



# 2022-2023 STUDENT ACHIEVEMENT REPORT



Park Hill School District

Building Successful Futures • Each Student • Every Day

## Executive Summary

The 2023 Student Achievement Report addresses student achievement in the areas of English Language Arts, Mathematics, Science, and Social Studies by integrating student performance across several different assessments. In addition, Composite ACT and PreACT data are reported. This report provides a comprehensive analysis of academics in the Park Hill School District.

Throughout this report, charts are used whenever possible to display each assessment result by levels, trends, and comparisons over time. These data are used to evaluate Park Hill’s impact on students' academic growth from year to year. Comparison data examines how Park Hill ranks against a comparison group and state or national averages. Trend analysis examines patterns of gradual change in student achievement over time.

The table below provides a visual representation of the Park Hill K-12 levels, trends, and comparison (LeTCI)-based analysis discussed in this report.

### Park Hill LeTCI-Based Analysis of Academic Achievement by Content Area and Grade Span: 2022-2023

	Elementary			Middle School			High School		
	L	T	C	L	T	C	L	T	C
English Language Arts									
Math									
Science									
Social Studies									
ACT and PreACT Composite									

#### Codes for Levels, Trends, and Comparison Analysis Indicators

<b>Levels</b> (L)	<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #2196F3; border: 1px solid black; margin-right: 5px;"></span> achievement levels exceed the goal (stretch) on the PHSD BSC</div> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #4CAF50; border: 1px solid black; margin-right: 5px;"></span> achievement levels meet the goal or are moderate on the PHSD BSC</div> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #FF9800; border: 1px solid black; margin-right: 5px;"></span> achievement levels are at risk on the PSHD BSC</div> </div>
<b>Trends</b> (T)	<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #2196F3; border: 1px solid black; margin-right: 5px;"></span> means results increased</div> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #4CAF50; border: 1px solid black; margin-right: 5px;"></span> means results were stable (within 2% of previous data point)</div> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #FF9800; border: 1px solid black; margin-right: 5px;"></span> means results decreased</div> </div>
<b>Comparisons</b> (C)	<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #2196F3; border: 1px solid black; margin-right: 5px;"></span> means Park Hill is in the top third of available comparison group data</div> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #4CAF50; border: 1px solid black; margin-right: 5px;"></span> means Park Hill is in the middle of available comparison group data</div> <div style="display: flex; align-items: center;"><span style="width: 15px; height: 15px; background-color: #FF9800; border: 1px solid black; margin-right: 5px;"></span> means Park Hill is in the bottom third of available comparison group data</div> </div>

The following is a high-level summary of levels, trends, and comparison measures in each content area. Supporting data can be found in the 2023 Academic Achievement Report following the Executive Summary.

## English Language Arts

### Levels

*Measures: MAP (3-8, ELA II), NWEA Reading (K-8), PreACT Reading (10), PreACT English (9-10), ACT Reading (11-12), ACT English (11-12), AP Language and Composition, AP Literature and Composition*

Overall, Park Hill showed average growth in English Language Arts with average growth in elementary, middle levels and high school. District wide, the levels were stable compared to previous years and would be considered moderate on the Balanced Scorecard measurement scale.

### Trends

*Measures: MAP (3-8, ELA II), NWEA Reading (K-8), PreACT Reading (10), PreACT English (9-10), ACT Reading (11-12), ACT English (11-12), AP Language and Composition, AP Literature and Composition*

Overall, Park Hill English Language Arts scores saw stable trends at elementary and middle school levels. High School saw a slight decline in their ELA achievement trends.

### Comparisons

*Measures: MAP (3-8, ELA II), NWEA Reading (K-8), PreACT Reading (10), PreACT English (9-10), ACT Reading (11-12), ACT English (11-12), AP Language and Composition, AP Literature and Composition*

Nationally, the Park Hill School District showed high achievement levels in elementary, middle, and high school on national assessments. Local comparisons cannot be made now as data has not been released from DESE.

## Mathematics

### Levels

*Measures: MAP (3-8, Algebra I), NWEA Math (K-8), PreACT Math (10), ACT Math (11-12), AP Statistics, AP Calculus BC*

Overall, Park Hill showed average growth in mathematics with average growth at all three levels: elementary, middle school, and high school. Overall, math levels are at or exceed district goals on our Balanced Scorecard. Growth on NWEA is in the moderate category on the BSC, but at NWEA recommended levels.

### Trends

*Measures: MAP (3-8, Algebra I), NWEA Math (K-8), PreACT Math (10), ACT Math (11-12), AP Statistics, AP Calculus BC*

Overall, Park Hill math scores are stable for MAP, ACT and PreACT. NWEA Math saw a higher percentage of students meeting their growth goals as achievement has stayed stable.

### Comparisons

*Measures: MAP (3-8, Algebra I), NWEA Math (K-8), PreACT Math (9-10), ACT Math (11-12), AP Statistics, AP Calculus BC*

Nationally, the Park Hill School District showed high achievement levels in elementary, middle, and high school on national assessments. Local comparisons cannot be made now as data has not been released from DESE.

## Science

### Levels

*Measures: MAP (5, 8, Biology), NWEA Science (5-8), PreACT Science (9-10), ACT Science (11-12), AP Biology, AP Chemistry, AP Environmental Science, AP Physics I, AP Physics II*

Overall, Park Hill showed average growth in science with average growth at the elementary and middle school levels using NWEA. Using ACT Science, high school showed above average growth.

### Trends

*Measures: MAP (5, 8, Biology), NWEA Science (5-8), PreACT Science (9-10), ACT Science (11-12), AP Biology, AP Chemistry, AP Environmental Science, AP Physics I, AP Physics II*

Overall, Park Hill science scores on the grade 5 MAP assessment and the Biology EOC have increased while grade 8 was stable, but scores on AP exams have mostly increased.

### Comparisons

*Measures: MAP (5, 8, Biology), NWEA Science (5-8), PreACT Science (9-10), ACT Science (11-12), AP Biology, AP Chemistry, AP Environmental Science, AP Physics I, AP Physics II*

Nationally, the Park Hill School District showed high achievement levels in elementary, middle, and high school on national assessments. Local comparisons cannot be made now as data has not been released from DESE.

## Social Studies

### Levels

*Measures: MAP (Government), AP European History, AP Human Geography, AP Macroeconomics, AP Psychology, AP US Government, AP US History, AP World History*

Levels for social studies can be measured by the achievement levels on the MAP EOC and AP assessments and currently show mostly high achievement. Growth cannot currently be calculated for social studies.

### Trends

*Measures: MAP (Government), AP European History, AP Human Geography, AP Macroeconomics, AP Psychology, AP US Government, AP US History, AP World History*

Overall, Park Hill social studies scores have remained stable for AP Exams and MAP EOC scores.

### Comparisons

*Measures: MAP(Government), AP European History, AP Human Geography, AP Macroeconomics, AP Psychology, AP US Government, AP US History, AP World History*

Nationally, the Park Hill School District showed mostly high achievement on high school state and national assessments. Local comparisons cannot be made now as data has not been released from DESE.

## **ACT and PreACT Composite**

### **Levels**

Overall, Park Hill showed average levels and growth on ACT and PreACT composite scores.

### **Trends**

Overall, Park Hill composite ACT and PreACT scores are stable respect to composite scores 2021-2023

### **Comparisons**

ACT and PreACT comparisons cannot be made until the 2023 ACT and PreACT data has been released.

## Table of Contents

Executive Summary	Page 2
Assessment Descriptions	Page 7
English Language Arts Supporting Data	Page 8
Missouri Assessment Program (3-8, ELA II)	
NWEA Reading (K-8),	
ACT Reading, English (11, 12)	
Pre-ACT Reading, English (10)	
AP Language and Composition, Literature and Composition (11, 12)	
English Language Arts Analysis	Page 23
Mathematics Supporting Data	Page 27
Missouri Assessment Program (3-8, Algebra I)	
NWEA Math (K-8)	
ACT Math (11, 12)	
Pre-ACT Math (10)	
AP Statistics, Calculus BC (10, 11, 12)	
Mathematics Analysis	Page 43
Science Supporting Data	Page 47
Missouri Assessment Program (5, 8, Biology)	
NWEA Science (3-8)	
ACT Science (11, 12)	
Pre-ACT Science (10)	
AP Biology, Chemistry, Environmental Science, Physics I, Physics II (11, 12)	
Science Analysis	Page 54
Social Studies Supporting Data	Page 58
Missouri Assessment Program (Government 2021)	
AP European History, Human Geography, Macroeconomics, Psychology,	
US Government, US History, World History (9, 10, 11, 12)	
Social Studies Analysis	Page 62
Miscellaneous Data	Page 64
Appendix A: Comparison District Table	Page 67
MAP District Comparison Data	Page 68

## Assessment Descriptions

### **Missouri Assessment Program (MAP)**

The Missouri Assessment Program (MAP) is a statewide assessment developed to assess how proficient students are in the knowledge, skills, and competencies represented in the Missouri Learning Standards. In 2020, the MAP was not administered due to the COVID-19 school shut down, therefore achievement data is unavailable. Since 2015, the Missouri Assessment Program has undergone many changes, making it difficult to derive meaningful trend data. Most recent changes include a new ELA and math test in 2018, a science field test in 2018, a new science test in 2019 and a government field test in 2019. Because of the changing assessments, items, content, and scales, comparisons to historical performance prior to 2018 (ELA and math) or 2019 (science) cannot be made.

### **NWEA Assessments**

The NWEA MAP Growth assessments are adaptive tests that identify a student's instructional level and measure academic growth throughout the school year (and from year to year) in math, reading, and science. A student's NWEA MAP Growth results are represented as RIT (Rausch Unit) scores. Like inches on a ruler, the RIT scale measures in equal intervals, regardless of a student's grade—and remains stable over time. As a result, the tests accurately measure what students are ready to learn as well as students' growth between tests. Administered three times per year, NWEA assessments serve as a nationally normed assessment for the Park Hill School District. NWEA replaced STAR, TerraNova, and Acuity in 2017-2018 for adaptive assessments given throughout the year. During 2022-2023 school year, NWEA MAP Growth assessments were administered in reading, math, and science.

### **ACT, PreACT**

The ACT is an entrance exam used by most colleges and universities to make admissions decisions. It is a multiple-choice, pencil-and-paper test administered in reading, English, math, and science with an optional written portion. The purpose of the ACT test is to measure a high school student's readiness for post-secondary education. The PreACT assessment is a 10<sup>th</sup> grade assessment administered to both 9<sup>th</sup> and 10<sup>th</sup> graders in Park Hill. Both ACT and PreACT provide information to assist students in making decisions about their next level of learning and their career interests. Achievement data and students' interests, needs, plans, and selected background characteristics are assessed using norm-referenced measures. In 2015, all 11th-grade students in Missouri were required to take the ACT. Park Hill School District continued this practice when the state of Missouri discontinued funding census testing in 2018. Park Hill began testing all 9<sup>th</sup> and 10<sup>th</sup> grade students using the PreACT in 2018.

### **Advanced Placement Exams**

The College Board's Advanced Placement (AP) courses are college-level classes in a wide variety of subjects that students can take while still in high school. When students take an AP course, they can take the AP Exam in that subject. AP Exams are given in May. These two-to-three-hour exams are made up of multiple-choice and free-response questions. AP Exams are scored on a scale of 1 to 5. Students who score high enough on the AP Exam may be eligible for college credit, advanced placement, or both at most colleges in the United States. AP Exams for the 2022-2023 school year were administered in person either on paper or in a digital format.

## English Language Arts

Student achievement in English Language Arts is assessed through a comprehensive set of standardized assessments as listed in the following table. English Language Arts includes both reading and written language and all the associated subskills.

**English Language Arts Assessments by Grade 2022-2023**

	K	1	2	3	4	5	6	7	8	9	10	11	12
MAP GLA				✓	✓	✓	✓	✓	✓				
MAP ELA II EOC											✓		
NWEA	✓	✓	✓	✓	✓	✓	✓	✓	✓				
ACT												✓	✓
PreACT										✓	✓		
Advanced Placement												✓	✓

### Missouri Assessment Program

The Missouri Assessment Program (MAP) assesses English Language Arts in multiple sessions, depending on the grade level. The sessions include multiple-choice items, technology enhanced items, performance tasks, and constructed response items. Scale scores are reported for the total test based on four performance levels: Below Basic, Basic, Proficient, and Advanced. The MAP test administered in 2018 (%) was a new test, with added content, items, and cut scores. Comparisons to historical performance cannot be made as this assessment, items, content, and scale are different than the MAP administered prior.

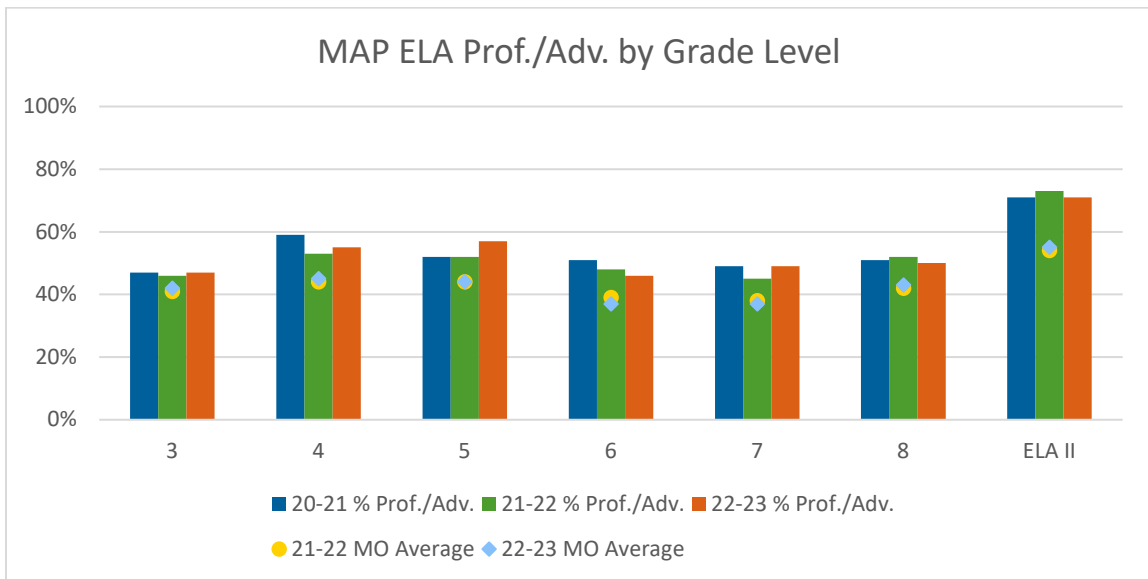
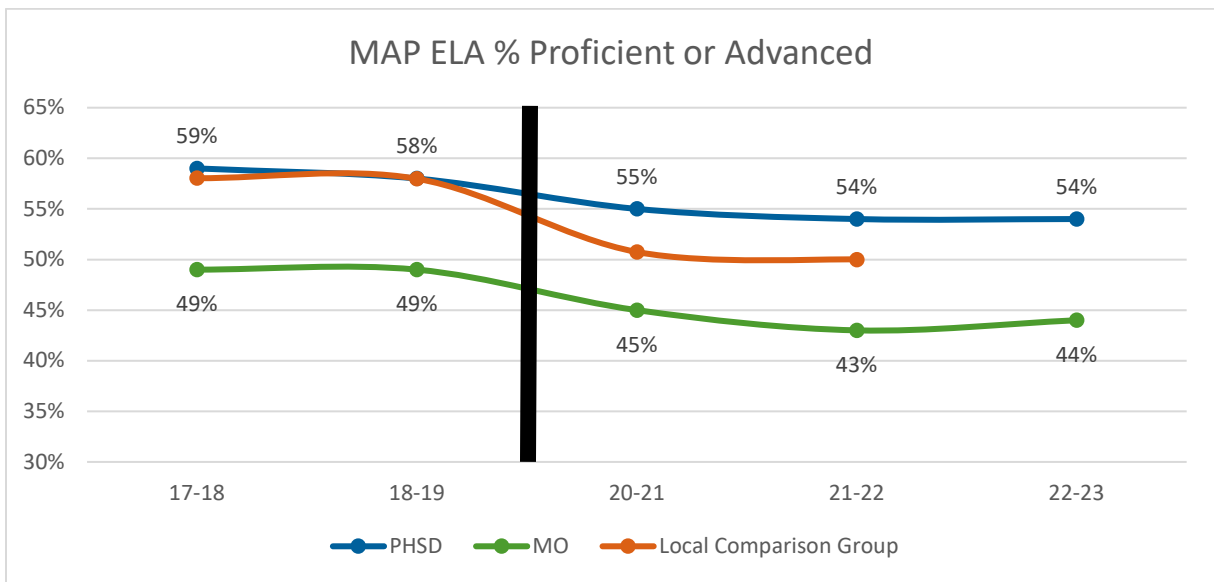
**MAP ELA Percent Proficient or Advanced 2010-2023**

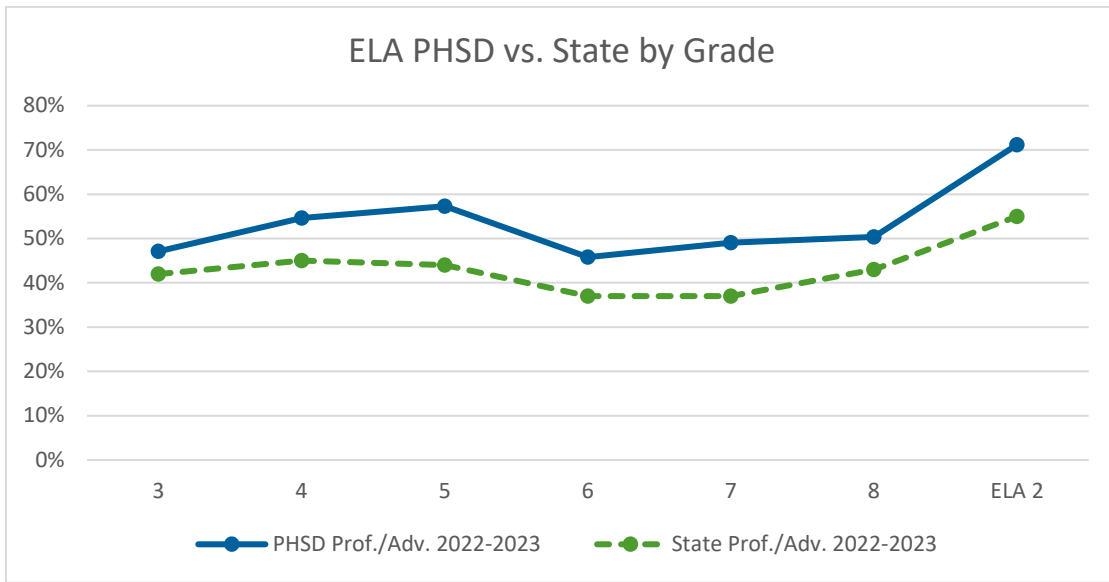
ELA	OLD MAP TEST									NEW MAP TEST				
	2010	2011	2012	2013	2014@	2015#	2016&	2017&	2018%	2019	2020\$	2021	2022	2023
Grade 3	57	56	55	60	59	69	69	73	55	55		47	46	47
Grade 4	67	65	65	66	66	65	74	71	60	57		59	53	55
Grade 5	66	66	70	69	67	71	69	73	55	55		52	52	57
Grade 6	66	65	68	66	70	72	70	67	59	52		51	48	46
Grade 7	70	67	72	70	73	73	69	69	53	57		49	45	49
Grade 8	66	67	67	68	76	71	68	72	56	52		51	52	50
Grade11														
Eng. I EOC	78	78	78	74	77	79	77	82						
Eng. II EOC	86	88	84	79	86	84	90	83	71	70		71	73	71
All Grades	70	70*	71*	72	72	73	73	72+	59	58		55	54	54



### MAP ELA Percent Proficient or Advanced PHSD vs. State

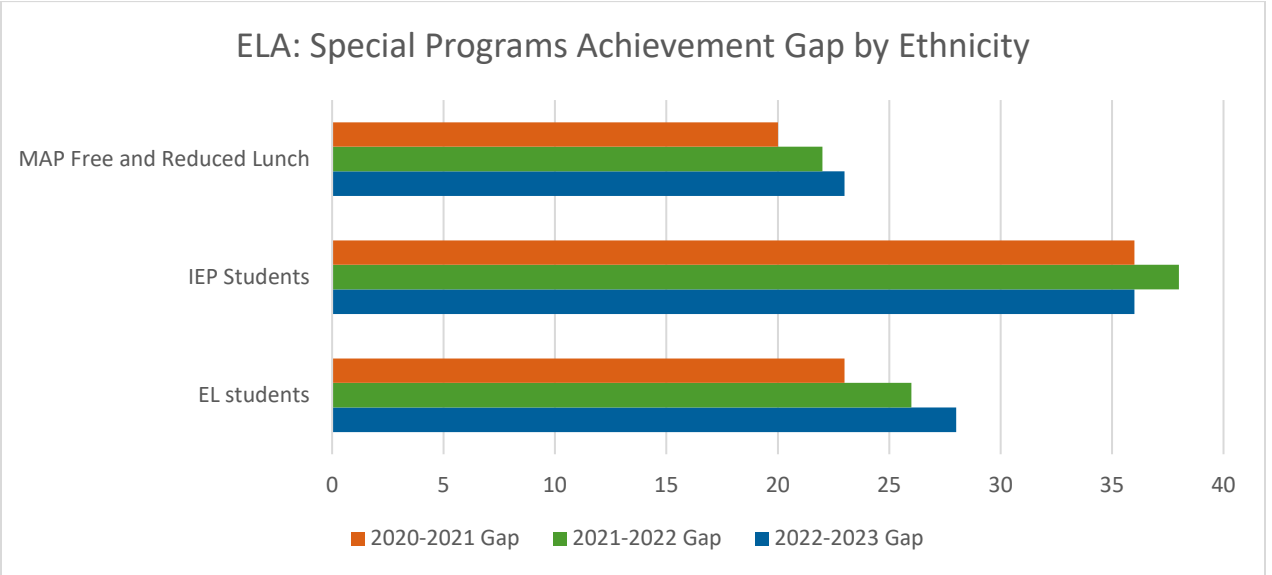
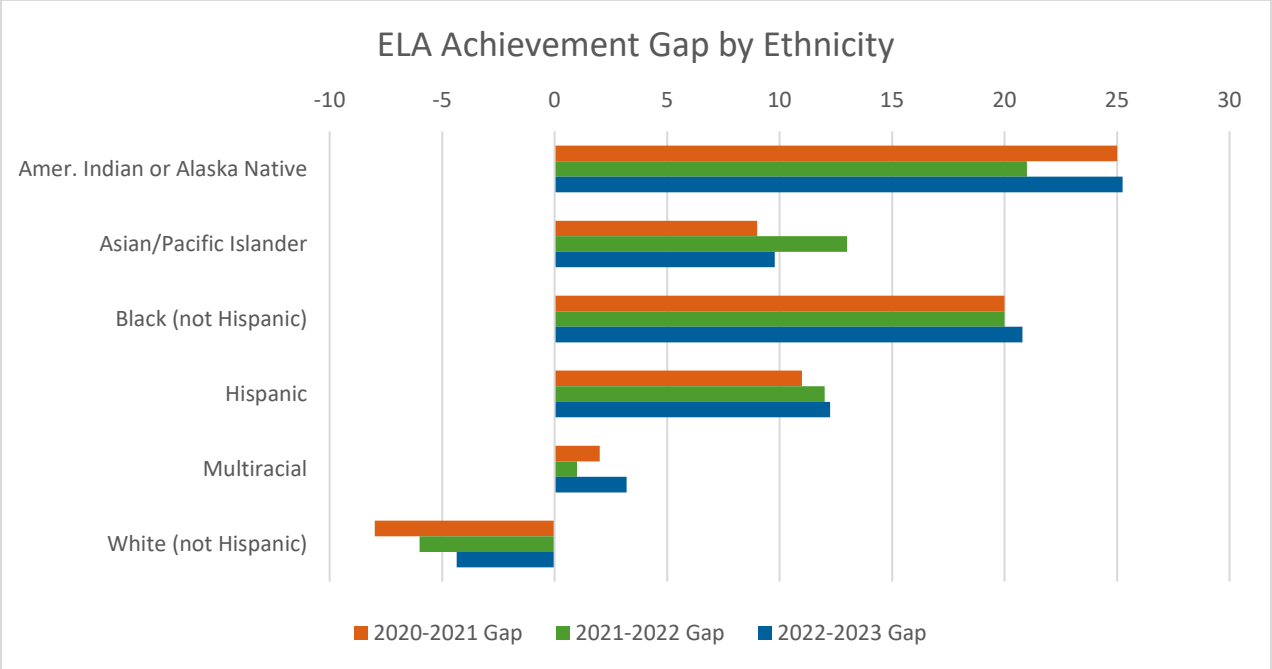
Content Area	Grade or EOC	PHSD Prof./Adv. 2021-2022	PHSD Prof./Adv. 2022-2023	PHSD Change	State Prof./Adv. 2021-2022	State Prof./Adv. 2022-2023	State Change	Diff. between PHSD and State
ELA	3	46%	47%	1%	41%	42%	1%	5%
ELA	4	53%	55%	2%	44%	45%	1%	10%
ELA	5	52%	57%	5%	44%	44%	0%	13%
ELA	6	48%	46%	-2%	39%	37%	-2%	9%
ELA	7	45%	49%	4%	38%	37%	-1%	12%
ELA	8	52%	50%	-2%	43%	43%	0%	7%
ELA	ELA 2	73%	71%	-2%	54%	55%	1%	16%





