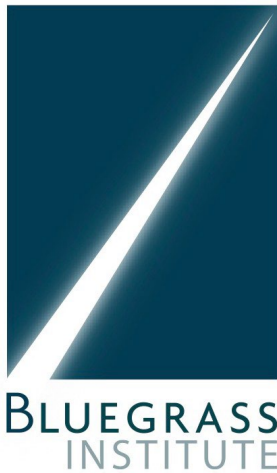


K-12 in Kentucky: A summary of facts and trends



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By John Garen, Ph.D. • January 2024



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K-12 in Kentucky: A summary of facts and trends

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January 2024

Overview

This policy point summarizes a host of notable facts and trends in Kentucky K-12 over the past decades, up to the most currently available data. Generally speaking, overall funding has risen dramatically and nearly continuously since 1990, but educational test scores have changed very modestly. Moreover, the gap between Black and White student test scores is large and has risen. Also, teacher salaries have no longer kept up with inflation, but hiring of non-teaching staff in schools has grown dramatically. Additionally, as of 2022, at least half of Kentucky students are not proficient in grades 4 and 8 reading and math.

More specifically:

- Total K-12 per pupil funding, after adjustment for inflation rose, from \$7,793 in 1990 to \$17,337 in 2022 – a 122% increase. The increase from 2013 to 2022 was 24%.
- Changes from the 1990s to 2022 in statewide average scores for grades 4 and 8 math and reading national (NAEP) tests ranged from a decline of 1.6% to an increase of 8.8%. All four of these test scores declined from 2013 to 2022.
- The gap between the average White student and average Black student scores was wider in 2022 than in 1990 for each of these four NAEP tests.
- According to Kentucky's testing in 2022 (the K-PREP), over half of students are not proficient on grades 4 and 8 reading and math tests. The 2022 national NAEP test indicates that over two-thirds are not proficient.
- For Black students, the 2022 K-PREP shows that over three-fourths are not proficient on any of these tests. The 2022 NAEP indicates over 85% are not proficient.
- From 1990 to 2020, the number of non-teacher staff grew by 55%, while the number of students in Kentucky grew by 5% and the number of teachers rose by 21%.
- Average teacher salaries, after inflation adjustment, rose in the 1990s and 2000s, but have fallen since then. Comparing 2022 to 1990, teacher salaries were 1.08 times higher while per-pupil funding was 2.22 times higher.
- Inflation-adjusted federal, state, and local funding per pupil all rose from 1990 to 2009, experienced a decline after the Great Recession, then resumed rising. State per-pupil funding has not kept pace with inflation, however.
- Within state funds, on an inflation-adjusted, per-pupil basis, contributions for pension and health benefits ("on behalf" of school districts) have risen sharply, while SEEK funds and "other" funds have declined.

Overall K-12 Funding

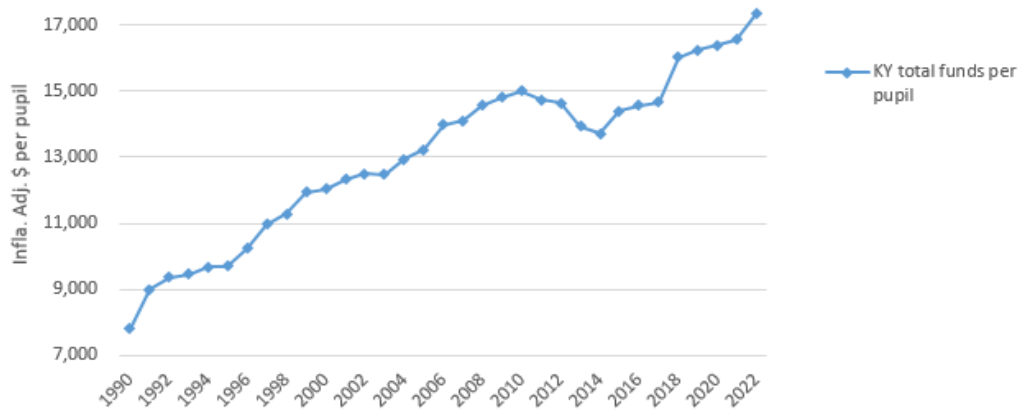
Figure 1 shows the total of federal, state, and local K-12 funding per pupil in Kentucky, adjusted for inflation using the Personal Consumption Expenditures (PCE) Price Index.¹ It rose from \$7,793 in 1990 to \$17,337 in 2022, i.e., 2.22 times more (after inflation) in 2022 than in 1990, equivalent to a 122% rise.² Nearly every year showed an increase except for the years following the Great Recession.

