Lincoln Public Schools Spring Literacy and Math Data Roll-Up
June 2023

Literacy Winter Data in Literacy Grades K-5

Background information on the assessment tools we utilize in K-5 literacy can be found in the fall Data Roll-Up from earlier this year. This spring report is based on DIBELS, the Fountas and Pinnell Benchmark Assessment System (BAS), on-demand writing tasks about their reading and about other topics, ongoing snap/trick word assessments, sentence dictation, running records, and conferences and teacher's observations of students in literacy work throughout the spirng, as well as deeper dive data for students who flag. Kindergarten students are also assessed using Early Bird, a digital tool with 12 subtests across critical foundational skill areas to predict reading ability.

Literacy specialists and teachers work together to determine an overall level for each student. We are using the same terms that MCAS uses, though we recognize that this is more an exercise in finding approximate synonyms than in precision and exact translation.

Not meeting expectations	Partially meeting expectations	Meeting expectations	Exceeding expectations

Overall across the district

Throughout January data meetings, we found that nearly 62% of the 630 students in grades K-5 met or exceeded benchmark expectations. Of the remaining 38% of students across the district, two-thirds were slightly below benchmark and the other third more significantly below benchmark.

The three charts below show the progression from fall, to winter, and then spring across our district.

Literacy: Spring 2023

Literacy: Fall 2022

Literacy: Winter 2023

Literacy: Spring 2023
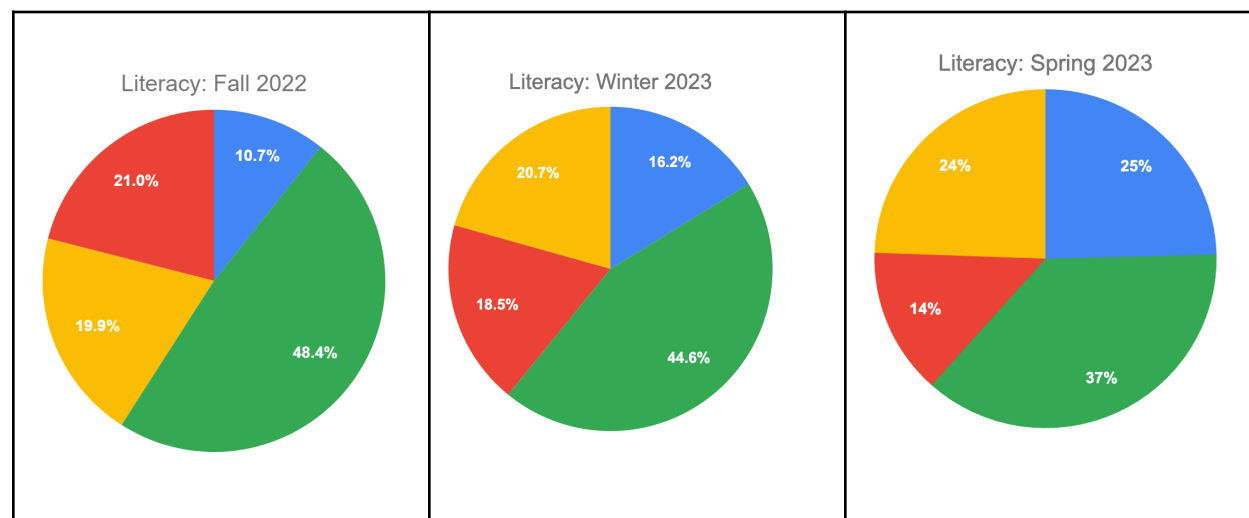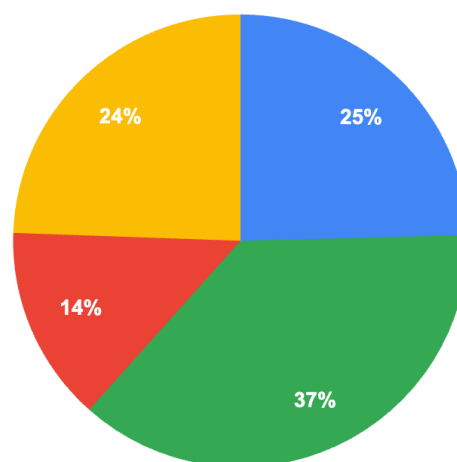
The charts below illustrate the percentage of students in each of these four levels, disaggregated by campus. 54% of students on the Hanscom campus met or exceeded benchmark expectations, as did 68% of students on the Lincoln campus.

Hanscom Campus (286)	Lincoln Campus (344)
Hanscom Literacy: Spring 2023	Lincoln Literacy: Spring 2023
16% 31% 15% 38%	19% 32% 13% 36%
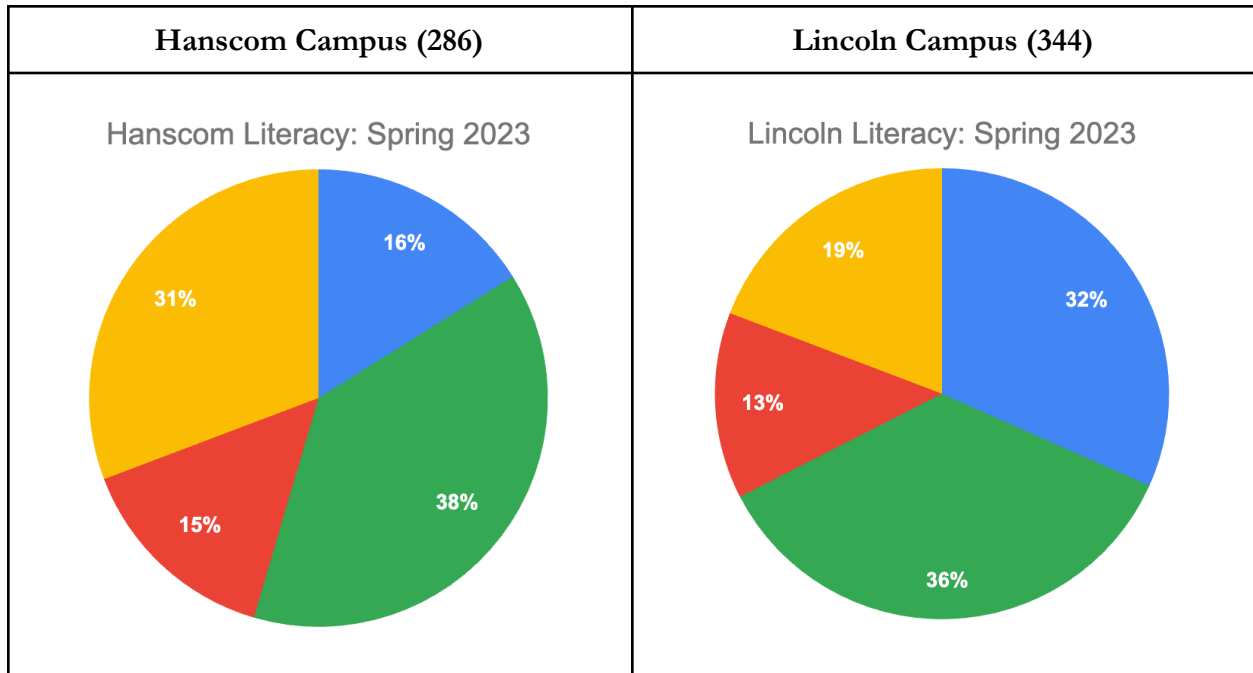
Distribution Across Grades

The charts below show the distribution of overall levels across grades on each campus.

Literacy by Grade on Lincoln Campus: Spring 2023

Grade	Blue	Green	Yellow	Red
K	34%	39%	20%	7%
1	27%	39%	24%	10%
2	39%	44%	11%	6%
3	29%	27%	18%	25%
4	37%	29%	21%	14%
5	22%	39%	22%	18%
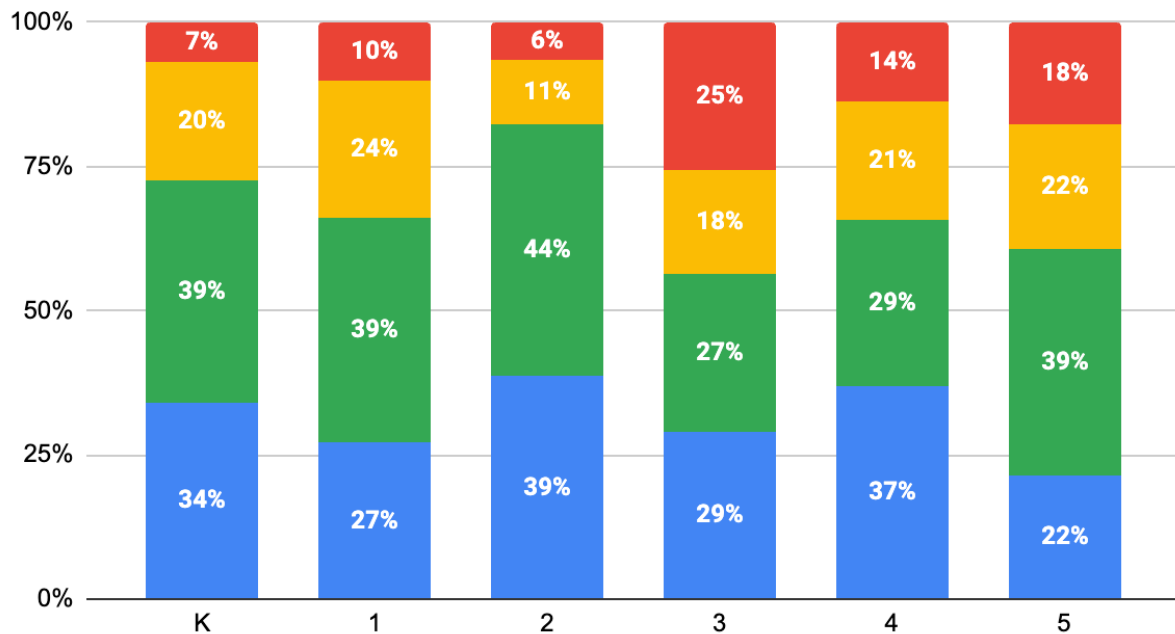
Literacy by Grade on Hanscom Campus: Spring 2023

Grade	Blue	Green	Yellow	Red
K	6%	47%	17%	31%
1	18%	45%	27%	10%
2	22%	35%	29%	4%
3	20%	37%	30%	15%
4	4%	26%	49%	10%
5	23%	47%	30%	21%
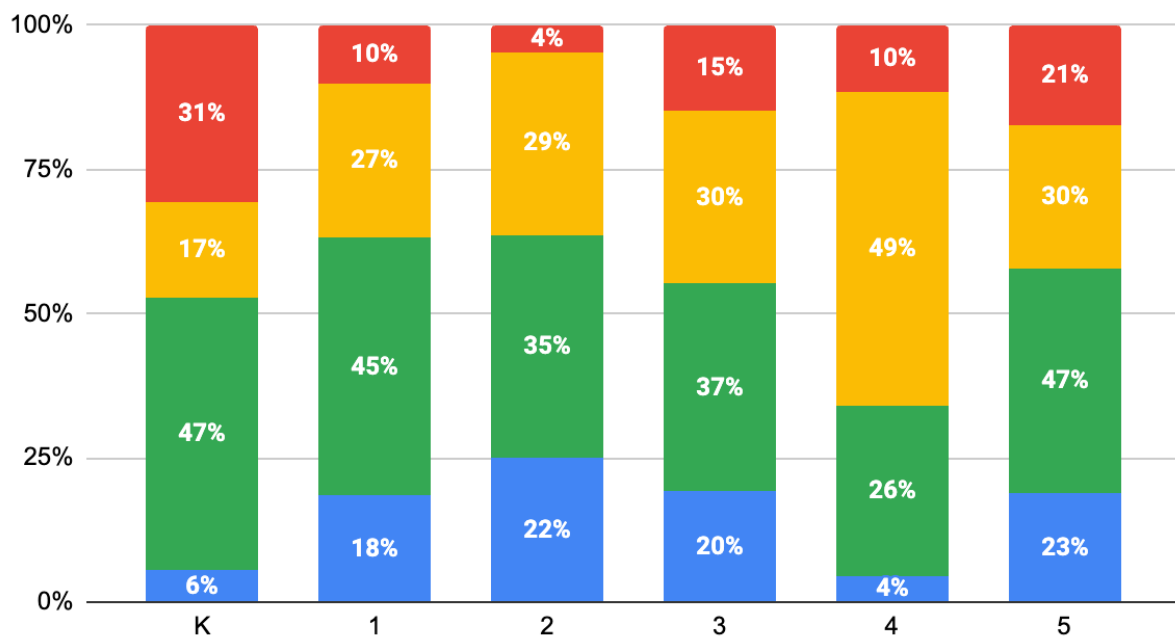
Hanscom Campus

Differences Across Racial Identities

When we disaggregate our diagnostic data in literacy by racial identities at Hanscom, we can see differences across groups, just like many of our other data sources, including MCAS and annual surveys. Note that data was suppressed for racial groups whose n-size was below 5 and thus individually identifiable.