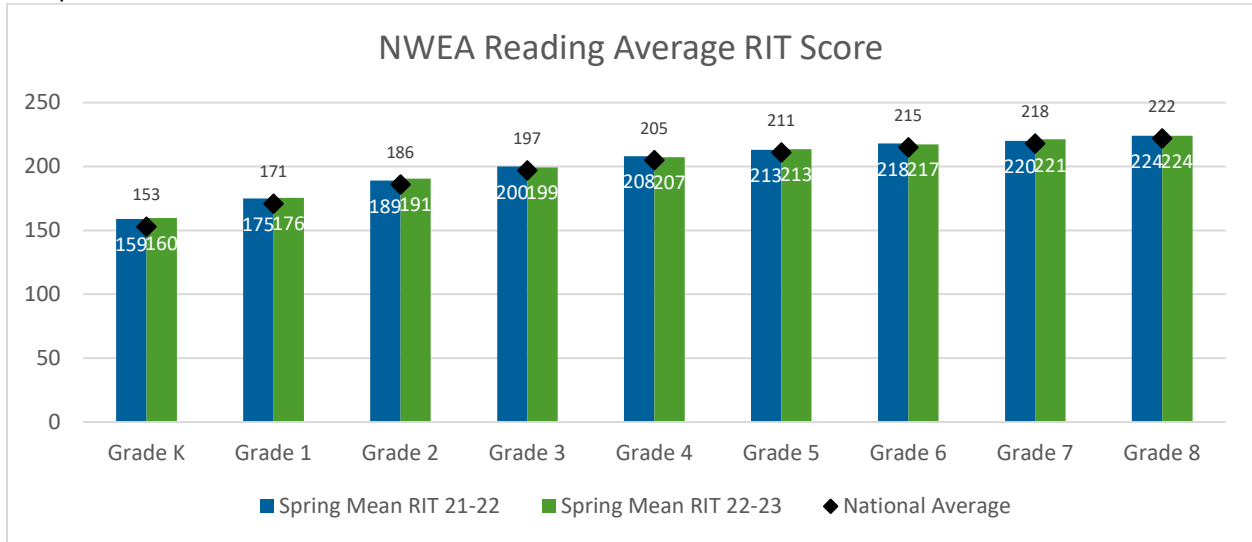
**MAP ELA Percent Proficient or Advanced by Student Group**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
District Total	62	68	70	70	71	72	72	73	73	71	59 \$	58		55	54	54
Asian/Pacific Isl.	66	65	70	66	68	68	77	80	83	74	56	57		45	41	44
Black	37	47	48	46	44	47	49	49	48	46	35	33		34	34	33
Hispanic	51	56	55	58	61	65	58	65	63	63	48	48		43	42	42
AINA	66	66	60	63	67	59	63	71	59		52	35		29	33	29
White	65	72	74	74	74	76	74	78	78	77	65	64		62	60	58
Multiracial				62	68	69	63	73	72	70	56	54		52	53	51
F/R Lunch	38	47	48	48	49	51	50	53	53	50	37	37		34	32	31
IEP	27	36	38	42	49	48	33	34	37	33	20	21		18	16	18
ELL	30	27	37	40	45	48	46	47	36	35	24	33		28	28	26
Student Group	41	50	53	54	56	56	55	56	56	53	40	40		36	32	30



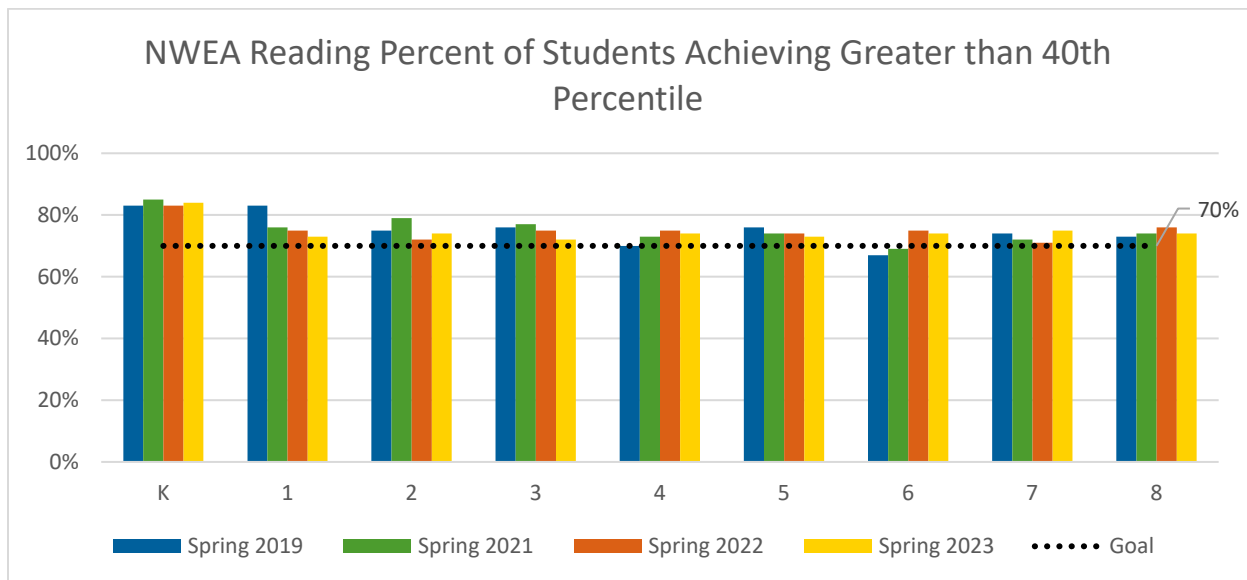
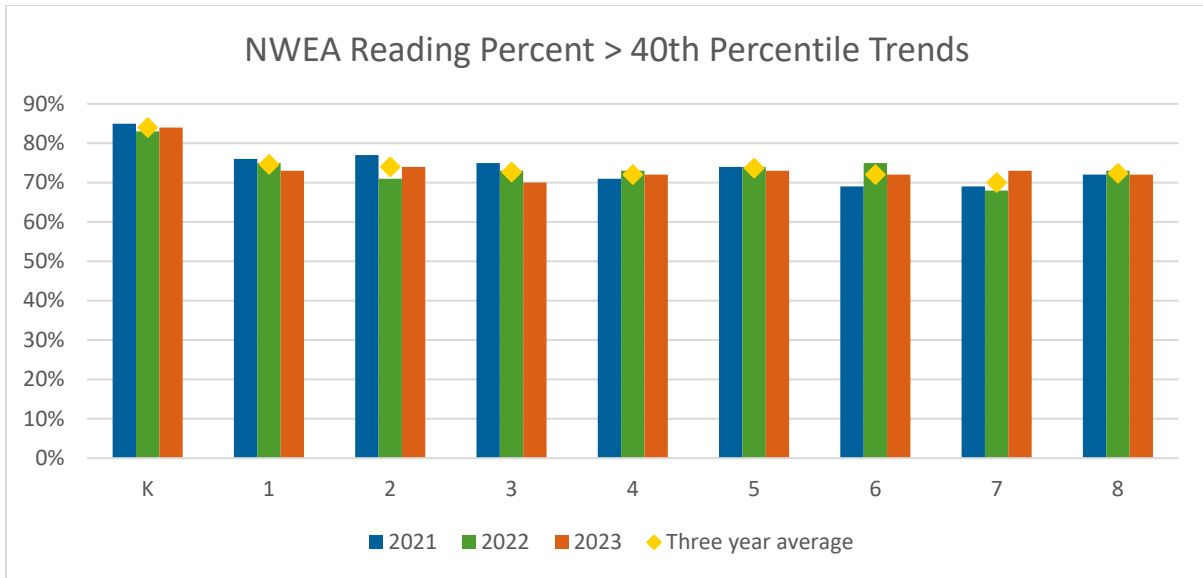
## NWEA Reading

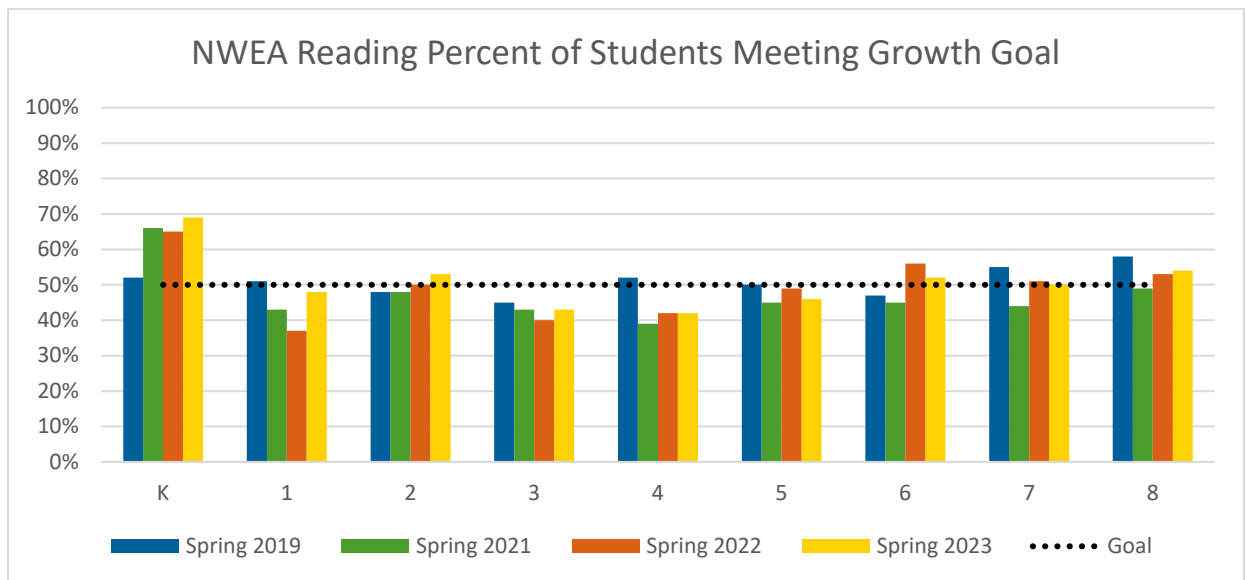
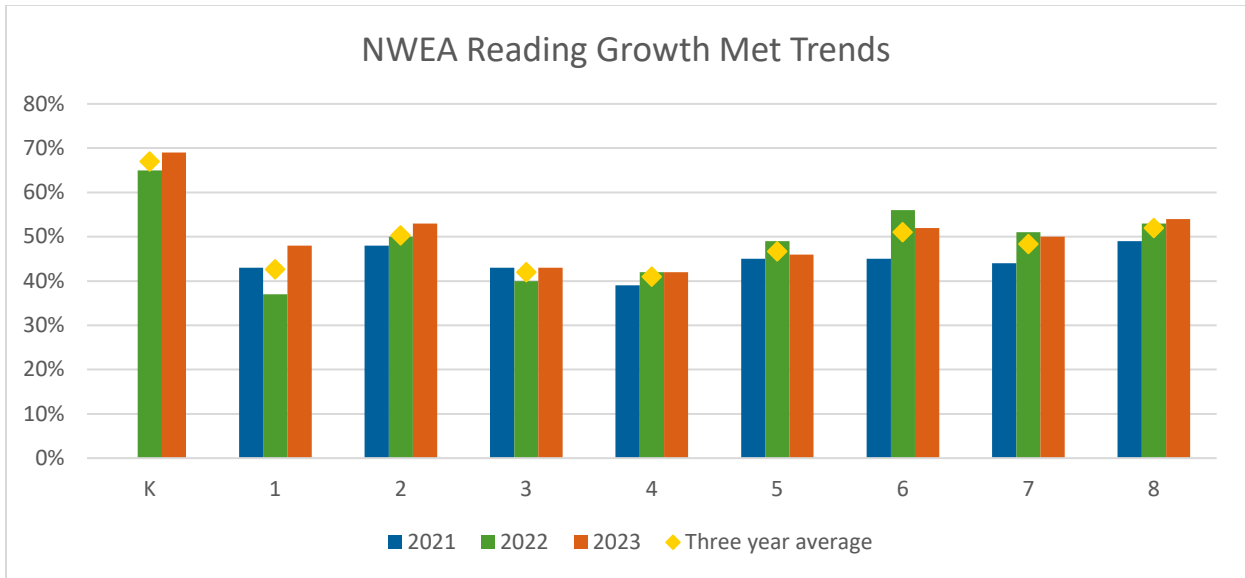
NWEA reading is administered three times throughout the year in grades K-8. NWEA is an adaptive assessment that produces a RIT score based on Rausch units on the progress of reading. Like inches on a ruler, the RIT scale measures in equal intervals regardless of a student's grade, and it remains stable over time. As a result, NWEA can accurately measure what students are ready to learn and student growth between tests. Analysis would indicate that NWEA is both a reliable and valid screening tool for the MTSS process, highly correlated with MAP performance, and a good proxy for reading comprehension. NWEA assessments are administered to all students.



## NWEA Reading Median Percentile

Reading	Spring 22 Median Percentile	Spring 23 Median Percentile	Change from Spring 22 to Spring 23
Grade K	77	75	-2
Grade 1	66	68	2
Grade 2	65	69	4
Grade 3	62	61	-1
Grade 4	62	59	-3
Grade 5	61	61	0
Grade 6	63	60	-3
Grade 7	60	60	0
Grade 8	59	61	2

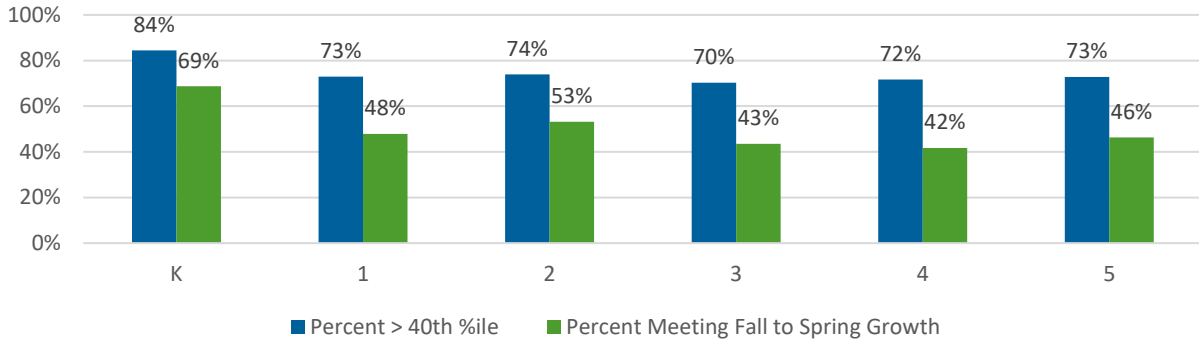




### Spring 2022-2023 Achievement and Growth: Elementary

Achievement vs. Growth (Reading)		
Grade	Percent > 40th %ile	Percent Meeting Fall to Spring Growth
K	84%	69%
1	73%	48%
2	74%	53%
3	70%	43%
4	72%	42%
5	73%	46%
District Total	74%	50%

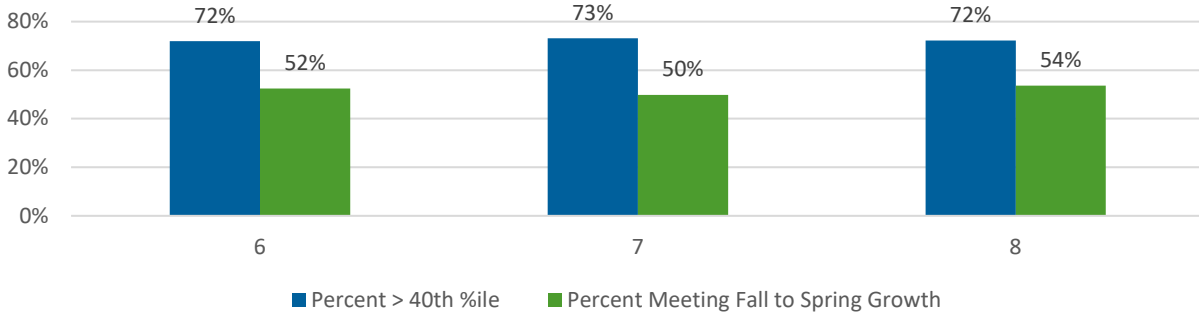
### NWEA Reading Ach. vs. Growth by Grade Level: Elementary



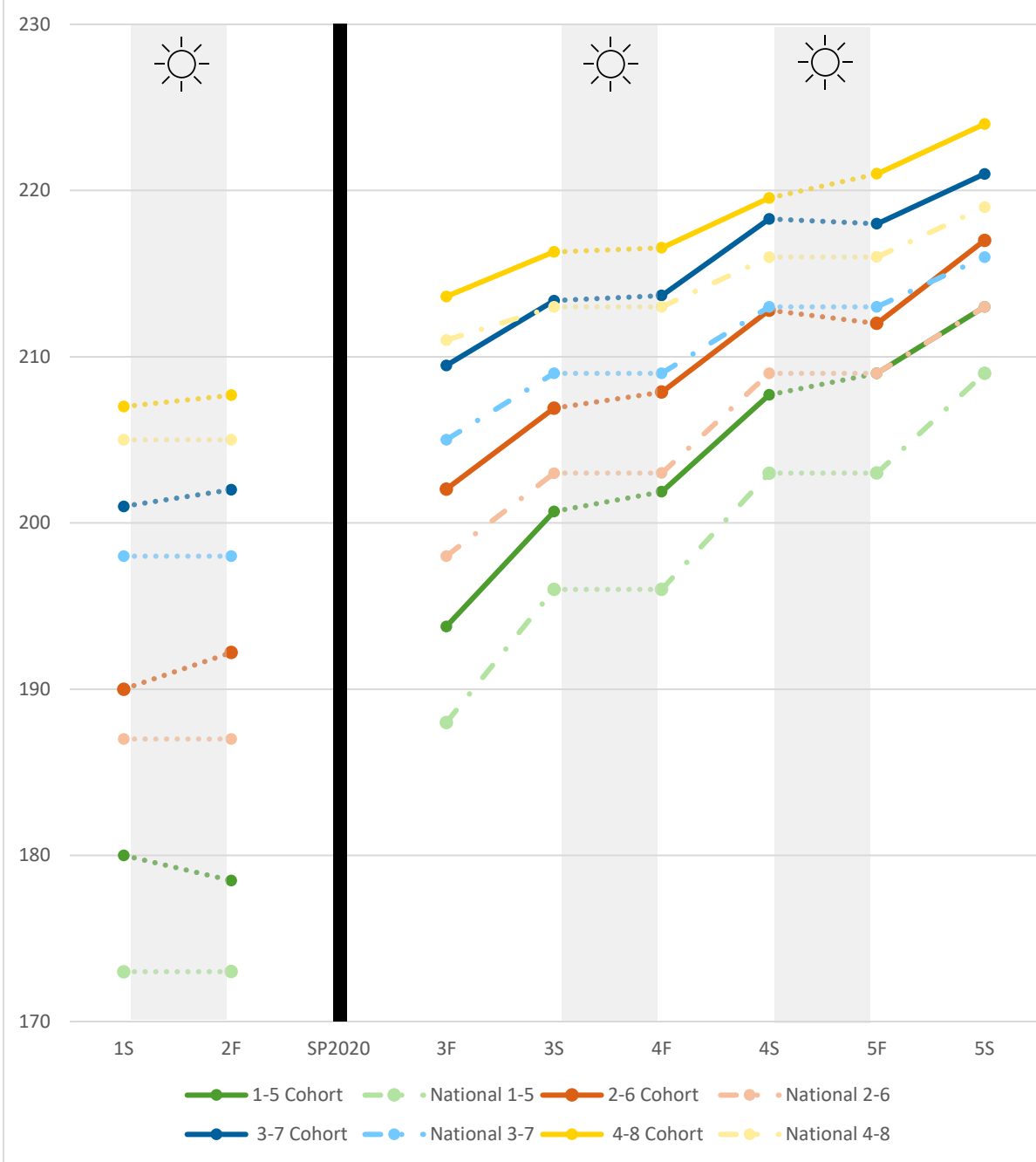
### Spring 2022-2023 Achievement and Growth: Middle School

Achievement vs. Growth (Reading)		
Grade	Percent > 40th %ile	Percent Meeting Fall to Spring Growth
6	72%	52%
7	73%	50%
8	72%	54%
<b>District Total</b>	<b>72%</b>	<b>52%</b>

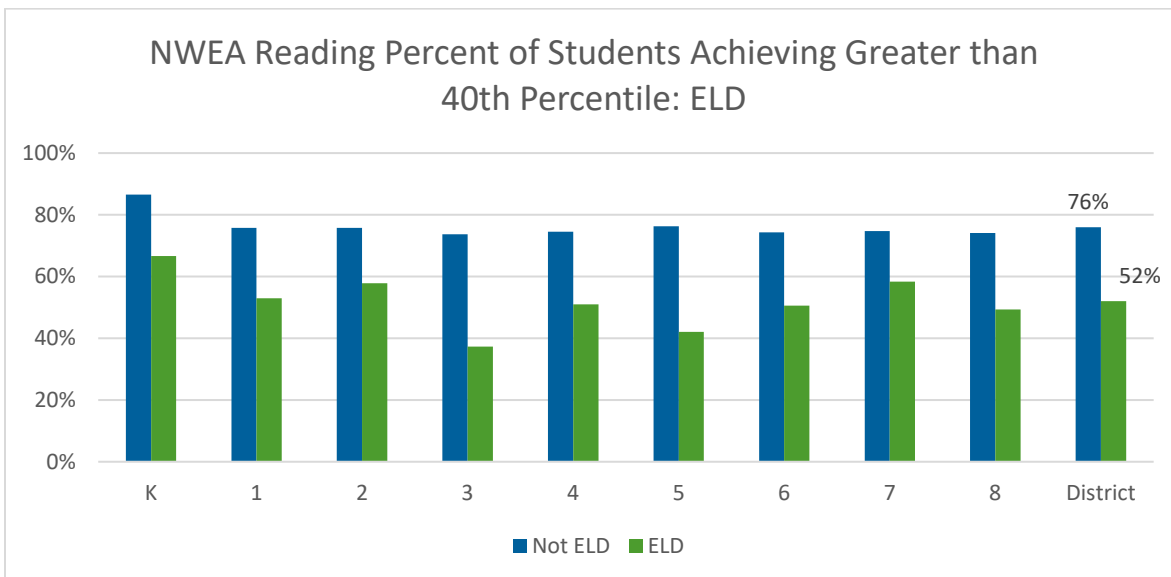
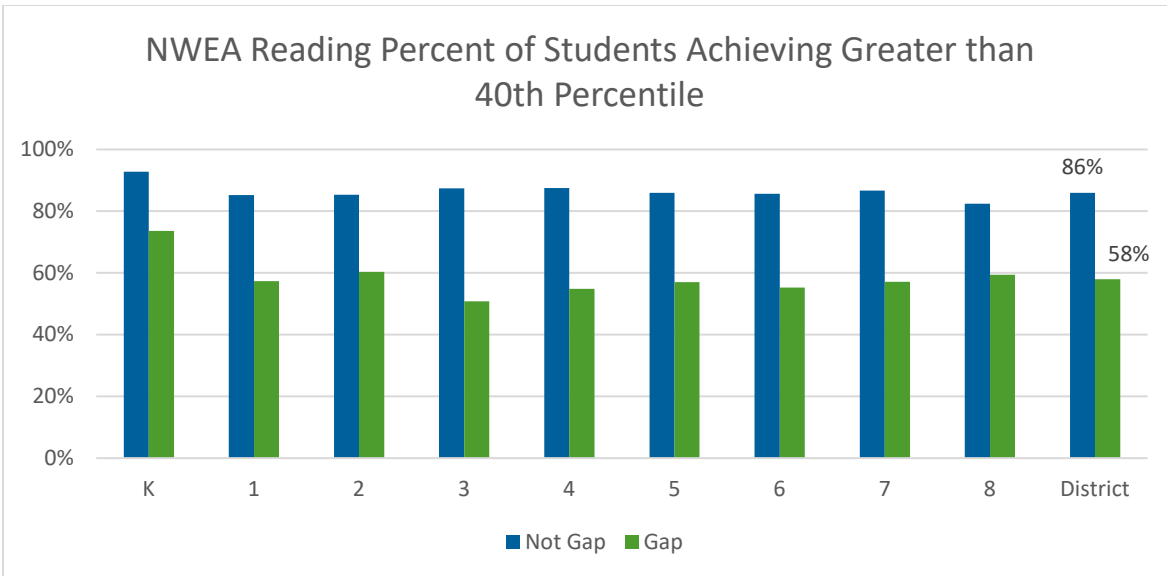
### NWEA Reading Ach. vs. Growth by Grade Level: Middle