For selected sub-periods:

1990-2000: 54.4% increase	2000-2010: 24.7% increase
2010-2014: 8.7% decrease	2014-2022: 26.5% increase

Figure 1

Total Funds per pupil, adjusted to 2022 dollars, 1990-2022
(total of federal, state, and local)



NAEP Test Score Performance

Table 1 shows the percentage changes in national (NAEP) test scores for Kentucky for grades 4 and 8 reading and math. Test scores showed modest increases up to 2013, but have all declined since then. Overall changes are small.

Table 1

NAEP Test	Percentage Changes in NAEP Test Score over Selected Time Periods		
	Test inception to 2013	2013 to 2022	Overall: test inception to 2022
Grade 4 reading	5.6%	-3.5%	2.3%
Grade 4 math	12.3%	-3.1%	8.8%
Grade 8 reading	2.8%	-4.3%	-1.6%
Grade 8 math	9.2%	-4.1%	4.6%

¹ At <https://www.bea.gov/data/personal-consumption-expenditures-price-index>.

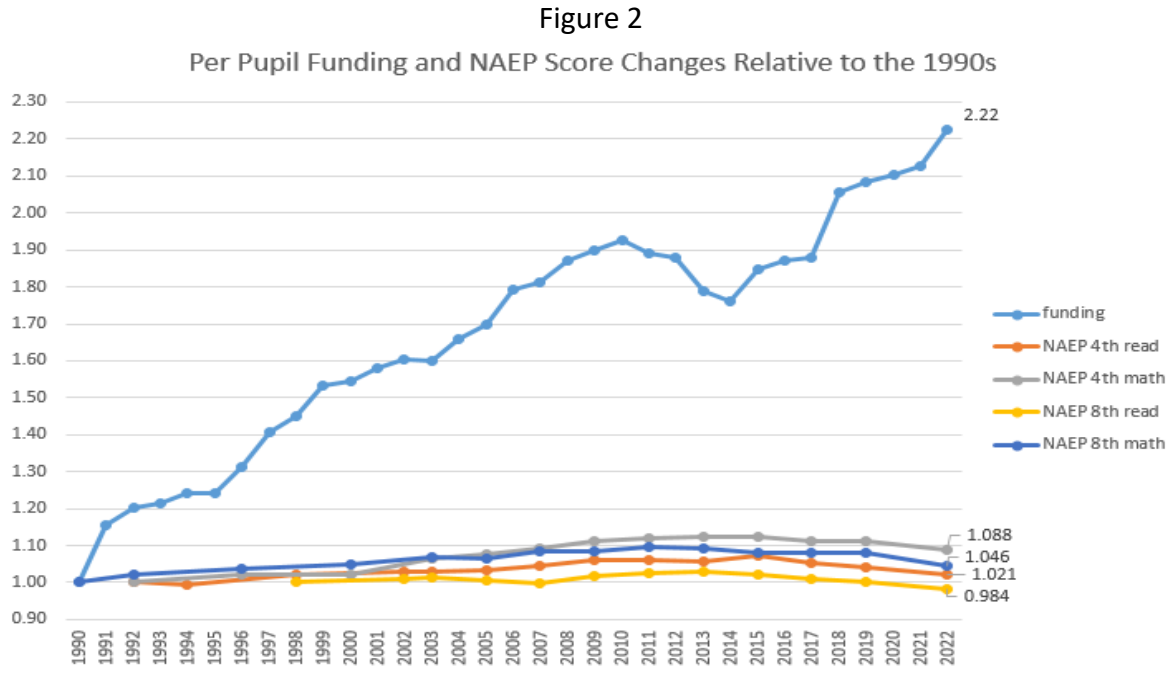
² Funding data are from federal sources through 2021. See <https://nces.ed.gov/programs/digest/> and <https://nces.ed.gov/ccd/files.asp#Fiscal:1,LevelId:2,SchoolYearId:37,Page:1>. Data for 2022 (the latest available year) are from <https://www.education.ky.gov/districts/FinRept/Pages/Fund%20Balances,%20Revenues%20and%20Expenditures,%20Chart%20of%20Accounts,%20Indirect%20Cost%20Rates%20and%20Key%20Financial%20Indicators.aspx>

³ All NAEP data are from <https://www.nationsreportcard.gov/ndecore/xplore/NDE>.