It is challenging to draw significant meaning when n-sizes are small since the data is statistically less reliable. For example, for Asian and Black students in grades 1-5 at Hanscom, a single student represents 7-9 percentage points and can significantly impact the overall trend. With higher numbers of Latinx and White students the results are more reliable.

Spring 2023 Literacy by Race on Hanscom Campus

	Asian (11)	Black (12)	Latinx (61)	Multiracial/Non Latinx (27)	White (173
Not Meeting Expectations	—	25%	25%	15%	12%
Partially Meeting Expectations	27%	33%	36%	26%	30%
Meeting Expectations	27%	25%	31%	33%	43%
Exceeding Expectations	45%	17%	8%	26%	16%
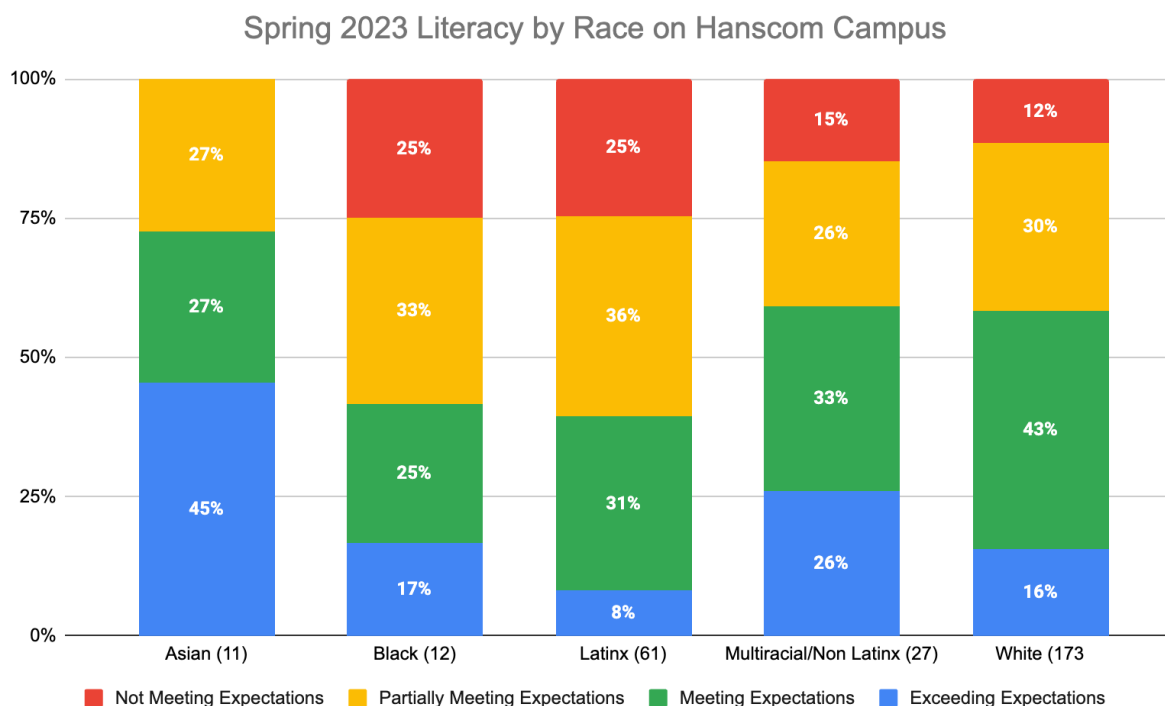
Differences Across Other Demographics

We also disaggregated by gender, English learner (EL) status, and special education status.
Data was suppressed for demographic groups whose n-size was below 5 and thus individually identifiable. Overall data trends look similar in the winter compared to the fall with small exceptions.

Spring 2023 Literacy by Demographic Groups on Hanscom Campus

Demographic Group	Exceeding Expectations	Meeting Expectations	Partially Meeting Expectations	Not Meeting Expectations
Female-identifying (142)	19%	39%	31%	11%
Male-identifying (144)	13%	38%	31%	19%
Not English Learners (277)	17%	39%	31%	14%
English Learners (9)		22%	33%	44%
Students without Disabilities (227)	20%	44%	29%	6%
Students with Disabilities (59)		15%	37%	47%

Differences between male- and female-identifying students smoothed out between the fall and winter. It is important to highlight the n-size for ELs at Hanscom: this group only includes 9 students, so each student constitutes over 10% of the total group, making this data potentially subject to big swings. Data for our students with disabilities continues to stand out. This group includes students with a wide range of disabilities, some related to language and literacy and others for different diagnoses.

Lincoln Campus

Differences Across Racial Identities

Compared to the Hanscom campus, the total number of students in each racial group are more similar, which makes the data more reliable and easier to compare across groups. Data was suppressed for racial groups whose n-size was below 5 and thus individually identifiable.

Spring 2023 Literacy by Race on Lincoln Campus

Race	Not Meeting Expectations	Partially Meeting Expectations	Meeting Expectations	Exceeding Expectations
Asian (29)		10%	45%	45%
Black (40)	40%	33%	20%	8%
Latinx (38)	26%	24%	39%	11%
Multiracial/Non Latinx (46)	20%	13%	33%	35%
White (191)	6%	18%	38%	38%

Legend: ■ Not Meeting Expectations ■ Partially Meeting Expectations ■ Meeting Expectations ■ Exceeding Expectations
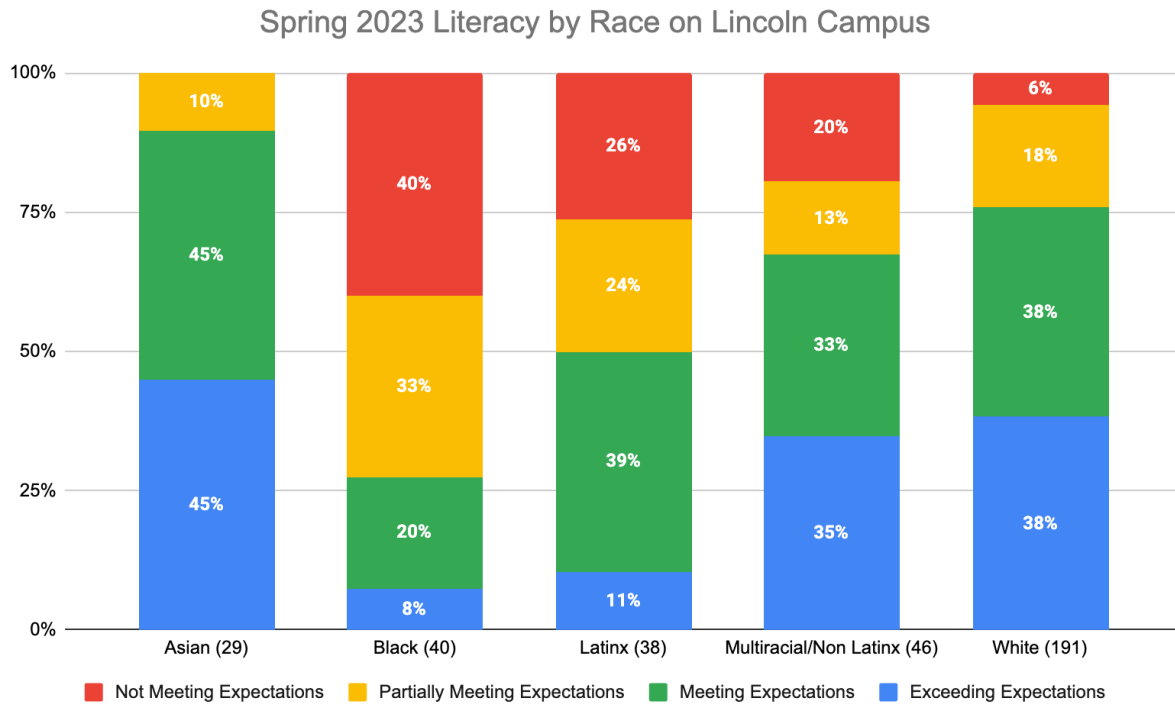
Differences Across Other Demographics

While all the students at Hanscom live on the Base, our students in Lincoln come from three different sets of communities including Boston, Lincoln, and the various towns or cities that staff children reside, each of which has diversity across various spectrums within themselves. The size of the staff children group in grades 1-5 is very small, so the data is significantly less reliable. But, when we compare Boston-resident students to Lincoln-resident students we notice a sizable difference particularly in the percentage of students who are not meeting benchmark expectations or exceeding them.

Spring 2023 Literacy by Residency

	Boston (60)	Lincoln (274)	Other (10)
Not Meeting Expectations	37%	9%	
Partially Meeting Expectations	28%	15%	70%
Meeting Expectations	27%	38%	20%
Exceeding Expectations	8%	38%	10%
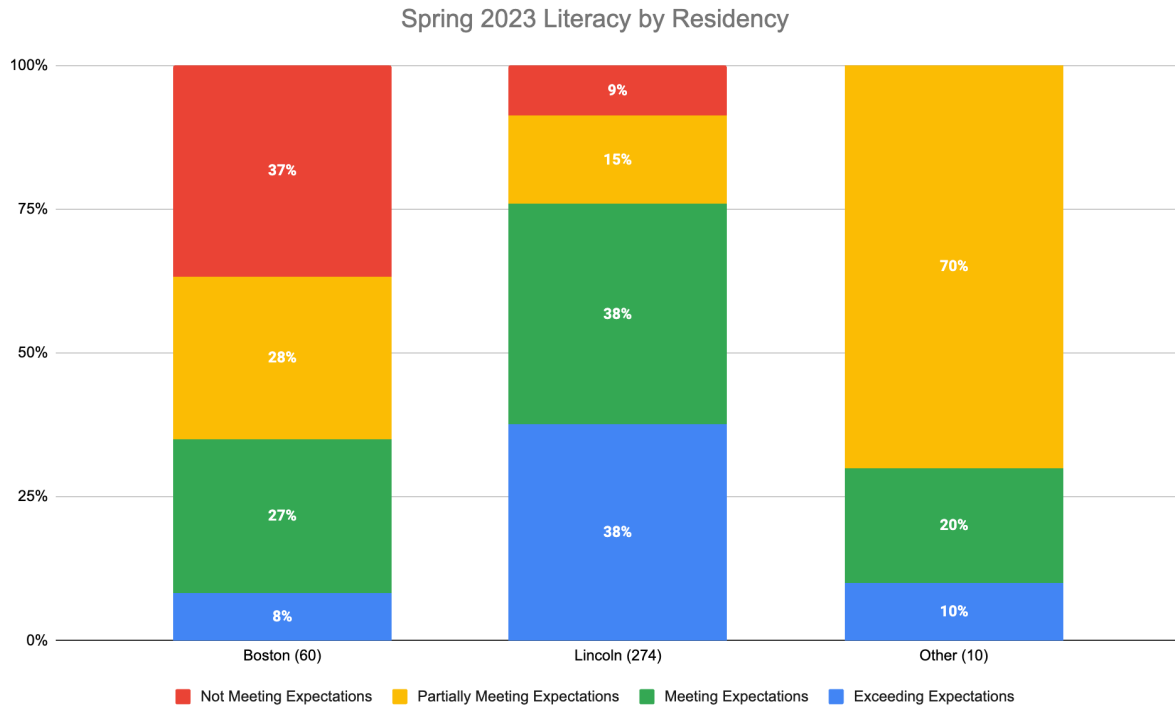
Similar to the Hanscom campus, the following chart shows data for a subset of demographic groups:

Spring 2023 Literacy by Demographic Groups on Lincoln Campus

Demographic Group	Exceeding Expectations	Meeting Expectations	Partially Meeting Expectations	Not Meeting Expectations
Female-identifying (180)	33%	38%	19%	11%
Male-identifying (163)	31%	33%	20%	17%
Not English Learners (318)	34%	36%	19%	12%
English Learners (23)	9%	39%	22%	30%
Students without Disabilities (280)	38%	40%	18%	4%
Students with Disabilities (64)	3%	17%	27%	53%

Exceeding Expectations ■ Meeting Expectations ■ Partially Meeting Expectations ■ Not Meeting Expectations

i-Ready Grades K-8

This fall, we adopted the i-Ready math diagnostic assessment for all students in kindergarten through eighth grade and students took the diagnostic assessment for a second time in January. We continue to learn how best to administer the assessment and how to interpret results. Two critical points to underscore:

1. In this first year of using i-Ready, we are interested in analyzing and reporting data after each diagnostic at the district and campus level to a deeper extent than we plan to in subsequent years, when we expect to pivot our attention to focus much more heavily on supporting individual teachers and teams of teachers in triangulating and using data to plan for instruction.

2. i-Ready data comes from a single, mostly multiple-choice online assessment, given three times a year. The data it provides is helpful for what it specifically was designed to illustrate. Our district's Portrait of a Learner and our goals and philosophy in math instruction aim for a significantly broader and deeper understanding and application of mathematical thinking. Thus, i-Ready data should be combined with other data sources to develop a full picture of what our students know and can do.

