cohort-Standardization)

## DATA DICTIONARY

*Note*: {w} refers to the FFCWS survey wave (5, 6); {yyyy} refers to the SEDA survey year (2009-2015), and {g} refers to the grade number (3-8). For more information, refer to the *Variable Naming Convention* section.

### *Mean Achievement Variables*

| Variable | Description |
|---|---|
| rs{w}seda_mn_avg_mth_ol_all_subCS | Geo District Mean Achievement, Math, OLS est, All races, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_all_subCS | Geo District Mean Achievement, ELA, OLS est, All races, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_all_subCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, All races, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_all_subCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, All races, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_blk_subCS | Geo District Mean Achievement, Math, OLS est, Black, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_blk_subCS | Geo District Mean Achievement, ELA, OLS est, Black, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_blk_subCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Black, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_blk_subCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Black, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_fem_subCS | Geo District Mean Achievement, Math, OLS est, Female, Pooled across grades and years, Cohort Standardized |

| | |
|---|---|
| rs{w}seda_mn_avg_ela_ol_fem_subCS | Geo District Mean Achievement, ELA, OLS est, Female, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_fem_subCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Female, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_fem_subCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, Female, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_hsp_subCS | Geo District Mean Achievement, Math, OLS est, Hispanic, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_hsp_subCS | Geo District Mean Achievement, ELA, OLS est, Hispanic, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_hsp_subCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Hispanic, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_hsp_subCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, Hispanic, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_mal_subCS | Geo District Mean Achievement, Math, OLS est, Male, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_mal_subCS | Geo District Mean Achievement, ELA, OLS est, Male, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_mal_subCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Male, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_mal_subCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, Male, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_mfg_subCS | Geo District Mean Achievement, Math, OLS est, Male-Female Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_mfg_subCS | Geo District Mean Achievement, ELA, OLS est, Male-Female Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_mfg_subCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Male-Female Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_mfg_subCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, Male-Female Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_wbg_subCS | Geo District Mean Achievement, Math, OLS est, White-Black Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_wbg_subCS | Geo District Mean Achievement, ELA, OLS est, White-Black Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_wbg_subCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, White-Black Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_wbg_subCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, White-Black Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_whg_subCS | Geo District Mean Achievement, Math, OLS est, White-Hispanic Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_whg_subCS | Geo District Mean Achievement, ELA, OLS est, White-Hispanic Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_whg_subCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, White-Hispanic Gap, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_whg_subCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, White-Hispanic Gap, Pooled across grades and years, Cohort Standardized |

| | |
|---|---|
| rs{w}seda_mn_avg_mth_ol_wht_subCS | Geo District Mean Achievement, Math, OLS est, White, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_wht_subCS | Geo District Mean Achievement, ELA, OLS est, White, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_wht_subCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, White, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_wht_subCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, White, Pooled across grades and years, Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_all_subGCS | Geo District Mean Achievement, Math, OLS est, All races, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_all_subGCS | Geo District Mean Achievement, ELA, OLS est, All races, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_all_subGCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, All races, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_all_subGCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, All races, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_blk_subGCS | Geo District Mean Achievement, Math, OLS est, Black, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_blk_subGCS | Geo District Mean Achievement, ELA, OLS est, Black, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_blk_subGCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Black, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_blk_subGCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Black, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_fem_subGCS | Geo District Mean Achievement, Math, OLS est, Female, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_fem_subGCS | Geo District Mean Achievement, ELA, OLS est, Female, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_fem_subGCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Female, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_fem_subGCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, Female, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_hsp_subGCS | Geo District Mean Achievement, Math, OLS est, Hispanic, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_hsp_subGCS | Geo District Mean Achievement, ELA, OLS est, Hispanic, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_hsp_subGCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Hispanic, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_hsp_subGCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, Hispanic, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_mal_subGCS | Geo District Mean Achievement, Math, OLS est, Male, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_mal_subGCS | Geo District Mean Achievement, ELA, OLS est, Male, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_mal_subGCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Male, Pooled across grades and years, Grade-Cohort Standardized |