Comparing Funding Changes to Test Score Changes

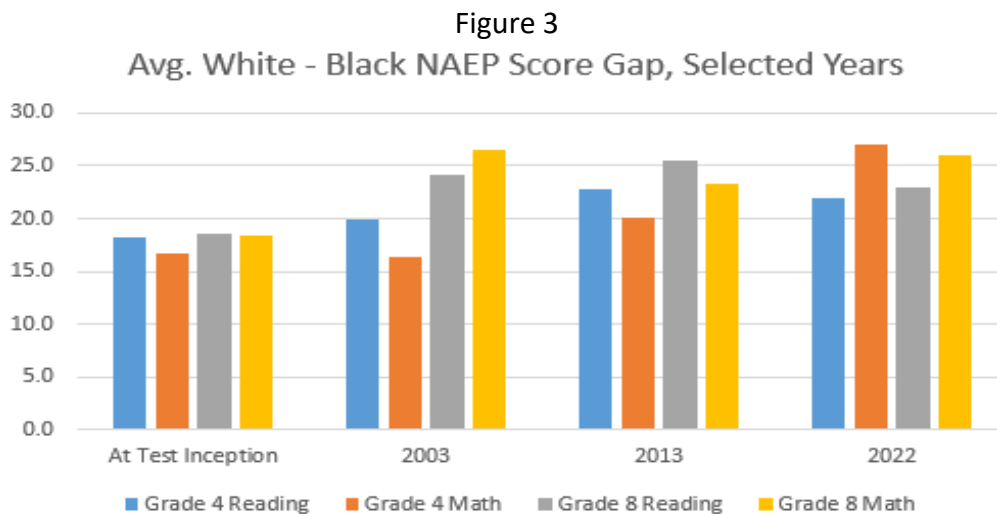
Figure 2 presents a comparison of changes in funding to changes in test scores. Each data series (i.e., funding and test scores) is indexed to 1.00 at its starting point and subsequent values indicate the percent increase since the data began.

Funding per pupil (inflation adjusted) is 2.22 times as high as in 1990. The test scores range from 0.984 to 1.088 times as high as their beginning years.



Black – White Test Score Gaps

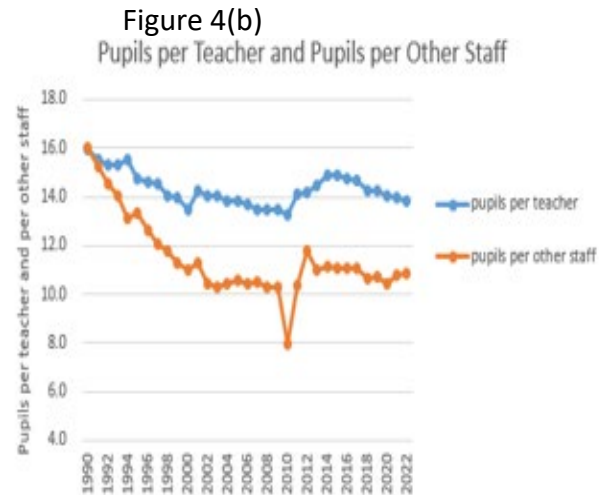
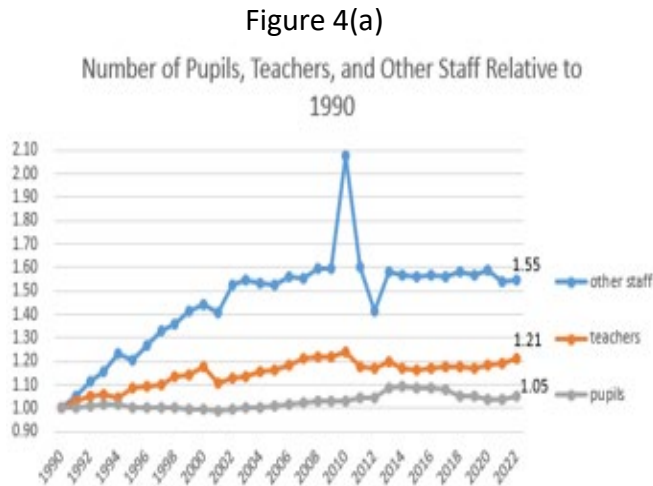
Figure 3 shows the gaps between the average score for White students and the average score for Black students for grade 4 and 8 reading and math tests for selected years. The gaps generally have risen over time and were substantially higher in 2022 than in 1990.