Overall across the district

The chart below illustrates the relative overall placement for K-8 students across the district:

Spring 2023 i-Ready Relative Overall Placement Across District

- 3 or More Grade Levels Below ● 2 Grade Levels Below ● 1 Grade Level Below ● Early On Grade Level ● Mid or Above Grade Level

Fall 2022 i-Ready Relative Overall Placement Across District

Spring 2023 i-Ready Relative Overall Placement Across District
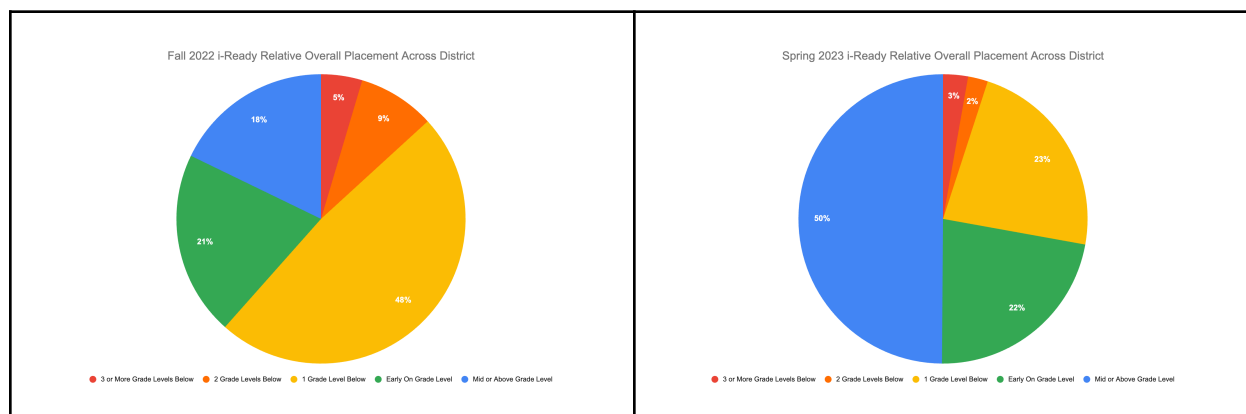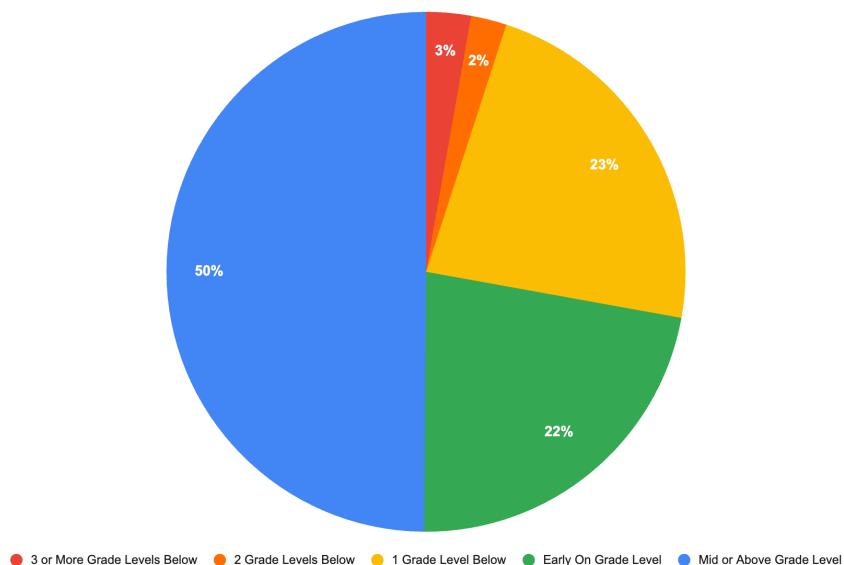
Of note is that across the district the percentage of students performing below grade level decreased from the fall to the winter and the percentage of students early on grade level or above increased, which is exactly what we want to see. The table below highlights these changes:

Relative Overall Placement	Fall	Winter	Spring	Fall→Spring Change
Mid or Above Grade Level	18	30	50	+32
Early On Grade Level	21	22	22	+1
1 Grade Level Below	48	39	23	-25
2 Grade Levels Below	9	5	2	-7
3 or More Grade Levels Below	5	4	3	-2

The breakdown of relative overall placements differs between the two campuses. The percentages of students scoring 2-3 grade levels below are not significantly different, but about 10% more students on the Lincoln campus are mid or above grade level while 10% more students on the Hanscom campus are 1 grade level below. Significantly more students at Hanscom placed early on, mid, or above grade level and less students placed below grade level than in the fall.

Spring 2023 i-Ready Relative Overall Placement on Hanscom Campus
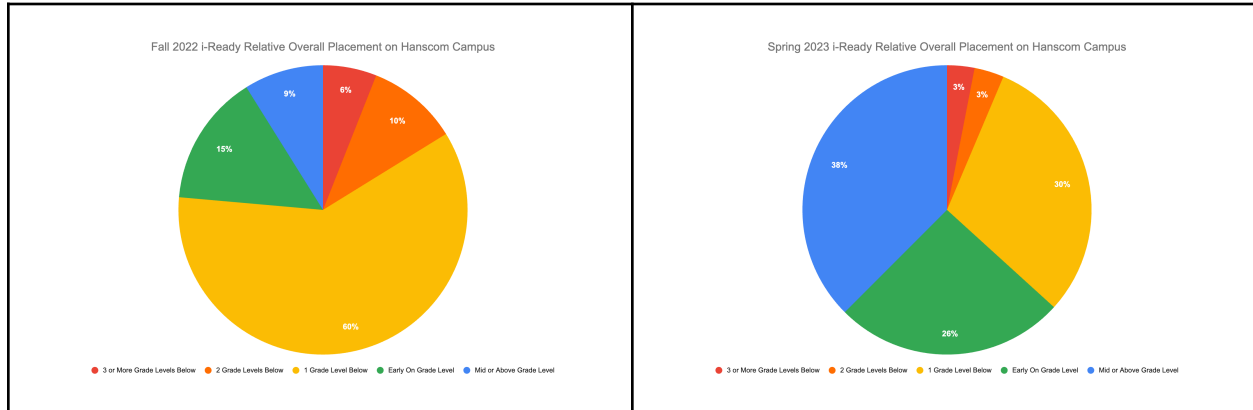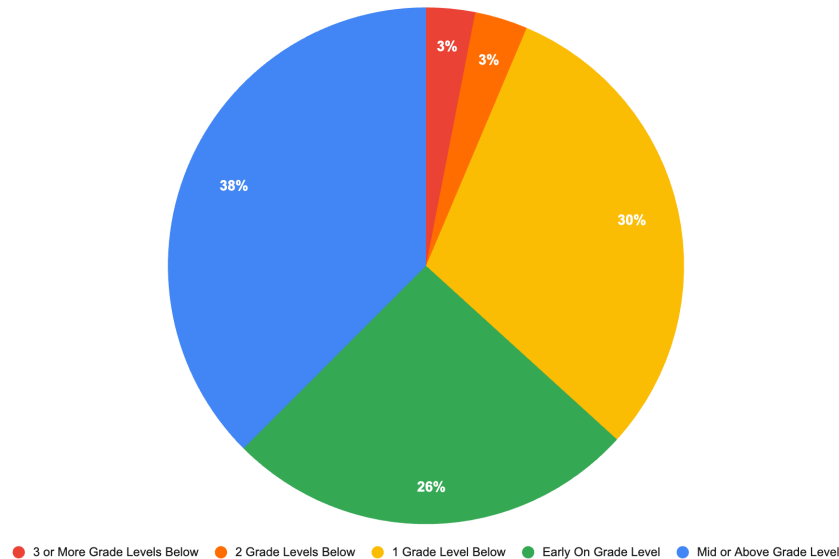
● 3 or More Grade Levels Below   ● 2 Grade Levels Below   ● 1 Grade Level Below   ● Early On Grade Level   ● Mid or Above Grade Level

Fall 2022 i-Ready Relative Overall Placement on Hanscom Campus

Spring 2023 i-Ready Relative Overall Placement on Hanscom Campus

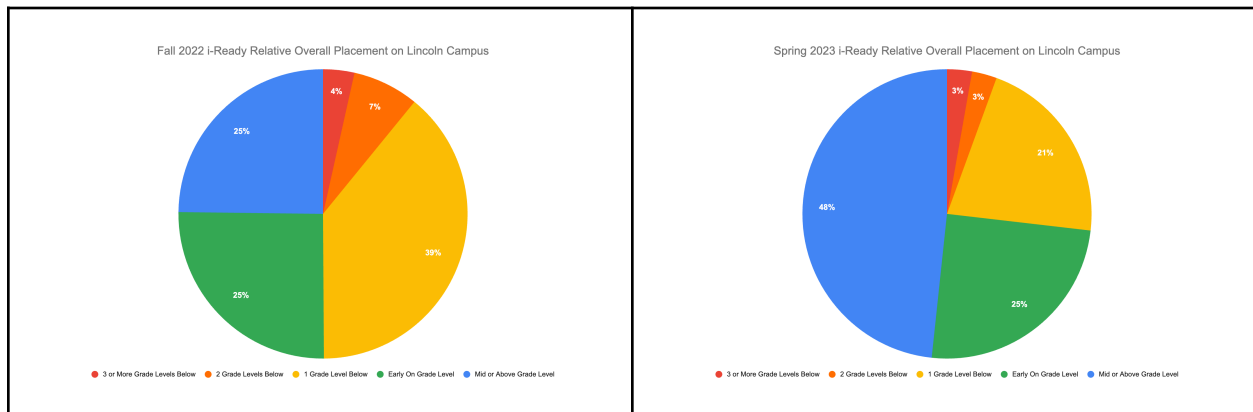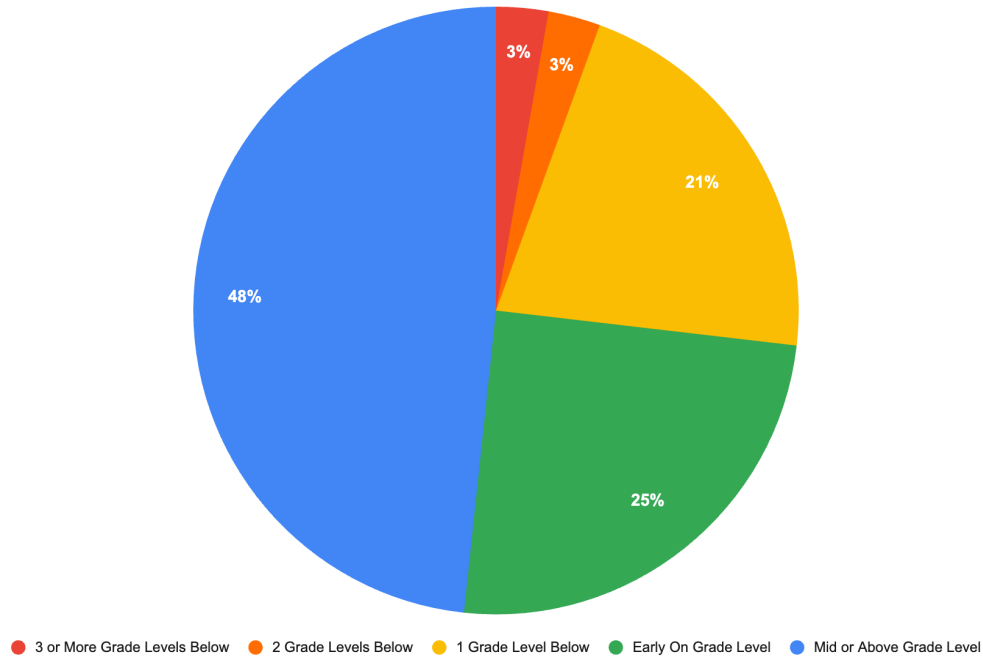| Relative Overall Placement	Fall	Winter	Spring	Fall→Spring Change
Mid or Above Grade Level	9	16	38	+29
Early On Grade Level	15	24	26	+11
1 Grade Level Below	60	50	30	-30
2 Grade Levels Below	10	7	3	-7
3 or More Grade Levels Below	6	4	3	-3

On the Lincoln campus, significantly less students were below grade level in compared to the fall and a significantly higher percentage of students placed mid or above grade level.

Spring 2023 i-Ready Relative Overall Placement on Lincoln Campus

Relative Overall Placement	Fall	Winter	Spring	Fall→Spring Change
Mid or Above Grade Level	25	41	48	+23
Early On Grade Level	25	20	25	0
1 Grade Level Below	39	31	21	-18
2 Grade Levels Below	7	4	3	-4
3 or More Grade Levels Below	4	4	3	-1

Distribution Across Grades

We examined the scores of students across grade levels. In the fall, we noticed that students in the upper grades 4-8 scored Early On Grade Level and Mid or Above Grade Level at higher rates than students in grades 1-3; this seems to have flipped. Students in Kindergarten can only be considered one grade level below if they are not early on grade level. Similarly, students in first grade can only be one or two grade levels below if they are not early on grade level.