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|---|---|
| rs{w}seda_mn_grd_ela_ol_mal_subGCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, Male, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_mfg_subGCS | Geo District Mean Achievement, Math, OLS est, Male-Female Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_mfg_subGCS | Geo District Mean Achievement, ELA, OLS est, Male-Female Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_mfg_subGCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, Male-Female Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_mfg_subGCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, Male-Female Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_wbg_subGCS | Geo District Mean Achievement, Math, OLS est, White-Black Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_wbg_subGCS | Geo District Mean Achievement, ELA, OLS est, White-Black Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_wbg_subGCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, White-Black Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_wbg_subGCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, White-Black Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_whg_subGCS | Geo District Mean Achievement, Math, OLS est, White-Hispanic Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_whg_subGCS | Geo District Mean Achievement, ELA, OLS est, White-Hispanic Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_whg_subGCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, White-Hispanic Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_whg_subGCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, White-Hispanic Gap, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_mth_ol_wht_subGCS | Geo District Mean Achievement, Math, OLS est, White, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ela_ol_wht_subGCS | Geo District Mean Achievement, ELA, OLS est, White, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_mth_ol_wht_subGCS | Geo District Grade Slope of Mean Achievement, Math, OLS est, White, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ela_ol_wht_subGCS | Geo District Grade Slope of Mean Achievement, ELA, OLS est, White, Pooled across grades and years, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ol_all_poolCS | Geo District Mean Achievement, Math & ELA, OLS est, All races, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_grd_ol_all_poolCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, All races, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_avg_ol_blk_poolCS | Geo District Mean Achievement, Math & ELA, OLS est, Black, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_grd_ol_blk_poolCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, Black, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_avg_ol_fem_poolCS | Geo District Mean Achievement, Math & ELA, OLS est, Female, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_grd_ol_fem_poolCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, Female, Pooled across grades, years, and subjects, Cohort Standardized |

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|---|---|
| rs{w}seda_mn_avg_ol_hsp_poolCS | Geo District Mean Achievement, Math & ELA, OLS est, Hispanic, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_grd_ol_hsp_poolCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, Hispnaic, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_avg_ol_mal_poolCS | Geo District Mean Achievement, Math & ELA, OLS est, Male, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_grd_ol_mal_poolCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, Male, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_avg_ol_mfg_poolCS | Geo District Mean Achievement, Math & ELA, OLS est, Male-Female Gap, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_grd_ol_mfg_poolCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, Male-Female Gap, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_avg_ol_wbg_poolCS | Geo District Mean Achievement, Math & ELA, OLS est, White-Black Gap, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_grd_ol_wbg_poolCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, White-Black Gap, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_avg_ol_whg_poolCS | Geo District Mean Achievement, Math & ELA, OLS est, White-Hispanic Gap, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_grd_ol_whg_poolCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, White-Hispanic Gap, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_avg_ol_wht_poolCS | Geo District Mean Achievement, Math & ELA, OLS est, White, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_grd_ol_wht_poolCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, White, Pooled across grades, years, and subjects, Cohort Standardized |
| rs{w}seda_mn_avg_ol_all_poolGCS | Geo District Mean Achievement, Math & ELA, OLS est, All races, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ol_all_poolGCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, All races, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ol_blk_poolGCS | Geo District Mean Achievement, Math & ELA, OLS est, Black, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ol_blk_poolGCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, Black, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ol_fem_poolGCS | Geo District Mean Achievement, Math & ELA, OLS est, Female, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ol_fem_poolGCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, Female, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ol_hsp_poolGCS | Geo District Mean Achievement, Math & ELA, OLS est, Hispanic, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ol_hsp_poolGCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, Hispnaic, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ol_mal_poolGCS | Geo District Mean Achievement, Math & ELA, OLS est, Male, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ol_mal_poolGCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, Male, Pooled across grades, years, and subjects, Grade-Cohort Standardized |