Teachers and Staffing

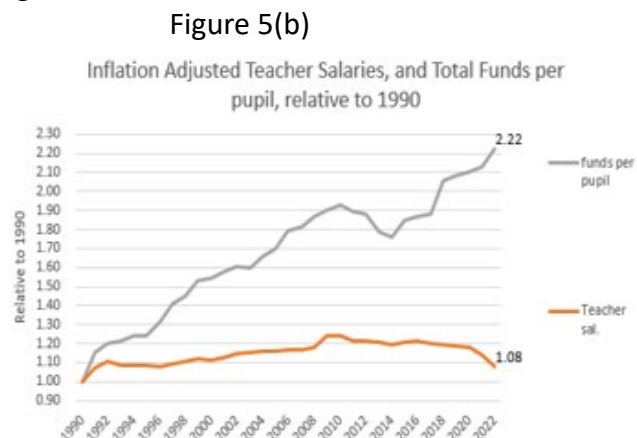
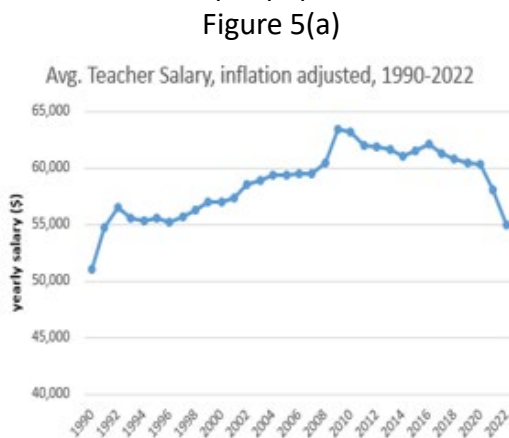
Figure 4(a) shows the numbers of pupils, teachers, and non-teacher “other staff” relative to 1990.⁴ The number of non-teaching staff was 1.55 times higher in 2022 than in 1990; the number of teachers was 1.21 times higher; the number pupils was 1.05 times higher.

Figure 4(b) shows pupils per teacher and pupils per other staff. The pupil-teacher ratio fell, rose, and fell again. In 2022, it was 13.8 compared to 15.9 in 1990. The other staff-pupil ratio fell from 1990 to 2003 and generally stabilized since then. In 2022, it was 10.8 compared to 16.0 in 1990.



Teacher Salaries

Figure 5(a) shows inflation-adjusted average teacher salaries.⁵ They rose through the 1990s and early 2000s and have fallen since then. Figure 5(b) shows inflation-adjusted total funds per pupil and teacher salaries. Teacher salaries in 2022, were 1.08 times as high as in 1990 while funds per pupil were 2.22 times higher.