Spring 2023 i-Ready Overall Relative Placement by Grade Level Across District

Legend: 3 or More Grade Levels Below | 2 Grade Levels Below | 1 Grade Level Below | Early On Grade Level | Mid or Above Grade Level
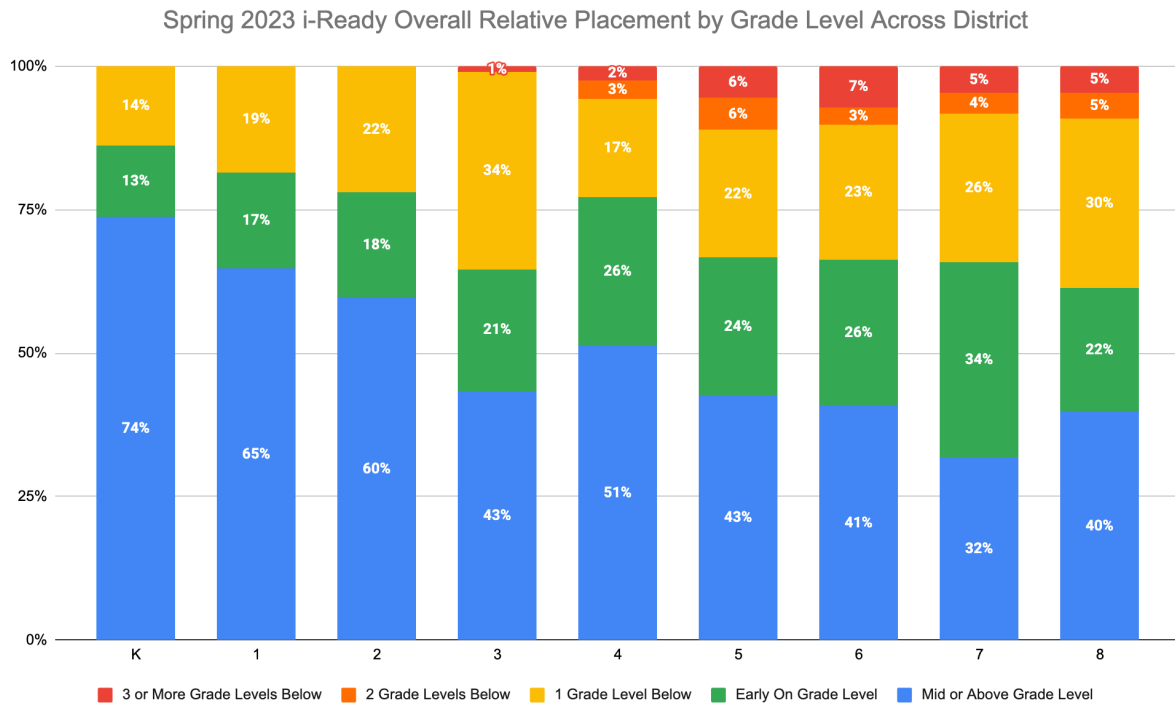
Just like with our overall results, differences by grade level between campuses can be seen, with students at Lincoln performing early on grade level or above at higher percentages and those performing one or more grade levels below less than their Hanscom peers. We can also see more variation between grade levels when we look at individual campus data.

Spring 2023 i-Ready Overall Relative Placement by Grade Level on Hanscom Campus

Spring 2023 i-Ready Overall Relative Placement by Grade Level on Lincoln Campus
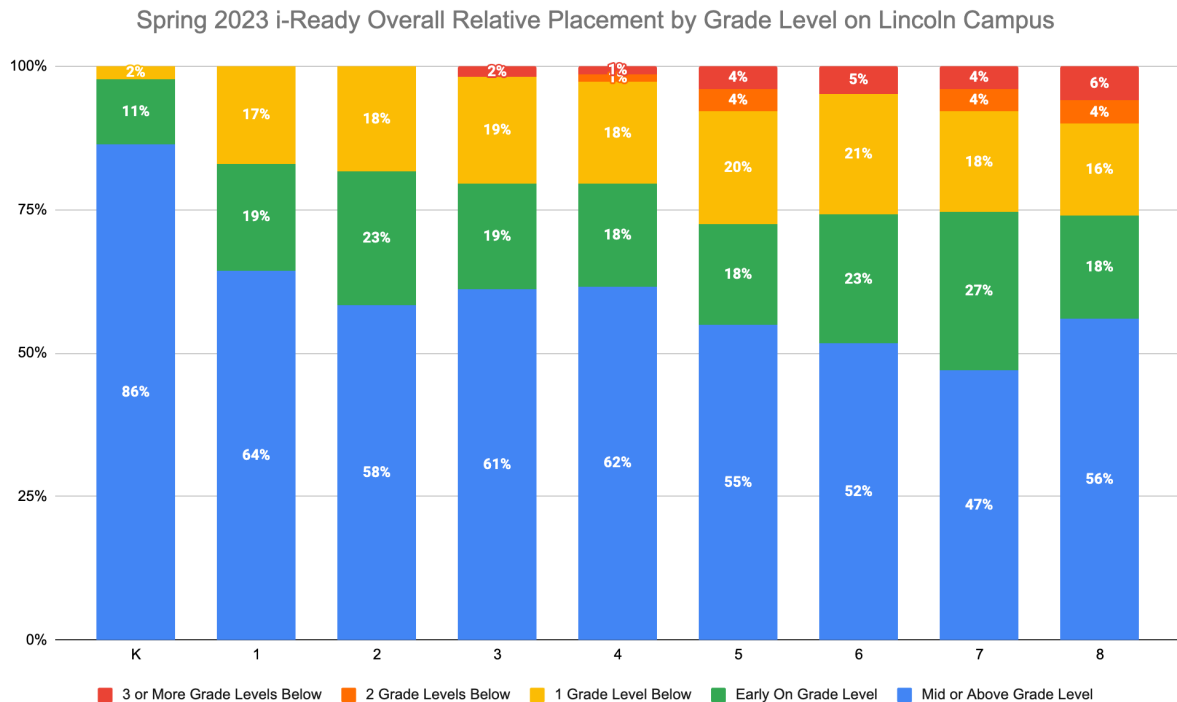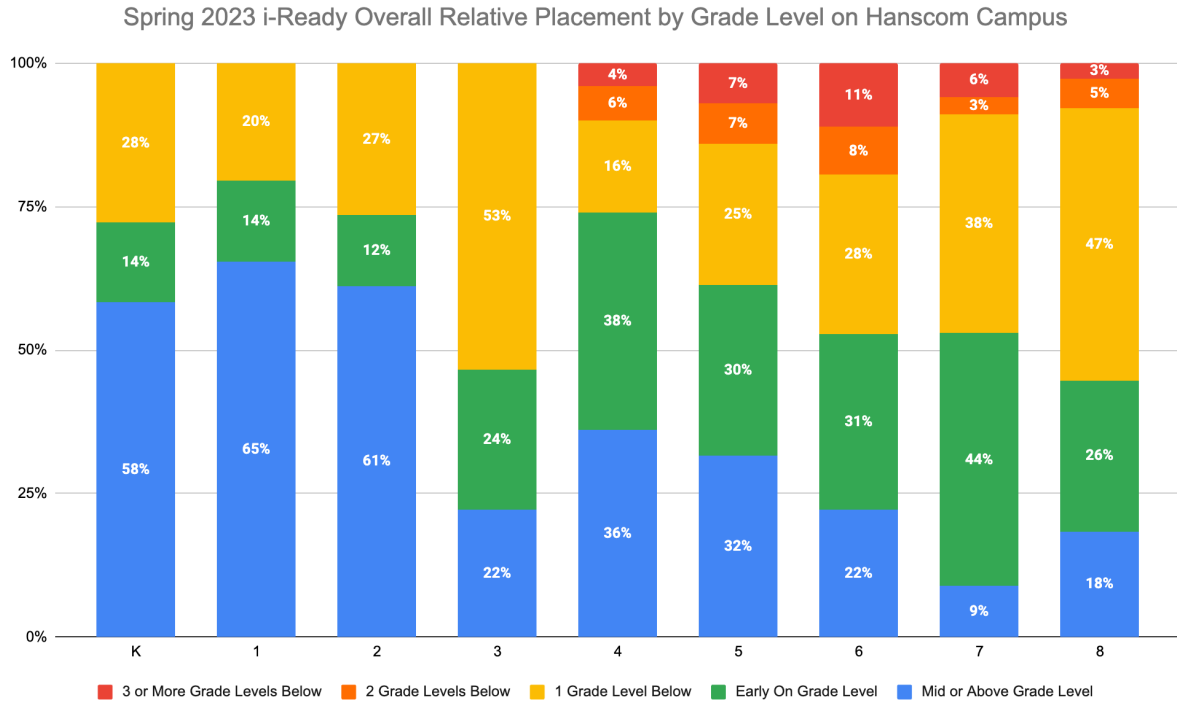
Differences Across Demographic Groups

District Level

At the district level we see gaps by racial groups and other demographic groups, similar to other assessments and data sources.

Spring 2023 i-Ready Overall Relative Placement by Race Across District

	Asian (55)	Black (77)	Latinx (143)	Multiracial, Non Latinx (101)	White (519)
3 or More Grade Levels Below		8%	8%	3%	2%
2 Grade Levels Below		5%	3%		2%
1 Grade Level Below	5%	43%	41%	18%	18%
Early On Grade Level	29%	19%	22%	23%	22%
Mid or Above Grade Level	65%	25%	27%	56%	57%

Legend: ■ 3 or More Grade Levels Below ■ 2 Grade Levels Below ■ 1 Grade Level Below ■ Early On Grade Level ■ Mid or Above Grade Level

In all racial groups, higher percentages of students performed early, mid or above and fewer percentages of students performed below grade level. Some racial groups showed higher levels of change compared to others. Multiracial/Non Latinx students had the biggest change from the fall to the winter, and Latinx students had the least amount of change.

	Differences from Fall to Spring				
	3 or More Grade Levels Below	2 Grade Levels Below	1 Grade Level Below	Early On Grade Level	Mid or Above Grade Level
Asian	0	-11	-25	+1	+25
Black	-6	-15	-14	+13	+22
Latinx	0	-14	-18	+12	+19
Multiracial / Non Latinx	0	-3	-27	-5	+35
White	-2	-3	-29	-3	+37

It is important for us to know that students from all four of our communities are experiencing positive and equitable outcomes. There is currently a marked difference in this area.

Spring 2023 i-Ready Overall Relative Placement by Residency
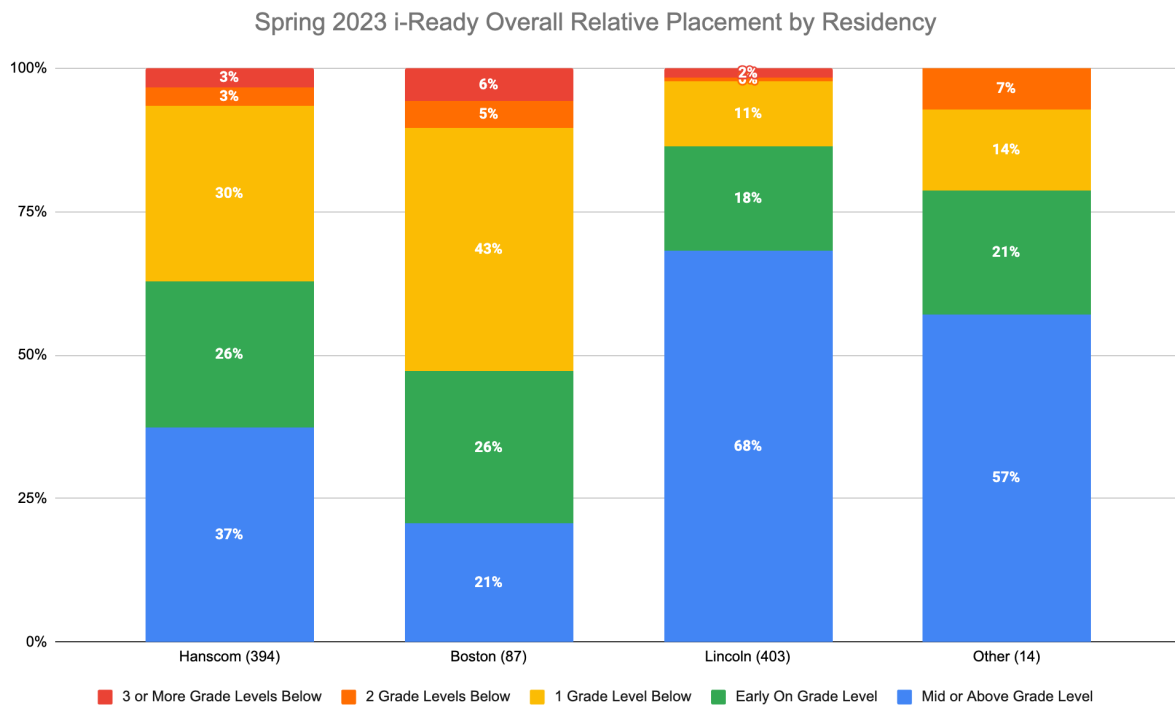
In looking from the fall to the winter diagnostics, each residency group has less students performing below grade level and more students early, mid, or above.