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|---|---|
| rs{w}seda_mn_avg_ol_mfg_poolGCS | Geo District Mean Achievement, Math & ELA, OLS est, Male-Female Gap, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ol_mfg_poolGCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, Male-Female Gap, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ol_wbg_poolGCS | Geo District Mean Achievement, Math & ELA, OLS est, White-Black Gap, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ol_wbg_poolGCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, White-Black Gap, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ol_whg_poolGCS | Geo District Mean Achievement, Math & ELA, OLS est, White-Hispanic Gap, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ol_whg_poolGCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, White-Hispanic Gap, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_avg_ol_wht_poolGCS | Geo District Mean Achievement, Math & ELA, OLS est, White, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_grd_ol_wht_poolGCS | Geo District Grade Slope of Mean Achievement, Math & ELA, OLS est, White, Pooled across grades, years, and subjects, Grade-Cohort Standardized |
| rs{w}seda_mn_all_ela_{yyyy}g{g}NAEP | Geo District Achievement Mean, All races, ELA, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_blk_ela_{yyyy}g{g}NAEP | Geo District Achievement Mean, Black students ELA, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_fem_ela_{yyyy}g{g}NAEP | Geo District Achievement Mean, Female students, ELA, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_hsp_ela_{yyyy}g{g}NAEP | Geo District Achievement Mean, Hispanic students, ELA, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_mal_ela_{yyyy}g{g}NAEP | Geo District Achievement Mean, Male students, ELA, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_wht_ela_{yyyy}g{g}NAEP | Geo District Achievement Mean, White students, ELA, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_wbg_ela_{yyyy}g{g}NAEP | Geo District Achievement Mean, White-Hispanic gap, ELA, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_whg_ela_{yyyy}g{g}NAEP | Geo District Achievement Mean, White-Black gap, ELA, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_mfg_ela_{yyyy}g{g}NAEP | Geo District Achievement Mean, Male-Female gap, ELA, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_all_mth_{yyyy}g{g}NAEP | Geo District Achievement Mean, All races, Math, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_blk_mth_{yyyy}g{g}NAEP | Geo District Achievement Mean, Black students Math, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_fem_mth_{yyyy}g{g}NAEP | Geo District Achievement Mean, Female students, Math, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_hsp_mth_{yyyy}g{g}NAEP | Geo District Achievement Mean, Hispanic students, Math, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_mal_mth_{yyyy}g{g}NAEP | Geo District Achievement Mean, Male students, Math, grade {g} year {yyyy}, NAEP raw score |

| | |
|---|---|
| rs{w}seda_mn_wht_mth_{yyyy}g{g}NAEP | Geo District Achievement Mean, White students, Math, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_wbg_mth_{yyyy}g{g}NAEP | Geo District Achievement Mean, White-Hispanic gap, Math, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_whg_mth_{yyyy}g{g}NAEP | Geo District Achievement Mean, White-Black gap, Math, grade {g} year {yyyy}, NAEP raw score |
| rs{w}seda_mn_mfg_mth_{yyyy}g{g}NAEP | Geo District Achievement Mean, Male-Female gap, Math, grade {g} year {yyyy}, NAEP raw score |

### *Covariates*

| | |
|---|---|
| rs{w}seda_avgrdall | Average Per Grade Enrollment (All students) |
| rs{w}seda_avgrdwht | Average Per Grade Enrollment (White students) |
| rs{w}seda_avgrdblk | Average Per Grade Enrollment (Black students) |
| rs{w}seda_avgrdhsp | Average Per Grade Enrollment (Hispanic students) |
| rs{w}seda_perhsp_pooled | Percent of students in the district that are Hispanic, pooled across years |
| rs{w}seda_perblk_pooled | Percent of students in the district that are black, pooled across years |
| rs{w}seda_perwht_pooled | Percent of students in the district that are white, pooled across years |
| rs{w}seda_perfrl_pooled | Percent of students in the district that are Free Lunch, pooled across years |
| rs{w}seda_perell_pooled | Percent of students in the district that are English Language Learners, pooled across years |
| rs{w}seda_perspeced_pooled | Percent of students in the district that are Special Ed, pooled across years |
| rs{w}seda_hsp_pooled | Number of Hispanic students in the district, pooled across years |
| rs{w}seda_blk_pooled | Number of black students in the district, pooled across years |
| rs{w}seda_wht_pooled | Number of white students in the district, pooled across years |
| rs{w}seda_frl_pooled | Number of Free lunch students in the district, pooled across years |
| rs{w}seda_rl_pooled | Number of Reduced lunch students in the district, pooled across years |
| rs{w}seda_totenrl_pooled | Total Enrollment, Grades 3-8, pooled across years |
| rs{w}seda_member | Total district membership |
| rs{w}seda_nsch_pooled | Number of schools in the district, pooled across years |
| rs{w}seda_ncharters_pooled | Number of charter schools in the district, pooled across years |
| rs{w}seda_speced_pooled | Number of Special Ed (IEP) students in district, pooled across years |
| rs{w}seda_ell_pooled | Number of English Language Learners in the district, pooled across years |

