

# State of Kansas

## K-12 Enrollment Projection Report

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Serving Educational Leaders,  
Inspiring Student Success

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*January 2015*



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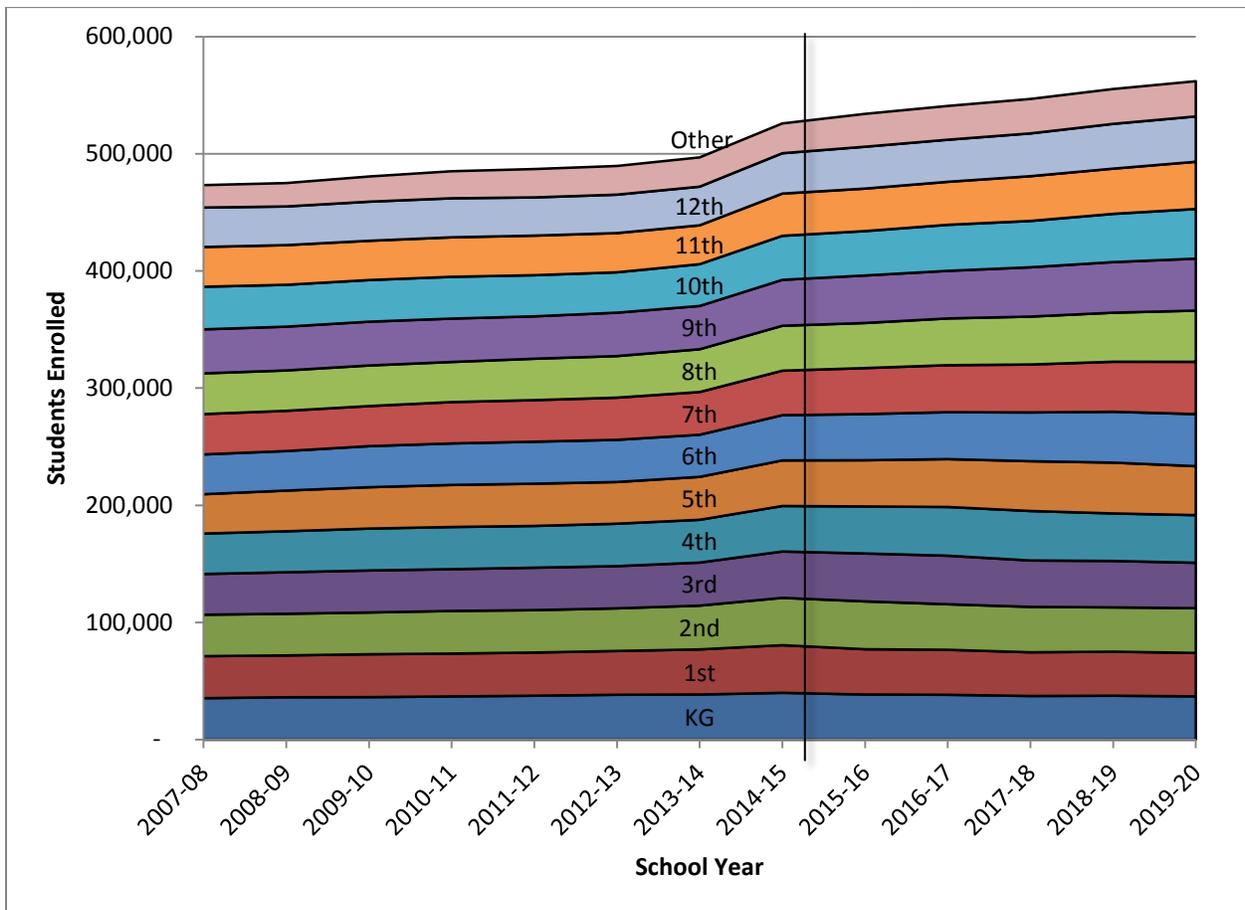
## Introduction

This document contains headcount enrollment projections for the State of Kansas for the 2015-16 school year through the 2019-20 school year. These projections are based on resident live births in Kansas and the headcount enrollment data for previous school years. For more information on the methods used, refer to Appendix A.

## Enrollment Headcounts

As Chart 1 and Table 1 show, student enrollment in Kansas is expected to continue the trend of gradual increase from approximately 526,000 students in 2014-15 to approximately 562,000 students in 2019-20. Changes across grades are expected to be fairly consistent, with no grades showing patterns significantly different than the rest.

**Chart 1: Actual and Projected Enrollments by Grade**



Note: Other represents non-graded students and students in grade categories other than K-12.