	Differences from Fall to Winter				
	3 or More Grade Levels Below	**2 Grade Levels Below**	**1 Grade Level Below**	**Early On Grade Level**	**Mid or Above Grade Level**
Hanscom	-3	-7	-30	+11	+28
Boston	-2	-19	-14	+18	+17
Lincoln	-1	-3	-22	-11	+38
Other	0	-1	-63	+6	+57

Based on data from the last five years, we always look for comparative outcomes in the following three ways: (1) disability-status; (2) EL-status; and (3) gender.

Spring 2023 i-Ready Overall Relative Placement by Demographic Groups Across District
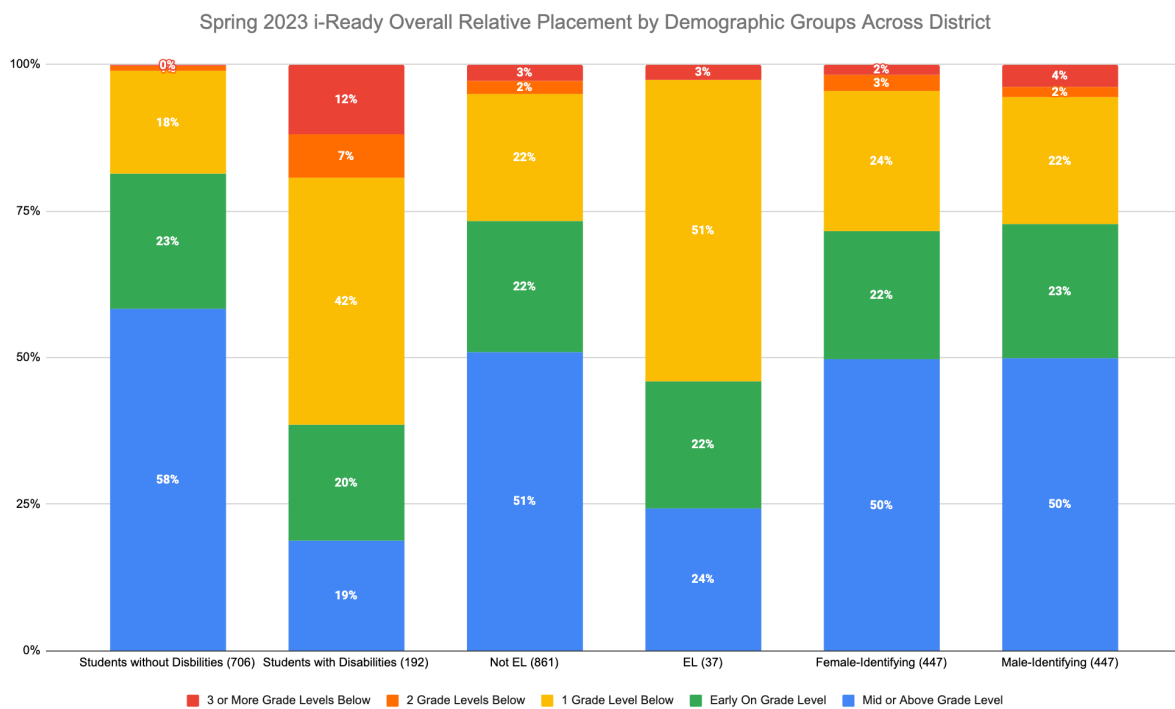
We see positive trends for all of these groups, with significant positive increases for our EL students.

	Differences from Fall to Spring				
	3 or More Grade Levels Below	2 Grade Levels Below	1 Grade Level Below	Early On Grade Level	Mid or Above Grade Level
Students without disabilities	-1	-5	-31	+1	+37
Students with disabilities	-7	-14	-3	+8	+15
Not EL	-2	-5	-27	+1	+32
EL	-8	-38	+11	+14	+22
Female-identifying	-1	-8	-27	+2	+35
Male-identifying	-3	-5	-24	+2	+29

Lincoln Campus

Spring 2023 i-Ready Overall Relative Placement by Race on Lincoln Campus
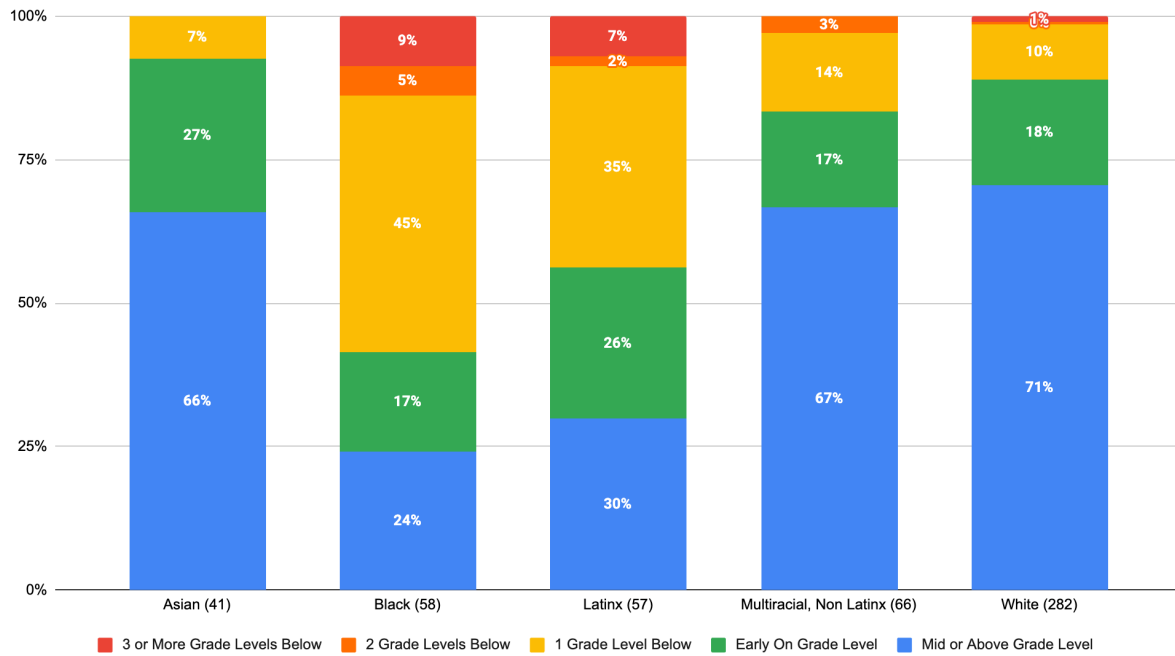
	3 or More Grade Levels Below	2 Grade Levels Below	1 Grade Level Below	Early On Grade Level	Mid or Above Grade Level
Asian (41)			7%	27%	66%
Black (58)	9%	5%	45%	17%	24%
Latinx (57)	7%	2%	35%	26%	30%
Multiracial, Non Latinx (66)		3%	14%	17%	67%
White (282)	1%	1%	10%	18%	71%

Legend: 3 or More Grade Levels Below | 2 Grade Levels Below | 1 Grade Level Below | Early On Grade Level | Mid or Above Grade Level

	Differences from Fall to Spring				
	3 or More Grade Levels Below	**2 Grade Levels Below**	**1 Grade Level Below**	**Early On Grade Level**	**Mid or Above Grade Level**
Asian	0	-9	-25	+13	+22
Black	-5	-16	-11	+12	+21
Latinx	+2	-14	-24	+14	+21
Multiracial / Non Latinx	0	-1	-23	-17	+42
White	-1	-3	-23	-14	+41

Spring 2023 i-Ready Overall Relative Placement by Demographic Groups on Lincoln Campus
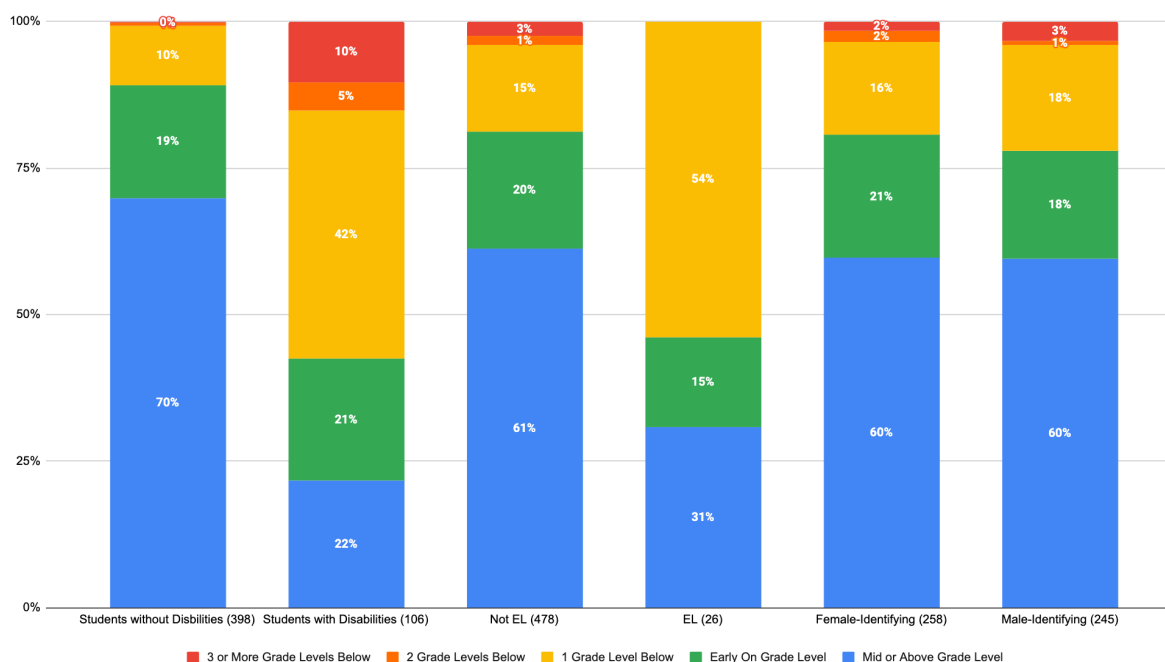
	Differences from Fall to Spring				
	3 or More Grade Levels Below	2 Grade Levels Below	1 Grade Level Below	Early On Grade Level	Mid or Above Grade Level
Students without disabilities	-1	-3	-29	-8	+41
Students with disabilities	-5	-19	+2	+5	+16
Not EL	0	-4	-24	-6	+35
EL	-11	-33	+9	+8	+27
Female-identifying	0	-7	-25	-6	+38
Male-identifying	-2	-5	-19	-5	+32

Hanscom Campus

Spring 2023 i-Ready Overall Relative Placement by Race on Hanscom Campus
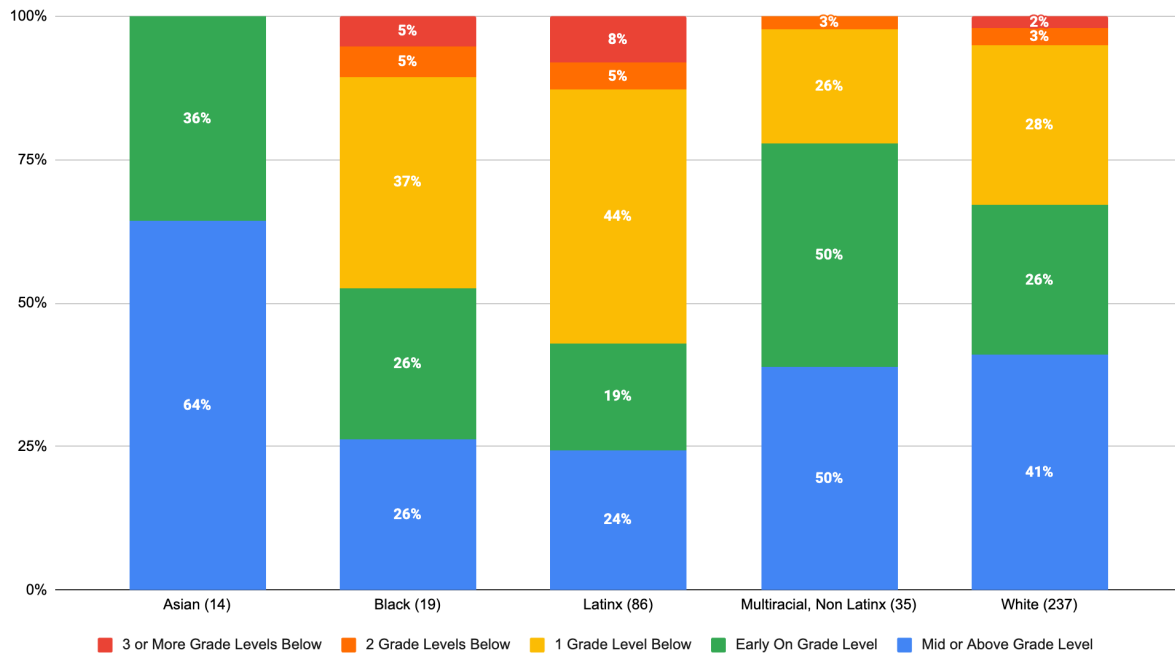
	Asian (14)	Black (19)	Latinx (86)	Multiracial, Non Latinx (35)	White (237)
3 or More Grade Levels Below		5%	8%		2%
2 Grade Levels Below		5%	5%	3%	3%
1 Grade Level Below		37%	44%	26%	28%
Early On Grade Level	36%	26%	19%	50%	26%
Mid or Above Grade Level	64%	26%	24%	50%	41%