| | |
|---|---|
| rs{w}seda_elmtch_pooled | Number of Elementary teachers, pooled across years |
| rs{w}seda_totch_pooled | Total number of teachers, pooled across years |
| rs{w}seda_aides_pooled | Number of Instructional aides, pooled across years |
| rs{w}seda_corsup_pooled | Number of Instructional coordinators and supervisors, pooled across years |
| rs{w}seda_elmgui_pooled | Number of Elementary Guidance counselors, pooled across years |
| rs{w}seda_stutch_wht_pooled | Pupil-Teacher ratio—Average white student's school, pooled across years |
| rs{w}seda_stutch_blk_pooled | Pupil-Teacher ratio—Average black student's school, pooled across years |
| rs{w}seda_stutch_hsp_pooled | Pupil-Teacher ratio—Average Hispanic student's school, pooled across years |
| rs{w}seda_stutch_all_pooled | Pupil-Teacher ratio—Average school, pooled across years |
| rs{w}seda_flunch_wht_pooled | Percent free lunch in average white student's school, pooled across years |
| rs{w}seda_flunch_blk_pooled | Percent free lunch in average black student's school, pooled across years |
| rs{w}seda_flunch_hsp_pooled | Percent free lunch in average Hispanic student's school, pooled across years |
| rs{w}seda_expwht_wht | Percent white in average white student's school |
| rs{w}seda_expblk_wht | Percent black in average white student's school |
| rs{w}seda_exphsp_wht | Percent Hispanic in average white student's school |
| rs{w}seda_expwht_blk | Percent white in average black student's school |
| rs{w}seda_expblk_blk | Percent black in average black student's school |
| rs{w}seda_exphsp_blk | Percent Hispanic in average black student's school |
| rs{w}seda_expwht_hsp | Percent white in average Hispanic student's school |
| rs{w}seda_expblk_hsp | Percent black in average Hispanic student's school |
| rs{w}seda_exphsp_hsp | Percent Hispanic in average Hispanic student's school |
| rs{w}seda_hswhtblk_pooled | Information Index between schools: White/Black, pooled across years |
| rs{w}seda_hswhthsp_pooled | Information Index between schools: White/Hispanic, pooled across years |
| rs{w}seda_hsflnfl_pooled | Information Index between schools: Free or Reduced Price Lunch/Non Free-Lunch, pooled across years |
| rs{w}seda_ppexp_tot_pooled | Per Pupil Total Expenditures – Total Expenditures/Total Enrollment, pooled across years |
| rs{w}seda_ppexp_inst_pooled | Per Pupil Instructional Expenditures – Instructional Expenditures/Total Enrollment, pooled across years |
| rs{w}seda_pprev_tot_pooled | Revenue Per Pupil– Total Expenditures/Total Enrollment, pooled across years |
| rs{w}seda_percharter_all_pooled | Percentage of 3-8 Grade Public School Students in Charters (all races), pooled |

| | |
|---|---|
| | across years |
| rs{w}seda_percharter_wht_pooled | Percentage of 3-8 Grade Public School Students in Charters (white students), pooled across years |
| rs{w}seda_percharter_blk_pooled | Percentage of 3-8 Grade Public School Students in Charters (black students), pooled across years |
| rs{w}seda_percharter_hsp_pooled | Percentage of 3-8 Grade Public School Students in Charters (Hispanic students), pooled across years |
| rs{w}seda_totppe_fleslope_pooled | State Slope – Total PPE = % FLE (Pooled across years) |
| rs{w}seda_instppe_fleslope_pooled | State Slope – Instructional PPE = % FLE (Pooled across years) |
| rs{w}seda_povexp_fl_fl | Percent free lunch in schools of free lunch students |
| rs{w}seda_povexp_rl_fl | Percent reduced lunch in schools of free lunch students |
| rs{w}seda_povexp_frl_fl | Percent free/reduced price lunch in schools of free lunch students |
| rs{w}seda_povexp_fl_nonfl | Percent free lunch in schools of non-free lunch students |
| rs{w}seda_povexp_rl_nonfl | Percent reduced lunch in schools of non-free lunch students |
| rs{w}seda_povexp_frl_nonfl | Percent free/reduced price lunch in schools of non-free lunch students |
| rs{w}seda_povexp_fl_frl | Percent free lunch in schools of free/reduced price lunch students |
| rs{w}seda_povexp_rl_frl | Percent reduced lunch in schools of free/reduced price lunch students |
| rs{w}seda_povexp_frl_frl | Percent free/reduced lunch in schools of free/reduced price lunch students |
| rs{w}seda_povexp_fl_nonfrl | Percent free lunch in schools of non-free/reduced lunch students |
| rs{w}seda_povexp_rl_nonfrl | Percent reduced price lunch in schools of non-free/reduced price lunch students |
| rs{w}seda_povexp_frl_nonfrl | Percent free/reduced lunch in schools of free lunch stud non-free/reduced price lunch students |
| rs{w}seda_gslo_pooled | Lowest Grade Offered in District (Pooled across years) |
| rs{w}seda_gshi_pooled | Highest Grade Offered in District (Pooled across years) |
| rs{w}seda_perrl_pooled | Percent reduced lunch in the district (Pooled across years) |
| rs{w}seda_profocc_wht | Percent in professional occupations, (white) |
| rs{w}seda_baplus_wht | Percent of adults with BA degree or higher (white) |
| rs{w}seda_poverty517_wht | Percent of 5-17 year old in poverty (white) |
| rs{w}seda_snap_wht | Percent living in household receiving snap benefits (white) |
| rs{w}seda_rent_wht | Percent living in households that rent (white) |
| rs{w}seda_singmom_wht | Percent in household with children, female head of household (white) |