**Table 1: Actual and Projected Enrollments by Grade**

Year	KG	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Other	Total
2007-08	35,486	35,821	35,373	34,768	34,470	33,565	33,956	34,457	34,719	37,552	36,345	33,960	33,627	19,137	473,236
2008-09	36,272	35,662	35,539	35,443	34,968	34,714	33,732	34,319	34,465	37,368	35,695	33,873	32,987	19,964	475,001
2009-10	36,364	36,574	35,649	35,842	35,736	35,302	35,035	34,208	34,636	37,352	35,528	33,511	33,370	21,486	480,593
2010-11	36,962	36,543	36,378	35,673	35,962	35,899	35,405	35,292	34,222	37,008	35,649	33,715	33,306	23,068	485,082
2011-12	37,578	36,814	36,198	36,226	35,621	36,012	35,841	35,490	35,337	36,166	35,096	33,781	32,600	24,196	486,956
2012-13	38,396	37,316	36,410	36,032	36,184	35,578	35,986	35,997	35,473	37,036	34,435	33,476	32,792	24,471	489,582
2013-14	38,581	38,488	37,357	36,748	36,494	36,620	35,947	36,464	36,496	36,926	35,659	33,174	32,976	24,973	496,903
2014-15	40,037	40,632	40,406	39,552	38,808	38,886	38,613	37,964	38,322	39,188	37,571	36,050	34,428	25,411	525,868
2015-16	38,586	38,621	40,836	40,890	40,103	39,447	39,394	39,258	38,465	40,530	37,896	36,254	35,721	28,038	534,041
2016-17	38,372	38,350	38,896	41,418	41,546	40,859	40,043	40,126	39,877	40,598	39,296	36,689	35,902	28,823	540,794
2017-18	37,334	37,272	38,749	39,593	42,228	42,474	41,612	40,916	40,875	42,077	39,534	38,206	36,504	29,380	546,755
2018-19	37,580	37,535	37,820	39,619	40,531	43,370	43,421	42,665	41,836	43,188	41,157	38,583	38,198	29,739	555,242
2019-20	37,031	37,030	38,189	38,768	40,643	41,749	44,440	44,623	43,698	44,335	42,376	40,270	38,689	30,064	561,906

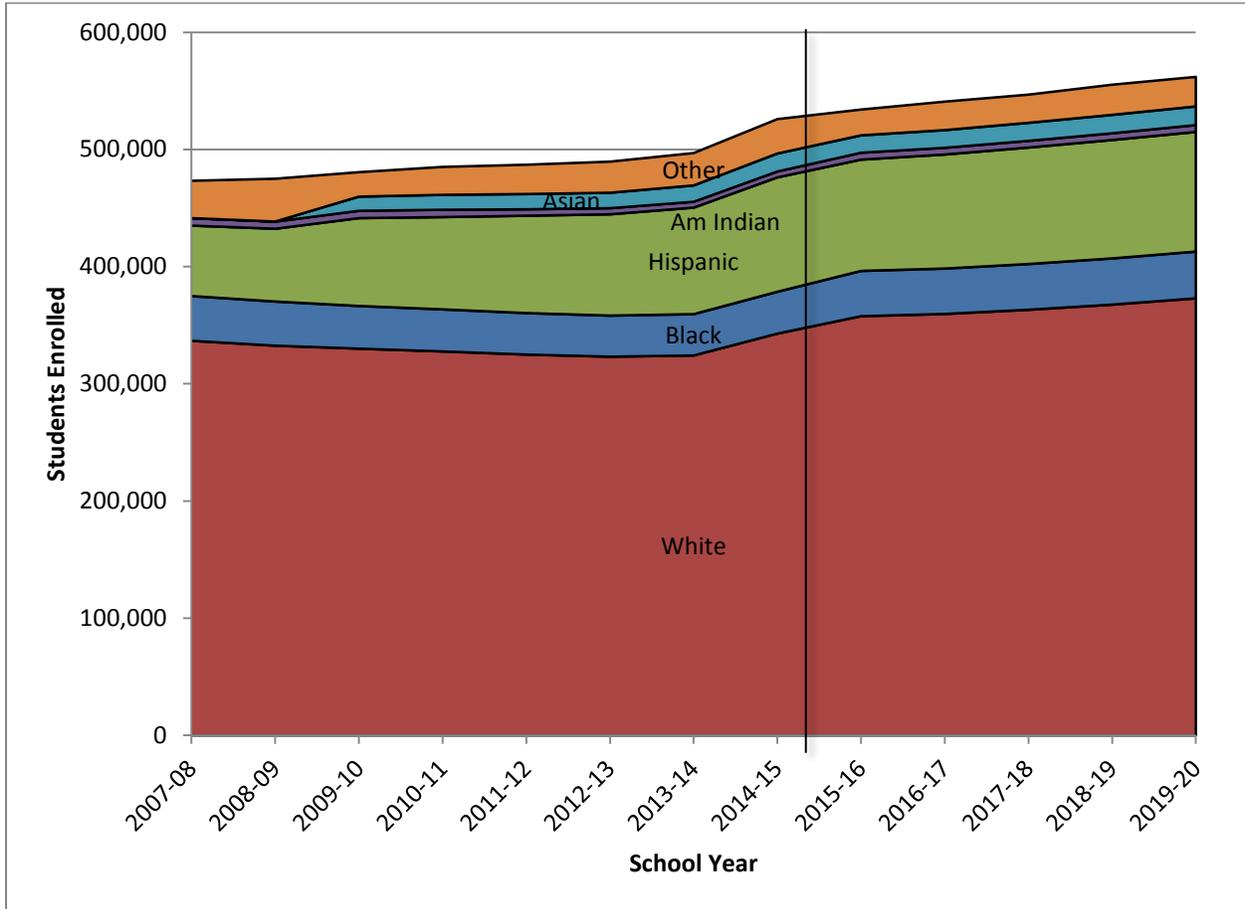
As Table 2 shows, headcount enrollment for students in grades other than K-12 is expected to increase through the 2019-20 school year from approximately 25,000 students to approximately 30,000 students.