■ 3 or More Grade Levels Below ■ 2 Grade Levels Below ■ 1 Grade Level Below ■ Early On Grade Level ■ Mid or Above Grade Level

	Differences from Fall to Spring				
	3 or More Grade Levels Below	**2 Grade Levels Below**	**1 Grade Level Below**	**Early On Grade Level**	**Mid or Above Grade Level**
Asian	0	-17	-25	+2	+39
Black	-9	-14	-20	+17	+26
Latinx	-1	-14	-14	+11	+18
Multiracial / Non Latinx	0	-6	-34	+33	+36
White	-3	-3	-35	+9	+32

Spring 2023 i-Ready Overall Relative Placement by Demographic Groups on Hanscom Campus
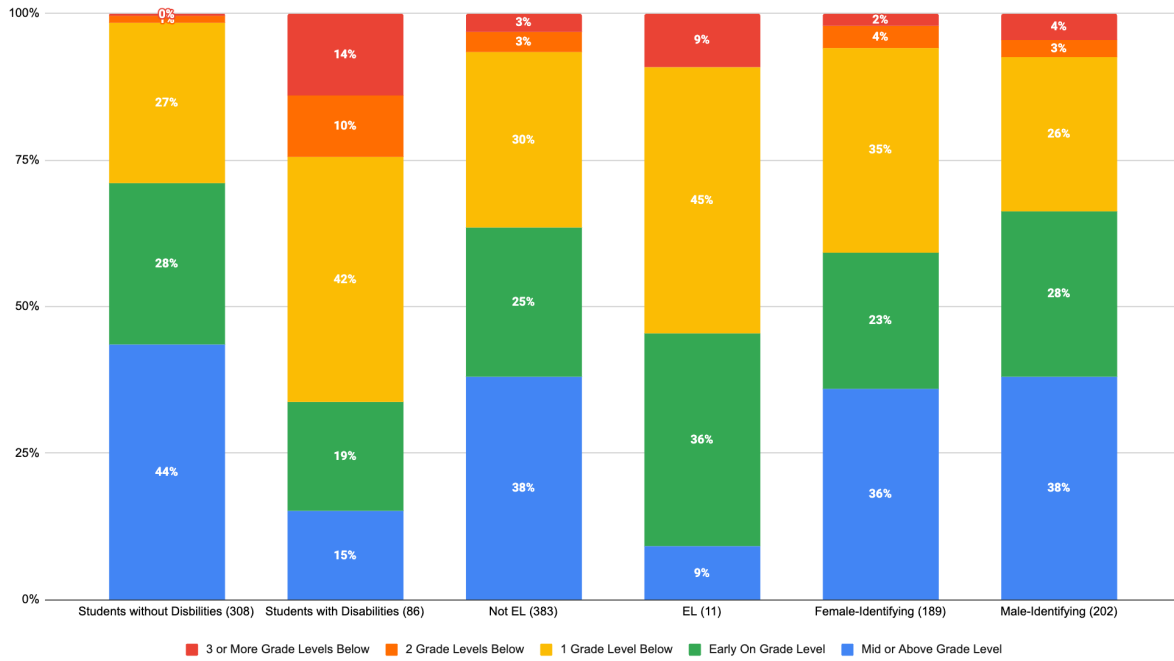
|	3 or More Grade Levels Below	2 Grade Levels Below	1 Grade Level Below	Early On Grade Level	Mid or Above Grade Level
Students without Disbilities (308)	0%		27%	28%	44%
Students with Disabilities (86)	14%	10%	42%	19%	15%
Not EL (383)	3%	3%	30%	25%	38%
EL (11)	9%		45%	36%	9%
Female-Identifying (189)	2%	4%	35%	23%	36%
Male-Identifying (202)	4%	3%	26%	28%	38%

Legend: ■ 3 or More Grade Levels Below ■ 2 Grade Levels Below ■ 1 Grade Level Below ■ Early On Grade Level ■ Mid or Above Grade Level

	Differences from Fall to Spring				
	3 or More Grade Levels Below	**2 Grade Levels Below**	**1 Grade Level Below**	**Early On Grade Level**	**Mid or Above Grade Level**
Students without disabilities	-2	-7	-35	+11	+33
Students with disabilities	-9	-8	-10	+11	+15
Not EL	-3	-6	-31	+11	+29
EL	-1	-50	+15	+26	+9
Female-identifying	-2	-10	-30	+13	+30
Male-identifying	-3	-4	-29	+10	+27

Growth

Growth Distribution Across District

Each student has an annual typical growth goal as well as an annual stretch growth goal. In the winter, we noticed a trend we called "book-ends" in which a large number of students had already met their typical growth goal mid-year and were on track to meeting their stretch growth goal, and another large group of students showed no growth with smaller groups making growth in between. By the end of the school year this "book end" phenomenon disappeared, with the majority of our students meeting their typical annual growth goal and making progress toward or achieving their annual stretch growth goal.
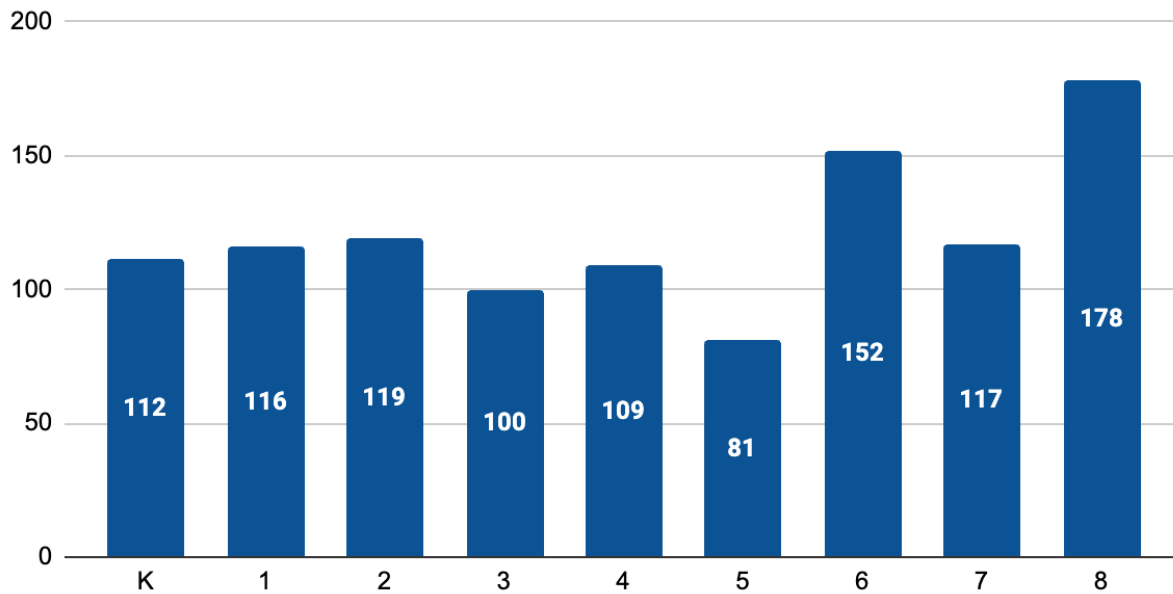
Distribution of Percent Progress Toward Typical Annual Growth Goals Across the District

Range	Count
0	86
1-19	26
20-39	47
40-59	60
60-79	86
80-99	65
100+	528
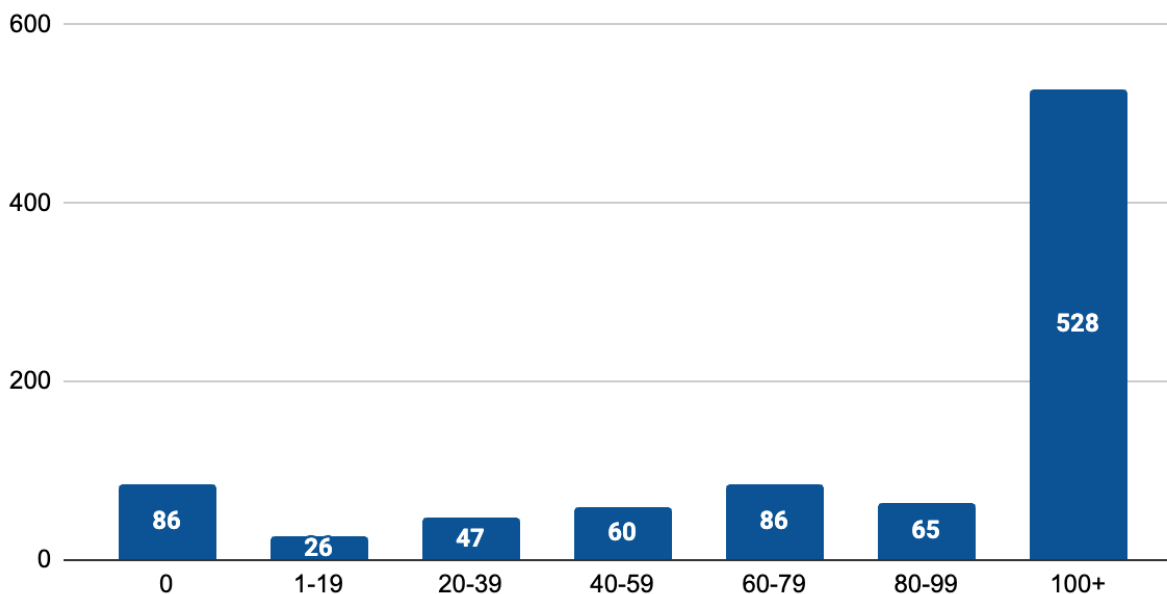
Growth by Grade Level

In the winter we saw significant differences between grade levels, with 6-8th grade students showing much higher levels of growth compared to those in K-5. This significantly evened out by the end of the year.
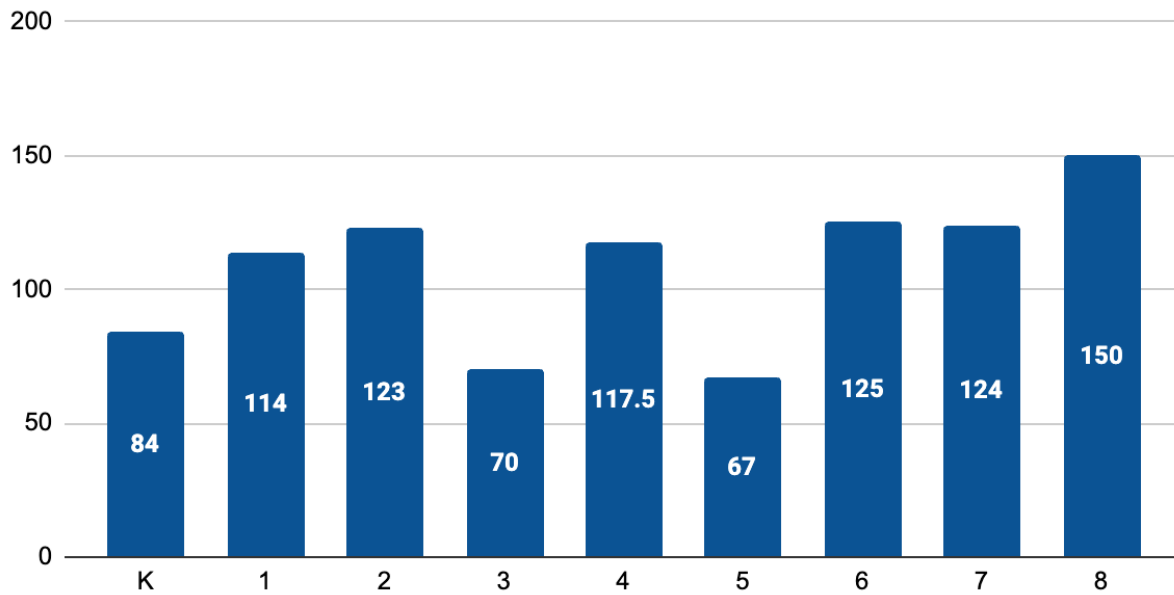
Median Percent Progress Toward Typical Annual Growth Goals
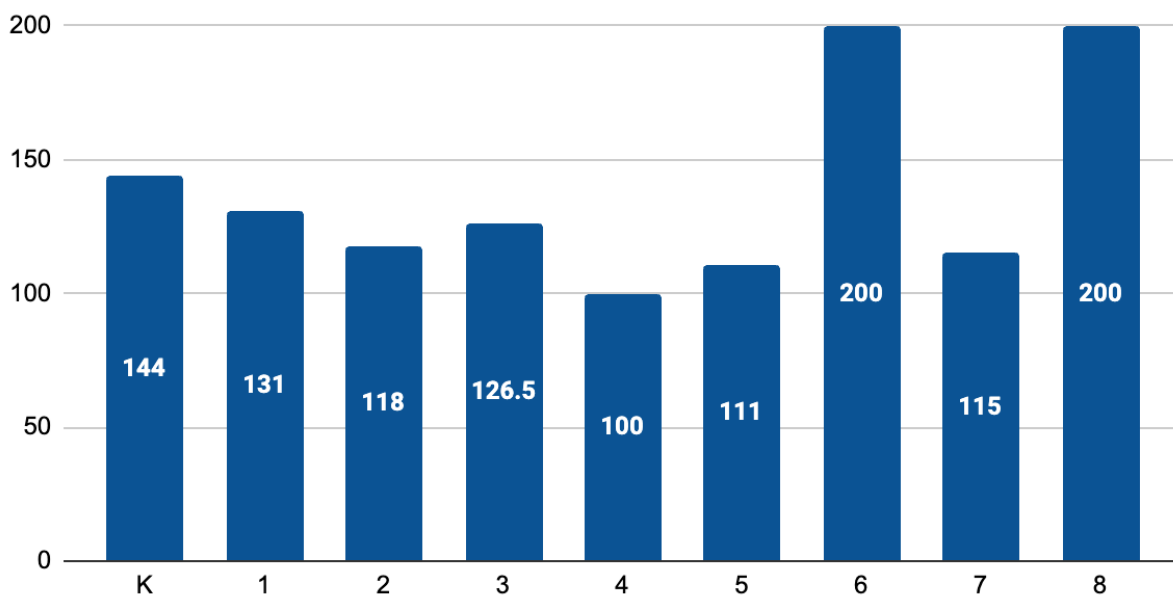By Grade Level Across the District