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|---|---|
| rs{w}seda_samehouse_wht | Percent living in same house as last year (white) |
| rs{w}seda_unemp_wht | Percent unemployed (white) |
| rs{w}seda_profocc_hsp | Percent in professional occupations, (Hispanic) |
| rs{w}seda_baplus_hsp | Percent of adults with BA degree or higher (Hispanic) |
| rs{w}seda_poverty517_hsp | Percent of 5-17 year old in poverty (Hispanic) |
| rs{w}seda_snap_hsp | Percent living in household receiving snap benefits (Hispanic) |
| rs{w}seda_rent_hsp | Percent living in households that rent (Hispanic) |
| rs{w}seda_singmom_hsp | Percent in household with children, female head of household (Hispanic) |
| rs{w}seda_samehouse_hsp | Percent living in same house as last year (Hispanic) |
| rs{w}seda_unemp_hsp | Percent unemployed (Hispanic) |
| rs{w}seda_profocc_blk | Percent in professional occupations, (black) |
| rs{w}seda_baplus_blk | Percent of adults with BA degree or higher (black) |
| rs{w}seda_poverty517_blk | Percent of 5-17 year old in poverty (black) |
| rs{w}seda_snap_blk | Percent living in household receiving snap benefits (black) |
| rs{w}seda_rent_blk | Percent living in households that rent (black) |
| rs{w}seda_singmom_blk | Percent in household with children, female head of household (black) |
| rs{w}seda_samehouse_blk | Percent living in same house as last year (black) |
| rs{w}seda_unemp_blk | Percent unemployed (black) |
| rs{w}seda_profocc_all | Percent in professional occupations, (all races) |
| rs{w}seda_baplus_all | Percent of adults with BA degree or higher (all races) |
| rs{w}seda_poverty517_all | Percent of 5-17 year old in poverty (all races) |
| rs{w}seda_snap_all | Percent living in household receiving snap benefits (all races) |
| rs{w}seda_rent_all | Percent living in households that rent (all races) |
| rs{w}seda_singmom_all | Percent in household with children, female head of household (all races) |
| rs{w}seda_samehouse_all | Percent living in same house as last year (all races) |
| rs{w}seda_unemp_all | Percent unemployed (all races) |
| rs{w}seda_pctenglish1 | Percent Hispanics – Speak English only; English very well; English well |
| rs{w}seda_pctenglish2 | Percent Hispanics – Speak English only; English very well |

| | |
|---|---|
| rs{w}seda_pctenglish3 | Percent Hispanics – Speak English only |
| rs{w}seda_pctforeign | Percent Hispanics – Foreign born |
| rs{w}seda_pctmexico | Percent Hispanics – Mexican |
| rs{w}seda_pctpuerto | Percent Hispanics – Puerto Rican |
| rs{w}seda_pctcuban | Percent Hispanics – Foreign born |
| rs{w}seda_pctcentral | Percent Hispanics – Central American |
| rs{w}seda_pctsouth | Percent Hispanics – South American |
| rs{w}seda_inc50all | Income at 50th percentile (all) |
| rs{w}seda_inc9010all | 90/10 income ratio (all) |
| rs{w}seda_inc9050all | 90/50 income ratio (all) |
| rs{w}seda_inc5010all | 50/10 income ratio (all) |
| rs{w}seda_inc50blk | Income at 50th percentile (black) |
| rs{w}seda_inc9010blk | 90/10 income ratio (black) |
| rs{w}seda_inc9050blk | 90/50 income ratio (black) |
| rs{w}seda_inc5010blk | 50/10 income ratio (black) |
| rs{w}seda_inc50hsp | Income at 50th percentile (Hispanic) |
| rs{w}seda_inc9010hsp | 90/10 income ratio (Hispanic) |
| rs{w}seda_inc9050hsp | 90/50 income ratio (Hispanic) |
| rs{w}seda_inc5010hsp | 50/10 income ratio (Hispanic) |
| rs{w}seda_inc50wht | Income at 50th percentile (white) |
| rs{w}seda_inc9010wht | 90/10 income ratio (white) |
| rs{w}seda_inc9050wht | 90/50 income ratio (white) |
| rs{w}seda_inc5010wht | 50/10 income ratio (white) |
| rs{w}seda_giniall | Gini Coefficient (all) |
| rs{w}seda_giniwht | Gini Coefficient (wht) |
| rs{w}seda_giniblk | Gini Coefficient (blk) |
| rs{w}seda_ginihsp | Gini Coefficient (hsp) |
| rs{w}seda_paredVblkwht | Vgap for parent education, interpreted as standard deviation in educational attainment between blacks and whites |