**Table 2: Actual and Projected Enrollments by Other Student Groups**

Year	Daycare	SpEd 3-4 yr	4 yr At Risk	Pre-K	NonGraded	Total K-12	Other	Total
2007-08	10	5,506	6,380	1,963	5,278	454,099	19,137	473,236
2008-09	14	5,727	6,906	2,121	5,196	455,037	19,964	475,001
2009-10	95	6,085	7,309	1,601	6,396	459,107	21,486	480,593
2010-11	-	6,501	7,307	3,615	5,645	462,014	23,068	485,082
2011-12	-	6,550	7,417	4,157	6,072	462,760	24,196	486,956
2012-13	-	6,568	7,500	4,435	5,968	465,111	24,471	489,582
2013-14	-	6,854	7,306	4,601	6,212	471,930	24,973	496,903
2014-15	-	7,056	7,175	5,048	6,132	500,457	25,411	525,868
2015-16	-	7,785	7,917	5,570	6,766	506,003	28,038	534,041
2016-17	-	7,912	8,673	5,149	7,090	511,971	28,823	540,794
2017-18	-	8,024	8,751	5,371	7,233	517,375	29,380	546,755
2018-19	-	8,137	8,806	5,503	7,294	525,503	29,739	555,242
2019-20	-	8,257	8,839	5,586	7,382	531,842	30,064	561,906

As Charts 2 through 4 and Tables 3 and 4 show, there are no major changes in the trends for students in each race/ethnicity category, students eligible for free lunch (FL), students eligible for reduced-price lunch (RPL), students not eligible for services under the National School Lunch Program (FPL), special education students (Sped), non-special education students (Non-Sped), and students receiving services for English Language Services (ELL) from the 2014-15 school year through the 2019-20 school year.

**Chart 2: Actual and Projected Enrollments by Race/Ethnicity**



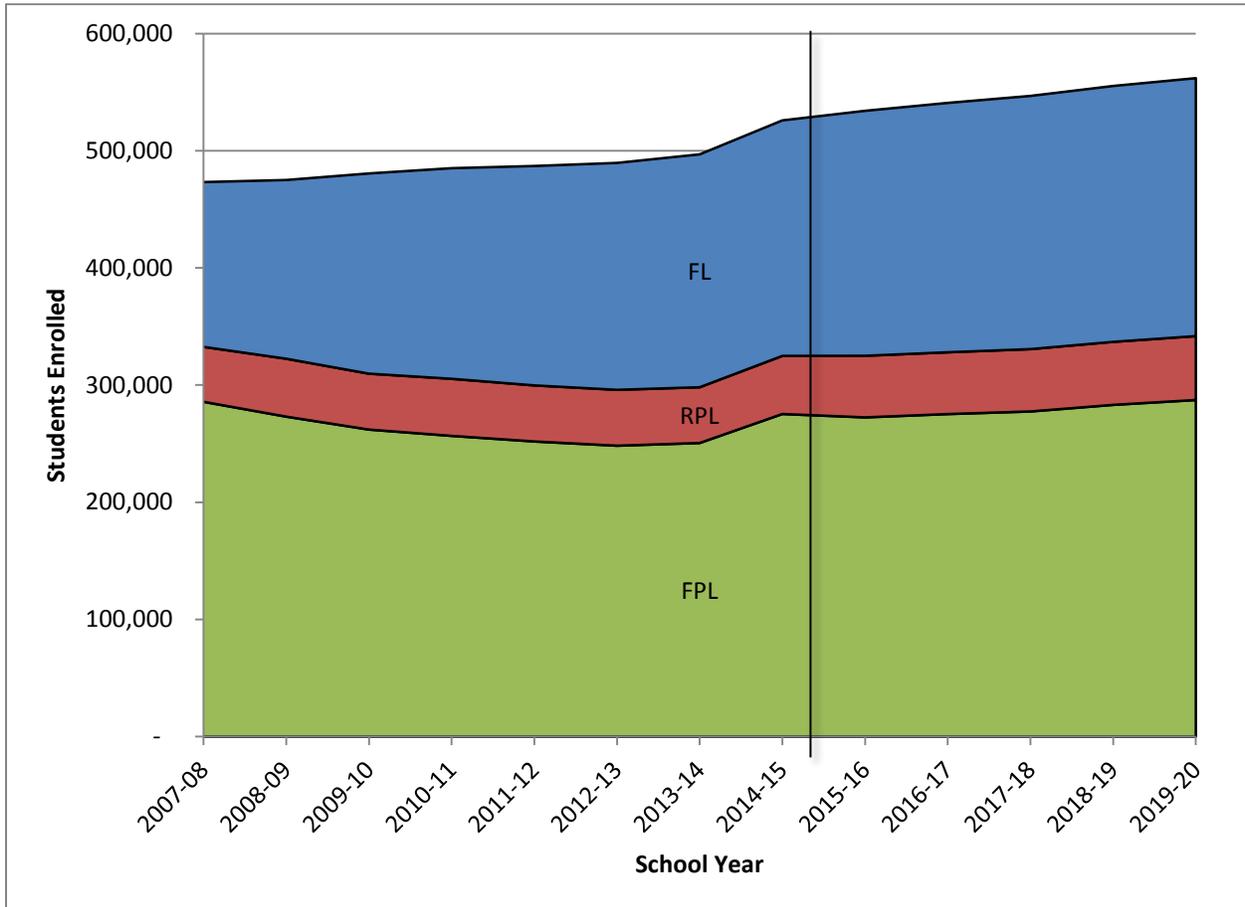
**Table 3: Actual and Projected Enrollments Race/Ethnicity**

Year	Total	White	Black	Hisp	AI	AS	Mult
2007-08	473,236	336,707	38,192	60,097	6,324	77	31,839
2008-09	475,001	332,532	37,696	62,083	6,076	90	36,524
2009-10	480,593	330,014	36,420	74,954	6,234	12,106	20,865
2010-11	485,082	327,629	35,893	78,755	6,233	12,747	23,825
2011-12	486,956	324,964	35,419	83,047	5,472	13,028	25,026
2012-13	489,582	323,160	35,052	86,450	5,192	13,194	26,534
2013-14	496,903	324,184	35,272	90,871	4,994	13,975	27,607
2014-15	525,868	342,835	35,734	97,560	5,020	15,365	29,354
2015-16	534,041	357,701	38,641	94,954	5,871	14,853	22,021
2016-17	540,794	359,619	38,735	97,310	5,711	15,126	24,294
2017-18	546,755	363,192	39,026	99,386	5,697	15,421	24,033
2018-19	555,242	367,581	39,422	101,040	5,737	15,728	25,733
2019-20	561,906	372,933	39,881	102,109	5,836	15,934	25,212