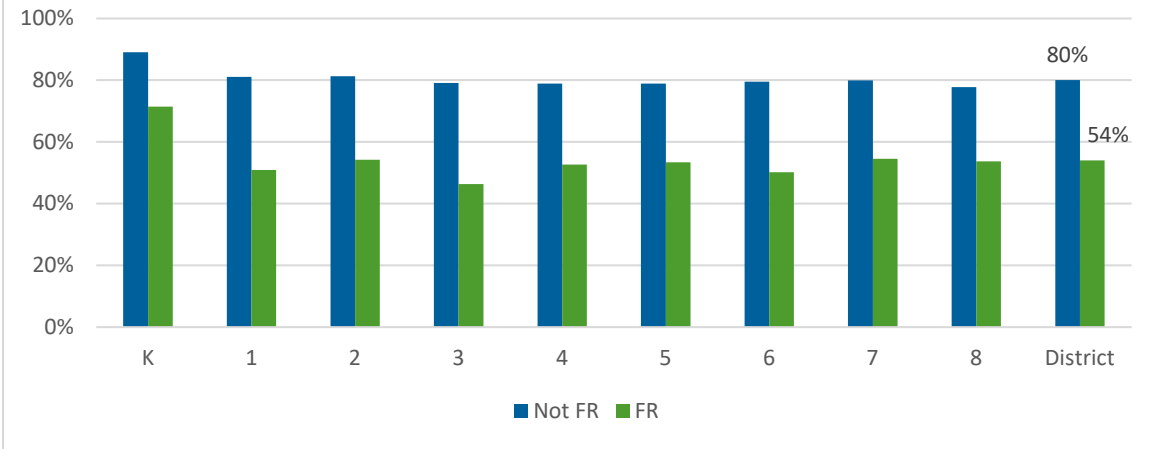
NWEA Reading Cohort Mean RIT PHSD vs. National



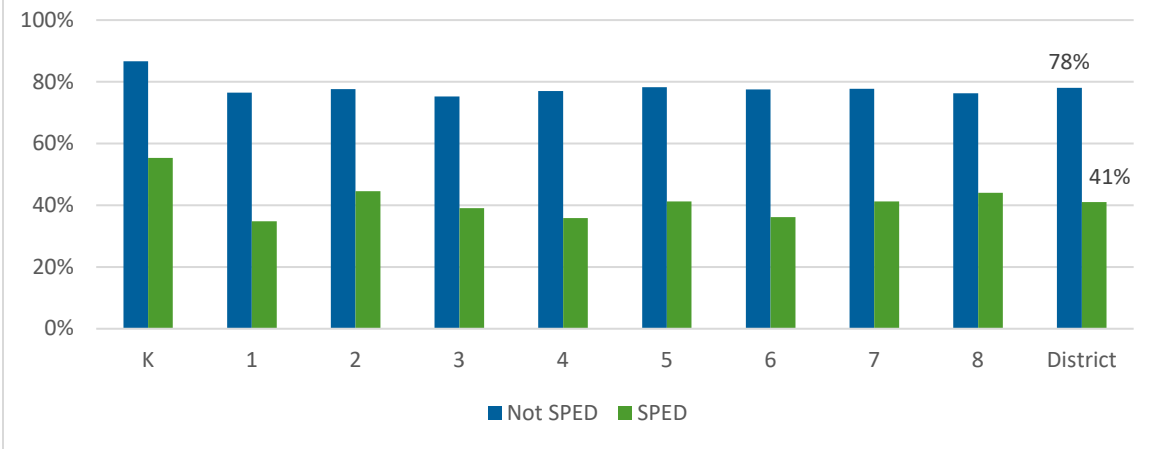


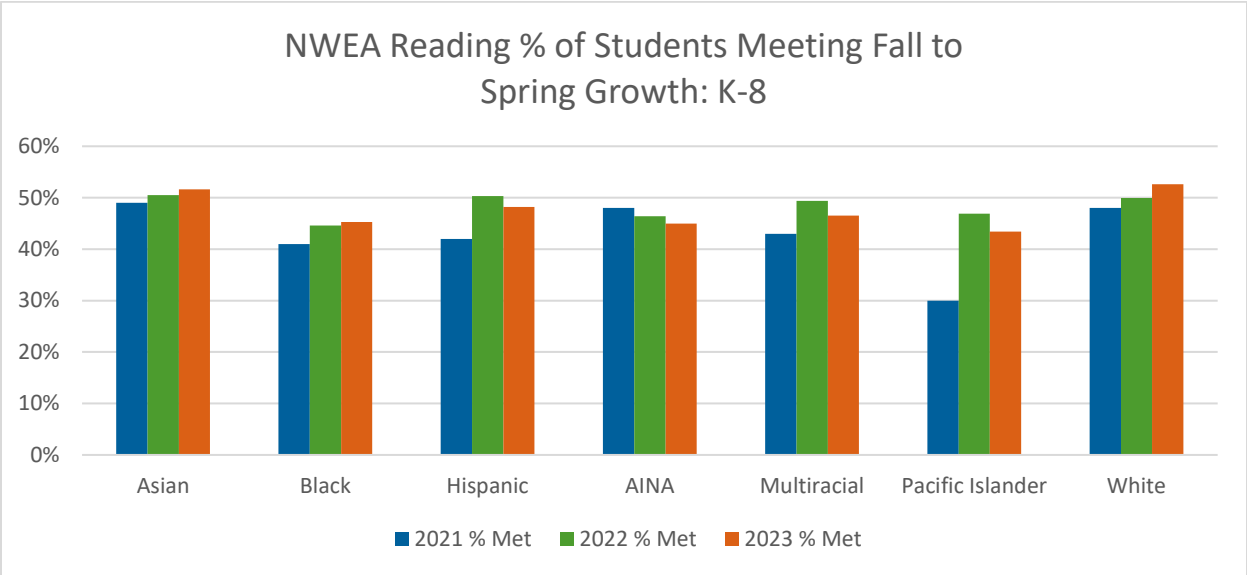
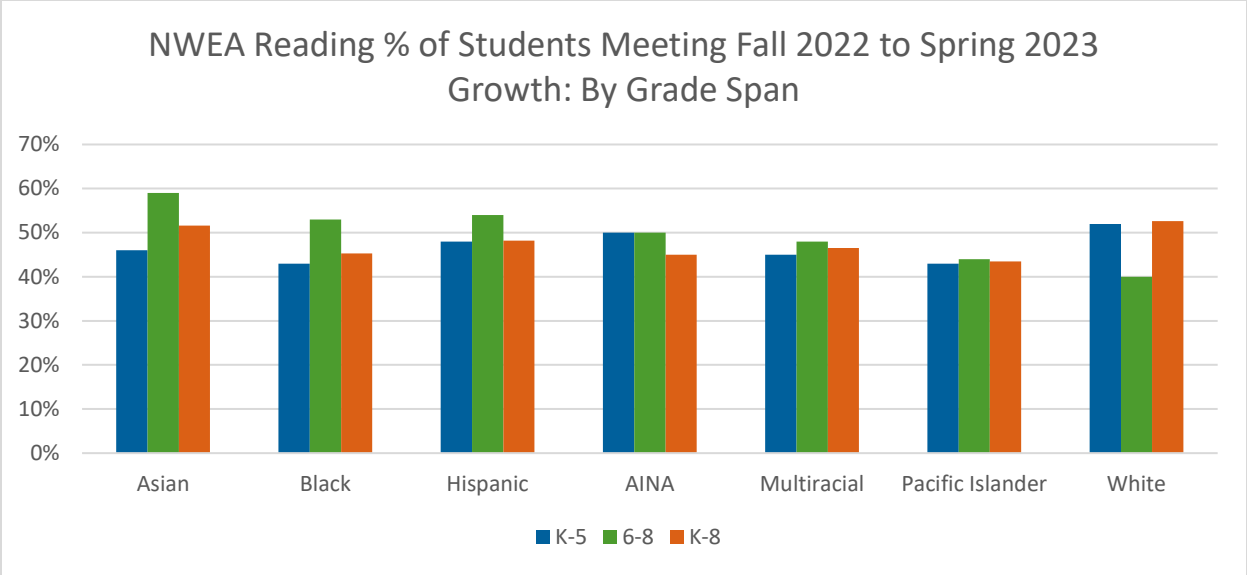


NWEA Reading Percent of Students Achieving Greater than 40th Percentile: Free and Reduced



NWEA Reading Percent of Students Achieving Greater than 40th Percentile: SPED



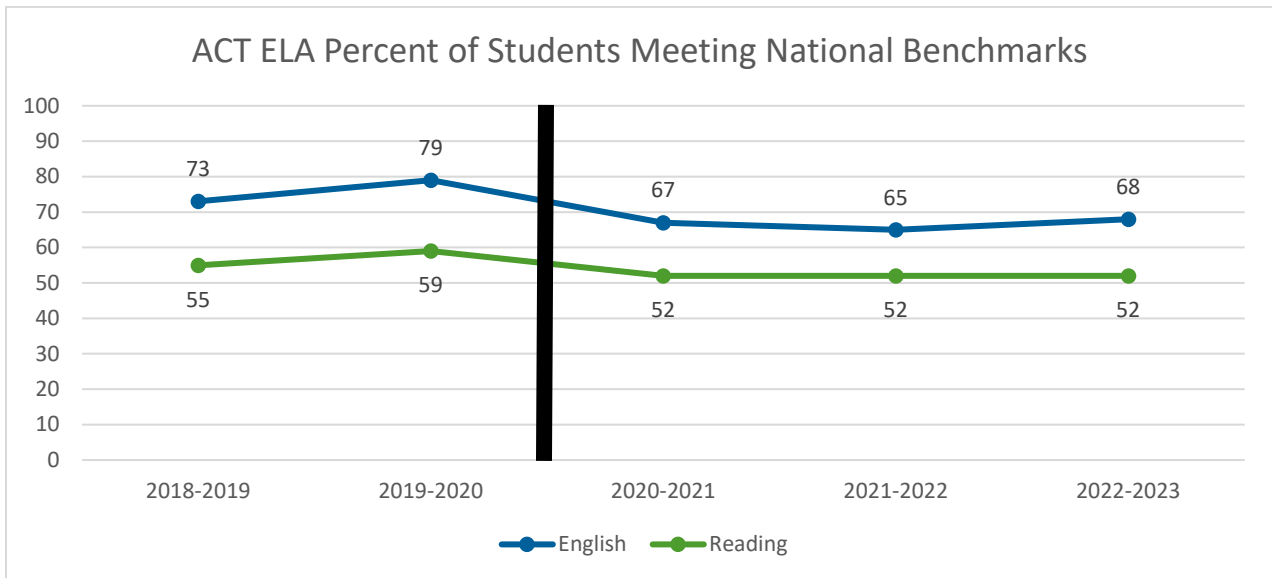
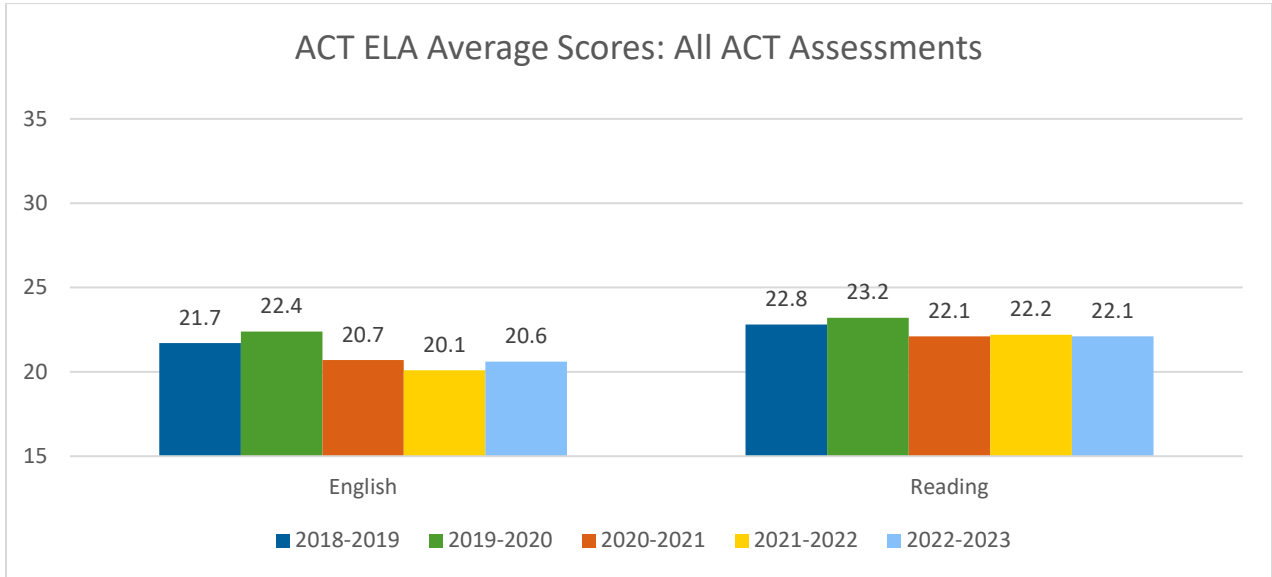


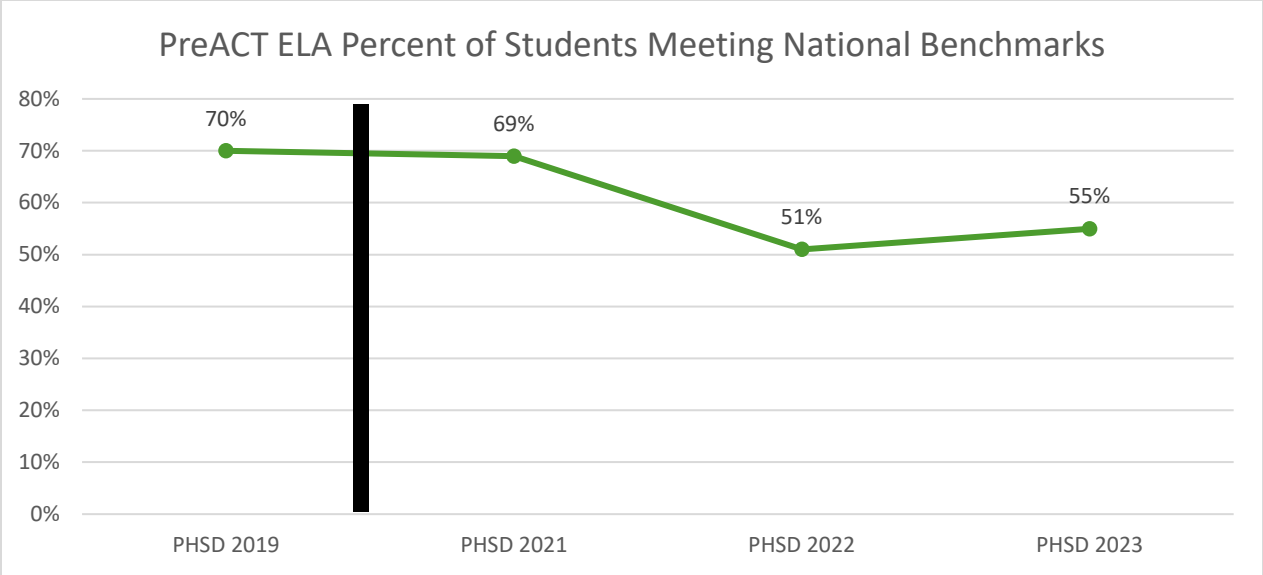
**Number of Students who took Fall to Spring NWEA Reading**

Asian	Black	Hispanic	AINA	Multiracial	Pacific Islander	White
186	908	797	20	473	122	4818

### ACT and PreACT

The ACT and PreACT have two sections that assess English Language Arts: English and Reading. Missouri required census testing of all juniors in 2015-2017, which reflects in the graduate scores of 2016-2018. Park Hill continued to census test all juniors after the state discontinued the process. The PreACT assessment was first administered in Park Hill in 2018.



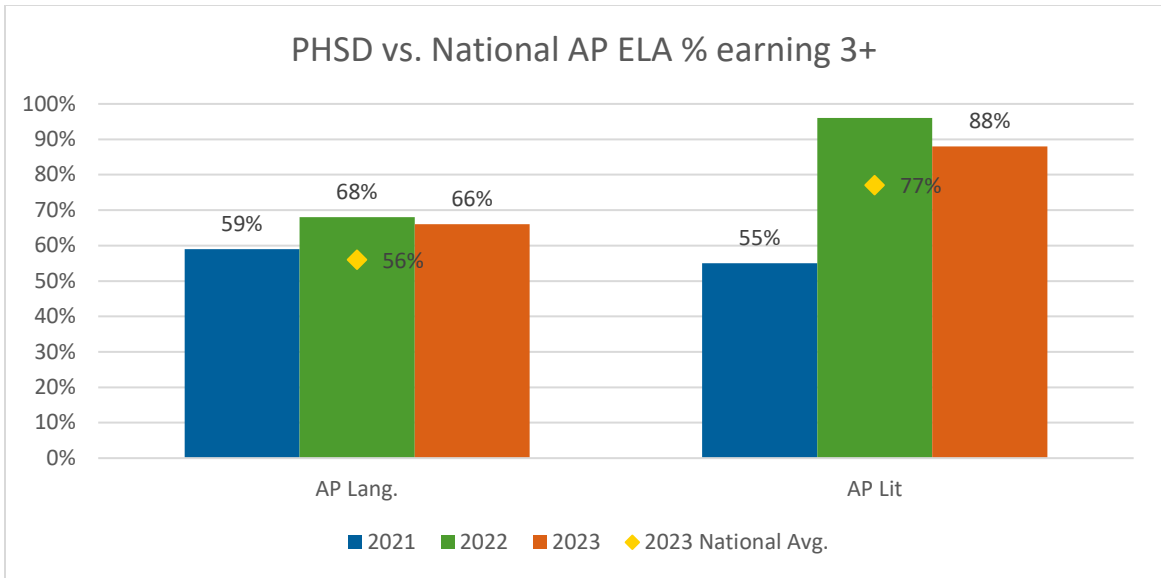


**Advanced Placement Exams**

Students are not required to take an Advanced Placement (AP) course during high school; students are not required to take the AP exam when enrolled in the AP course. A score of a “3” or higher is considered a passing score on the AP exams. Many colleges will not award credit for scores below a “3.” AP exams administered during the 2022-2023 school year were administered in-person on paper or at school in a digital platform.

AP Lang	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Number of students who took exams	231	166	205	141	169
Students scoring 3+	132	101	121	95	112
% scoring 3+	57%	61%	59%	68%	66%
Mean Score	2.85	2.83	2.89	3.04	3

AP Lit.	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Number of students who took exams	117	110	64	69	89
Students scoring 3+	59	66	35	66	78
% scoring 3+	50%	60%	55%	96%	88%
Mean Score	2.61	2.87	2.64	3.7	3.5



# English Language Arts Analysis: Levels, Trends, and Comparisons

	Elementary			Middle School			High School		
	L	T	C	L	T	C	L	T	C
English Language Arts	Green	Green	White	Green	Green	White	Green	Orange	Blue

**Codes for LeTCI Analysis Indicators**

<b>Levels (L)</b>	Blue	achievement levels exceed the goal (stretch) on the PHSD BSC
	Green	achievement levels meet the goal or are moderate on the PHSD BSC
	Orange	achievement levels are at risk on the PSHD BSC
<b>Trends (T)</b>	Blue	means results increased
	Green	means results were stable (within 2% of previous data point)
	Orange	means results decreased
<b>Comparisons (C)</b>	Blue	means Park Hill is in the top third of available comparison group data
	Green	means Park Hill is in the middle of available comparison group data
	Orange	means Park Hill is in the bottom third of available comparison group data

**Levels and Growth**

Overall, Park Hill showed average growth in English Language Arts with average growth in elementary, middle levels and high school. District wide, the levels were stable compared to previous years and would be considered moderate on the Balanced Scorecard measurement scale.

**Elementary**

Elementary ELA growth can be measured using NWEA in reading. At the elementary level, stable growth occurred during 2022-2023.

NWEA provides a growth projection for each student based on average growth between windows. For example, if the average growth nationally for a second-grade student scoring a 180 in reading is three points, the Park Hill second grade student scoring a 180 will be projected to grow three points. Growth on NWEA can be measured between windows (fall to winter, winter to spring), over the school year (fall to spring), and over the calendar year (fall to fall).

On the NWEA reading assessment, students in grades 1-5 grew at a stable rate over the school year (fall to spring) and over the calendar year (fall to fall) with respect to the previous school year. Grades K and 2 showed the highest growth from fall 2022 to spring 2023.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall reading norms, in 2023 Park Hill performed above the national average in grades 1-5. These same students performed above the national average in the spring of 2023.

Reading proficiency as measured by NWEA showed elevated levels of proficiency at the elementary level as measured on the PHSD BSC. ELA proficiency as measured by the PHSD BSC shows moderate levels with a slight decline from previous years.

## **Middle School**

Middle-level ELA growth can be measured using NWEA reading. At the middle level, average growth occurred during 2022-2023.

NWEA provides a growth projection for each student based on average growth between windows. For example, if the average growth nationally for an eighth-grade student scoring a 212 in reading is three points, the Park Hill eighth grade student scoring a 212 will be projected to grow three points. Growth on NWEA can be measured between windows (fall to winter, winter to spring), over the school year (fall to spring), and over the calendar year (fall to fall).

On the NWEA reading assessment, students in grades 6-8 grew at a stable rate over the school year (fall to spring) and over the calendar year (fall to fall).

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall reading norms, in 2022 Park Hill performed above the national average in grades 6-8. These same students performed above the national average in the spring of 2023.

Reading proficiency as measured by NWEA showed elevated levels of proficiency at the middle school level as measured on the PHSD BSC. ELA proficiency as measured by the PHSD BSC MAP scores show moderate levels with a slight decline from previous years, but an increase from 2020-2021.

## **High School**

High school ELA growth can be measured using the reading and English subtests of the PreACT. At the high school level, average growth was shown in 2022-2023.

## **Trends**

Overall, Park Hill English Language Arts scores saw stable trends at elementary and middle school levels. High School saw a slight decline in their ELA achievement trends.

## **Elementary**

Elementary ELA trends can be measured on the Missouri Assessment Program Grade Level Assessment and on NWEA reading.

Trend data for MAP will use three data points: 2020-2021, 2021-2022, and 2022-2023. Park Hill scores increased in grade five and were stable in grades 3 and 4.

Using three data points from NWEA, Park Hill RIT scores are stable on the NWEA reading assessments from spring of 2021 to spring of 2023 in grades one through five with a difference of 0-3 RIT points in each grade level.

## **Middle School**

Middle School ELA trends can be measured on the Missouri Assessment Program Grade Level Assessment and on NWEA in reading.

Trend data for MAP will use three data points: 2020-2021, 2021-2022, and 2022-2023. Park Hill scores were stable in grades 6 and 8 and saw a slight increase in grade 7.



## **High School**

High School ELA trends can be measured on the Missouri Assessment Program End of Course ELA II Assessment, the reading and English portions of the ACT and PreACT, and the Advanced Placement assessments: Language & Composition and Literature & Composition. Results at the high school level remained stable.

Trend data for MAP will use three data points: 2020-2021, 2021-2022, and 2022-2023. Park Hill School District scores on the ELA II EOC decreased 1% from 2021 and 3% from 2022.

The state of Missouri began census testing all juniors with the ACT in 2015. While the state has discontinued this practice, Park Hill still administers the ACT to all juniors. Because of this change in practice, ACT graduate trend data begins in 2016 with census testing. Park Hill tested 97% of all graduating seniors in 2016 and tested 99% of all graduating seniors between 2017 and 2019, 96% in 2020, 87% in 2021, and 93% in 2022. ACT English Scores have been stable since the 2020-2021 school year with a change of -0.1 points. ACT reading has also been stable with no change since the 2020-2021 school year. **ACT information will be updated with the release of the class of 2023 graduate report from ACT.**

Park Hill began using the PreACT in 2018, thus trend data prior to 2018 is not available. Park Hill reading scores saw a decrease in mean score (-0.3 points) but saw an increase (+4%) in students meeting the PreACT benchmarks.

The Advanced Placement (AP) assessments are optional to students enrolled in the courses. The average composite score on the AP Language exam has remained stable from 2019-2023 with a change of +0.15. The average composite score on the AP Literature exam has increased from 2019-2023 (+0.89).

## **Comparisons**

Nationally, the Park Hill School District showed high achievement levels in elementary, middle, and high school on national assessments. Local comparisons cannot be made now as data has not been released from DESE.

### **Elementary**

Elementary comparisons can be made locally and statewide using the Missouri Assessment Program and nationally using NWEA reading. Local comparisons cannot be made now as data has not been released from DESE.

Using the Missouri Assessment program data, comparisons can be made to similar Missouri districts and the state overall. As a district, Park Hill outperformed the state average at all levels. Local comparisons cannot be made now as data has not been released from DESE.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall 2020 reading norms, in 2022 Park Hill performed above the national average in grades 1-5. Based on spring norms, in 2023 Park Hill performed above the national achievement percentiles in reading in grades 1-5. Based on the fall 2022 reading norms, in 2023 Park Hill performed above the national average in grades 1-5.

## **Middle School**

Middle school level comparisons can be made locally and statewide using the Missouri Assessment Program and nationally using NWEA reading. Local comparisons cannot be made now as data has not been released from DESE.

Using the Missouri Assessment program data, comparisons can be made to similar Missouri districts and the state overall. Park Hill scored above the state average in ELA in grades 6-8. Local comparisons cannot be made now as data has not been released from DESE.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall 2020 reading norms, in 2023 Park Hill performed above the national average in grades 6-8. Based on spring 2020 norms for reading, Park Hill performed above the national achievement percentiles in grades 6-8. Based on spring 2020 reading norms, in spring 2023 Park Hill performed above the national average in grades 6-8.

## **High School**

High school comparisons can be made locally and statewide using the Missouri Assessment Program, statewide and nationally using ACT & PreACT, and nationwide using the Advanced Placement assessments: Language & Composition and Literature & Composition. Local comparisons cannot be made now as data has not been released from DESE.

Using the Missouri Assessment program data, comparisons can be made to similar Missouri districts and the state overall. Park Hill scored well above the state average on the ELA II End of Course exam (71% proficient or advanced in Park Hill; 55% proficient or advanced in the state of Missouri). Local comparisons cannot be made now as data has not been released from DESE.