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|---|---|
| rs{w}seda_paredVhspwht | Vgap for parent education, interpreted as standard deviation in educational attainment between Hispanic and whites |
| rs{w}seda_incVblkwht | Vgap for income, interpreted as standard deviation in income between blacks and whites |
| rs{w}seda_incVhspwht | Vgap for income, interpreted as standard deviation in income between Hispanic and whites |
| rs{w}seda_baplus_mal | Percent of males with BA or Higher |
| rs{w}seda_baplus_fem | Percent of females with BA or Higher |
| rs{w}seda_baplus_all | Percent of all with BA or Higher |
| rs{w}seda_pov_mal | Percent of males in poverty |
| rs{w}seda_pov_fem | Percent of females in poverty |
| rs{w}seda_pov_all | Percent of all in poverty |
| rs{w}seda_occbus_mal | Percent of males in Management, Business and Financial Occupations |
| rs{w}seda_occbus_fem | Percent of females in Management, Business and Financial Occupations |
| rs{w}seda_occbus_all | Percent of all in Management, Business and Financial Occupations |
| rs{w}seda_occsci_mal | Percent of males in Computer, Engineering and Science Occupations |
| rs{w}seda_occsci_fem | Percent of females in Computer, Engineering and Science Occupations |
| rs{w}seda_occsci_all | Percent of all in Computer, Engineering and Science Occupations |
| rs{w}seda_occeduc_mal | Percent of males in Education, Legal, Commercial Services, Arts, Media Occupations |
| rs{w}seda_occeduc_fem | Percent of females in Education, Legal, Commercial Services, Arts, Media Occupations |
| rs{w}seda_occeduc_all | Percent of all in Education, Legal, Commercial Services, Arts, Media Occupations |
| rs{w}seda_occhealth_mal | Percent of males in Health Practitioners and Technical Occupations |
| rs{w}seda_occhealth_fem | Percent of females in Health Practitioners and Technical Occupations |
| rs{w}seda_occhealth_all | Percent of all in Health Practitioners and Technical Occupations |
| rs{w}seda_occserv_mal | Percent of males in Services Occupations |
| rs{w}seda_occserv_fem | Percent of females in Services Occupations |
| rs{w}seda_occserv_all | Percent of all in Services Occupations |
| rs{w}seda_occsales_mal | Percent of males in Sales Occupations |
| rs{w}seda_occsales_fem | Percent of females in Sales Occupations |
| rs{w}seda_occsales_all | Percent of all in Sales Occupations |

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| rs{w}seda_occtrade_mal | Percent of males in Natural Resources, Construction, Maintenance Occupations |
| rs{w}seda_occtrade_fem | Percent of females in Natural Resources, Construction, Maintenance Occupations |
| rs{w}seda_occtrade_all | Percent of all in Natural Resources, Construction, Maintenance Occupations |
| rs{w}seda_inlf_mal | Percent of 25-64 year old males in labor force |
| rs{w}seda_inlf_fem | Percent of 25-64 year old females in labor force |
| rs{w}seda_inlf_all | Percent of all 25-64 year old in labor force |
| rs{w}seda_unemp_mal | Percent of 25-64 year old males in labor force & unemployed |
| rs{w}seda_unemp_fem | Percent of 25-64 year old females in labor force & unemployed |
| rs{w}seda_unemp_allv2 | Percent of all 25-64 year old in labor force & unemployed |
| rs{w}seda_teenbirth_all | Percent of 15-19 year olds giving birth |
| rs{w}seda_inc50indvall | Median income, all individuals (Not households) |
| rs{w}seda_inc50fem | Median income, females |
| rs{w}seda_inc50mal | Median income, males |
| rs{w}seda_incVmalfem | Vgap for income, interpreted as standard deviation in income between males and females |
| rs{w}seda_educVmalfem | Vgap for education, interpreted as standard deviation in educational attainment between males and females |
| rs{w}seda_totkids517 | Number of 5-17 year olds enrolled in public schools (ACS) |
| rs{w}seda_totkids | Number of relevant children enrolled in public schools (ACS) |
| rs{w}seda_sesall | Standardized SES composite score, all races |
| rs{w}seda_seswht | Standardized SES composite score, white |
| rs{w}seda_sesblk | Standardized SES composite score, blacks |
| rs{w}seda_seshsp | Standardized SES composite score, Hispanics |
| rs{w}seda_sesallimp1 | SES composite score, all races, imputed using 5 of the 6 measures* |
| rs{w}seda_sesallimp2 | SES composite score, all races, imputed using 3 of the 6 measures* |
| rs{w}seda_seswhtimp1 | SES composite score, whites, imputed using 5 of the 6 measures* |
| rs{w}seda_seswhtimp2 | SES composite score, whites, imputed using 3 of the 6 measures* |
| rs{w}seda_sesblkimp1 | SES composite score, blacks, imputed using 5 of the 6 measures* |
| rs{w}seda_sesblkimp2 | SES composite score, blacks, imputed using 3 of the 6 measures* |
| rs{w}seda_seshspimp1 | SES composite score, Hispanics, imputed using 5 of the 6 measures* |