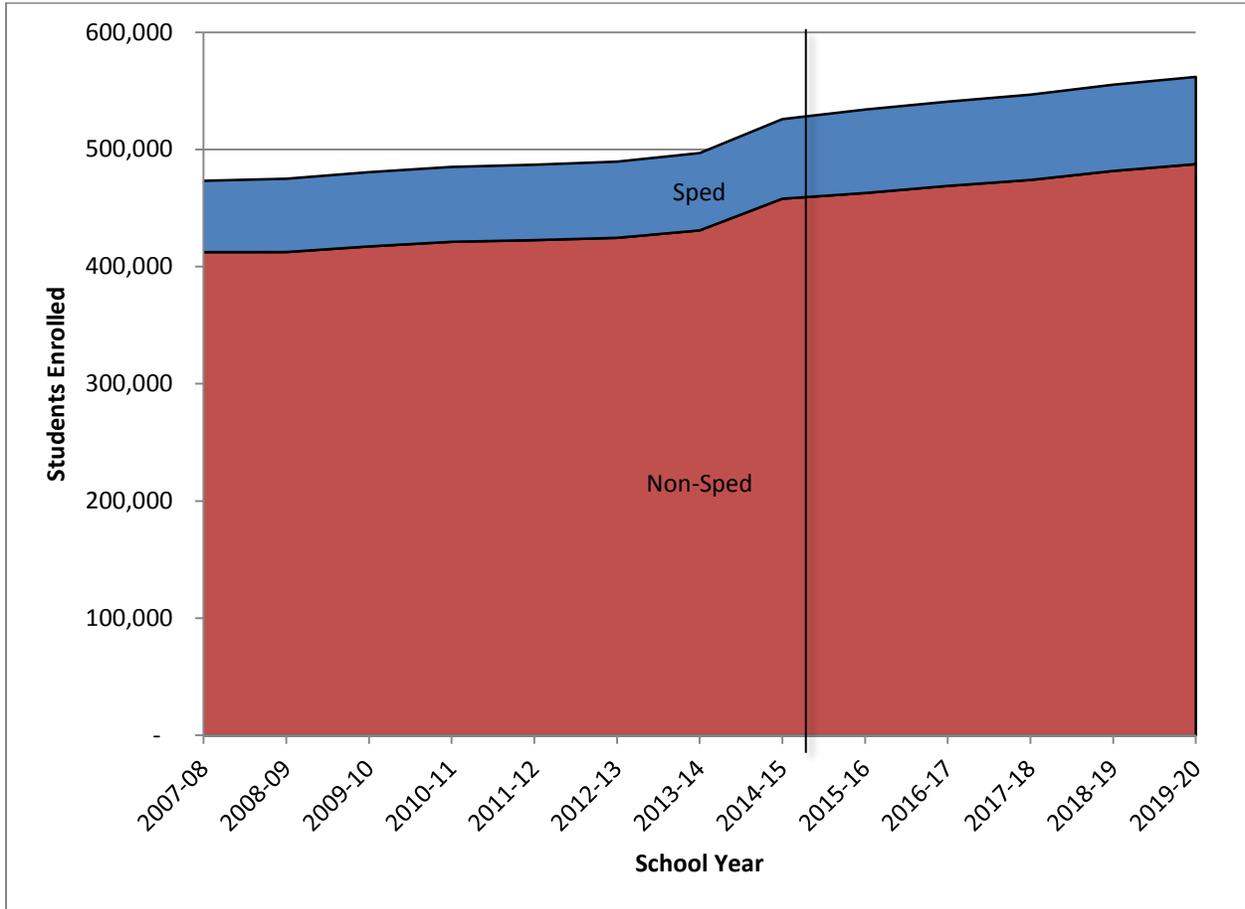
The projection report produced by KASB in July suggested the percent of students in the state who are of Hispanic ethnicity could increase to 22 percent by the 2018-19 school year. The current report estimates the percent will remain fairly constant from the current year through the 2019-20 school year.

at approximately 18 percent. The reasons for this apparent discrepancy are a) the previous report was based on data through the 2013-14 school year whereas the current report is based on data through the 2014-15 school year, and b) the current report utilizes different calculations. For more information on this, as well as details regarding the accuracy of the projections, refer to Appendix A.

**Chart 3: Actual and Projected Enrollments by National School Lunch Program Eligibility**



**Chart 4: Actual and Projected Enrollments by Special Education Status**



**Table 4: Actual and Projected Enrollments by Program**

Year	Total	FL	RPL	FPL	Sped	Non-Sped
2007-08	473,236	140,622	46,872	285,742	60,844	412,392
2008-09	475,001	152,500	49,407	273,094	62,555	412,446
2009-10	480,593	170,844	47,687	262,062	63,353	417,240
2010-11	485,082	179,708	48,696	256,678	63,889	421,193
2011-12	486,956	187,217	47,835	251,904	64,342	422,614
2012-13	489,582	193,620	47,673	248,289	65,008	424,574
2013-14	496,903	198,734	47,564	250,605	65,986	430,917
2014-15	525,868	200,970	49,557	275,341	67,934	457,934
2015-16	534,041	209,025	52,560	272,455	71,234	462,807
2016-17	540,794	212,786	52,717	275,291	71,921	468,873
2017-18	546,755	216,050	53,196	277,509	72,783	473,972
2018-19	555,242	218,344	53,761	283,137	73,606	481,636
2019-20	561,906	220,114	54,510	287,282	74,433	487,473

## **Conclusion**

Based on the available data related to resident live births by county and previous school year enrollments, student enrollment in Kansas is expected to increase from approximately 526,000 students in 2014-15 to approximately 562,000 students in 2019-20. Trends by grade level and program participation are expected to be consistent with previous years.