The ACT has two sections that assess Communication Arts: Reading and English. Using the ACT, comparisons can be made to both the state and national ACT averages. In reading, 2022 graduates from Park Hill scored above the national average; Park Hill graduates also scored above the Missouri average in reading. In English, 2022 Park Hill graduates scored high as compared to the national average; Park Hill graduates scored above the Missouri average in English. **Upon release of 2023 ACT information, comparisons can then be made.**

The PreACT has two sections that assess Communication Arts: Reading and English. While the PreACT is a 10<sup>th</sup> grade content assessment, students in Park Hill take the PreACT in grades nine and 10. During the 2021-2022 school year only 10<sup>th</sup> grade students took the PreACT. Park Hill 10<sup>th</sup> grade students scored high when compared to the PreACT reading national average. Compared to the national average for PreACT English, Park Hill 10<sup>th</sup> grade students scored just below the national average. Upon release of 2023 PreACT information, comparisons can then be made.

The Advanced Placement (AP) assessments are optional to students enrolled in the courses. A score of a “3” or higher is considered a passing score on the AP exams. When comparing the percentage of students in Park Hill who score a “3” or higher to the percent of students nation-wide who score a “3” or higher, Park Hill scores above the national percentage in AP Language and above the national average for AP Literature.

## Mathematics

Student achievement in Mathematics is assessed through a comprehensive set of standardized assessments as listed in the following table.

**Mathematics Assessments by Grade**

	K	1	2	3	4	5	6	7	8	9	10	11	12
MAP GLA				✓	✓	✓	✓	✓	✓				
MAP Algebra I EOC									✓	✓			
MAP Algebra II EOC										✓			
NWEA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
PreACT										✓	✓		
ACT												✓	✓
Advanced Placement											✓	✓	✓

### Missouri Assessment Program

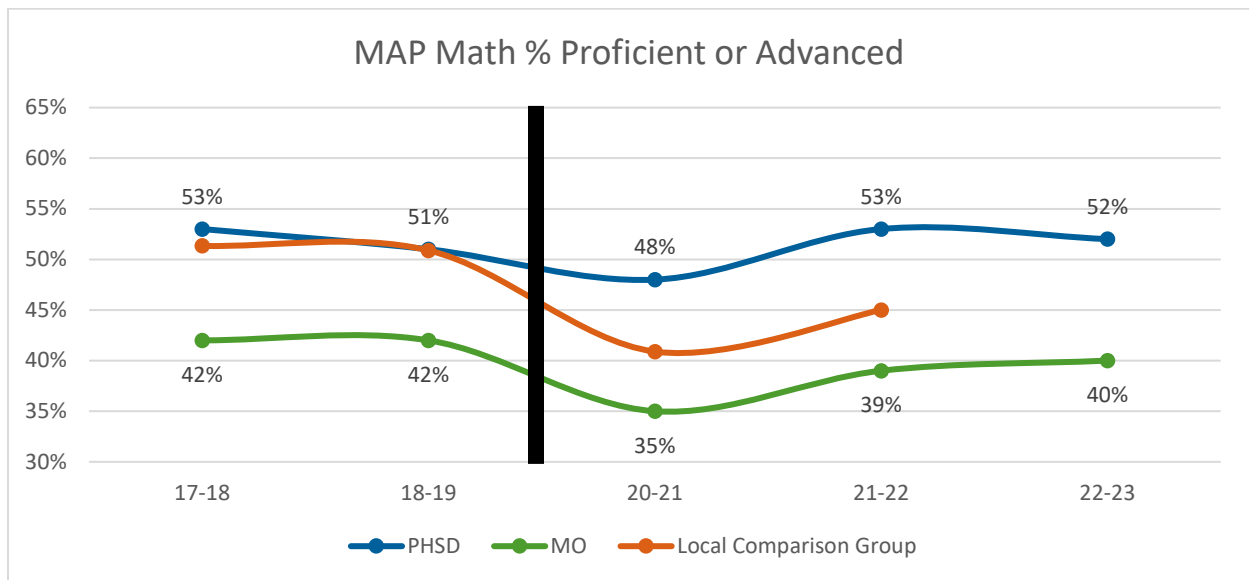
The Missouri Assessment Program (MAP) assesses Mathematics in multiple sessions, depending on the grade level. The sessions include multiple-choice items, technology enhanced items, performance tasks, and constructed response items. Scale scores are reported for the total test based on four performance levels: Below Basic, Basic, Proficient, and Advanced. The MAP test administered in 2018 (%) was a new test, with updated content, items, and cut scores. Comparisons to historical performance cannot be made as this assessment, items, content, and scale are different than the MAP administered prior.

**MAP Math Percent Proficient or Advanced 2010-2023**

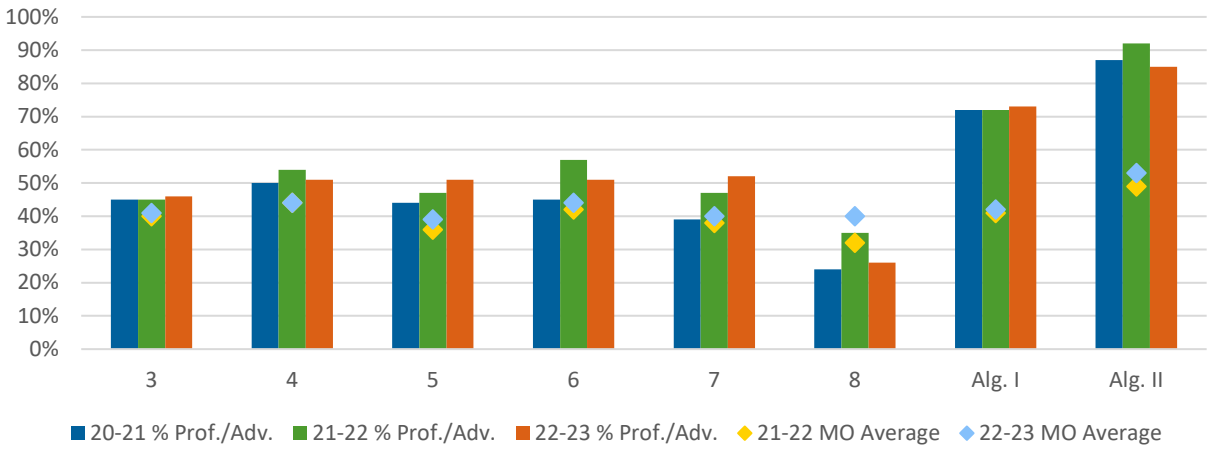
Math	OLD MAP TEST								NEW MAP TEST					
	2010	2011	2012	2013	2014@	2015#	2016&	2017&	2018%	2019	2020\$	2021	2022	2023
Grade 3	56	58	58	57	60	65	63	63	49	52		45	45	47
Grade 4	63	64	61	56	60	60	65	60	56	53		50	54	52
Grade 5	68	72	70	70	67	55	56	61	49	50		44	47	52
Grade 6	68	71	72	72	71	54	55	51	47	44		45	57	52
Grade 7	72	69	73	76	74	50	53	54	44	46		39	47	53
Grade 8	65	68	65	52**	61	41	44	38**	31	23		24	35	26
Alg. I EOC	81	86	82	76**	82	87	86	87	74	69		72	72	74
Alg. II EOC	64	78	82	86	71	76	80	79	89	93		87	92	85
All Grades	69	71*	72*	71*	73	62	63	58+	53	51		48	53	52

### MAP Math Percent Proficient or Advanced PHSD vs. State

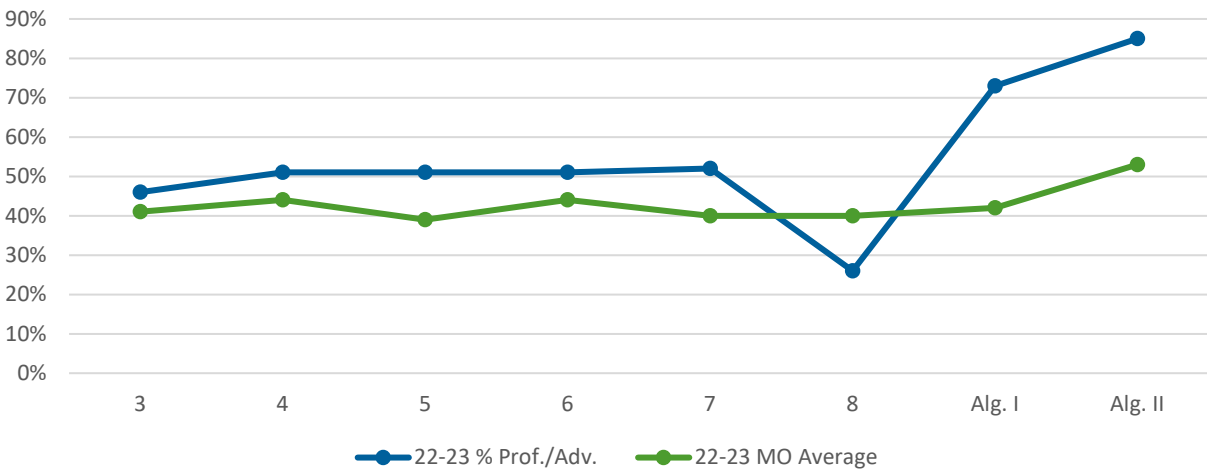
Content Area	Grade or EOC	PHSD Prof./Adv. 2021-2022	PHSD Prof./Adv. 2022-2023	PHSD Change	State Prof./Adv. 2021-2022	State Prof./Adv. 2022-2023	State Change	Diff. between PHSD and State
MATH	3	45%	47%	2%	40%	41%	1%	6%
MATH	4	54%	52%	-2%	44%	44%	0%	8%
MATH	5	47%	52%	5%	36%	39%	3%	13%
MATH	6	57%	52%	-5%	42%	44%	2%	8%
MATH	7	47%	53%	6%	38%	40%	2%	13%
MATH	8	35%	26%	-9%	32%	40%	8%	-14%
MATH	Algebra 1	72%	74%	2%	41%	42%	1%	32%
MATH	Algebra 2	92%	85%	-7%	49%	53%	4%	32%



### MAP Math Prof./Adv. by Grade Level

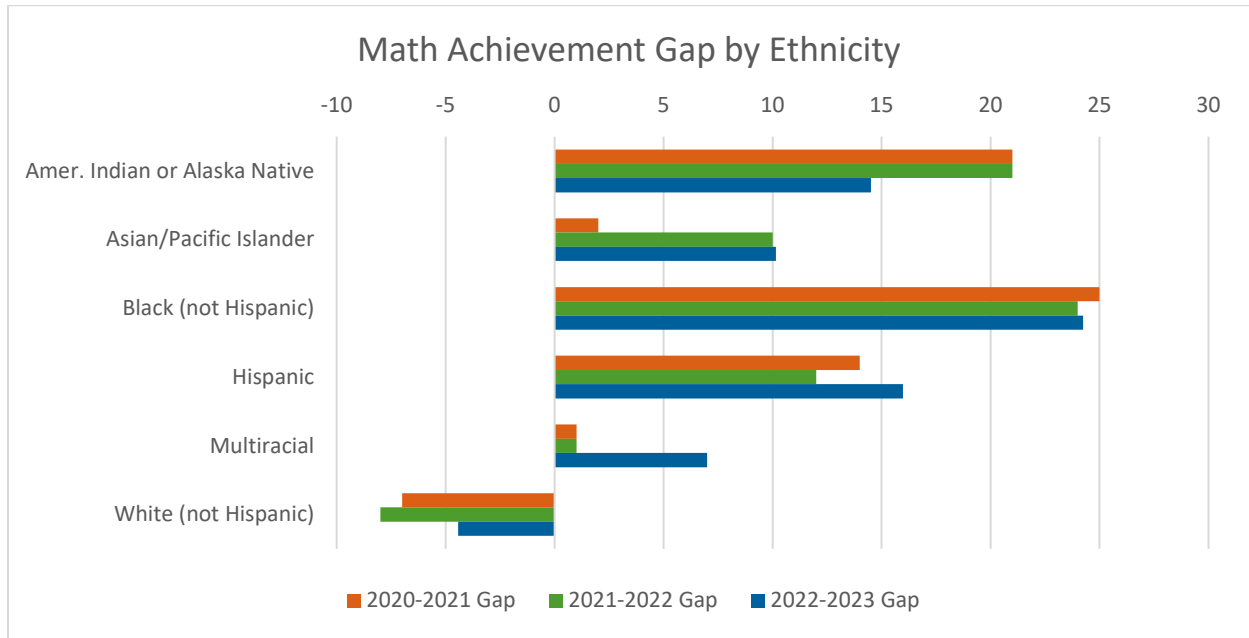


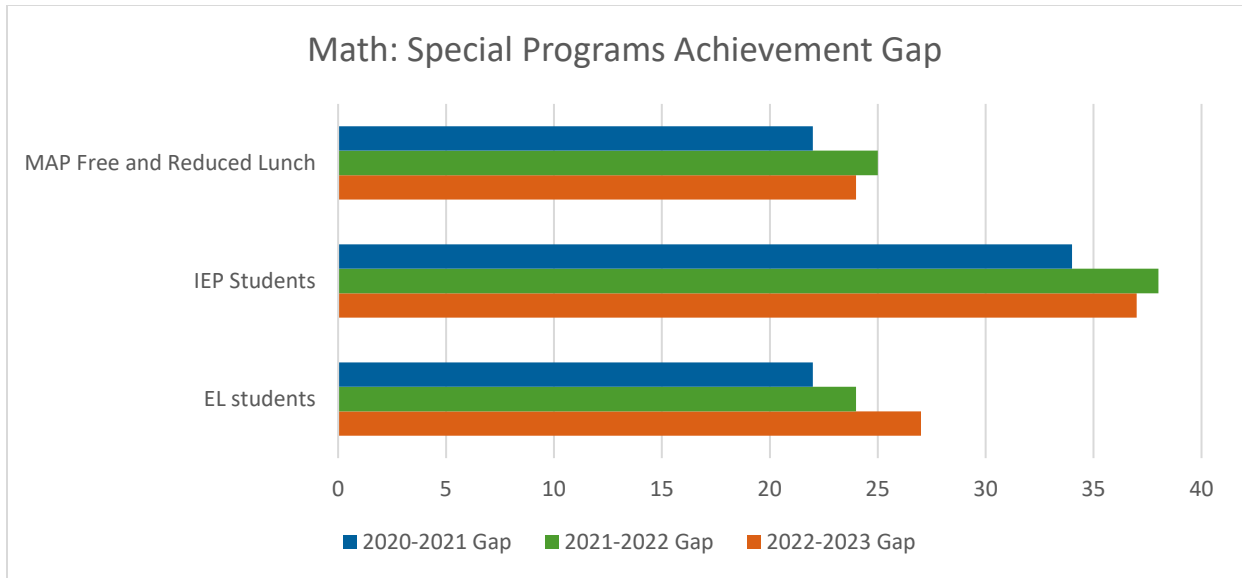
### Math PHSD vs. State Percent Proficient or Advanced



**MAP Math Percent Proficient or Advanced by Student Group**

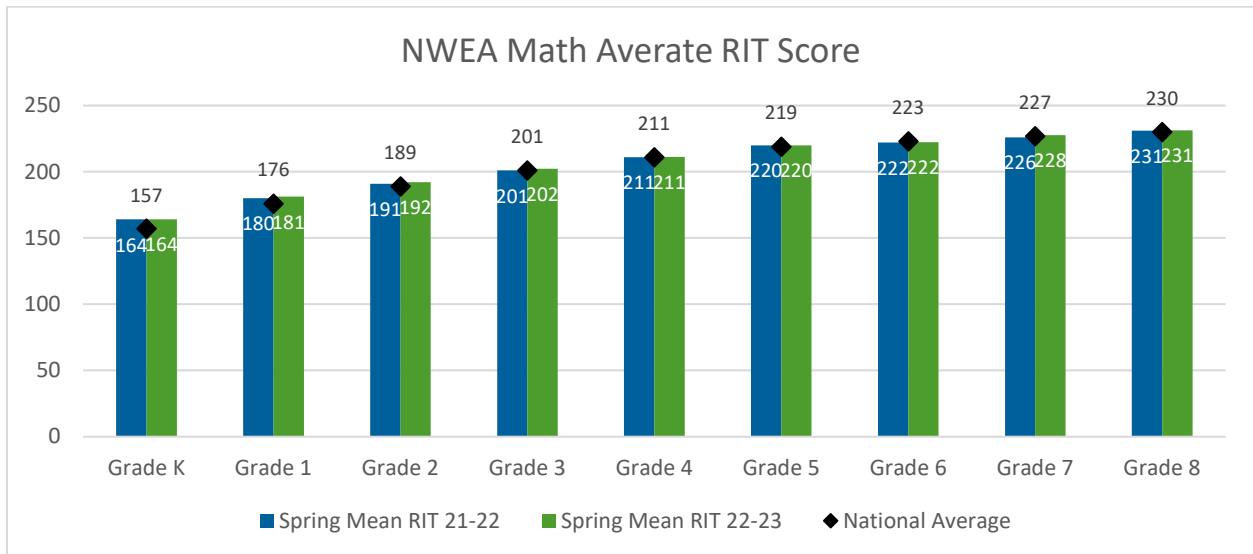
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
School Total	61	64	69	71	72	71	71	62	63	55***	53	51		48	53	52
Asian/Pacific Isl.	69	65	71	72	68	75	84	81	78	70	56	54		46	43	42
Black	35	39	44	41	42	47	46	38	35	28	26	24		23	29	28
Hispanic	45	48	59	61	60	61	58	51	48	43	38	39		34	41	36
AINA	62	62	58	68	64	52	72	54	47		29	45		27	32	37
White	65	68	73	76	74	75	75	68	67	62	60	58		55	61	56
Multiracial				63	60	67	67	57	57	46	46	45		47	52	45
F/R Lunch	35	42	49	51	52	53	51	43	41	34	31	29		26	28	28
IEP	34	36	41	45	49	49	38	29	27	20	16	15		14	15	15
ELL	29	35	42	46	46	53	48	42	31	29	24	30		26	29	25
Student Group	40	44	51	55	56	57	54	47	43	36	33	32		28	30	27





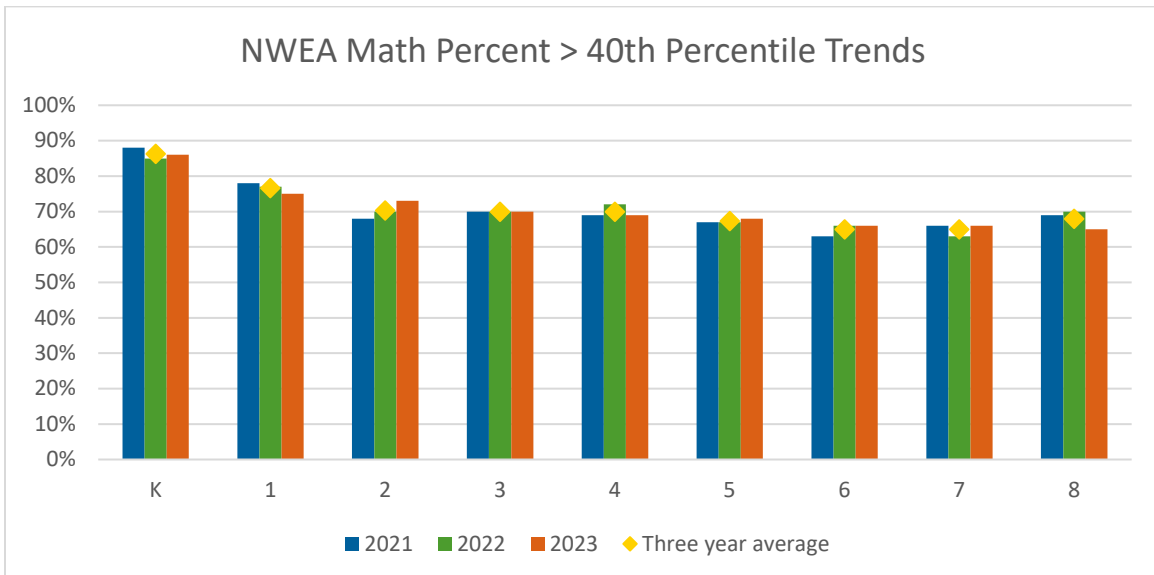
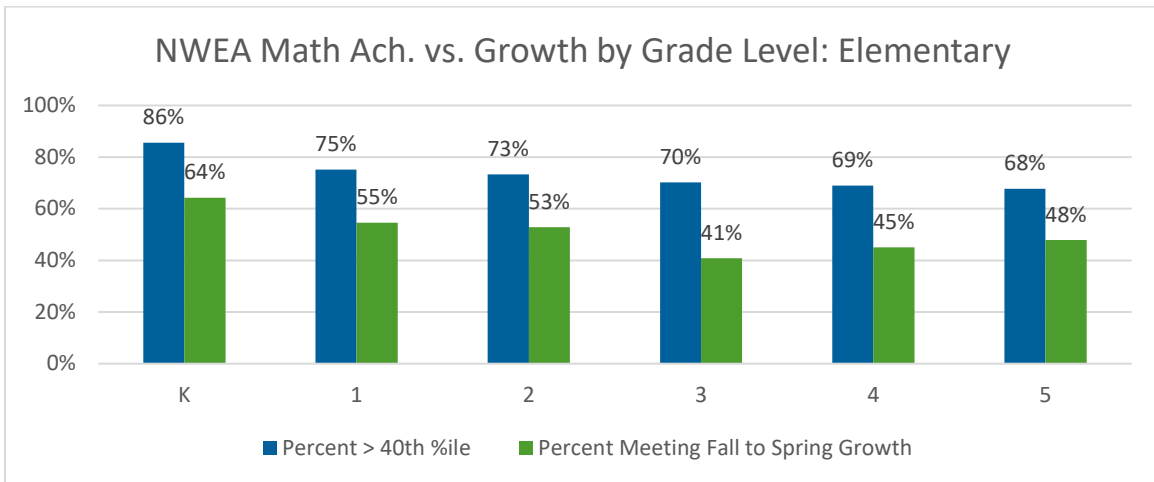
### NWEA Math

The NWEA math assessment is administered three times throughout the year in grades K-8. NWEA is an adaptive assessment that produces a RIT score based on Rausch units on the progress of mastering mathematical concepts. Like inches on a ruler, the RIT scale measures in equal intervals regardless of a student's grade, and it remains stable over time. As a result, NWEA can accurately measure what students are ready to learn and student growth between tests. Analysis would indicate that NWEA is both a reliable and valid screening tool for the MTSS process and highly correlated with MAP performance.