Grade	K	1	2	3	4	5	6	7	8
Value	112	116	119	100	109	81	152	117	178

Below are campus-based growth levels, disaggregated by grade level:

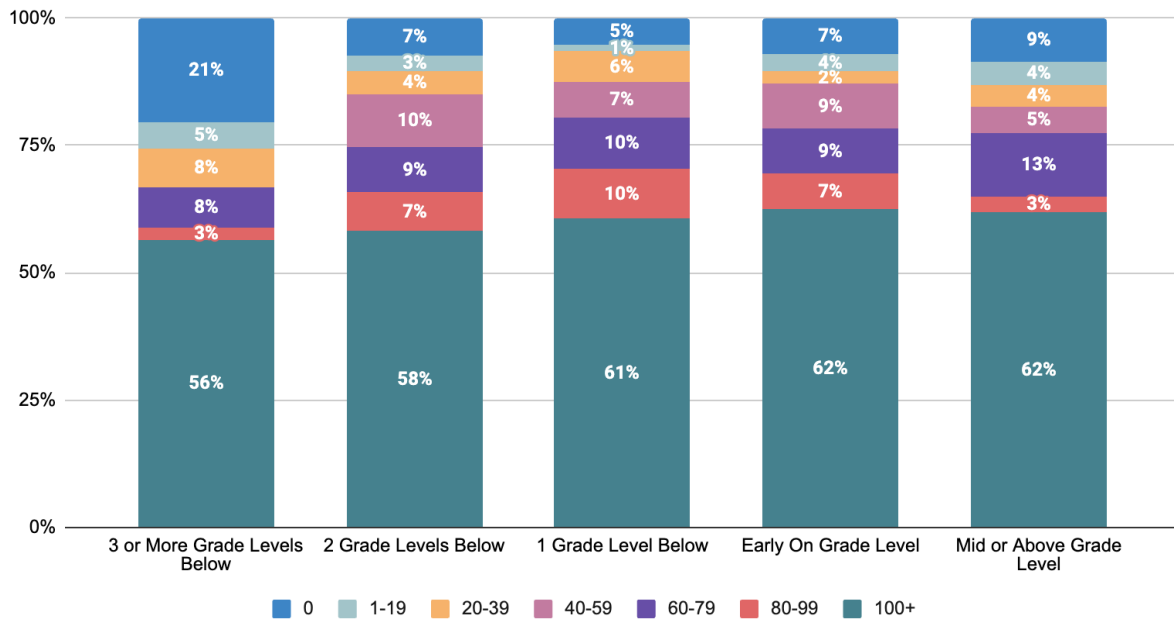## Median Percent Progress Toward Typical Annual Growth Goals By Grade Level on Hanscom Campus

Grade	K	1	2	3	4	5	6	7	8
Value	84	114	123	70	117.5	67	125	124	150

Median Percent Progress Toward Typical Annual Growth Goals By Grade Level on Lincoln Campus

Grade	K	1	2	3	4	5	6	7	8
Value	144	131	118	126.5	100	111	200	115	200

Growth by Overall Placement Level

We were curious if students in certain overall placement levels grew more than others. We want all students to grow at rates that ensure they meet their typical growth goal each year and we especially want our students who are below grade level to reach their stretch growth goals so that each year we narrow and eventually close these gaps. Interestingly, students from all placement levels grew at remarkably similar rates, except for students 3 or more grade levels below, who were more likely to not make growth.
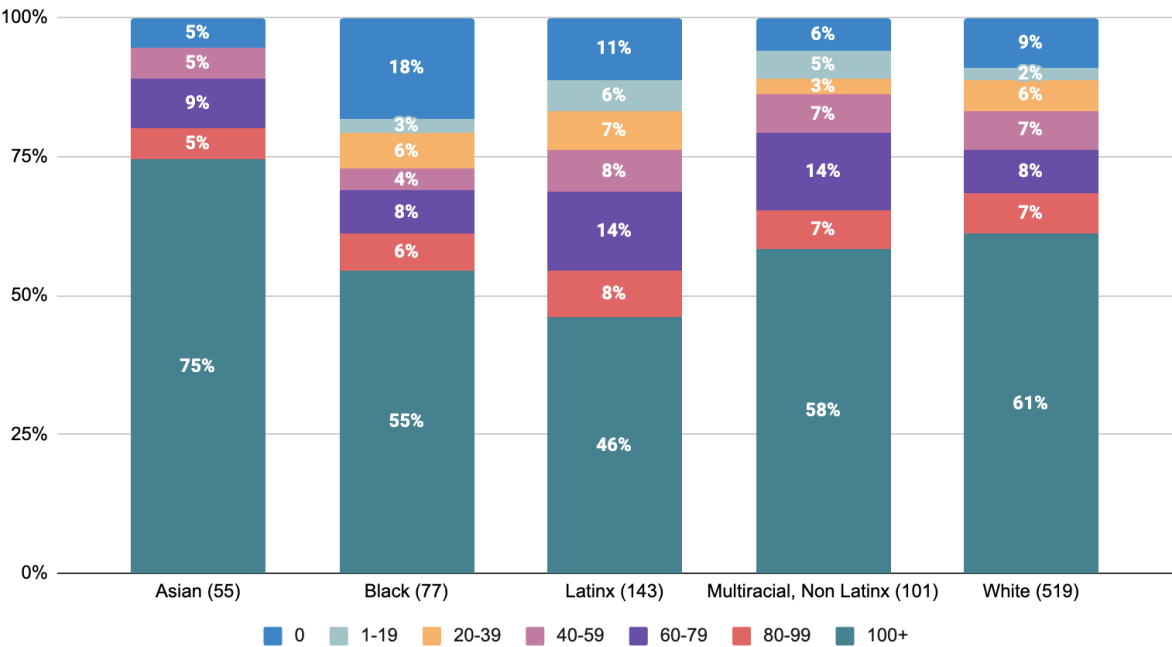
Percent Progress Toward Annual Typical Growth Goal by Overall Placement Level Across the District

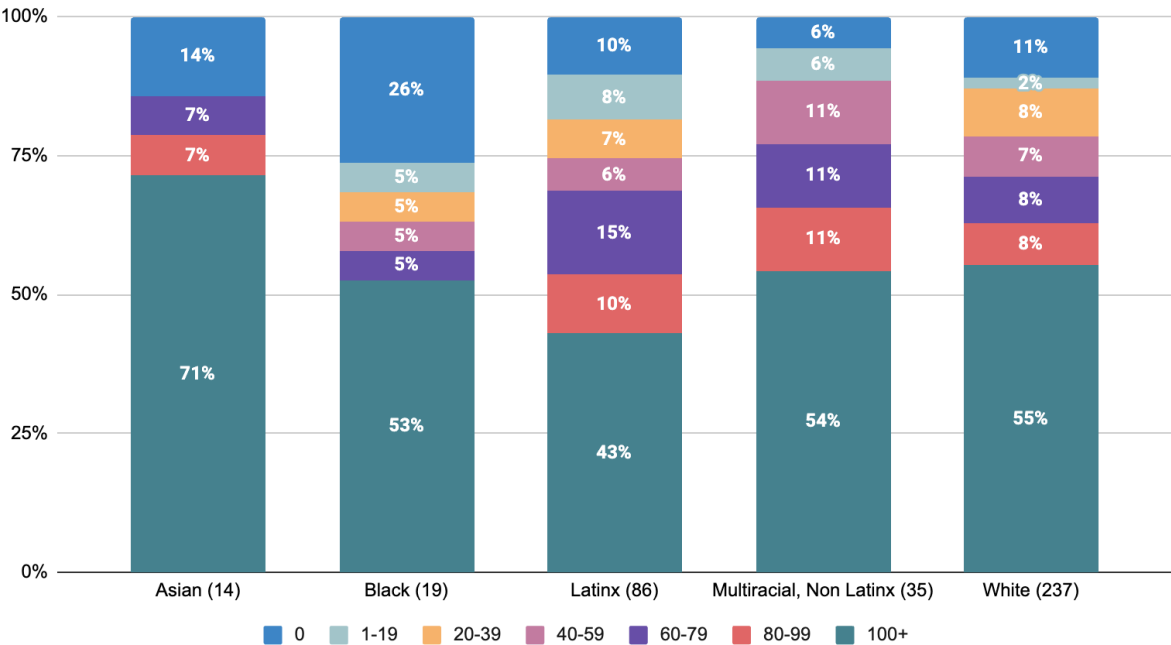| Placement Level	0	1-19	20-39	40-59	60-79	80-99	100+
3 or More Grade Levels Below	21%	5%	8%		8%	3%	56%
2 Grade Levels Below	7%	3%	4%	10%	9%	7%	58%
1 Grade Level Below	5%	1%	6%	7%	10%	10%	61%
Early On Grade Level	7%	4%	2%	9%	9%	7%	62%
Mid or Above Grade Level	9%	4%	4%	5%	13%	3%	62%

Growth by Racial Groups

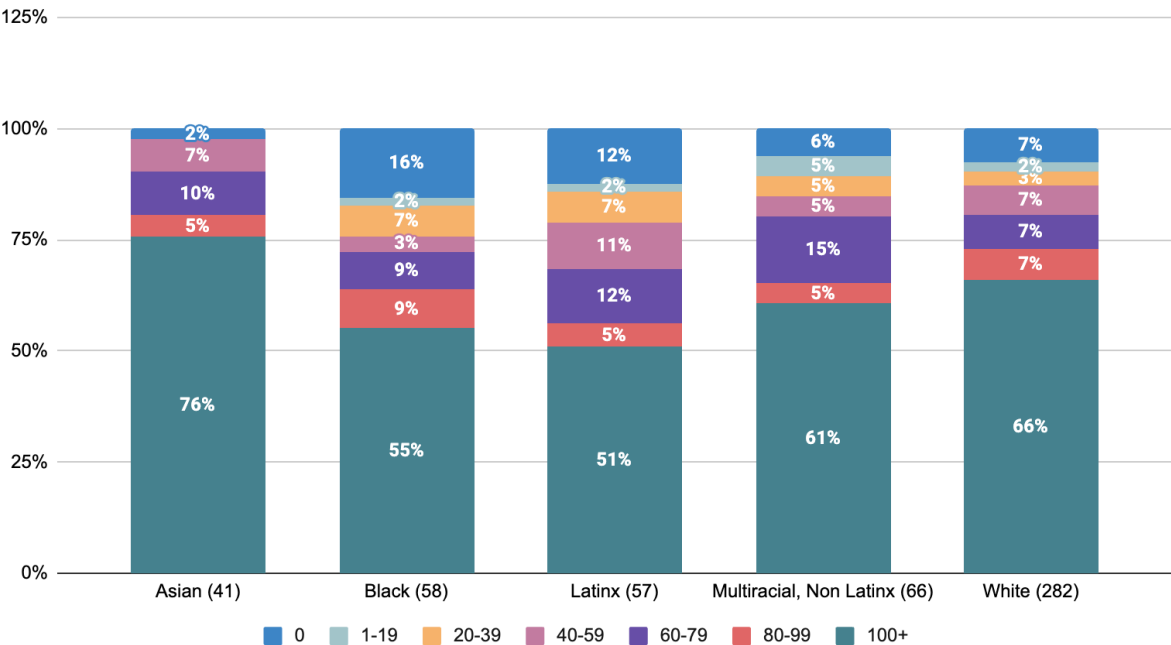Similarly, we wanted to see if students across racial groups were making similar levels of progress.