## **Appendix A: Methodology**

The following describes the methods used for developing the Enrollment Projections contained in this report. This method is based on the one used by KASB for many years, but has been enhanced and expanded as of the 2014-15 school year.

### **Initial Data**

KASB acquires enrollment counts from the Kansas State Department of Education (KSDE) via their K-12 School Reports page (<http://svapp15586.ksde.org/k12/k12.aspx>).

KASB acquires county-level birth data by month from the Kansas Department of Health and Environment via their Annual Summary of Vital Statistics ([www.kdheks.gov/hci/annsumm.html](http://www.kdheks.gov/hci/annsumm.html)).

### **Ratio of Birth to First Grade Enrollment**

Total resident live births by state and school year are calculated using monthly births from September of one year through August of the following year; consistent with the birth dates used to determine age of eligibility for attending first grade. The birth data by county is then tied to the state-level enrollment data.

Because of some of the challenges with kindergarten data, KASB utilizes a ratio of births by school year to first grade enrollments seven years later; when the children would be turning seven years old and therefore be eligible for first grade enrollment.

This ratio, which serves as a comparison between children born in the state to the number of students enrolling in first grade within the state seven years later, serves as the basis for the enrollment estimates for the state. Limitations of this ratio include the fact that it does not take into account children moving into or out of the state's boundaries.

In order to estimate the first grade enrollment numbers for future years, a five-year rolling average is utilized. Such an average is calculated by determining the average ratio for the past five years in order to create the ratio for the first year of the projection, then taking the ratio for the past four years plus the ratio calculated for the first year of the projection and averaging them in order to create the ratio for the second year of the projection, and so forth. Rolling averages are commonly utilized in order to minimize the impact of short-term fluctuations or deviations on the overall projections.

The calculated ratios for five years' worth of school years are then applied to the actual resident live births in order to determine estimated first grade enrollment numbers at the state level.

Table B1 shows the actual and projected birth to first grade ratios and numbers at the district level. Chart B1 shows, at the district level, the actual and projected first grade enrollment numbers.

### **Cohort Survival Ratios**

For all other grade levels 2 through 12 at the state and district level, a cohort survival ratio is calculated and utilized. The cohort survival ratio determines the relationship between the number of students at a particular grade level one year and the number of students at the next grade level the following year.

For kindergarten, the ratio is calculated backwards; determining the ratio of the number of students in first grade one year and the number of students in kindergarten the year prior. Again for these calculations a five-year rolling average is utilized.

Table B2 shows the actual and projected cohort survival ratios at the district level. Table 1 shows the actual and projected enrollment numbers by grade at the state level, as well as the total K-12 numbers.

## **Other Student Groups**

Beyond the traditional grades K through 12, KSDE also reports on students in the following groups:

- Daycare
- Special Education Three- and Four-Year Olds
- Four-Year Olds At Risk
- Pre-Kindergarten
- Non-graded

In order to estimate the enrollment numbers for these students at the state and district level, a ratio of each group to the total number of students in K-12 for the same year is calculated, and again a five-year rolling average is utilized to project numbers for the next five years.

Table 2 shows the actual and projected numbers for these groups at the district level, as well as the overall total numbers. Chart 1 shows the actual and projected enrollment numbers for the K-12 and all students groups at the district level.

## **Demographics**

KSDE also provides student counts by students eligible for free lunch, students eligible for reduced-price lunch, and students receiving special education services.

Like the other student groups described above, in order to estimate the enrollment numbers for these students at the state level, a ratio of each group to the total number of students in K-12 for the same year is calculated, and again a five-year rolling average is utilized to project numbers for the next five years.