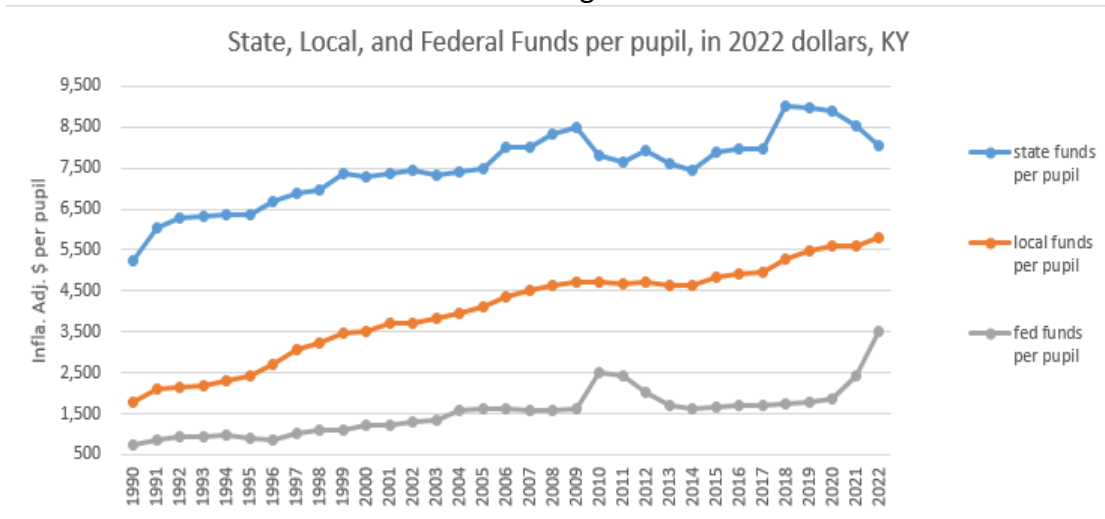
⁴ Staffing data are from the Digest of Education Statistics, <https://nces.ed.gov/programs/digest/index.asp>.

⁵ Salary data are from <https://www.education.ky.gov/districts/FinRept/Pages/School%20District%20Personnel%20Information.aspx>

Composition of Funding

Figure 6 shows local, state, and federal funding per pupil (inflation adjusted) separately. Local funds per pupil have increased nearly every year, except following the Great Recession. State funds rose from 1990 to 2009, fell somewhat during the Great Recession, rose again, then fell for the past few years. State funding per pupil in 2022 was just above its 2017 level, though total funding has risen every year since 2014. Federal funds have risen, then fell after 2011 and have risen again recently.⁶

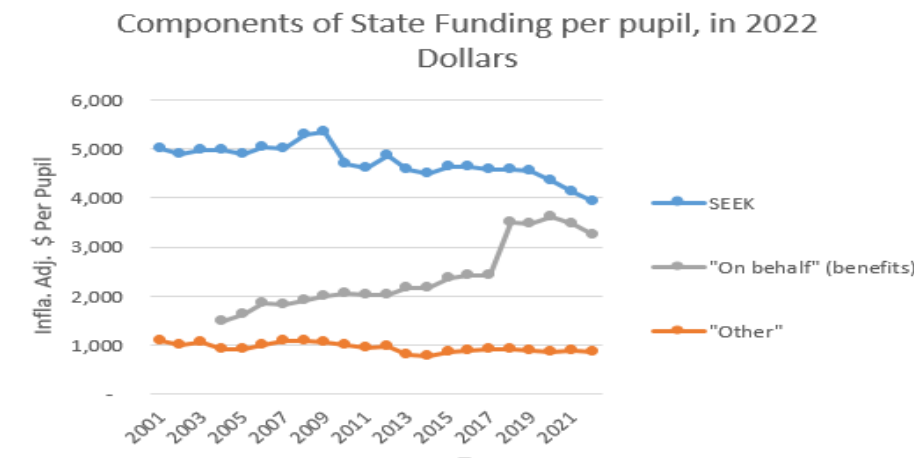
Figure 6



Components of State Funding

Figure 7 shows the components of state funding per pupil, inflation adjusted (only available from 2001 or later). From 2001, SEEK funds rose somewhat, but have fallen for the past several years. The “On Behalf” funding (mostly for school employees’ pension and health benefits) has risen sharply since 2004 (the first year in the data). Other state funding has slowly drifted downward since 2001.⁷

Figure 7



⁶ Data sources are as listed in footnote 2.

⁷ These data are from the state source listed in footnote 2.

Other Current Data

Table 2 shows the 2021-2022 school year per pupil funding, by source.

Table 2

<u>2021-22 Per Pupil Funding</u>	
Local	\$5,782
State	\$8,048
Federal	\$3.507
Total	\$17,337

Table 3 presents the percentages of students below proficient in grades 4 and 8 reading and math according to Kentucky's test in 2022 (K-PREP) and the national test in 2022 (NAEP).⁸ According to the K-PREP, over half of Kentucky students are not proficient for any of these tests. The NAEP shows over two-thirds are not proficient.

For Black students, K-PREP indicates three-fourths or more are not proficient. NAEP indicates over 85% are not proficient.