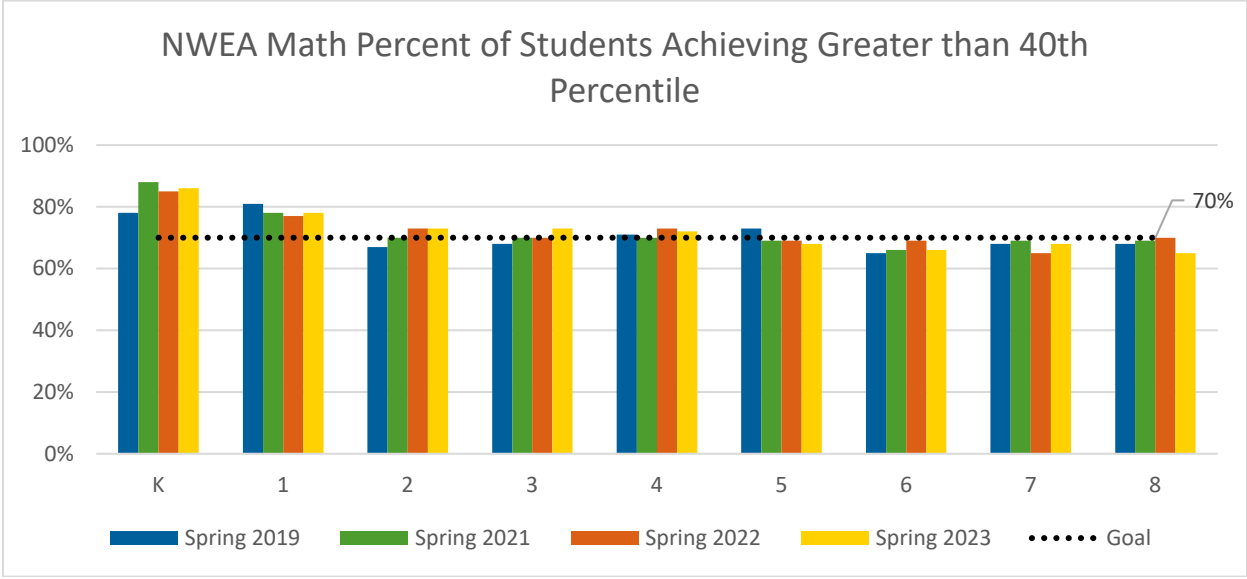
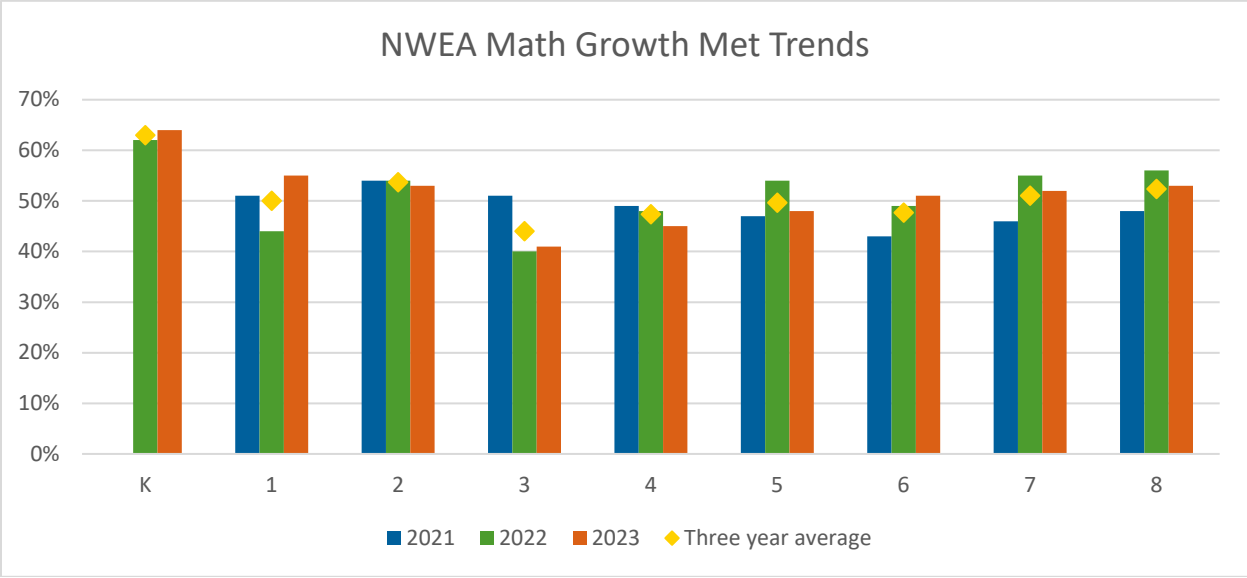


### NWEA Math Median Percentile

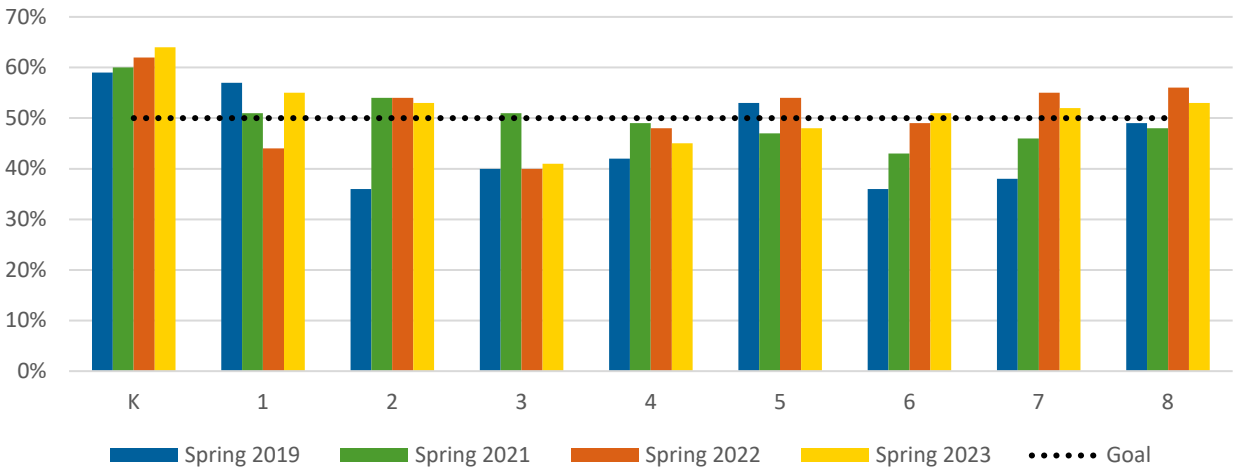
Math	Spring 22 Median Percentile	Spring 23 Median Percentile	Change from Spring 22 to Spring 23
Grade K	79	80	1
Grade 1	71	72	1
Grade 2	64	65	1
Grade 3	61	62	1
Grade 4	61	60	-1
Grade 5	60	59	-1
Grade 6	53	55	2
Grade 7	53	57	4
Grade 8	55	55	0







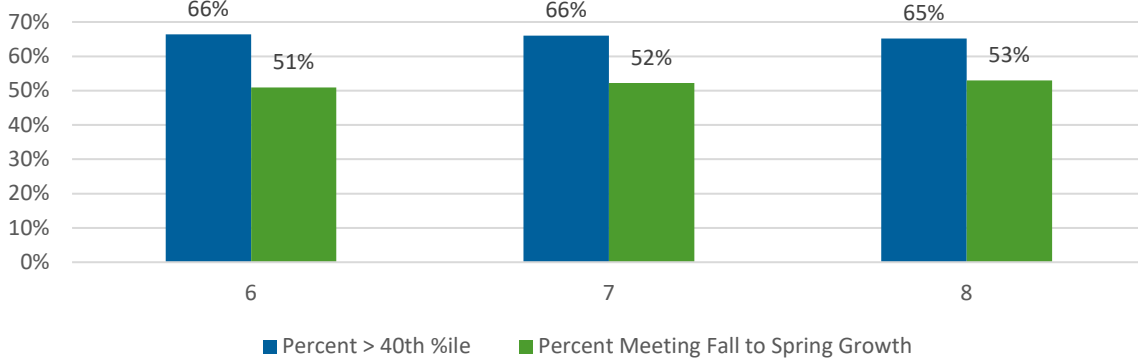
### NWEA Math Percent of Students Meeting Growth Goal



### Spring 2022-2023 Achievement and Growth: Elementary

Achievement vs. Growth (Math)		
Grade	Percent > 40th %ile	Percent Meeting Fall to Spring Growth
K	86%	64%
1	75%	55%
2	73%	53%
3	70%	41%
4	69%	45%
5	68%	48%
<b>District Total</b>	<b>73%</b>	<b>51%</b>

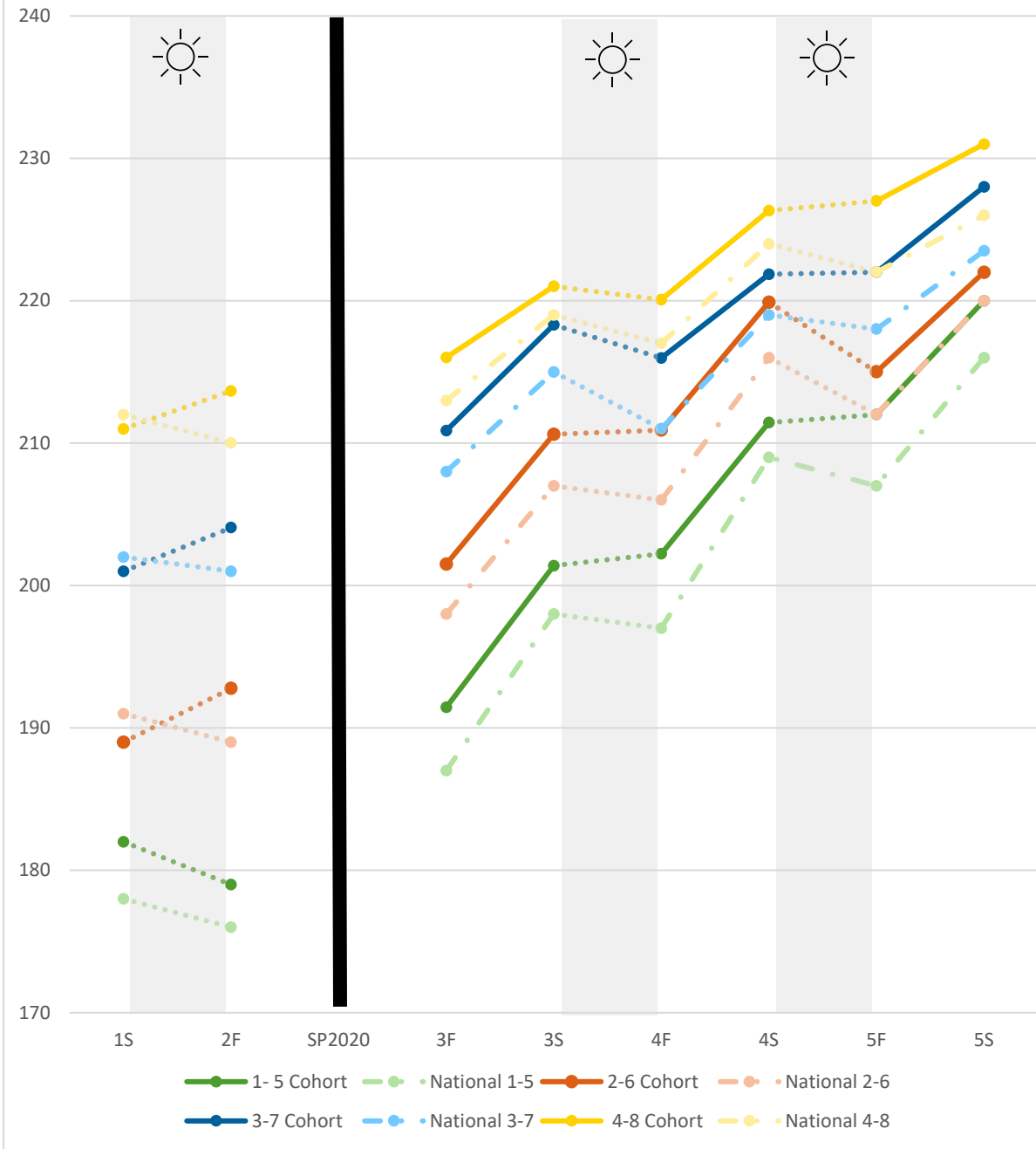
### NWEA Math Ach. vs. Growth by Grade Level: Middle

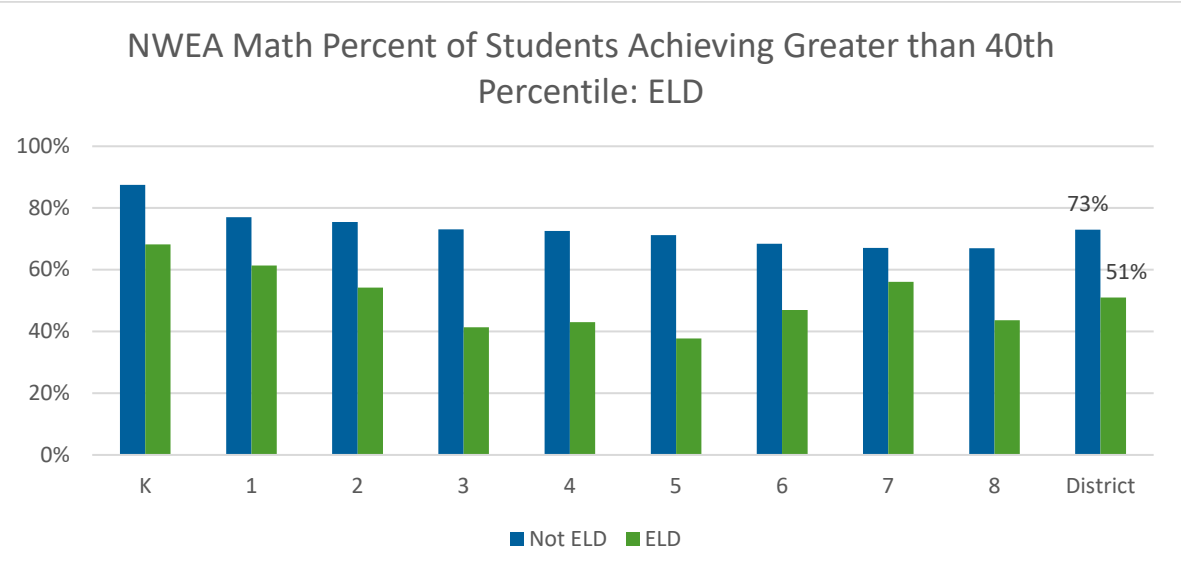
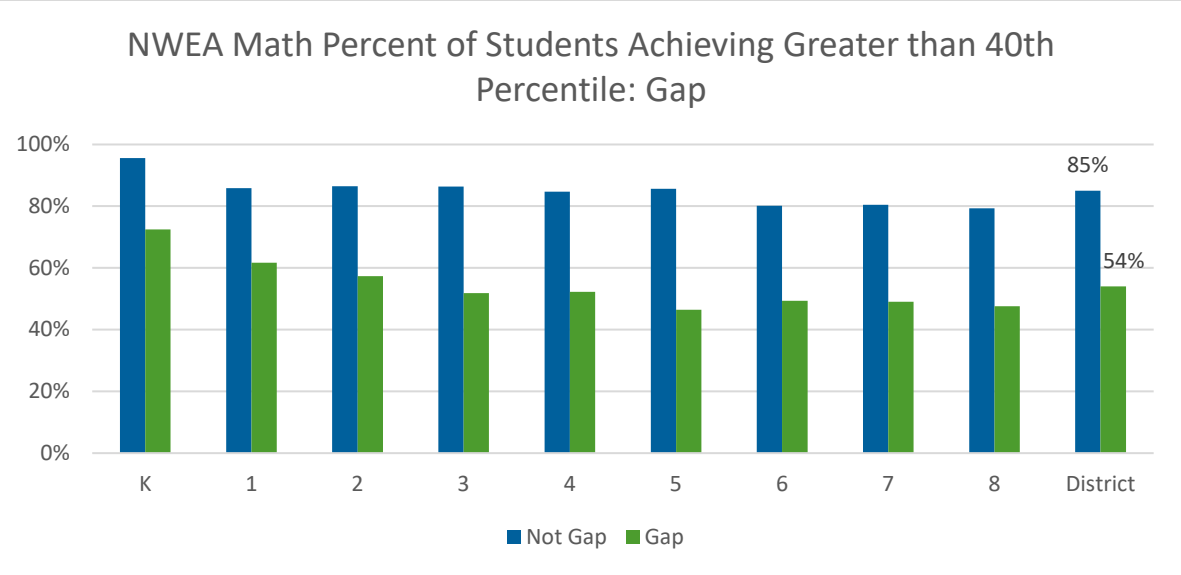


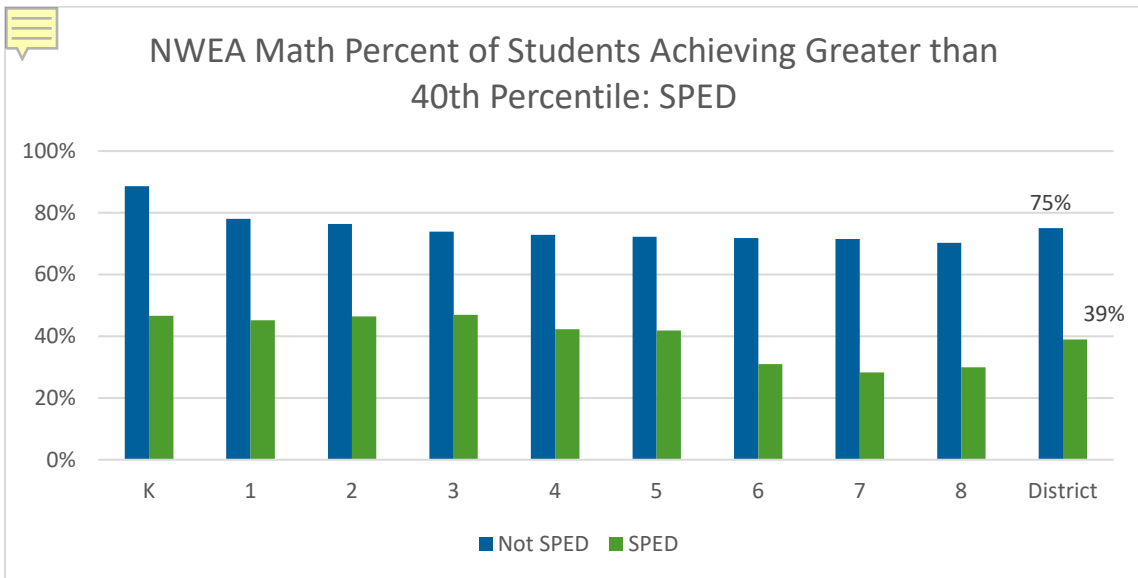
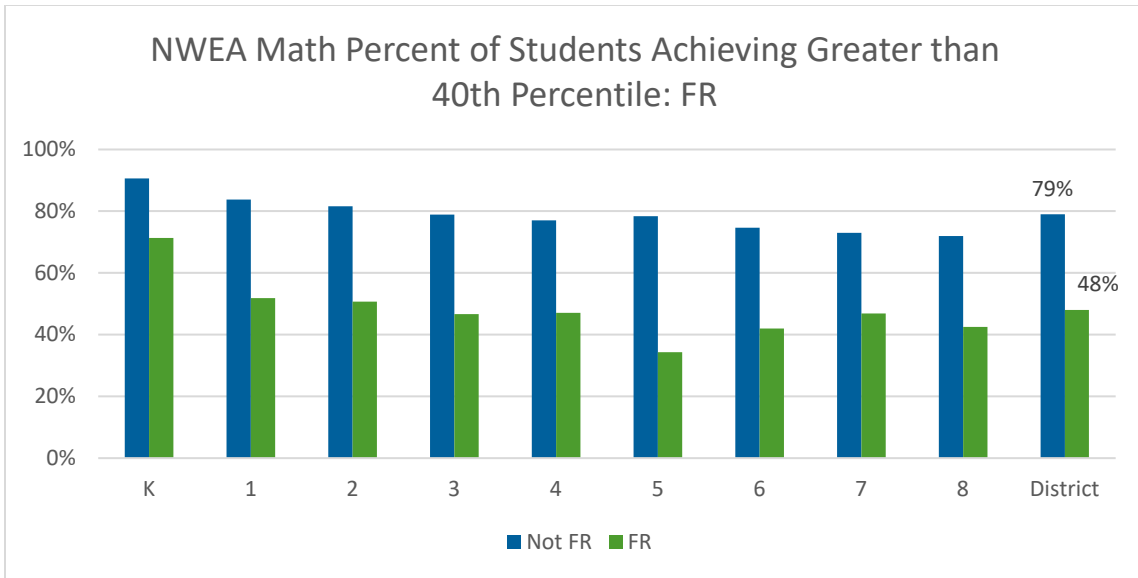
**Spring 2022-2023 Achievement and Growth: Middle School**

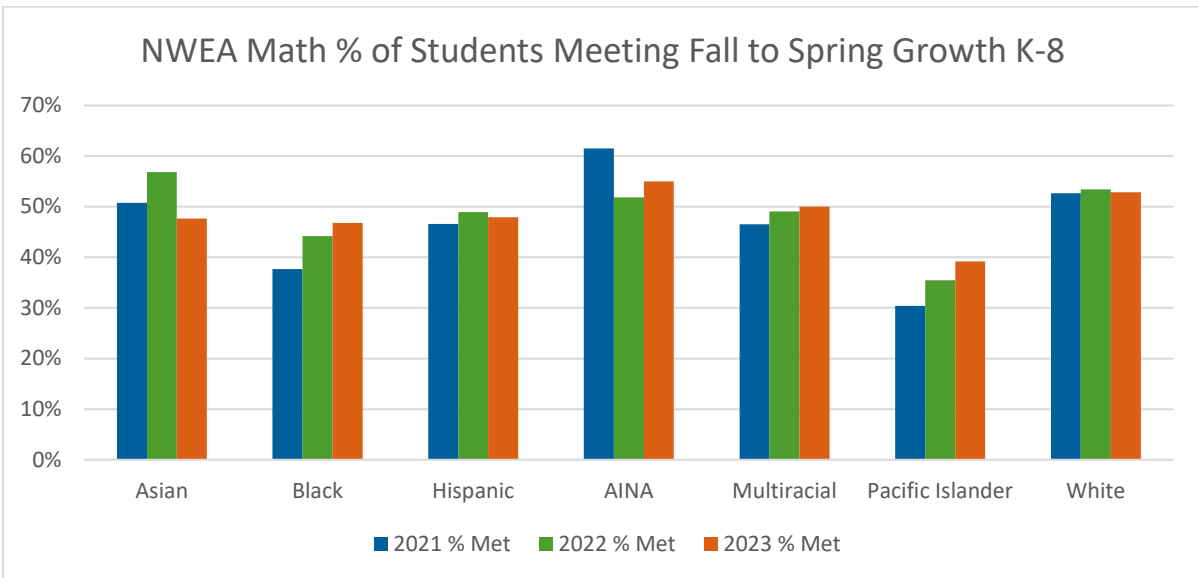
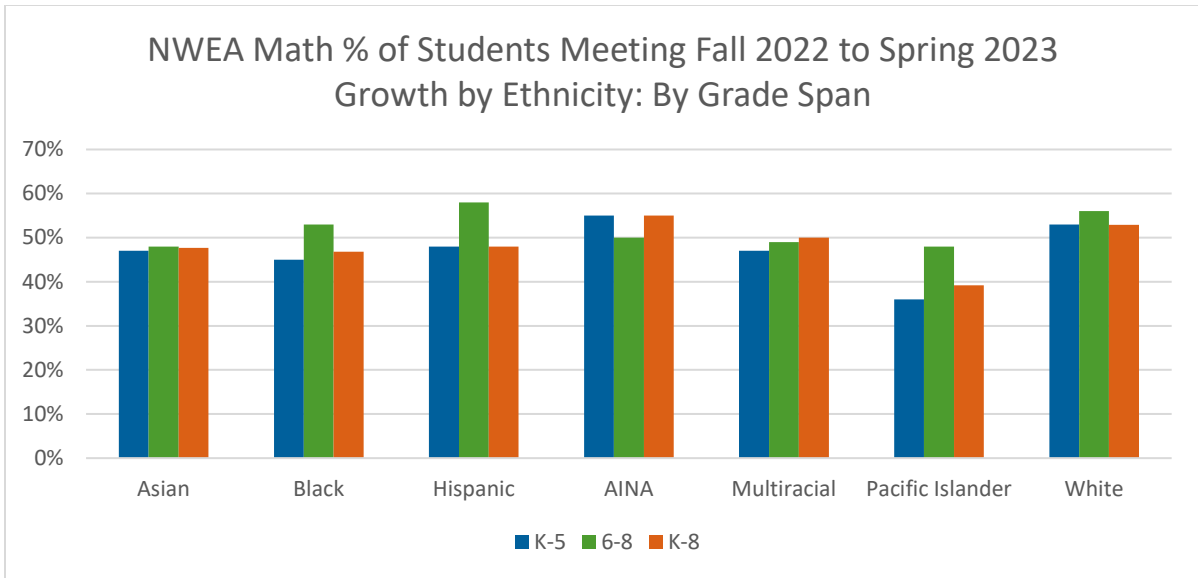
Achievement vs. Growth (Math)		
Grade	Percent > 40th %ile	Percent Meeting Fall to Spring Growth
6	66%	51%
7	66%	52%
8	65%	53%
<b>School Total</b>	<b>66%</b>	<b>52%</b>

NWEA Math Cohort Mean RIT PHSD vs. National







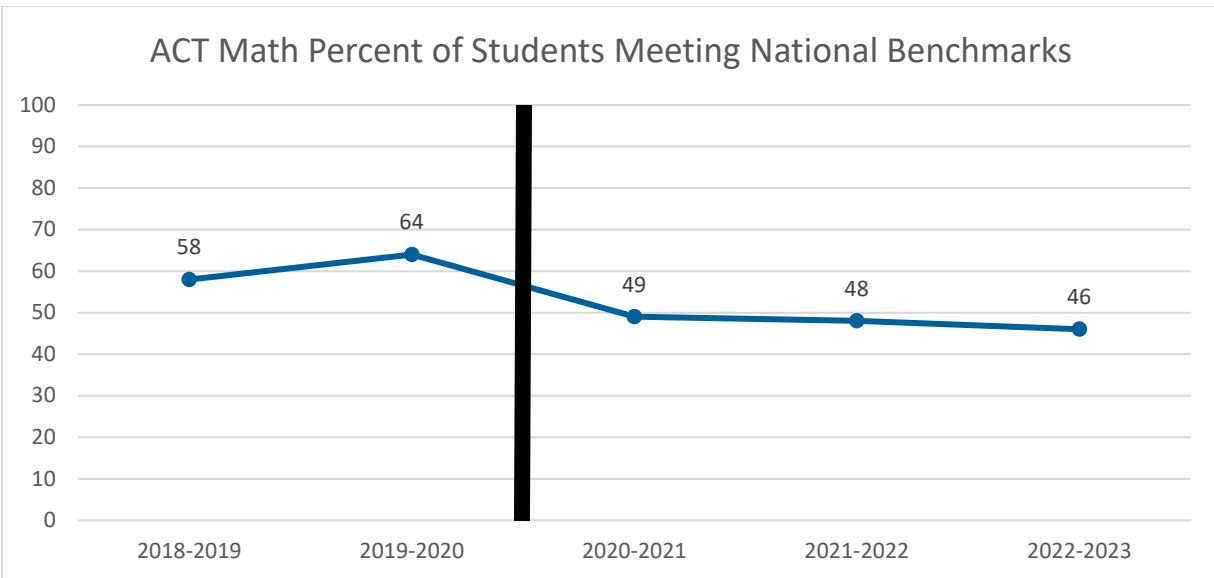
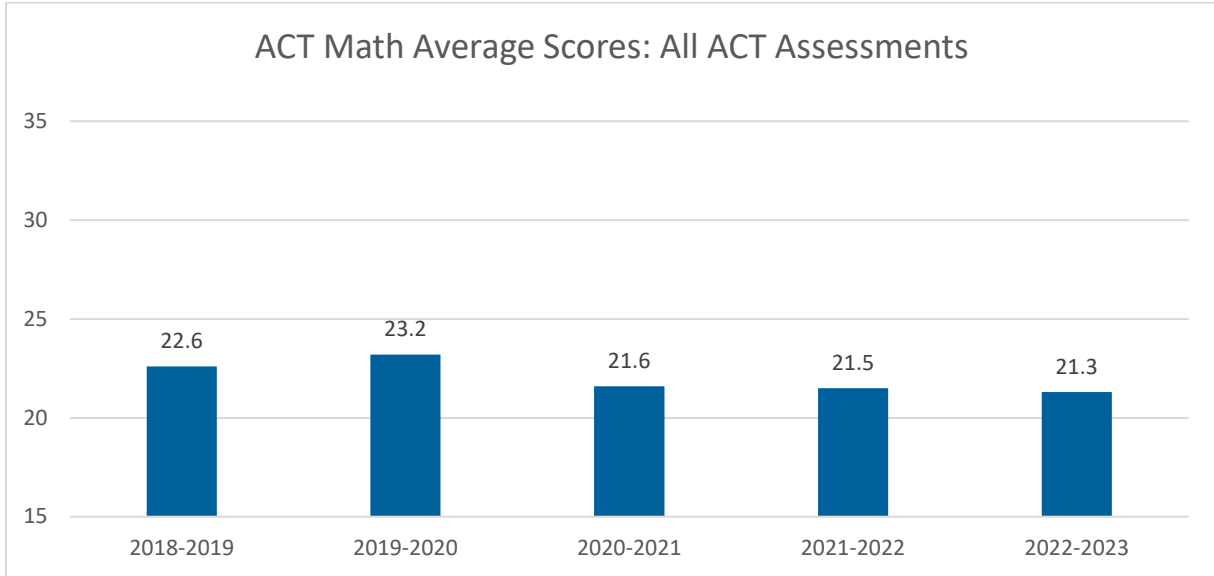