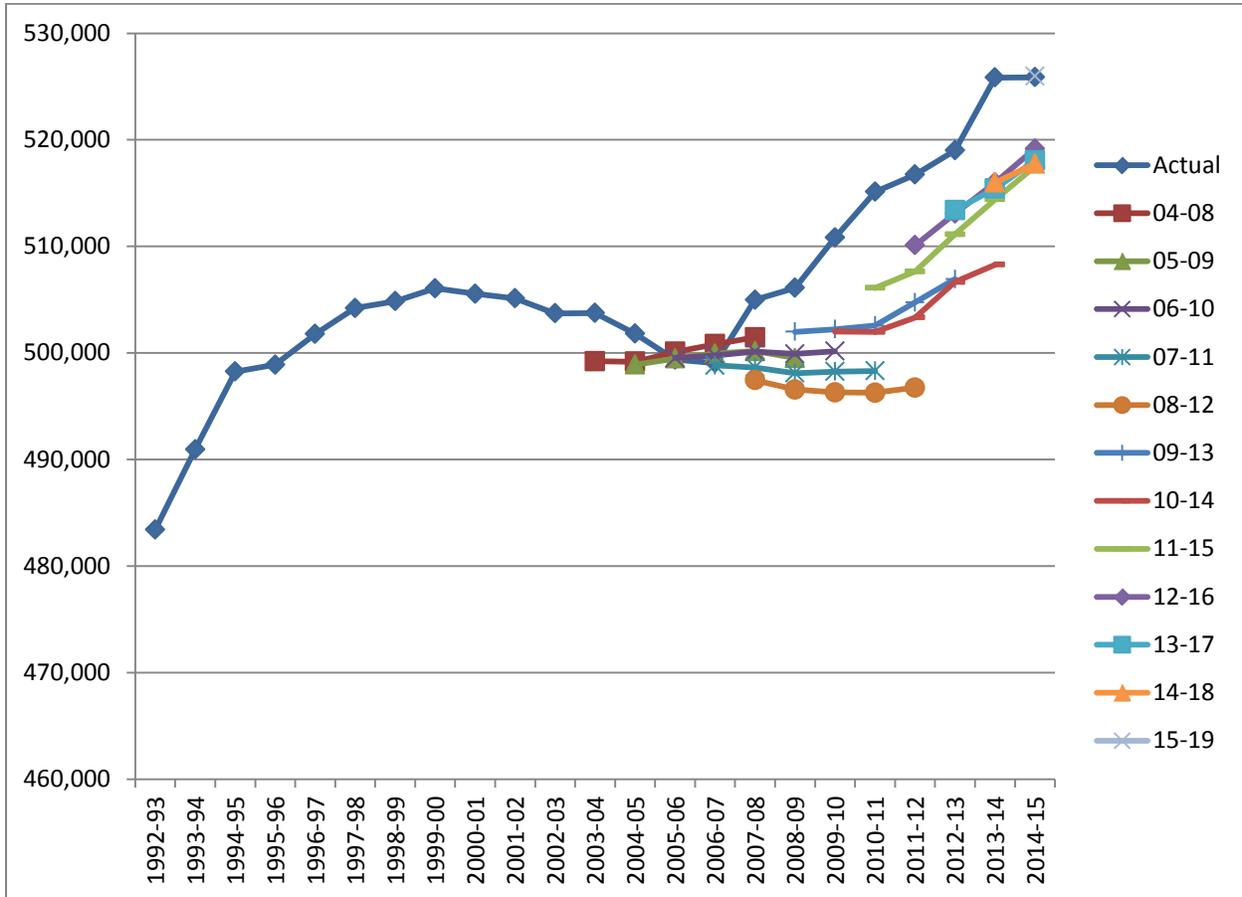
Tables 3 and 4 show the actual and projected numbers for these groups at the state level. Charts 2 through 4 show district-level data. Chart 2 shows the actual and projected numbers by race/ethnicity, Chart 3 shows numbers for free and reduced-price lunch eligibility and Chart 4 shows the actual and projected numbers by special education status.

## **Accuracy of Projections**

It is important to note that the projections in this report are “best guesses” for what future enrollments in Kansas at the state, district, and/or school level may look like based on the existing data. Changes in policies, large employers entering or exiting the state, and other factors can have a significant impact on the actual enrollment figures that would not be reflected in these projections.

Chart A1 shows the actual headcount enrollment for the State of Kansas along with the projected headcount enrollments calculated each year from 2003-04 through 2014-15

**Chart A1: Projection Accuracy**



As Chart A1 above and Table A1 below show, the projections are more accurate the first year out than the fifth year because as the time between the calculation of the projection and the year projected increases, the likelihood of other factors influencing the overall total increases. On average the first year calculations using this calculation were approximately 1 percent below the actual enrollment numbers, whereas on average the fifth year projections were 2.3 percent under the actual enrollment numbers. It is also important to note that this calculation methodology consistently under-estimates the actual headcount enrollments for the state.

**Table A1: Projection Accuracy**

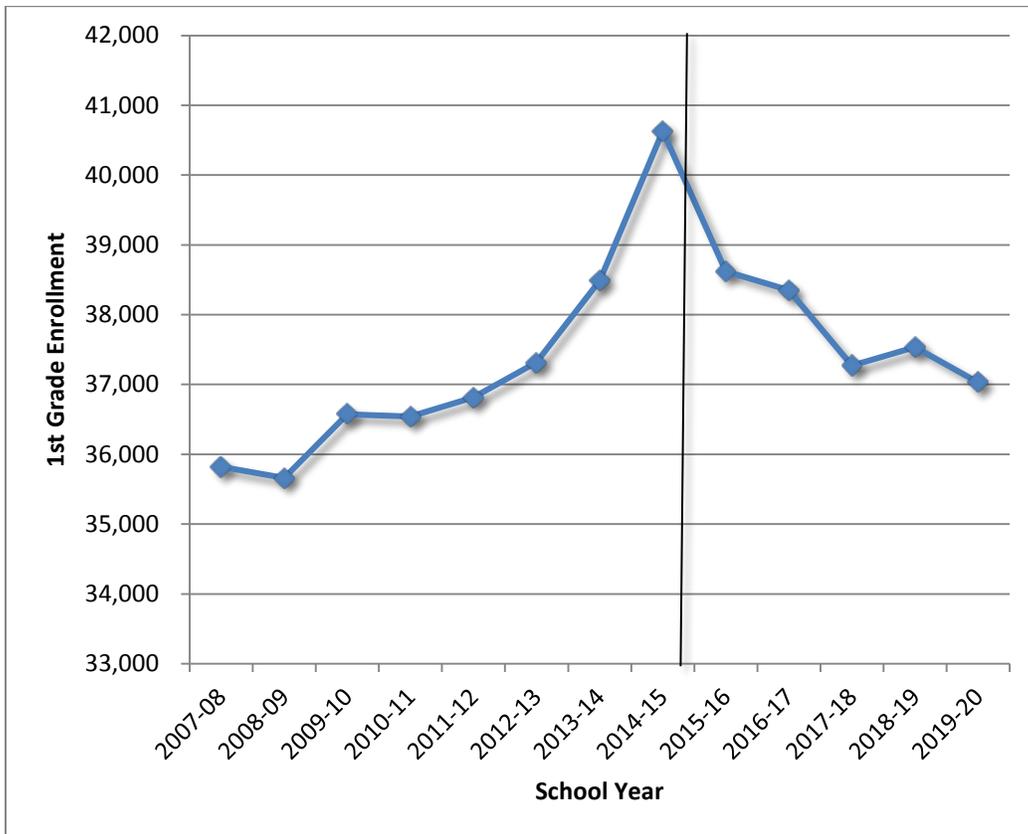
Projection Year	Average Deviation
1st	-0.96%
2nd	-1.29%
3rd	-1.50%
4th	-1.79%
5th	-2.31%