Table 3

<u>2022 Percentages of Below Proficient Students, Ky. and NAEP Tests</u>		
	<u>% below proficient, Ky. K-Prep Test, 2022</u>	<u>% below proficient, NAEP test, 2022</u>
<u>All Students</u>		
Grade 4 reading	54%	69%
Grade 4 math	60%	67%
Grade 8 reading	56%	71%
Grade 8 math	63%	78%
<u>Black Students</u>		
Grade 4 reading	76%	85%
Grade 4 math	84%	91%
Grade 8 reading	78%	88%
Grade 8 math	86%	91%

⁸ K-PREP data are from <https://www.kyschoolreportcard.com/organization/20?year=2022>. The NAEP data source is in footnote 3.

Data Appendix

Data on funding, pupils, staff, salaries, and prices.

Year	PCE Price Index ^a	Avg. Daily Attendance ^b	Total Receipts (thou.\$) ^b	No. Teachers ^c	No. Non-Teacher Staff ^c	Avg. Teacher Salary ^d	Tot. Federal Receipts (thou.\$) ^b	Tot. State Receipts (thou.\$) ^b	Tot. Local Receipts (thou.\$) ^b	SEEK Funding (\$) ^e	"Other" State Funding (\$) ^e	"On Behalf" Funding (\$) ^e
1990	59.775	569,795	2,287,158	35,731	35,646	26,292	220,813	1,540,138	526,207			
1991	61.774	569,713	2,729,811	36,777	37,467	29,115	260,356	1,827,601	641,854			
1992	63.420	574,226	2,939,351	37,571	39,594	30,869	296,573	1,969,899	672,880			
1993	65.000	579,446	3,071,172	37,868	41,323	31,115	309,365	2,058,542	703,266			
1994	66.356	578,020	3,194,404	37,324	43,955	31,625	329,830	2,105,658	758,915			
1995	67.754	572,952	3,240,926	38,784	42,936	32,434	301,243	2,132,169	807,514			
1996	69.203	571,934	3,492,890	39,120	45,305	32,934	290,625	2,280,140	922,126			
1997	70.407	570,431	3,794,129	39,331	47,380	33,797	351,264	2,386,935	1,055,930			
1998	70.967	569,694	3,932,068	40,488	48,508	34,442	376,532	2,427,126	1,128,409			
1999	72.001	568,603	4,210,793	40,803	50,285	35,383	389,074	2,600,631	1,221,089			
2000	73.822	565,693	4,330,619	41,954	51,378	36,255	433,290	2,628,338	1,268,991			
2001	75.302	564,198	4,509,893	39,589	50,085	37,217	448,073	2,702,932	1,358,888	1,832,893,382	395,254,203	
2002	76.291	566,451	4,650,146	40,376	54,451	38,513	489,988	2,772,395	1,387,763	1,825,691,718	372,042,874	
2003	77.894	569,538	4,764,253	40,662	55,177	39,533	504,713	2,799,254	1,460,287	1,902,135,334	402,838,515	
2004	79.827	570,911	5,077,772	41,201	54,725	40,849	617,504	2,907,751	1,552,517	1,956,993,276	357,067,513	581,229,895
2005	82.127	574,380	5,379,257	41,463	54,457	42,032	658,612	3,049,129	1,671,516	1,994,690,371	377,831,572	658,027,242
2006	84.440	580,937	5,909,930	42,413	55,524	43,275	691,004	3,383,793	1,835,133	2,128,847,643	418,382,095	785,238,799
2007	86.607	583,102	6,141,245	43,371	55,441	44,384	687,706	3,483,546	1,969,993	2,178,552,740	476,123,864	797,913,600
2008	89.170	585,775	6,561,268	43,536	56,826	46,417	710,865	3,759,235	2,091,168	2,375,854,983	488,113,918	858,573,904
2009	88.921	585,556	6,641,128	43,451	56,766	48,603	731,351	3,802,150	2,107,627	2,403,732,883	469,430,616	897,528,601
2010	90.514	587,102	6,873,286	44,371	74,060	49,332	1,139,931	3,582,406	2,150,950	2,143,807,308	463,001,757	937,987,984
2011	92.804	593,323	6,993,349	42,042	57,183	49,614	1,149,658	3,622,461	2,221,230	2,184,001,460	451,028,240	959,907,450
2012	94.534	594,440	7,086,717	41,860	50,427	50,428	971,266	3,841,443	2,274,008	2,360,482,415	470,348,440	981,169,714
2013	95.781	618,774	7,120,960	42,769	56,407	50,938	875,760	3,878,756	2,366,445	2,339,143,527	415,478,008	1,108,414,832
2014	97.121	622,088	7,137,145	41,820	55,988	51,100	836,249	3,884,563	2,416,333	2,336,956,769	407,217,710	1,124,000,407
2015	97.299	617,642	7,453,976	41,586	55,683	51,635	856,715	4,093,058	2,504,203	2,402,607,667	442,465,412	1,231,097,766
2016	98.284	618,606	7,634,758	41,902	55,810	52,618	887,650	4,179,014	2,568,095	2,429,019,629	470,632,455	1,262,034,585
2017	100.000	616,281	7,782,860	42,029	55,665	52,812	912,224	4,229,780	2,640,856	2,427,615,305	491,429,851	1,293,005,140
2018	102.047	600,115	8,458,983	42,064	56,299	53,450	918,073	4,759,331	2,781,578	2,412,775,175	483,161,884	1,844,983,790
2019	103.513	597,333	8,651,926	41,827	55,788	53,923	955,954	4,785,635	2,910,337	2,425,508,177	477,982,691	1,849,664,576
2020	104.635	592,315	8,757,350	42,223	56,659	54,372	1,004,964	4,751,147	3,001,240	2,332,182,069	465,908,977	1,925,851,994
2021	109.001	592,130	9,218,839	42,458	54,968	54,548	1,343,277	4,753,615	3,121,948	2,297,308,394	500,934,842	1,928,267,639
2022	116.043	598,652	10,378,779	43,380	55,247	55,016	2,099,710	4,817,953	3,461,116	2,352,084,540	520,134,735	1,945,734,688