**Number of Students who took Fall to Spring NWEA Math**

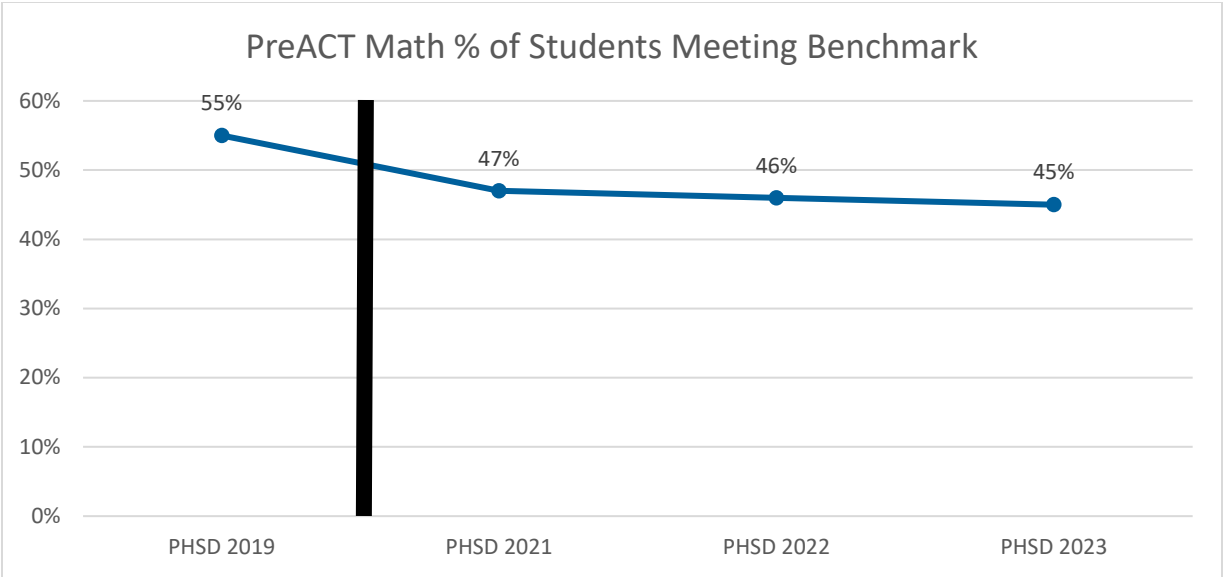
Asian	Black	Hispanic	AINA	Multiracial	Pacific Islander	White
190	910	799	20	475	120	4819

## ACT and PreACT

Missouri required census testing of all juniors in 2015-2017, which reflects in the graduate scores of 2016-2018. Park Hill continued to census test all juniors after the state discontinued the process. The PreACT assessment was first administered in Park Hill in 2018.





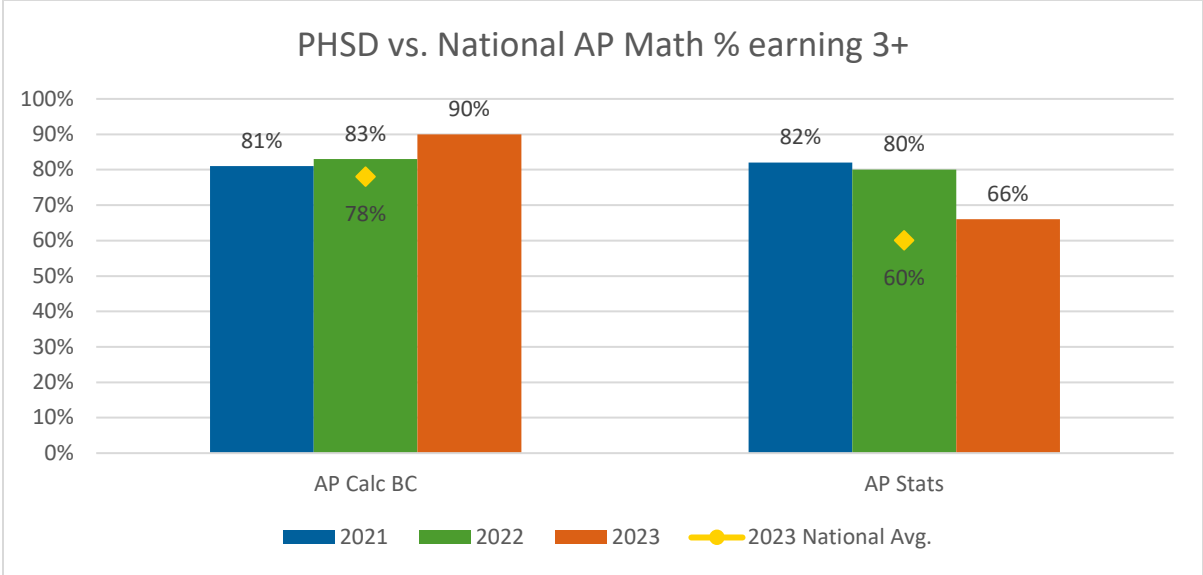


**Advanced Placement Exams**

Students are not required to take an Advanced Placement (AP) course during high school; students are not required to take the AP exam when enrolled in the AP course. A score of a “3” or higher is considered a passing score on the AP exams. Many colleges will not award credit for scores below a “3.” AP exams administered during the 2021-2022 school year were administered in person on paper.

AP Calc BC	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Number of students who took exams	85	110	88	81	100
Students scoring 3+	75	90	71	67	90
% scoring 3+	88%	82%	81%	83%	90%
Mean Score	3.91	3.68	3.68	3.79	3.9

AP Stats	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Number of students who took exams	97	99	97	95	98
Students scoring 3+	80	57	80	76	65
% scoring 3+	82%	58%	82%	80%	66%
Mean Score	3.3	2.82	3.37	3.26	3.1



# Mathematics Analysis: Value-Added, Comparisons, Trends

	Elementary			Middle School			High School		
	L	T	C	L	T	C	L	T	C
Mathematics	Blue	Green	White	Green	Green	White	Blue	Green	White

## Codes for LeTCI Analysis Indicators

<b>Levels (L)</b>	Blue	achievement levels exceed the goal (stretch) on the PHSD BSC
	Green	achievement levels meet the goal or are moderate on the PHSD BSC
	Orange	achievement levels are at risk on the PHSD BSC
<b>Trends (T)</b>	Blue	means results increased
	Green	means results were stable (within 2% of previous data point)
	Orange	means results decreased
<b>Comparisons (C)</b>	Blue	means Park Hill is in the top third of available comparison group data
	Green	means Park Hill is in the middle of available comparison group data
	Orange	means Park Hill is in the bottom third of available comparison group data

## Levels and Growth

Overall, Park Hill showed average growth in mathematics with average growth at all three levels: elementary, middle school, and high school. Overall, math levels are at or exceed district goals on our Balanced Scorecard. Growth on NWEA is in the moderate category on the BSC, but at NWEA recommended levels.

### **Elementary**

Elementary math growth can be measured using NWEA. At the elementary level, stable achievement occurred during 2022-2023 with respect to the previous school year.

NWEA provides a growth projection for each student based on average growth between windows. For example, if the average growth nationally for a second-grade student scoring a 180 in math is three points, the Park Hill second grade student scoring a 180 will be projected to grow three points. Growth on NWEA can be measured between windows (fall to winter, winter to spring), over the school year (fall to spring), and over the calendar year (fall to fall).

On the NWEA math assessment, students in grades 1, 3, and 5 grew at a stable rate over the school year (fall to spring) with respect to last school year. Grades K and 2 grew at a faster rate with respect to last school year. Grade 4 saw a decline in the percent of students meeting growth goals.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall math norms, in 2022-2023 Park Hill performed above the national average in grades 1-5. These same students performed at or near the national average in the spring of 2023.

## **Middle School**

Middle-level math growth can be measured using NWEA. At the middle level, average growth was shown in 2022-2023.

NWEA provides a growth projection for each student based on average growth between windows. For example, if the average growth nationally for an eighth-grade student scoring a 212 in math is three points, the Park Hill eighth grade student scoring a 212 will be projected to grow three points. Growth on NWEA can be measured between windows (fall to winter, winter to spring), over the school year (fall to spring), and over the calendar year (fall to fall).

On the NWEA math assessment, students in grades 7 and 8 grew at a stable rate over the school year (fall to spring) where grade 6 grew faster than average.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall math norms, in 2022-2023 Park Hill performed above the national average in grades 6-8. In Spring of 2023, grades 6-8 performed above the national average.

## **High School**

High school math growth can be measured using the math subtest of the PreACT. At the high school level, average growth was shown in 2022-2023.

## **Trends**

Overall, Park Hill math scores have increased at all three levels: elementary, middle school, and high school.

### **Elementary**

Elementary school math trends can be measured on the Missouri Assessment Program Grade Level Assessment and on NWEA. Results at the elementary level remained stable.

Using three data points from MAP as a measure (2021, 2022 and 2023), Park Hill observed an increase from the 2021-2022 school year in grades 3 and 5. The percent proficient or advanced in grade 4 decreased. With respect to 2018-2019, grades 3 and 5 have decreased while grade 4 increased.

Using three data points from NWEA, Park Hill percent of students at or above the 40<sup>th</sup> percentile are stable as are the percent of students meeting their growth goal.

### **Middle School**

Middle School math trends can be measured on the Missouri Assessment Program Grade Level Assessment and on NWEA. Results at the middle level are stable for NWEA but saw a decline in MAP assessments.

Using three data points from MAP as a measure (2021, 2022, and 2023), Park Hill observed an increase in grade 7, but saw decreases in grades 6 and 8.

Using three data points from NWEA, Park Hill percent of students at or above the 40<sup>th</sup> percentile are stable as are the percent of students meeting their growth goal.

## High School

High School math trends can be measured on the Missouri Assessment Program End-of-Course Algebra I Assessment, the math portion of the ACT and PreACT, and the Advanced Placement assessments: Statistics and Calculus BC. Results at the high school level have remained stable for MAP and AP achievement but have declined for ACT and 10<sup>th</sup> grade PreACT.

Using three data points from MAP as a measure (2021, 2022, and 2023), Park Hill observed stable percentages in Algebra I of students earning proficient or advanced and observed a decrease in Algebra II.

The state of Missouri began census testing all juniors with the ACT in 2015. While the state has discontinued this practice, Park Hill still administers the ACT to all juniors. Because of this change in practice, ACT graduate trend data begins in 2016 with census testing. Park Hill tested 97% of all graduating seniors in 2016 and tested 99% of all graduating seniors between 2017 and 2019, 96% in 2020, 87% in 2021, and 93% in 2022. ACT math scores have declined from 2017 to 2022 with a difference of -1.2 points. **Upon release of 2023 ACT graduate data, this information will be updated.**

The Advanced Placement (AP) assessments are optional to students enrolled in the courses. The average composite score on the AP Statistics exam has decreased from 2019-2023 with a change of (-0.20). The average composite score on the AP Calculus BC exam is stable from 2019-2023.

## Comparisons

Nationally, the Park Hill School District showed high achievement levels in elementary, middle, and high school on national assessments.

### Elementary

Elementary school math comparisons can be made locally and statewide using the Missouri Assessment Program and nationally using NWEA. Local comparisons cannot be made now as data has not been released from DESE.

Using the Missouri Assessment program data, comparisons can be made to similar Missouri districts and the state overall. Park Hill scored above the state average in grades 3-5. Local comparisons cannot be made now as data has not been released from DESE.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall math norms, in 2022-2023 Park Hill performed above the national average in grades 6-8. In Spring of 2023, grades 6-8 performed above the national average.

### Middle School

Middle level math comparisons can be made locally and statewide using the Missouri Assessment Program and nationally using NWEA. Local comparisons cannot be made now as data has not been released from DESE.

Using the Missouri Assessment program data, math comparisons can be made to similar Missouri districts and the state. Park Hill scored above the state average in grades 6-8. Local comparisons cannot be made now as data has not been released from DESE.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall math norms, in 2022-2023 Park Hill performed above the national average in grade 6-8. In Spring of 2023, grades 6-8 performed above the national average.

### **High School**

High school math comparisons can be made locally and statewide using the Missouri Assessment Program, statewide and nationally using ACT & PreACT, and nationally using the Advanced Placement assessments: Statistics and Calculus BC. Local comparisons cannot be made now as data has not been released from DESE.

Using the Missouri Assessment program data, comparisons can be made to similar Missouri districts and the state overall. Park Hill scored well above the state average on the Algebra I End of Course exam (74% proficient or advanced in Park Hill; 42% proficient or advanced in the state of Missouri). Local comparisons cannot be made now as data has not been released from DESE.

Using the ACT, math comparisons can be made to both the state and national ACT averages. In math, 2022 graduates from Park Hill scored above the national average; Park Hill graduates also scored above the Missouri average in math. **Upon release of 2023 ACT graduate data, this information will be updated.**

While the PreACT is a 10<sup>th</sup> grade content assessment, students in Park Hill take the PreACT in grades nine and 10. During the 2021-2022 school year, both 9<sup>th</sup> and 10<sup>th</sup> grade students completed the PreACT. Park Hill 9<sup>th</sup> and 10<sup>th</sup> grade students scored high compared to the PreACT math national average. Upon release of 2023 PreACT data, this information will be updated.

The Advanced Placement (AP) assessments are optional to students enrolled in the courses. A score of a “3” or higher is considered a passing score on the AP exams. When comparing the percentage of students in Park Hill who score a “3” or higher to the percent of students nation-wide who score a “3” or higher, Park Hill scores higher than the national percentage in both AP Statistics and AP Calculus BC.

## Science

Student achievement in science is assessed through a comprehensive set of standardized assessments as listed in the following table.

### Science Assessments by Grade

	K	1	2	3	4	5	6	7	8	9	10	11	12
MAP GLA						✓			✓				
MAP Biology EOC										✓			
NWEA				✓	✓	✓	✓	✓	✓				
PreACT										✓	✓		
ACT												✓	✓
Advanced Placement										✓	✓	✓	✓

### Missouri Assessment Program (MAP)

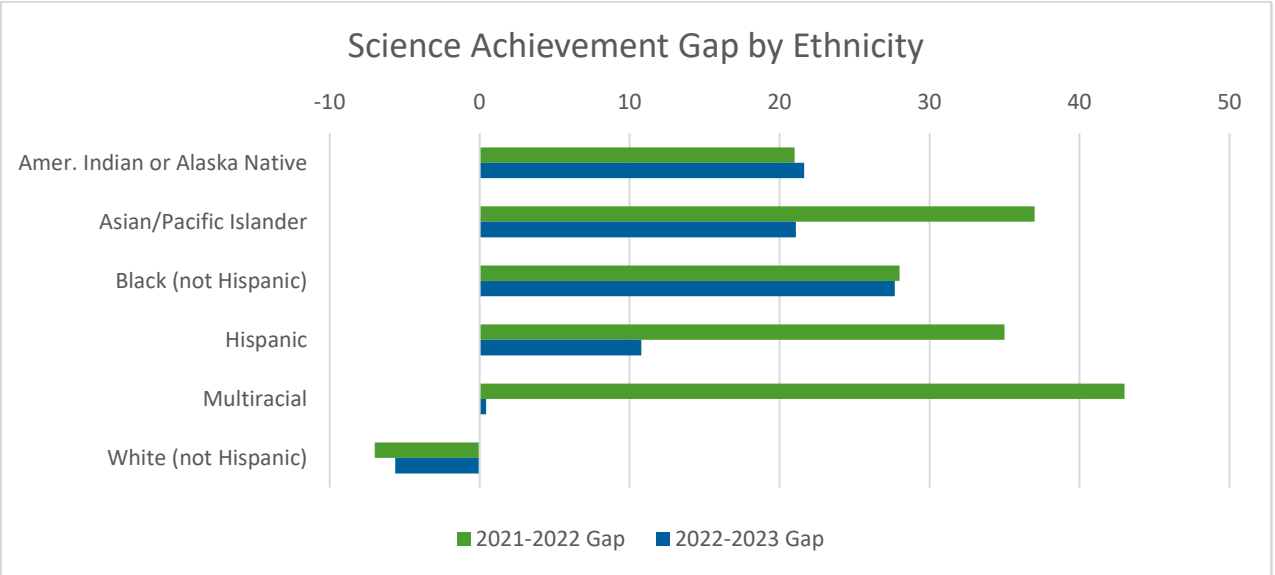
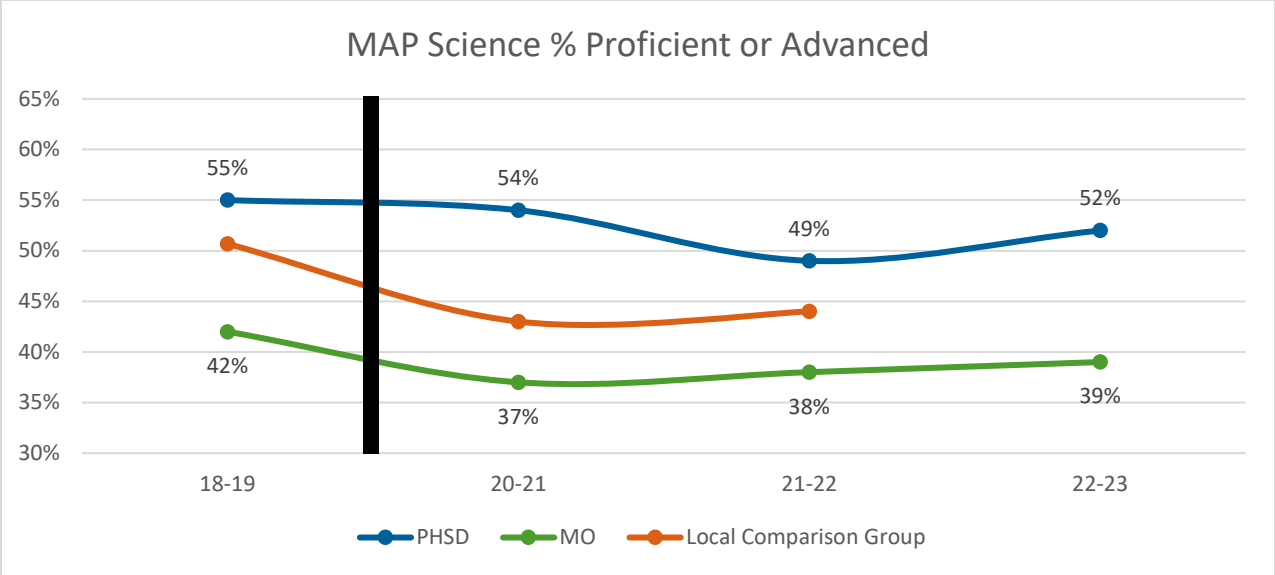
The Missouri Assessment Program (MAP) assesses Science in multiple sessions, depending on the grade level. The sessions include multiple-choice items, technology enhanced items, performance tasks, and constructed response items. Scale scores are reported for the total test based on four performance levels: Below Basic, Basic, Proficient, and Advanced. The MAP test administered in 2019 (&) was a new test with added content, items, and cut scores. Comparisons to historical performance cannot be made as this assessment, items, content, and scale are different than the MAP administered prior.

### MAP Science Percent Proficient or Advanced 2010-2023

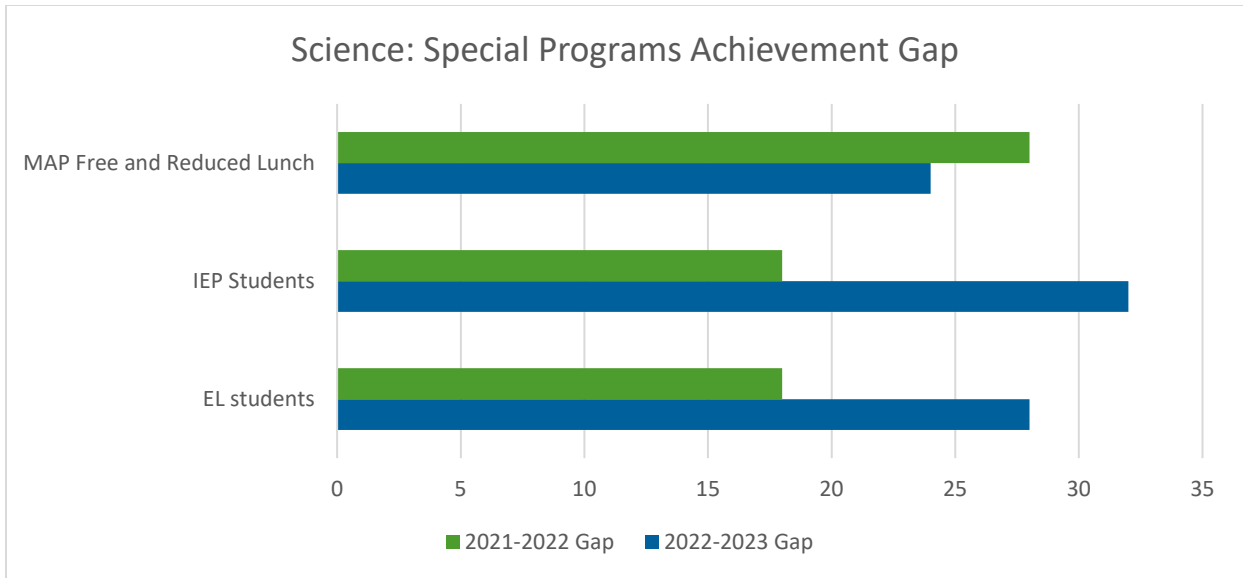
	OLD MAP TEST										NEW MAP TEST				
	2010	2011	2012	2013	2014@	2015#	2016&	2017&	2018%	2019	2020\$	2021	2022	2023	
<b>Math</b>															
Grade 5	67	72	68	71	68	63	52	57	Field Test	56		53	50	54	
Grade 8	62	68	65	67	70	65	61	61	Field Test	52		48	45	45	
Bio EOC	79	82	77	87	83	85	79	77	Field Test	55		58	48	57	
All Grades	70	74*	71*	77*	75*	75*	65*	65	Field Test	55		54	49	52	

### MAP Science Percent Proficient or Advanced PHSD vs. State

Content Area	Grade or EOC	PHSD Prof./Adv. 2021-2022	PHSD Prof./Adv. 2022-2023	PHSD Change	State Prof./Adv. 2021-2022	State Prof./Adv. 2022-2023	State Change	Diff. between PHSD and State
SCIENCE	5	50%	54%	4%	41%	41%	0%	13%
SCIENCE	8	45%	45%	0%	38%	38%	0%	7%
SCIENCE	BIOLOGY	48%	57%	9%	35%	39%	4%	18%





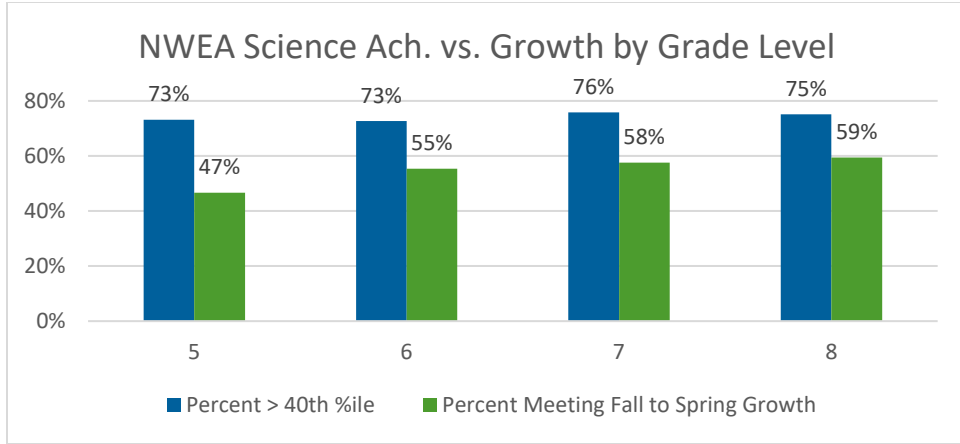


### NWEA Science

The NWEA Science assessment is administered three times throughout the year in grades 5-8. It is an adaptive assessment that produces a RIT score based on Rausch units on the progress of science reasoning. Like inches on a ruler, the RIT scale measures in equal intervals, regardless of a student's grade and it remains stable over time. As a result, NWEA can accurately measure what students are ready to learn and student growth between tests. Analysis would indicate that NWEA is a reliable and valid screening tool for the MTSS process and highly correlated with MAP performance.