## Appendix B: Additional Charts and Tables

**Table B1: Actual and Projected Birth to 1<sup>st</sup> Grade Ratios and Enrollments**

Birth Year	School Year	Births	1st Grade	Ratio
2000-01	2007-08	39,102	35,821	0.92
2001-02	2008-09	39,166	35,662	0.91
2002-03	2009-10	39,494	36,574	0.93
2003-04	2010-11	39,273	36,543	0.93
2004-05	2011-12	39,738	36,814	0.93
2005-06	2012-13	40,463	37,316	0.92
2006-07	2013-14	41,758	38,488	0.92
2007-08	2014-15	41,782	40,632	0.97
2008-09	2015-16	41,321	38,621	0.93
2009-10	2016-17	40,994	38,350	0.94
2010-11	2017-18	39,765	37,272	0.94
2011-12	2018-19	39,917	37,535	0.94
2012-13	2019-20	39,225	37,030	0.94

**Chart B1: Actual and Projected 1<sup>st</sup> Grade Enrollments**



**Table B2: Actual and Projected Cohort Survival Ratios**

School Year	1-K	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12
2008-09		1.22	1.00	1.03	1.05	1.06	1.13	1.15	1.06	0.97	1.00	1.22
2009-10	0.97	1.14	0.91	1.14	1.06	1.26	1.18	1.03	1.00	1.08	1.03	1.00
2010-11	1.00	1.00	0.94	0.93	0.97	0.94	0.93	0.89	0.97	1.00	0.98	0.94
2011-12	1.29	1.29	1.06	1.10	1.18	1.00	0.94	1.07	0.80	0.94	1.05	1.00
2012-13	1.03	0.94	0.96	1.03	0.94	0.97	1.03	0.93	0.97	1.00	1.09	0.95
2013-14	0.97	1.07	1.03	1.12	1.08	1.03	1.03	1.09	1.07	1.00	1.09	0.86
2014-15	1.23	0.95	1.00	1.00	1.10	1.03	1.15	1.09	0.89	1.07	1.07	1.11
2015-16	1.10	1.05	1.00	1.03	1.05	0.99	1.02	1.02	0.94	1.00	1.06	0.97
2016-17	1.12	1.06	1.01	1.05	1.07	1.00	1.03	1.04	0.93	1.00	1.07	0.98
2017-18	1.09	1.01	1.00	1.05	1.05	1.00	1.05	1.03	0.96	1.01	1.08	0.98
2018-19	1.10	1.03	1.01	1.05	1.07	1.01	1.06	1.05	0.96	1.02	1.07	0.98
2019-20	1.13	1.02	1.00	1.04	1.07	1.01	1.06	1.05	0.94	1.02	1.07	1.01

## Appendix C: Census Data

### QuickFacts

<b>People QuickFacts</b>	<b>Kansas</b>
Population, 2013 estimate	2,893,957
Population, 2010 (April 1) estimates base	2,853,116
Population, percent change, April 1, 2010 to July 1, 2013	1.40%
Population, 2010	2,853,118
Persons under 5 years, percent, 2013	6.90%
Persons under 18 years, percent, 2013	25.00%
Persons 65 years and over, percent, 2013	14.00%
Female persons, percent, 2013	50.20%
White alone, percent, 2013 (a)	87.10%
Black or African American alone, percent, 2013 (a)	6.20%
American Indian and Alaska Native alone, percent, 2013 (a)	1.20%
Asian alone, percent, 2013 (a)	2.70%
Native Hawaiian and Other Pacific Islander alone, percent, 2013 (a)	0.10%
Two or More Races, percent, 2013	2.70%
Hispanic or Latino, percent, 2013 (b)	11.20%
White alone, not Hispanic or Latino, percent, 2013	77.10%
Living in same house 1 year & over, percent, 2008-2012	83.00%
Foreign born persons, percent, 2008-2012	6.50%
Language other than English spoken at home, pct age 5+, 2008-2012	10.90%
High school graduate or higher, percent of persons age 25+, 2008-2012	89.70%
Bachelor's degree or higher, percent of persons age 25+, 2008-2012	30.00%
Veterans, 2008-2012	218,511
Mean travel time to work (minutes), workers age 16+, 2008-2012	18.9
Housing units, 2013	1,239,706
Homeownership rate, 2008-2012	68.20%
Housing units in multi-unit structures, percent, 2008-2012	17.60%
Median value of owner-occupied housing units, 2008-2012	\$127,400
Households, 2008-2012	1,109,391
Persons per household, 2008-2012	2.5
Per capita money income in past 12 months (2012 dollars), 2008-2012	\$26,845
Median household income, 2008-2012	\$51,273
Persons below poverty level, percent, 2008-2012	13.20%
<b>Business QuickFacts</b>	<b>Kansas</b>
Private nonfarm establishments, 2012	73,944
Private nonfarm employment, 2012	1,134,216
Private nonfarm employment, percent change, 2011-2012	1.90%
Nonemployer establishments, 2012	188,168
Total number of firms, 2007	237,040
Black-owned firms, percent, 2007	2.40%
American Indian- and Alaska Native-owned firms, percent, 2007	0.90%
Asian-owned firms, percent, 2007	2.00%
Native Hawaiian and Other Pacific Islander-owned firms, percent, 2007	S
Hispanic-owned firms, percent, 2007	2.40%
Women-owned firms, percent, 2007	27.50%
Manufacturers shipments, 2007 (\$1000)	76,751,828
Merchant wholesaler sales, 2007 (\$1000)	45,863,865
Retail sales, 2007 (\$1000)	34,538,332
Retail sales per capita, 2007	\$12,444
Accommodation and food services sales, 2007 (\$1000)	4,192,347
Building permits, 2012	6,252