^aFrom <https://www.bea.gov/data/personal-consumption-expenditures-price-index>.

^bSee <https://nces.ed.gov/programs/digest/> and

<https://nces.ed.gov/ccd/files.asp#Fiscal:1,LevelId:2,SchoolYearId:37,Page:1>. Data for 2022 are from <https://www.education.ky.gov/districts/FinRept/Pages/Fund%20Balances,%20Revenues%20and%20Expenditures,%20Chart%20of%20Accounts,%20Indirect%20Cost%20Rates%20and%20Key%20Financial%20Indicators.aspx>

^c<https://nces.ed.gov/programs/digest/index.asp>.

^d<https://www.education.ky.gov/districts/FinRept/Pages/School%20District%20Personnel%20Information.aspx>

^eSee the Kentucky data source in footnote b.

Data on NAEP test scores.^f

Year	Grade 4 read, all	Grade 4 read, White	Grade 4 read, Black	Grade 4 math, all	Grade 4 math, White	Grade 4 math, Black	Grade 8 read, all	Grade 8 read, White	Grade 8 read, Black	Grade 8 math, all	Grade 8 math, White	Grade 8 math, Black
1990										257	259	240
1991												
1992	213	214	196	215	217	200				262	264	241
1993												
1994	212	214	190									
1995												
1996				220	222	203				267	269	247
1997												
1998	218	220	199				262	264	246			
1999												
2000				219	223	196				270	272	250
2001												
2002	219	222	199				265	267	248			
2003	219	221	202	229	231	214	266	269	245	274	277	250
2004												
2005	220	222	203	231	234	217	264	266	248	274	276	255
2006												
2007	222	225	203	235	238	219	262	264	247	279	282	257
2008												
2009	226	228	204	239	241	220	267	269	249	279	282	258
2010												
2011	225	226	210	241	243	225	269	271	248	282	284	261
2012												
2013	224	227	204	241	244	224	270	272	247	281	283	260
2014												
2015	228	231	212	242	244	226	268	271	247	278	281	257
2016												
2017	224	227	204	239	248	223	265	268	246	278	282	252
2018												
2019	221	225	199	239	242	223	263	266	239	278	282	256
2020												
2021												
2022	217	222	200	234	237	210	258	262	239	269	274	248

^fAll NAEP data are from <https://www.nationsreportcard.gov/ndecore/xplore/NDE>.