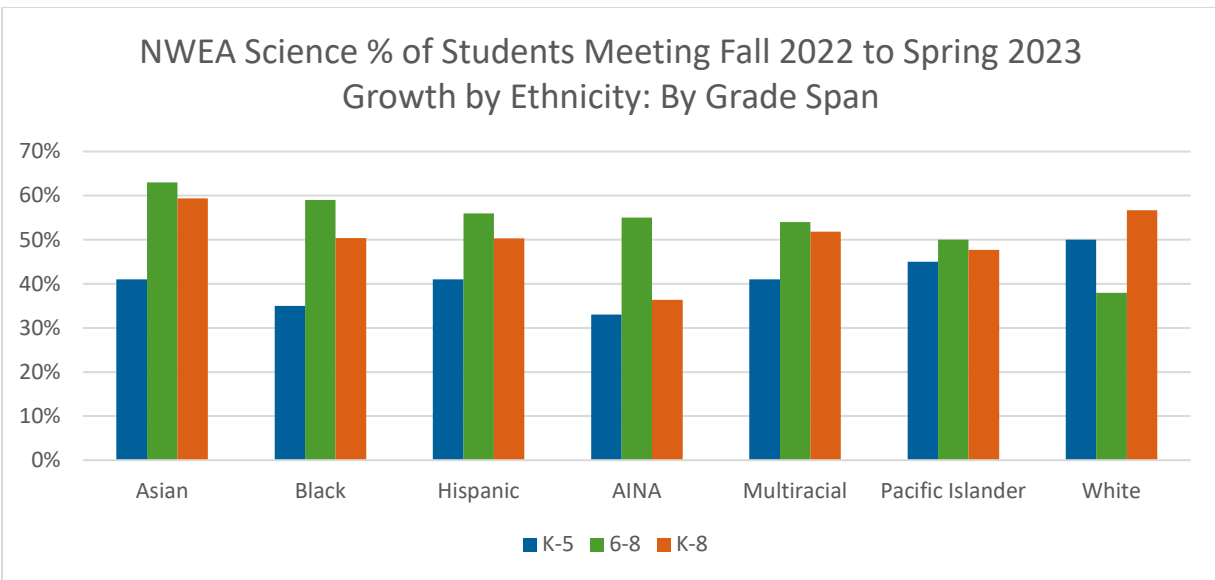
#### NWEA Science RIT Score Trends

Science	Winter Mean RIT 21-22	Spring Mean RIT 21-22	Fall Mean RIT 22-23	Winter Mean RIT 22-23	Spring Mean RIT 22-23	Change from Fall 22-23
<b>Grade 5</b>	208	210	206	208	209	<b>3</b>
<b>Grade 6</b>	211	212	208	210	212	<b>4</b>
<b>Grade 7</b>	213	214	212	213	215	<b>3</b>
<b>Grade 8</b>	217	218	214	217	218	<b>4</b>



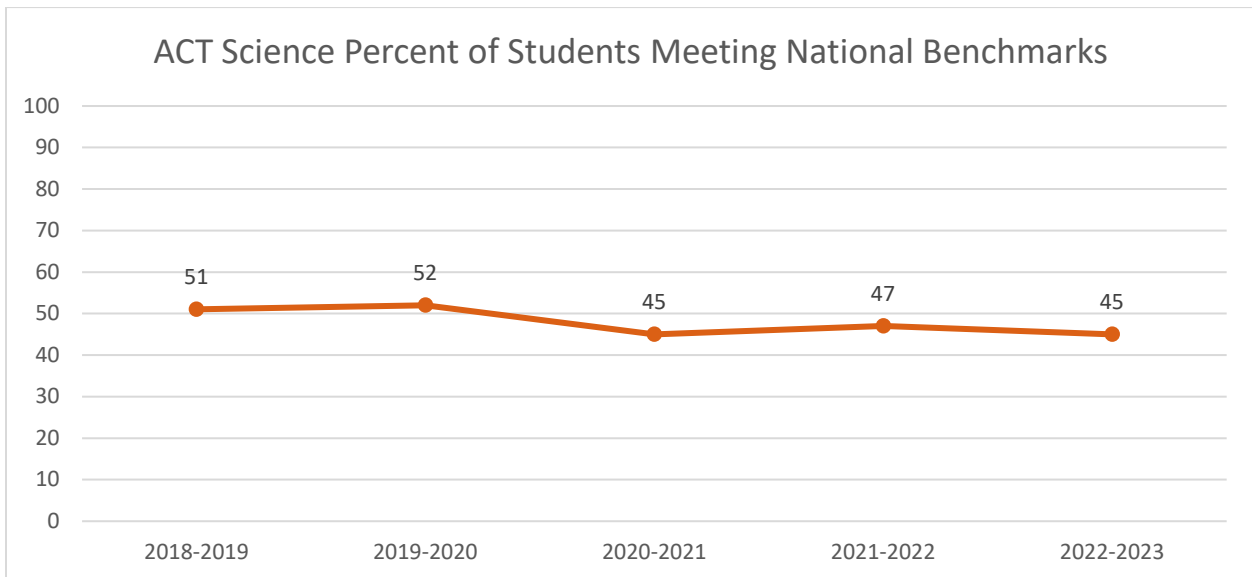
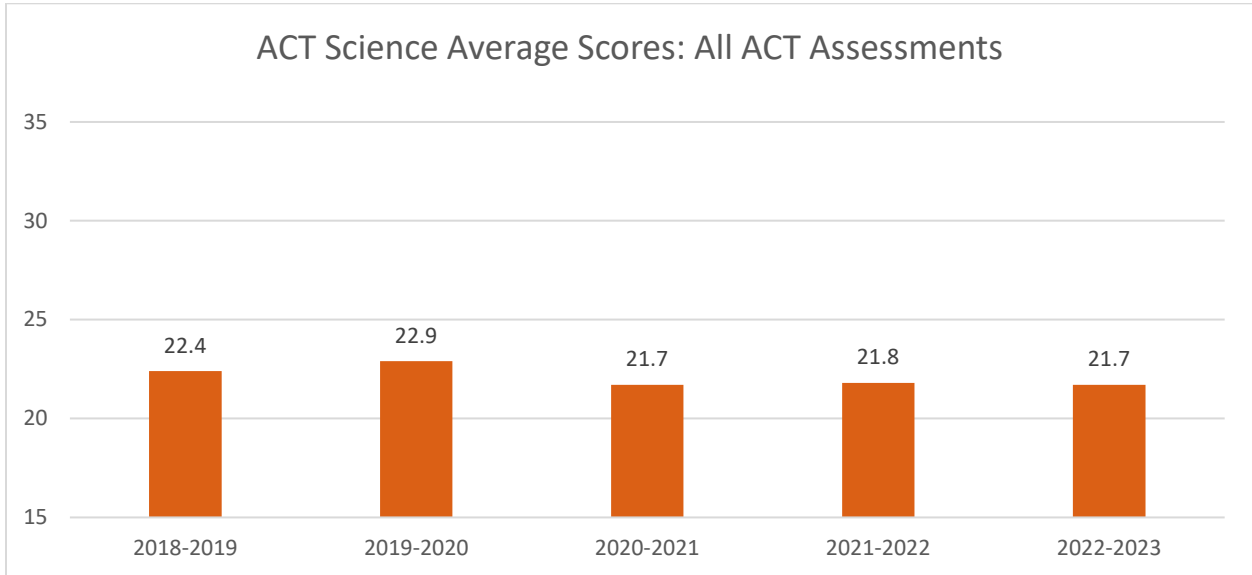
### Spring 2022-2023 Achievement and Growth

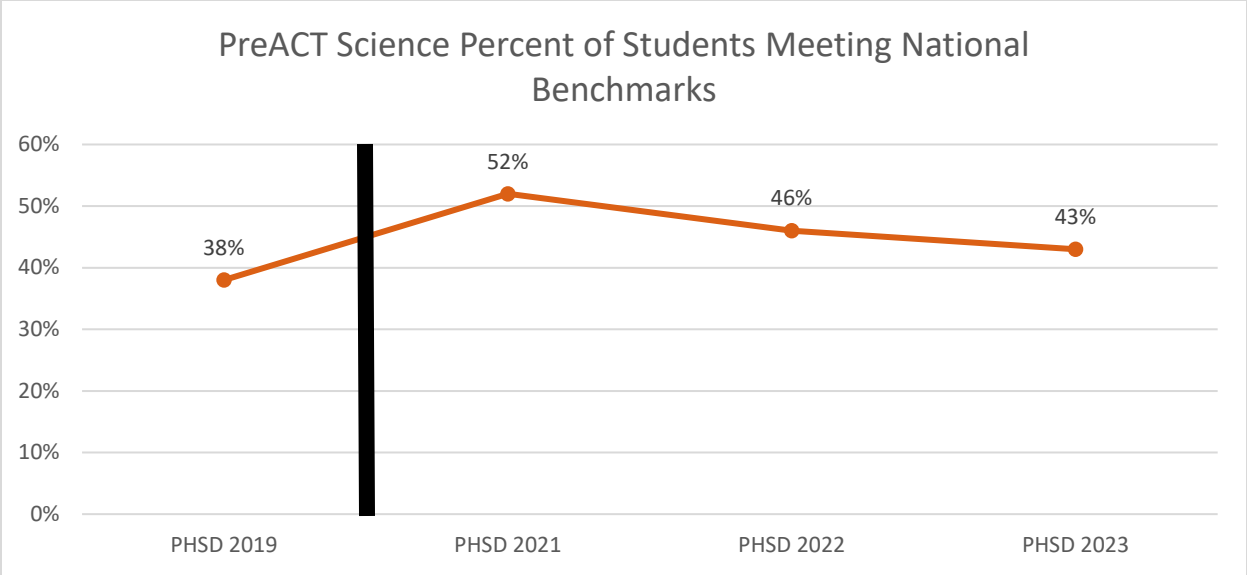
Achievement vs. Growth (Science)		
Grade	Percent > 40th %ile	Percent Meeting Fall to Spring Growth
5	73%	47%
6	73%	55%
7	76%	58%
8	75%	59%
<b>District Total</b>	<b>74%</b>	<b>55%</b>



## ACT and PreACT

Missouri required census testing of all juniors in 2015-2017, which reflects in the graduate scores of 2016-2018. Park Hill continued to census test all juniors after the state discontinued the process. The PreACT assessment was first administered in Park Hill in 2018.





**Advanced Placement Exams**

Students are not required to take an Advanced Placement (AP) course during high school; students are not required to take the AP exam when enrolled in the AP course. A score of a “3” or higher is considered a passing score on the AP exams. Many colleges will not award credit for scores below a “3.” AP exams administered during the 2021-2022 school year were administered in person on paper.

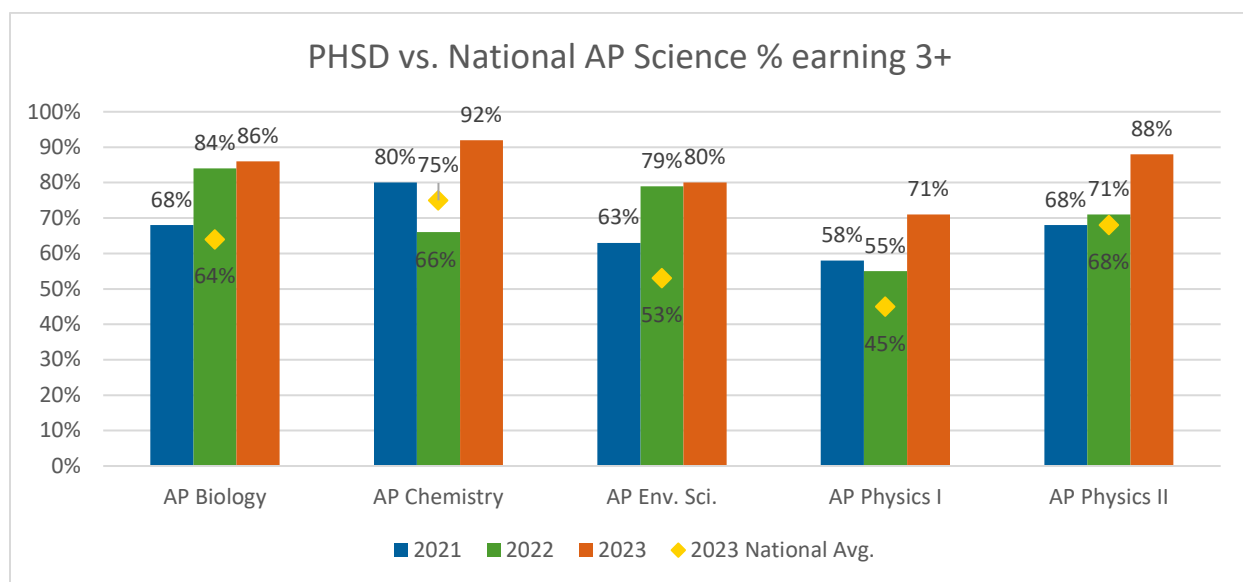
<b>AP Biology</b>	<b>2018-2019</b>	<b>2019-2020</b>	<b>2020-2021</b>	<b>2021-2022</b>	<b>2022-2023</b>
Number of students who took exams	98	53	66	57	70
Students scoring 3+	74	41	45	48	60
% scoring 3+	76%	77%	68%	84%	86%
Mean Score	3.22	3.17	3.03	3.44	3.6

<b>AP Chemistry</b>	<b>2018-2019</b>	<b>2019-2020</b>	<b>2020-2021</b>	<b>2021-2022</b>	<b>2022-2023</b>
Number of students who took exams	61	59	25	41	37
Students scoring 3+	34	39	20	27	34
% scoring 3+	56%	66%	80%	66%	92%
Mean Score	2.62	2.86	3.48	2.93	3.5

AP Environmental Science	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Number of students who took exams	44	73	30	65	69
Students scoring 3+	27	46	19	51	55
% scoring 3+	61%	63%	63%	79%	80%
Mean Score	3.05	3.03	3.17	3.45	3.4

AP Physics I	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Number of students who took exams	24	46	43	38	28
Students scoring 3+	17	28	25	21	20
% scoring 3+	71%	61%	58%	55%	71%
Mean Score	3.13	2.79	2.77	2.82	3.3

AP Physics II	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Number of students who took exams	24	33	38	31	24
Students scoring 3+	16	22	26	22	21
% scoring 3+	67%	67%	68%	71%	88%
Mean Score	2.92	2.94	3.08	3.13	3.4



# Science Analysis: Value-Added, Comparisons, Trends

	Elementary			Middle School			High School		
	L	T	C	L	T	C	L	T	C
Science									

## Codes for LeTCI Analysis Indicators

<b>Levels (L)</b>	<ul style="list-style-type: none"> <li><span style="color: #3498db;">■</span> achievement levels exceed the goal (stretch) on the PHSD BSC</li> <li><span style="color: #76b82a;">■</span> achievement levels meet the goal or are moderate on the PHSD BSC</li> <li><span style="color: #f4a460;">■</span> achievement levels are at risk on the PHSD BSC</li> </ul>
<b>Trends (T)</b>	<ul style="list-style-type: none"> <li><span style="color: #3498db;">■</span> means results increased</li> <li><span style="color: #76b82a;">■</span> means results were stable (within 2% of previous data point)</li> <li><span style="color: #f4a460;">■</span> means results decreased</li> </ul>
<b>Comparisons (C)</b>	<ul style="list-style-type: none"> <li><span style="color: #3498db;">■</span> means Park Hill is in the top third of available comparison group data</li> <li><span style="color: #76b82a;">■</span> means Park Hill is in the middle of available comparison group data</li> <li><span style="color: #f4a460;">■</span> means Park Hill is in the bottom third of available comparison group data</li> </ul>

## Levels and Growth

Overall, Park Hill showed average growth in science with average growth at the elementary and middle school level using NWEA. Using ACT Science, high school showed above average growth.

### Elementary

Elementary science growth can be measured using NWEA.

NWEA provides a growth projection for each student based on average growth between windows. For example, if the average growth nationally for a second-grade student scoring a 180 in science is three points, the Park Hill second grade student scoring a 180 will be projected to grow three points. Growth on NWEA can be measured between windows (fall to winter, winter to spring), over the school year (fall to spring), and over the calendar year (fall to fall).

NWEA Science is only administered in grade 5 at the elementary level. Students show below average growth with 47% of the 5<sup>th</sup> grade students meeting their growth goals. NWEA expects half of the student population to meet or exceed their goals.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall science norms, in 2023 Park Hill performed above the national average in grade five.

### Middle School

Middle school level science growth can be measured using NWEA where average growth was observed.

NWEA provides a growth projection for each student based on average growth between windows. For example, if the average growth nationally for an eighth-grade student scoring a 212 in science is three points, the Park Hill eighth grade student scoring a 212 will be projected to grow three points. Growth

on NWEA can be measured between windows (fall to winter, winter to spring), over the school year (fall to spring), and over the calendar year (fall to fall).

NWEA Science is administered in grades 6-8 at the middle school level. Students show above average growth in grades 6-8 on the NWEA Science assessment from Fall to Spring. NWEA expects half of the student population to meet or exceed their goals.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall science norms, in 2023 Park Hill performed above the national average in grades 6-8.

### **High School**

High school science growth can be measured using the science subtest of the PreACT and ACT. We can measure the science scale score from the PreACT (grade 10) to ACT science score (grade 12). PHSD saw an increase from 19.8 to 21.7 with respect to the PreACT and ACT. This is average compared to national trends in Pre-ACT to ACT growth for science.

### **Trends**

Overall, Park Hill science scores on the grade 5 MAP assessment and the Biology EOC have increased while grade 8 was stable, but scores on AP exams have mostly increased.

### **Elementary**

Elementary science trends can be measured on the NWEA and MAP. Using three data points for MAP testing, grade 5 MAP scores have decreased 2% since 2018-2019. NWEA trend data is not available with the science NWEA assessment not required during 2020-2021.

### **Middle School**

Middle School science trends can be measured on NWEA and MAP. Using three data points for MAP testing, Grade 8 has observed a 7% decrease since the 2018-2019 school year and a 3% decrease from 2020-2021. NWEA trend data is not available with the science NWEA assessment not required during 2020-2021.

### **High School**

High School math trends can be measured on the Biology EOC, the science portion of the ACT and PreACT, and the Advanced Placement assessments: Biology, Chemistry, Environmental Science, Physics I and Physics II. Overall, results at the high school level observed a decrease.

The state of Missouri requires all students to take the Biology EOC to graduate. Between the 2018-2019 school year and the 2022-2023 school year the Park Hill School district has observed a 2% increase in the percent of students achieving proficient or advanced.

The state of Missouri began census testing all juniors with the ACT in 2015. While the state has discontinued this practice, Park Hill still administers the ACT to all juniors. Because of this change in practice, ACT graduate trend data begins in 2016 with census testing. Park Hill tested 97% of all graduating seniors in 2016 and tested 99% of all graduating seniors between 2017 and 2019, 96% in 2020, 87% in 2021, and 93% in 2022. ACT science scores have decreased and are trending low from 2019 to 2022 with a difference of -0.4 points but have remained stable for the last three years. **Upon release of the 2023 ACT data, this information will be updated.**

The Advanced Placement (AP) assessments are optional to students enrolled in the courses. The average composite score on the AP Biology exam has increased from 2019-2023 with a change of +0.38. The average composite score on the AP Chemistry exam has increased from 2019-2023 (+0.88). The average composite score on the AP Environmental Science exam has increased from 2019-2023 with a change of +0.35. The average composite score on the AP Physics I exam has increased from 2018-2022 with a change of +0.20. The average composite score on the AP Physics II exam has increased from 2018-2022 (+0.48).

### **Comparisons**

Nationally, the Park Hill School District showed high achievement levels in elementary, middle, and high school on national assessments. Local comparisons cannot be made now as data has not been released from DESE.

#### **Elementary**

Elementary science comparisons can be made statewide using the Missouri Assessment Program and nationally using NWEA. Local comparisons cannot be made now as data has not been released from DESE.

Using the Missouri Assessment program data, comparisons can be made to the state overall. In grade five, Park Hill students scored 54% proficient or advanced while the state performed at 41% proficient or advanced. Park Hill scored above the state average at the elementary level. Local comparisons cannot be made now as data has not been released from DESE.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall science norms, in 2023 Park Hill fifth grade students performed above national norms.

#### **Middle School**

Middle level science comparisons can be made statewide using the Missouri Assessment Program and nationally using NWEA. Local comparisons cannot be made now as data has not been released from DESE.

Using the Missouri Assessment program data, comparisons can be made to the state overall. In grade eight, Park Hill students scored 45% proficient or advanced while the state performed at 38% proficient or advanced. Park Hill scored high compared to the state average in science. Local comparisons cannot be made now as data has not been released from DESE.

NWEA provides national norms for each grade level based on the testing window (fall, winter, and spring). Based on fall science norms, in 2023 Park Hill performed above the national average in grades 6-8.

#### **High School**

High school science comparisons can be made statewide using the Missouri Assessment Program, statewide and nationally using ACT & PreACT, and nationally using the Advanced Placement assessments: Biology, Chemistry, Environmental Science, Physics I and Physics II. Local comparisons cannot be made now as data has not been released from DESE.



Using the Missouri Assessment program data, comparisons can be made to the state overall. Park Hill scored above the state average on the Biology End of Course exam (57% proficient or advanced in Park Hill; 39% proficient or advanced in the state of Missouri). Park Hill scored high compared to the state average in science. Local comparisons cannot be made now as data has not been released from DESE.

Using the ACT, science comparisons can be made to both the state and national ACT averages. In science, 2022 graduates from Park Hill scored above the national average; Park Hill graduates also scored above the Missouri average in science. **Upon release of the 2023 ACT data, this information will be updated.**

The Advanced Placement (AP) assessments are optional to students enrolled in the courses. A score of a “3” or higher is considered a passing score on the AP exams. When comparing the percentage of students in Park Hill who score a “3” or higher to the percent of students nation-wide who score a “3” or higher, Park Hill scores were higher than the national average in AP Biology, AP Chemistry, AP Environmental Science, AP Physics I, and AP Physics II.

## Social Studies

**Student achievement in Social Studies is assessed through the Missouri Assessment Program Government End of Course exam and Advanced Placement exams.**

Social Studies Assessments by Grade

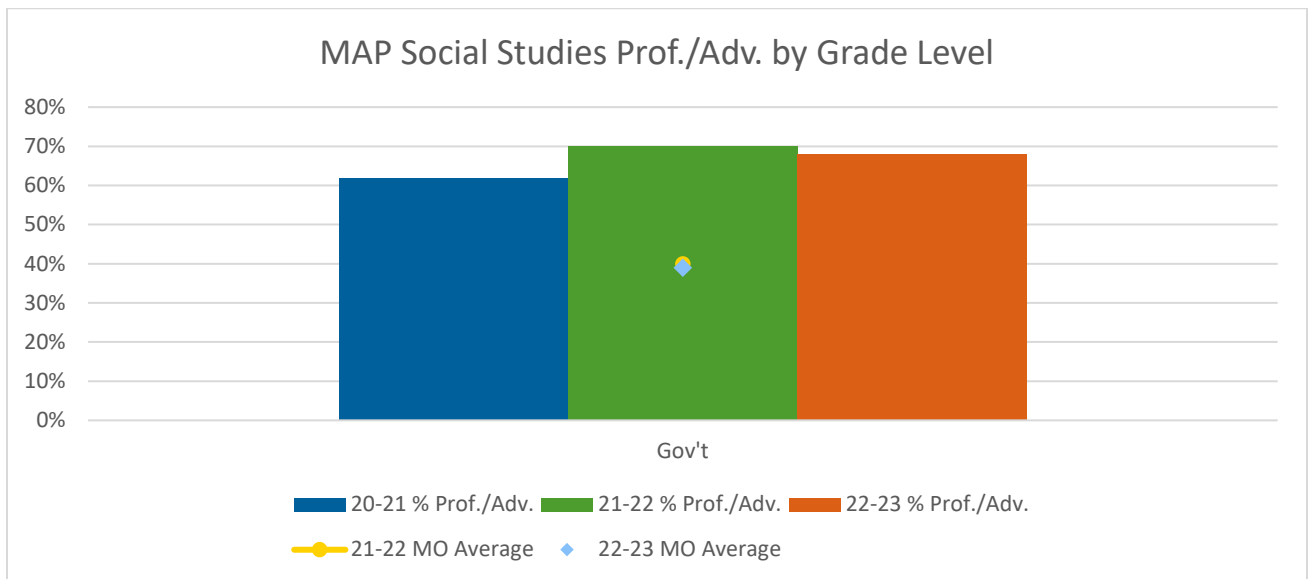
	K	1	2	3	4	5	6	7	8	9	10	11	12
<b>MAP EOC (Govt)</b>													✓
<b>Advanced Placement</b>										✓	✓	✓	✓

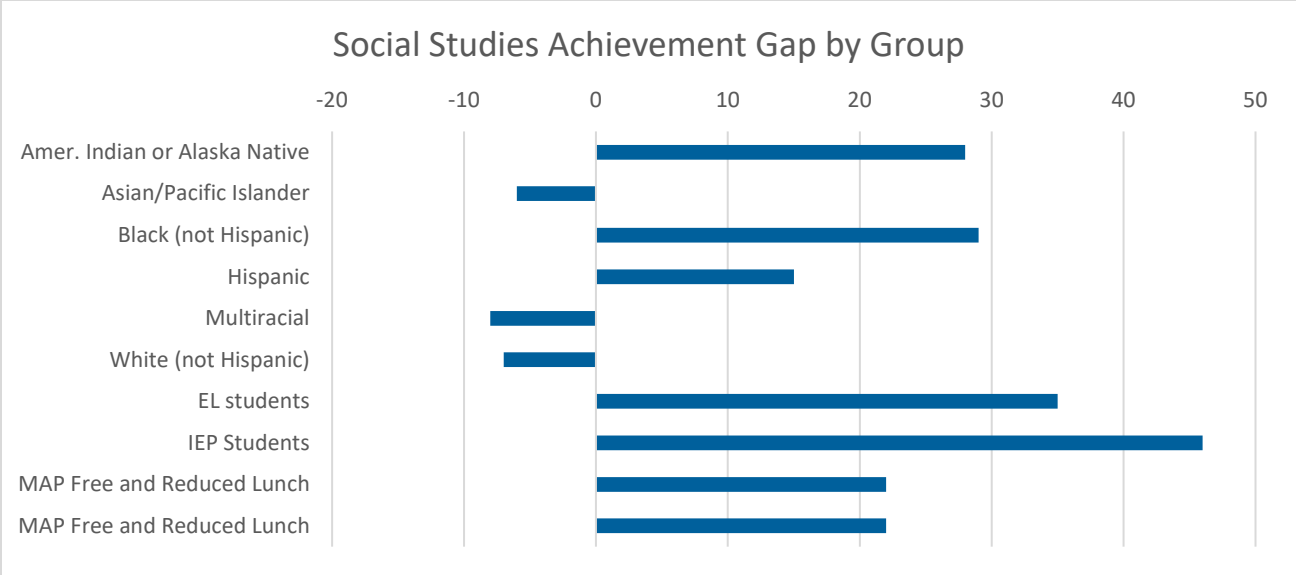
### Missouri Assessment Program (MAP)

The Missouri Assessment Program (MAP) assesses Social Studies through an End of Course exam in high school Government. The exam includes multiple-choice items, enhanced technology items, performance tasks, and constructed response items. Scale scores are reported for the total test based on four performance levels: Below Basic, Basic, Proficient, and Advanced. The MAP test administered in 2019 was a field test with no scores reported.