<b>Geography QuickFacts</b>	<b>Kansas</b>
Land area in square miles, 2010	81,758.72
Persons per square mile, 2010	34.9
FIPS Code	20
Metropolitan or Micropolitan Statistical Area	

*Includes persons reporting only one race.*

*Hispanics may be of any race, so also are included in applicable race categories.*

*FN: Footnote on this item for this area in place of data*

*NA: Not available*

*D: Suppressed to avoid disclosure of confidential information*

*X: Not applicable*

*S: Suppressed; does not meet publication standards*

*Z: Value greater than zero but less than half unit of measure shown*

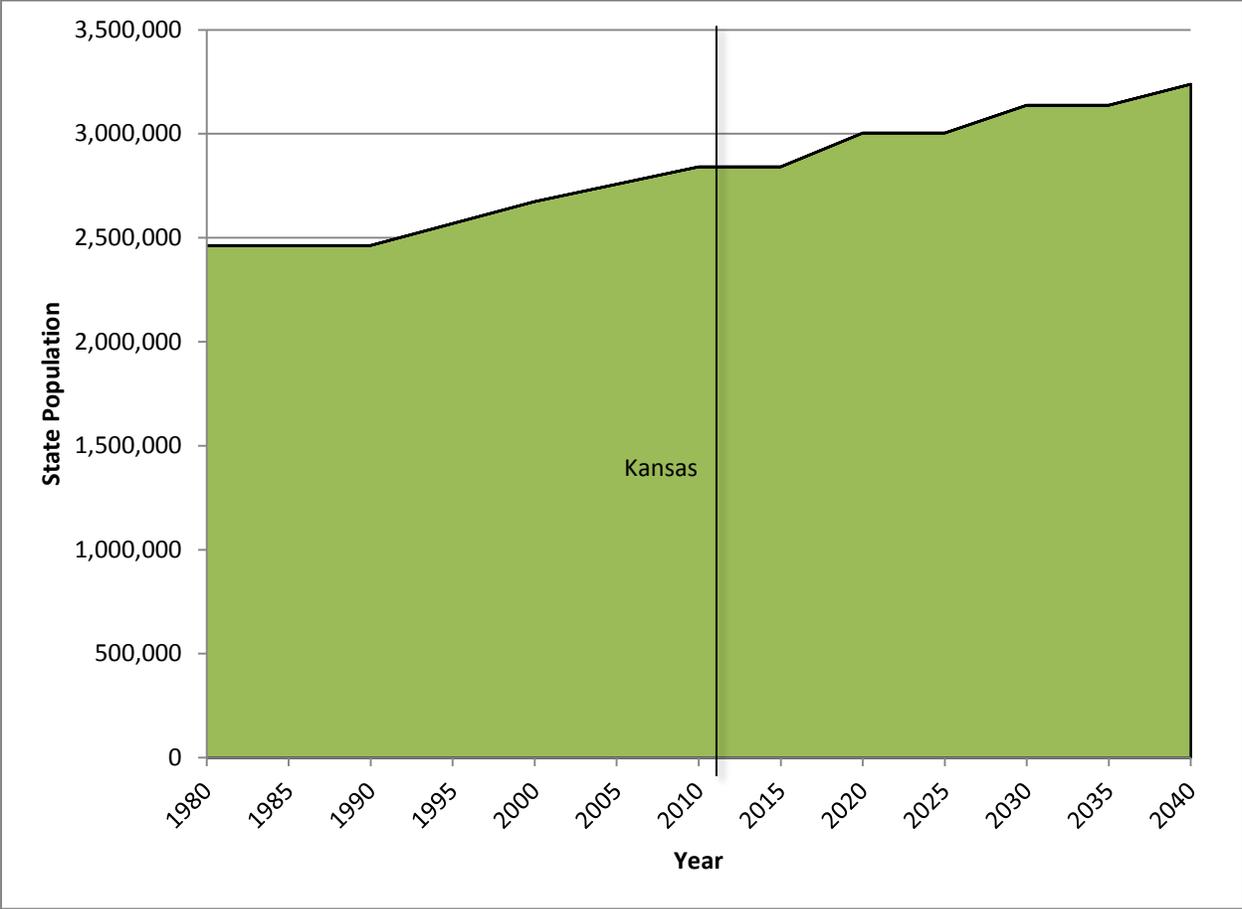
*F: Fewer than 100 firms*

*Source: US Census Bureau State & County QuickFacts*

**Table C1: Actual and Projected Population**

<b>Year</b>	<b>Kansas</b>
1860	100,034
1870	354,583
1880	984,191
1890	1,413,645
1900	1,450,988
1910	1,663,309
1920	1,745,748
1930	1,859,608
1940	1,781,154
1950	1,887,112
1960	2,162,242
1970	2,231,535
1980	2,348,582
1990	2,462,950
2000	2,674,033
2010	2,841,121
2015	2,916,705
2020	3,003,691
2025	3,071,541
2030	3,137,345
2035	3,195,809
2040	3,238,356

**Chart C1: Actual and Projected Population**



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