Percent Progress Toward Annual Typical Growth Goal by Race Across District

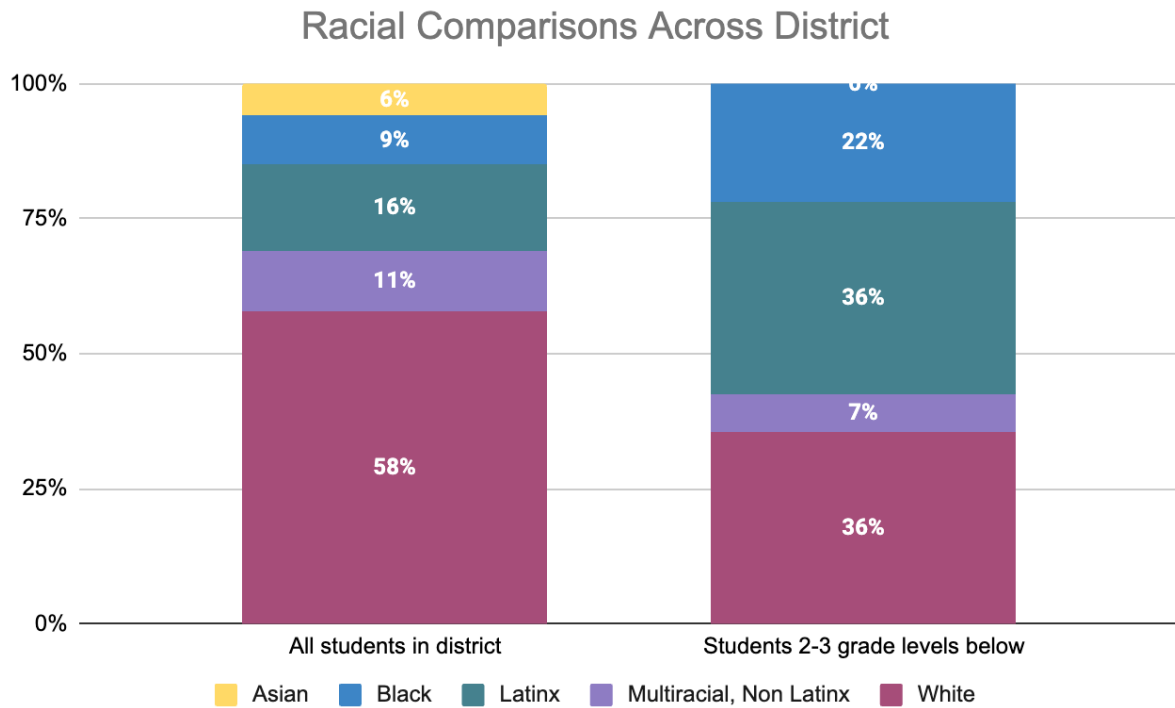## Percent Progress Toward Annual Typical Growth Goal by Race on Hanscom Campus

	Asian (14)	Black (19)	Latinx (86)	Multiracial, Non Latinx (35)	White (237)
0	14%	26%	10%	6%	11%
1-19		5%	8%	6%	2%
20-39		5%	7%		8%
40-59		5%	6%	11%	7%
60-79	7%	5%	15%	11%	8%
80-99	7%		10%	11%	8%
100+	71%	53%	43%	54%	55%

Legend: 0, 1-19, 20-39, 40-59, 60-79, 80-99, 100+

Percent Progress Toward Annual Typical Growth Goal by Race on Lincoln Campus

	Asian (41)	Black (58)	Latinx (57)	Multiracial, Non Latinx (66)	White (282)
0	2%	16%	12%	6%	7%
1-19		2%	2%	5%	2%
20-39		7%	7%	5%	3%
40-59	7%	3%	11%	5%	7%
60-79	10%	9%	12%	15%	7%
80-99	5%	9%	5%	5%	7%
100+	76%	55%	51%	61%	66%

Legend: 0, 1-19, 20-39, 40-59, 60-79, 80-99, 100+

Supporting Students

We examined slices of the data to understand how to support students who are behind grade level, as well as students who did not make growth on i-Ready from the fall to spring. Our students who are 2-3 grade levels below are disproportionately Black and Latinx compared to other racial groups and a majority of them are students in special education.

Racial Comparisons Across District

	All students in district	Students 2-3 grade levels below
Asian	6%	0%
Black	9%	22%
Latinx	16%	36%
Multiracial, Non Latinx	11%	7%
White	58%	36%

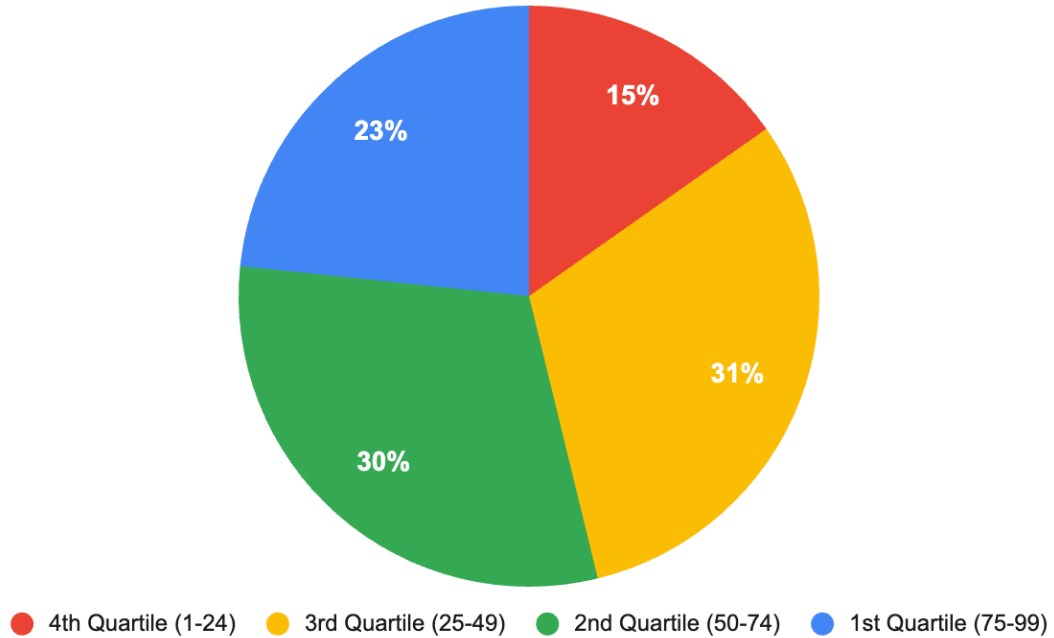## Comparing our Data to National Norm Percentiles

Somewhere around 10 million students use i-Ready across the country. The charts below illustrate how our students rank when compared to all students who take i-Ready. Across the district, about 10% fewer students are in the bottom quartile and about 10% more are in the top quartile compared nationally.

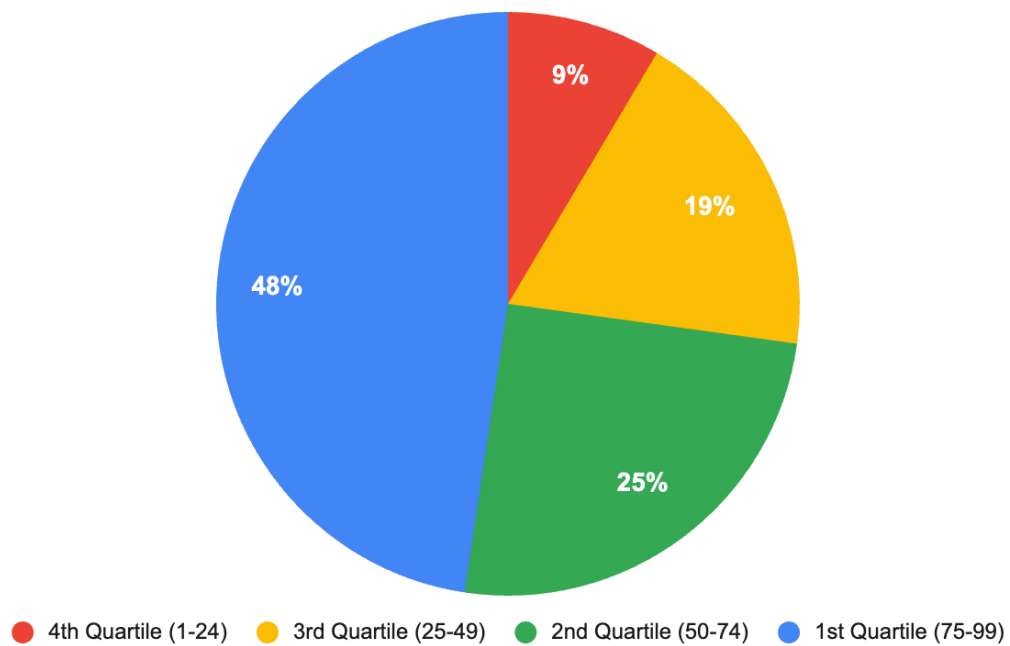### LPS Students Across District Compared to National Norm Percentiles

11%
37%
24%
28%

🔴 4th Quartile (1-24)   🟡 3rd Quartile (25-49)   🟢 2nd Quartile (50-74)   🔵 1st Quartile (75-99)
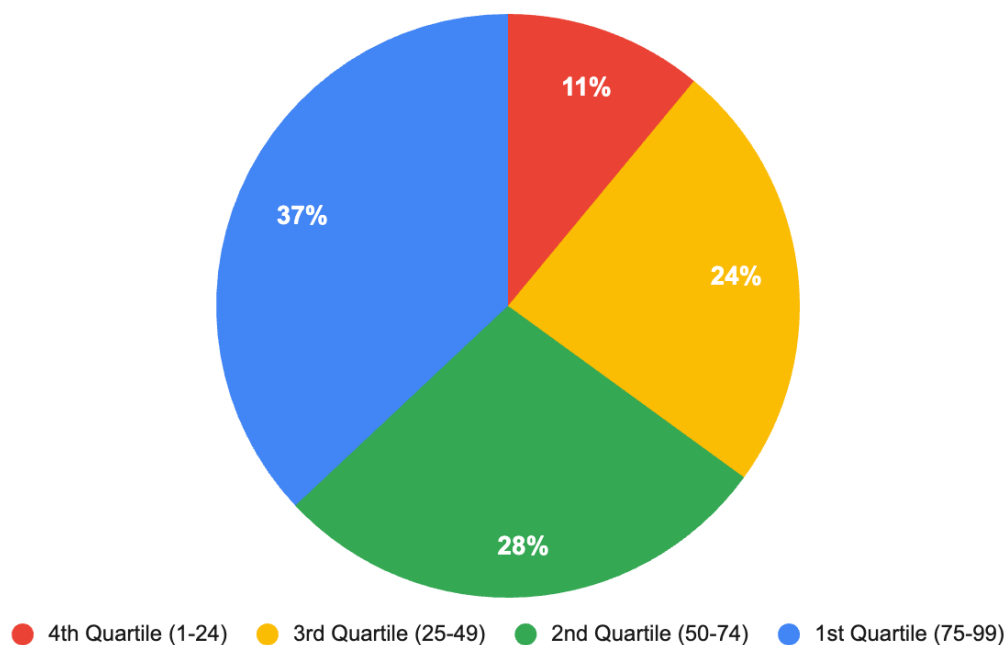
On the Hanscom campus a few more percentage points of students are in the middle two quartiles compared to the 1st and 4th.

Hanscom Campus Compared to National Norm Percentiles

- 4th Quartile (1-24)
- 3rd Quartile (25-49)
- 2nd Quartile (50-74)
- 1st Quartile (75-99)

On the Lincoln campus nearly half of our students are in the top quartile.

Lincoln Campus Compared to National Norm Percentiles

- 4th Quartile (1-24)
- 3rd Quartile (25-49)
- 2nd Quartile (50-74)
- 1st Quartile (75-99)

For 8th graders on the Lincoln campus, 58% are beginning high school in the top quartile of students across the nation who take i-Ready.

Lincoln Campus 8th Graders Compared to National Norm Percentiles

● 4th Quartile (1-24)   ● 3rd Quartile (25-49)   ● 2nd Quartile (50-74)   ● 1st Quartile (75-99)