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| rs{w}seda_seshspimp2 | SES composite score, Hispanics, imputed using 3 of the 6 measures* |

* These measures are: median income, percent with a bachelor's degree or higher, poverty rate, SNAP rate, single mother headed household rate, and unemployment rate

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| rs{w}seda_perhsp_{yyyy}g{g} | Percent of students in grade {g} that are Hispanic, for year {yyyy} |
| rs{w}seda_perblk_{yyyy}g{g} | Percent of students in grade {g} that are black, for year {yyyy} |
| rs{w}seda_perwht_{yyyy}g{g} | Percent of students in grade {g} that are white, for year {yyyy} |
| rs{w}seda_perfrl_{yyyy} | Percent of students in the district that are Free Lunch, for year {yyyy} |
| rs{w}seda_perell_{yyyy} | Percent of students in the district that are English Language Learners, for year {yyyy} |
| rs{w}seda_perspeced_{yyyy} | Percent of students in the district that are Special Ed, for year {yyyy} |
| rs{w}seda_hsp_{yyyy}g{g} | Number of Hispanic students in grade {g}, for year {yyyy} |
| rs{w}seda_blk_{yyyy}g{g} | Number of black students in grade {g}, for year {yyyy} |
| rs{w}seda_wht_{yyyy}g{g} | Number of white students in grade {g}, for year {yyyy} |
| rs{w}seda_frl_{yyyy}g{g} | Number of Free lunch students, for year {yyyy} and grade {g} |
| rs{w}seda_rl_{yyyy}g{g} | Number of Reduced lunch students, for year {yyyy} and grade {g} |
| rs{w}seda_totenrl_{yyyy}g{g} | Total Enrollment, Grades 3-8, for year {yyyy} and grade {g} |
| rs{w}seda_nsch_{yyyy} | Number of schools in the district, for year {yyyy} |
| rs{w}seda_ncharters_{yyyy} | Number of charter schools in the district, for year {yyyy} |
| rs{w}seda_speced_{yyyy} | Number of Special Ed (IEP) students in district, for year {yyyy} |
| rs{w}seda_ell_{yyyy} | Number of English Language Learners in the district, for year {yyyy} |
| rs{w}seda_elmtch_{yyyy} | Number of Elementary teachers, for year {yyyy} |
| rs{w}seda_tottch_{yyyy} | Total number of teachers, for year {yyyy} |
| rs{w}seda_gslo_pooled | Lowest Grade Offered in District (Pooled across years) |
| rs{w}seda_gshi_pooled | Highest Grade Offered in District (Pooled across years) |
| rs{w}seda_aides_{yyyy} | Number of Instructional aides, for year {yyyy} |
| rs{w}seda_corsup_{yyyy} | Number of Instructional coordinators and supervisors, for year {yyyy} |
| rs{w}seda_elmgui_{yyyy} | Number of Elementary Guidance counselors, for year {yyyy} |
| rs{w}seda_stutch_wht_{yyyy} | Pupil-Teacher ratio—Average white student's school, for year {yyyy} |
| rs{w}seda_stutch_blk_{yyyy} | Pupil-Teacher ratio—Average black student's school, for year {yyyy} |