#### MAP Social Studies Percent Proficient or Advanced PHSD vs. State

Content Area	Grade or EOC	PHSD Prof./Adv. 2021-2022	PHSD Prof./Adv. 2022-2023	PHSD Change	State Prof./Adv. 2021-2022	State Prof./Adv. 2022-2023	State Change	Diff. between PHSD and State
Social Studies	Gov't	70%	68%	-2%	40%	39%	-1%	29%





**Advanced Placement Exams**

Students are not required to take an Advanced Placement (AP) course during high school; students are not required to take the AP exam when enrolled in the AP course. A score of a “3” or higher is considered a passing score on the AP exams. Many colleges will not award credit for scores below a “3.” AP exams administered during the 2022-2023 school year were administered in person on paper.

AP European History	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Number of students who took exams	29	26	8	10	3
Students scoring 3+	19	16	6	7	2
% scoring 3+	66%	62%	75%	70%	67%
Mean Score	3	3.04	3.5	3.5	3.7

AP Human Geo.	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Number of students who took exams	124	96	128	121	85
Students scoring 3+	93	66	88	56	67
% scoring 3+	56%	69%	69%	65%	79%
Mean Score	3.29	2.95	3.13	2.92	3.4

AP Macroeconomics	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Number of students who took exams	28	1	31		35
Students scoring 3+	20	1	21		24
% scoring 3+	71%	100%	68%		69%
Mean Score	3.5	4	3.19		3.3

<b>AP Microeconomics</b>	<b>2018- 2019</b>	<b>2019- 2020</b>	<b>2020- 2021</b>	<b>2021- 2022</b>	<b>2022- 2023</b>
Number of students who took exams		28		28	
Students scoring 3+		20		20	
% scoring 3+		71%		71%	
Mean Score		3.1		3.5	

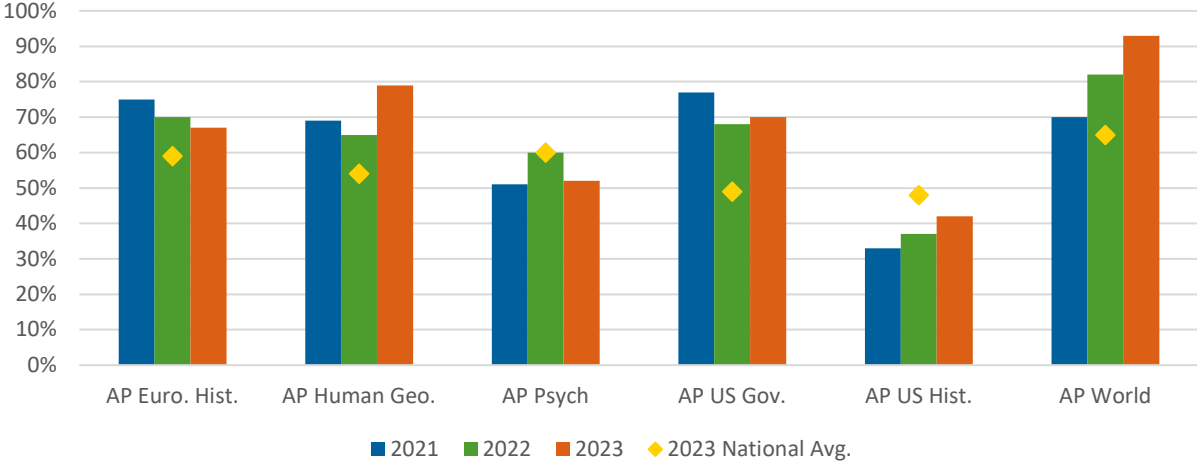
<b>AP Psychology</b>	<b>2018- 2019</b>	<b>2019- 2020</b>	<b>2020- 2021</b>	<b>2021- 2022</b>	<b>2022- 2023</b>
Number of students who took exams	280	229	213	151	174
Students scoring 3+	170	161	108	89	90
% scoring 3+	61%	70%	51%	60%	52%
Mean Score	2.98	3.08	2.55	2.83	2.7

<b>AP United States Gov. and Politics</b>	<b>2018- 2019</b>	<b>2019- 2020</b>	<b>2020- 2021</b>	<b>2021- 2022</b>	<b>2022- 2023</b>
Number of students who took exams	87	107	61	59	76
Students scoring 3+	68	76	47	40	53
% scoring 3+	78%	71%	77%	68%	70%
Mean Score	3.33	3.18	3.52	3.03	3.3

<b>AP United States History</b>	<b>2018- 2019</b>	<b>2019- 2020</b>	<b>2020- 2021</b>	<b>2021- 2022</b>	<b>2022- 2023</b>
Number of students who took exams	99	118	100	87	89
Students scoring 3+	49	66	33	32	37
% scoring 3+	49%	56%	33%	37%	42%
Mean Score	2.64	2.58	2.16	2.38	2.5

<b>AP World History: Modern</b>	<b>2018- 2019</b>	<b>2019- 2020</b>	<b>2020- 2021</b>	<b>2021- 2022</b>	<b>2022- 2023</b>
Number of students who took exams	19	31	10	22	14
Students scoring 3+	18	24	7	17	13
% scoring 3+	95%	77%	70%	82%	93%
Mean Score	3.63	3.42	3.5	3.27	3.7

### PHSD vs. National AP Social Studies % earning 3+



# Social Studies Analysis: Value-Added, Comparisons, Trends

	Elementary			Middle School			High School		
	L	T	C	L	T	C	L	T	C
Social Studies									

## Codes for LeTCI Analysis Indicators

Levels (L)	<span style="color: blue;">■</span>	achievement levels exceed the goal (stretch) on the PHSD BSC
	<span style="color: green;">■</span>	achievement levels meet the goal or are moderate on the PHSD BSC
	<span style="color: orange;">■</span>	achievement levels are at risk on the PHSD BSC
Trends (T)	<span style="color: blue;">■</span>	means results increased
	<span style="color: green;">■</span>	means results were stable (within 2% of previous data point)
	<span style="color: orange;">■</span>	means results decreased
Comparisons (C)	<span style="color: blue;">■</span>	means Park Hill is in the top third of available comparison group data
	<span style="color: green;">■</span>	means Park Hill is in the middle of available comparison group data
	<span style="color: orange;">■</span>	means Park Hill is in the bottom third of available comparison group data

## Levels and Growth

Levels for social studies can be measured by the achievement levels on the MAP EOC and AP assessments. Growth cannot currently be calculated for social studies.

### High School

The Park Hill School District observed elevated levels of achievement on the MAP Government EOC. Park Hill observed 68% of students achieving proficient or advanced on this exam. AP Social Studies exams observed average to high achievement.

## Trends

Overall, Park Hill social studies scores have remained stable for AP Exams and MAP EOC scores.

### High School

High School social studies trends can be measured on Advanced Placement assessments. MAP EOC has remained stable.

The Advanced Placement (AP) assessments are optional to students enrolled in the courses. The average composite score on the AP European History exam has increased from 2019-2023 with a change of +0.70. The average composite score on the AP Human Geography exam has increased from 2019-2023 (+0.11). The average composite score on the AP Psychology exam has declined from 2019-2023 with a change of -0.28. The average composite score on the AP US Government exam has decreased from 2019-2023 (-0.03). The average composite score on the AP US History exam has decreased from 2019-2023 (-0.14). The average composite score on the AP World History exam has increased from 2019-2023 with a change of +0.07.

## **Comparisons**

Nationally, the Park Hill School District showed high achievement levels in elementary, middle, and high school on national assessments. Local comparisons cannot be made now as data has not been released from DESE.

### **High School**

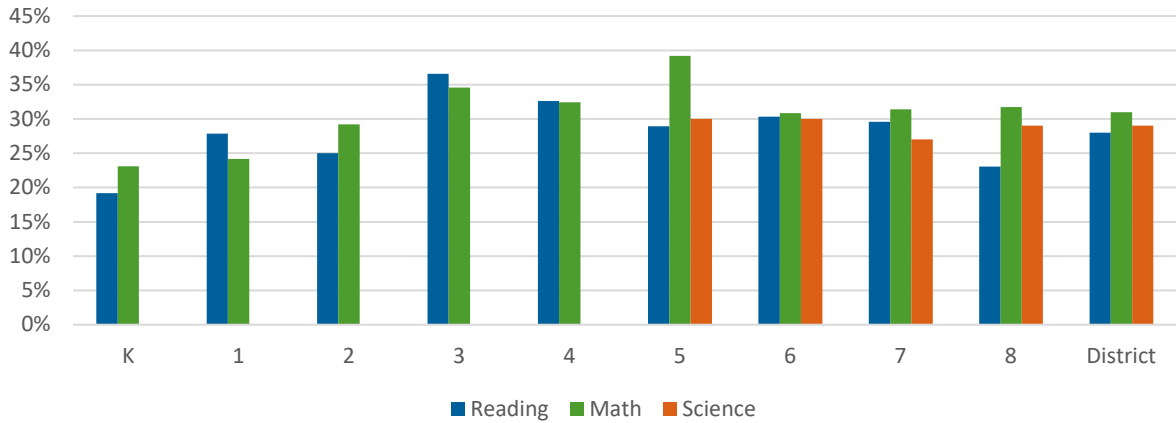
High school social studies comparisons can be made locally and statewide using the Missouri Assessment Program (2022), and nationally using Advanced Placement assessments: European History, Human Geography, Macroeconomics, Psychology, US Government, US History, and World History. Local comparisons cannot be made now as data has not been released from DESE.

Using the Missouri Assessment program data from 2022, comparisons can be made to the state overall. In 2022, Park Hill scored above the state average on the Government End of Course exam (68% proficient or advanced in Park Hill; 39% proficient or advanced in the state of Missouri). Local comparisons cannot be made now as data has not been released from DESE.

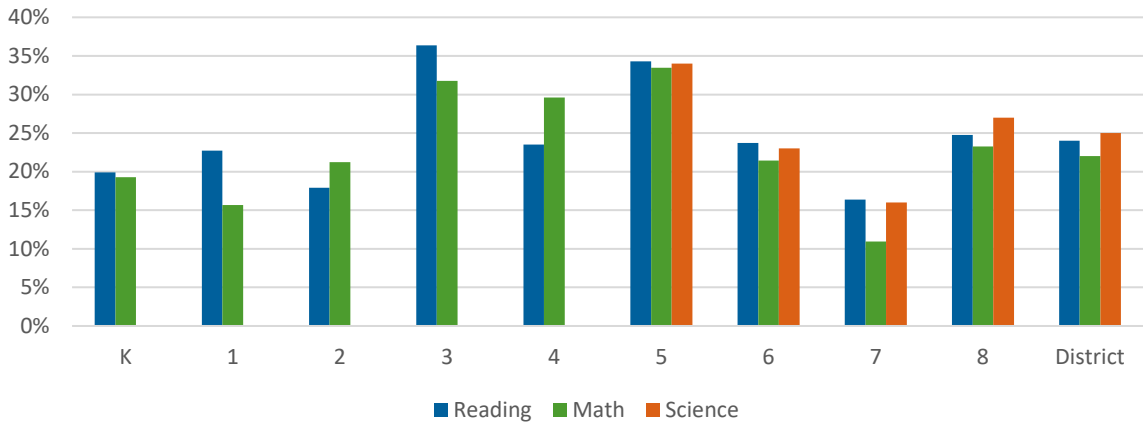
The Advanced Placement (AP) assessments are optional to students enrolled in the courses. A score of a "3" or higher is considered a passing score on the AP exams. When comparing the percentage of students in Park Hill who score a "3" or higher to the percent of students nation-wide who score a "3" or higher, Park Hill scores were higher than the national percentage in AP European History, Human Geography, Macroeconomics, US Government, and World History. Park Hill scores were below the national percentage in AP Psychology and US History.

Miscellaneous Data

NWEA Achievement: Difference between Gap and Non-Gap Students: Spring 2023

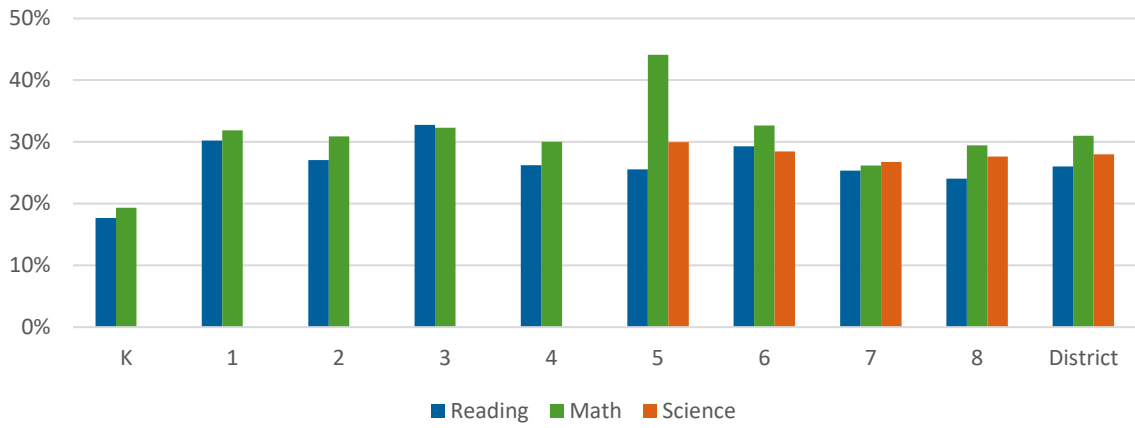


NWEA Achievement: Difference between ELD and Non-ELD Students: Spring 2023

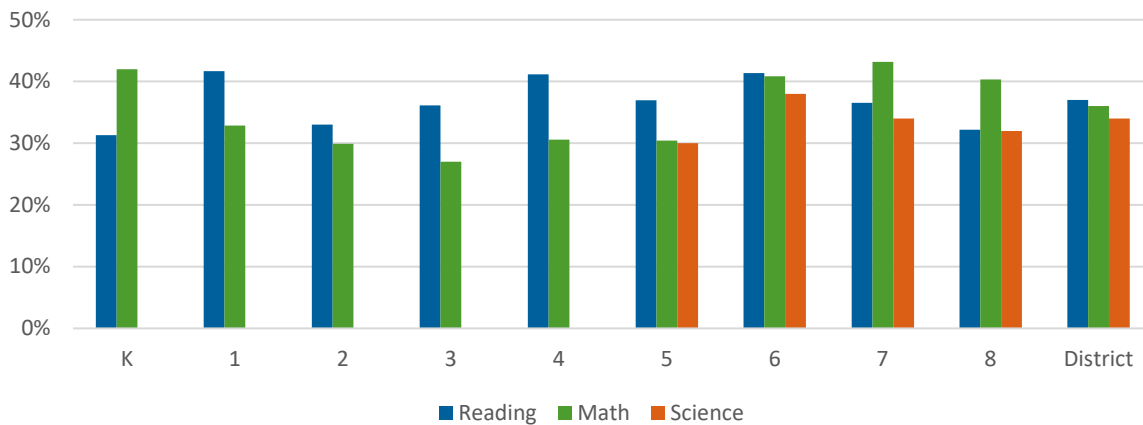


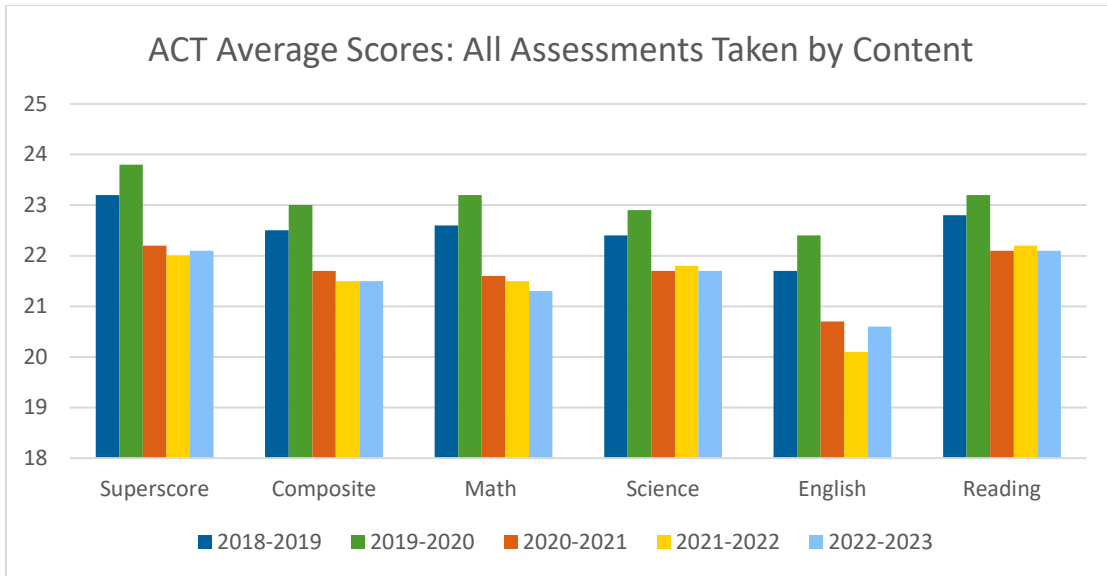


NWEA Achievement: Difference between FR and Non-FR students: Spring 2023

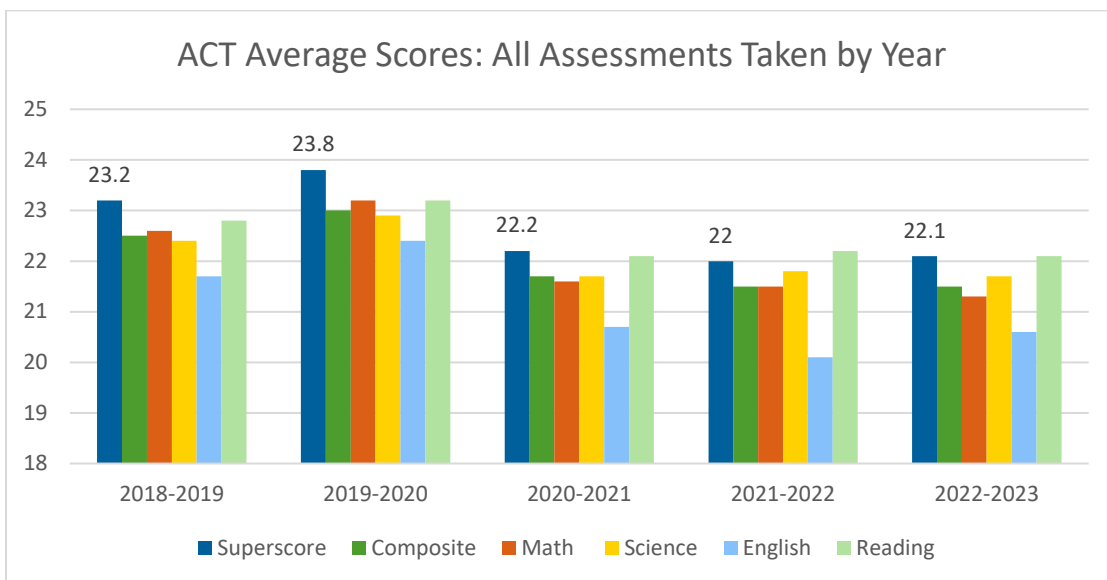


NWEA Achievement: Difference between SPED and Non-SPED students: Spring 2023





Composite and math have seen a decline each year since 2019-2020. Reading and science have been stable from 2020-2021. Super score and English saw a slight increase in 2022-2023.



ELA has historically been the subject with the lowest average scores and continues to decline but saw a slight increase in 2022-2023.

# Appendix A: Comparison Districts

(To be updated upon DESE enrollment and demographic data release)

To find comparable districts with which to benchmark against, the Park Hill School District follows a process based on the Pugh Method created by Stuart Pugh at the University of Strathclyde in Glasgow, Scotland. This takes a list of criteria that help describe the Park Hill School District and creates an index score to be attributed to other districts. Those districts that scored closest to the Park Hill School District were selected to be part of the comparison list.

A committee selected the following items as criteria for comparison: socioeconomic status (percent of students eligible for free or reduced lunch), diversity (percent of minority students), urbanicity, size (number of students), and proximity to Park Hill. The committee then attributed weights to the scores based on priority to give each criteria an index score. Tables A.1 and A.2 are the results of that Pugh Decision Matrix. Any ties were broken by a decision of the committee based on past comparison history.

The following districts were selected as comparison districts: Blue Springs, Platte County, Liberty, Raymore-Peculiar, Lee’s Summit, Belton, Fox, Mehlville, and North Kansas City.

Table A.1: Comparison Matrix

Rank	District	County	%White	%FR	#Students	SES (x5)		Diversity (x5)		Urbanicity (x2)		Size (x3)		Proximity (x5)		Total Index
						Score	Index	Score	Index	Score	Index	Score	Index	Score	Index	
	Park Hill	Platte	68.5	27.4	11458	3	15	3	15	3	6	3	9	3	15	60
1	Blue Springs R-IV	Jackson	71.2	28.9	14380	3	15	3	15	3	6	3	9	2	10	55
2	Platte CO. R-III	Platte	76.9	24.2	4083	3	15	2	10	3	6	2	6	3	15	52
3	Liberty 53	Clay	81	18.4	12364	2	10	1	5	3	6	3	9	3	15	45
4	Raymore-Peculiar R-III	Cass	78.6	25.5	6085	3	15	1	5	3	6	2	6	2	10	42
4	Lee's Summit R-VII	Jackson	75	20.2	17937	2	10	2	10	3	6	2	6	2	10	42
4	Belton 124	Jackson	67.9	51.8	4568	1	5	3	15	3	6	2	6	2	10	42
7	Fox C-6	Jefferson	91.2	30.8	11286	3	15	1	5	3	6	3	9	1	5	40
7	Mehlville R-IX	St. Louis	80.5	28.1	10138	3	15	1	5	3	6	3	9	1	5	40
9	North Kansas City 74	Clay	57.2	47.7	19712	1	5	1	5	3	6	2	6	3	15	37
9	Nixa Public Schools	Christian	86.9	31.8	5947	3	15	1	5	3	6	2	6	1	5	37
9	St. Charles R-VI	St. Charles	72.5	40.6	4806	1	5	3	15	3	6	2	6	1	5	37
9	Parkway C-2	St. Louis	60.7	18.9	17599	2	10	2	10	3	6	2	6	1	5	37
13	Wentzville R-IV	St. Charles	83.1	18.4	16373	2	10	1	5	3	6	3	9	1	5	35
13	Orchard Farm R-V	St. Charles	79.8	28.7	1890	3	15	1	5	2	4	2	6	1	5	35
15	St. Joseph	Buchanan	73.6	71.4	11256	1	5	2	10	2	4	3	9	1	5	33
15	Washington	Franklin	94.4	30.9	3970	3	15	1	5	1	2	2	6	1	5	33

Table A.2: Scoring Guide for Each Factor

	SES (x5)	Diversity (x4)	Urbanicity (x2)	Size (x3)	Proximity (x5)
<b>3</b>	<5% variance	<5% variance	Suburban	<5000 variances	Northland
<b>2</b>	5% - 10% variance	5% - 10% variance	Urban	5000 - 10000 variances	KCMO
<b>1</b>	>10% variance	>10% variance	Rural	>10000 variances	Missouri

**2022-2023 MAP Assessment  
Comparison Information  
(Will be available upon DESE release)**

**PHSD Data**

**ELA**

**Math**

**Science**

**Social Studies**