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| rs{w}seda_stutch_hsp_{yyyy} | Pupil-Teacher ratio—Average Hispanic student's school, for year {yyyy} |
| rs{w}seda_stutch_all_{yyyy} | Pupil-Teacher ratio—Average school, for year {yyyy} |
| rs{w}seda_flunch_wht_{yyyy} | Percent free lunch in average white student's school, for year {yyyy} |
| rs{w}seda_flunch_blk_{yyyy} | Percent free lunch in average black student's school, for year {yyyy} |
| rs{w}seda_flunch_hsp_{yyyy} | Percent free lunch in average Hispanic student's school, for year {yyyy} |
| rs{w}seda_percharter_all_{yyyy} | Percentage of 3-8 Grade Public School Students in Charters (all races), for year {yyyy} |
| rs{w}seda_percharter_wht_{yyyy} | Percentage of 3-8 Grade Public School Students in Charters (white students), for year {yyyy} |
| rs{w}seda_percharter_blk_{yyyy} | Percentage of 3-8 Grade Public School Students in Charters (black students), for year {yyyy} |
| rs{w}seda_percharter_hsp_{yyyy} | Percentage of 3-8 Grade Public School Students in Charters (Hispanic students), for year {yyyy} |
| rs{w}seda_hswhtblk_{yyyy}g{g} | Information Index between schools: White/Black, for year {yyyy} and grade {g} |
| rs{w}seda_hswhthsp_{yyyy}g{g} | Information Index between schools: White/Hispanic, for year {yyyy} and grade {g} |
| rs{w}seda_hsflnfl_{yyyy}g{g} | Information Index between schools: Free or Reduced Price Lunch/Non Free-Lunch, for year {yyyy} and grade {g} |
| rs{w}seda_ppexp_tot_{yyyy} | Per Pupil Total Expenditures – Total Expenditures/Total Enrollment, for year {yyyy} |
| rs{w}seda_ppexp_inst_{yyyy} | Per Pupil Instructional Expenditures – Instructional Expenditures/Total Enrollment, for year {yyyy} |
| rs{w}seda_pprev_tot_{yyyy} | Revenue Per Pupil– Total Expenditures/Total Enrollment, for year {yyyy} |
| rs{w}seda_totppe_fleslope_{yyyy} | State Slope – Total PPE = % FLE (For year {yyyy}) |
| rs{w}seda_instppe_fleslope_{yyyy} | State Slope – Instructional PPE = % FLE (For year {yyyy}) |
| rs{w}seda_perrl_{yyyy} | Percent reduced lunch in the district (For year {yyyy}) |

*Appendix A:*

**Gap variables with missing data in either subgroup, coerced to missing for those cases**

rs5seda_mn_avg_mth_ol_mfg_subCS
rs5seda_mn_avg_mth_ol_wbg_subCS
rs5seda_mn_avg_mth_ol_whg_subCS
rs5seda_mn_grd_mth_ol_wbg_subCS
rs5seda_mn_grd_mth_ol_whg_subCS
rs6seda_mn_avg_mth_ol_mfg_subCS
rs6seda_mn_avg_mth_ol_whg_subCS
rs6seda_mn_grd_mth_ol_wbg_subCS
rs6seda_mn_grd_mth_ol_whg_subCS
rs5seda_mn_avg_mth_ol_mfg_subGCS
rs5seda_mn_avg_mth_ol_wbg_subGCS
rs5seda_mn_avg_mth_ol_whg_subGCS
rs5seda_mn_grd_mth_ol_wbg_subGCS
rs5seda_mn_grd_mth_ol_whg_subGCS
rs6seda_mn_avg_mth_ol_mfg_subGCS
rs6seda_mn_avg_mth_ol_wbg_subGCS
rs6seda_mn_avg_mth_ol_whg_subGCS
rs6seda_mn_grd_mth_ol_wbg_subGCS
rs6seda_mn_grd_mth_ol_whg_subGCS
rs5seda_mn_avg_ela_ol_wbg_subCS
rs5seda_mn_grd_ela_ol_wbg_subCS
rs5seda_mn_grd_ela_ol_whg_subCS
rs6seda_mn_avg_ela_ol_wbg_subCS
rs6seda_mn_avg_ela_ol_whg_subCS
rs6seda_mn_grd_ela_ol_wbg_subCS
rs6seda_mn_grd_ela_ol_whg_subCS
rs5seda_mn_avg_ela_ol_wbg_subGCS
rs5seda_mn_avg_ela_ol_whg_subGCS
rs5seda_mn_grd_ela_ol_wbg_subGCS
rs5seda_mn_grd_ela_ol_whg_subGCS
rs6seda_mn_avg_ela_ol_whg_subGCS
rs6seda_mn_grd_ela_ol_wbg_subGCS
rs6seda_mn_grd_ela_ol_whg_subGCS