



## Lincoln Public Schools Lincoln, Massachusetts

Patricia Kinsella  
Assistant Superintendent

To: School Committee  
From: Patricia Kinsella, Rob Ford, and Stephanie Powers  
Re: Report on Subgroup Performance and Growth  
Date: November 20, 2014

### Context

Lincoln Public Schools has a long-standing commitment to the achievement of all its students. Full access to a rigorous core curriculum is a priority, and the district consistently allocates resources to provide quality learning experiences and support for all students. Despite these efforts, achievement gaps have persisted, and various efforts have been made to address the needs of students who have not achieved at a level commensurate with that of grade-level peers.

This report disaggregates recent assessment data to provide a more detailed picture of academic achievement and growth by subgroups of students. The student subgroups analyzed derive from categories outlined in state and/or federal reporting guidelines:

- High Needs, including ELL and Former ELL, Low Income, and Students with Disabilities;
- Race/Ethnicity, including African American, Asian, Hispanic/Latino, Multiple Race/Non-Latino, and White; and
- Gender.

Because the LPS student population is small, we present data in grade spans in order to provide a scale sufficient to safeguard student identities and to ensure the validity of our analysis. It should be noted that the identification of students' race and ethnicity is done by parents when registering their children for school.

The assessment data analyzed in this report include Spring 2014 MCAS results and Spring 2014 Fountas and Pinnell reading results.

### Considerations Regarding MCAS

We present MCAS data with two key issues in mind:

- We cluster the grades by school and/or campus because the subgroups are too small to report and analyze at individual grade levels.
- The smaller the subgroup size, the more one student's performance makes a difference in percentage points.

### Student Growth Percentile Distribution

Student Growth Percentile (SGP) is a measure of how individual students have grown in comparison to students across the state who scored similarly in previous years. Students with an SGP between 40 and 60 are considered to have moderate growth. Students with an SGP from 0-40 are considered to have Low or Very Low Growth, and students with an SGP from 60-100 are considered to have High or Very High Growth.

Because SGP measures growth, its calculation requires that students have MCAS scores for two or more years. Given the high rate of student mobility on the Hanscom campus, the percentage of Hanscom students for whom we can calculate SGP is much smaller than that of Lincoln School.

## MCAS Analysis: Achievement and Growth by Student Subgroups

For each of the three subgroup domains (High Needs, Race/Ethnicity, and Gender), this report provides two frames of reference. The first is a brief list of bulleted points that highlights important stories within the numbers. The second is a set of graphs that visually represents the assessment data. The data used in this report come from both the state's data warehouse service and LPS internal data systems.

Within the bulleted points, for High Needs and Race/Ethnicity, we group information into strengths and challenges. These points are not meant to be a comprehensive analysis of subgroup growth and performance. They are, rather, places from which we believe important conversations need to begin.

For the Gender domain, we make a brief series of statements about achievement gaps by gender subgroups.

Graphs 1-12 all use a similar visual format: the colors blue, green, and red are used to signify levels of achievement and growth. Within each graph, data have been organized by location, either across the state (S), on the Hanscom campus (H), or in Lincoln School (L).

### 1. STUDENT SUBGROUPS: HIGH NEEDS

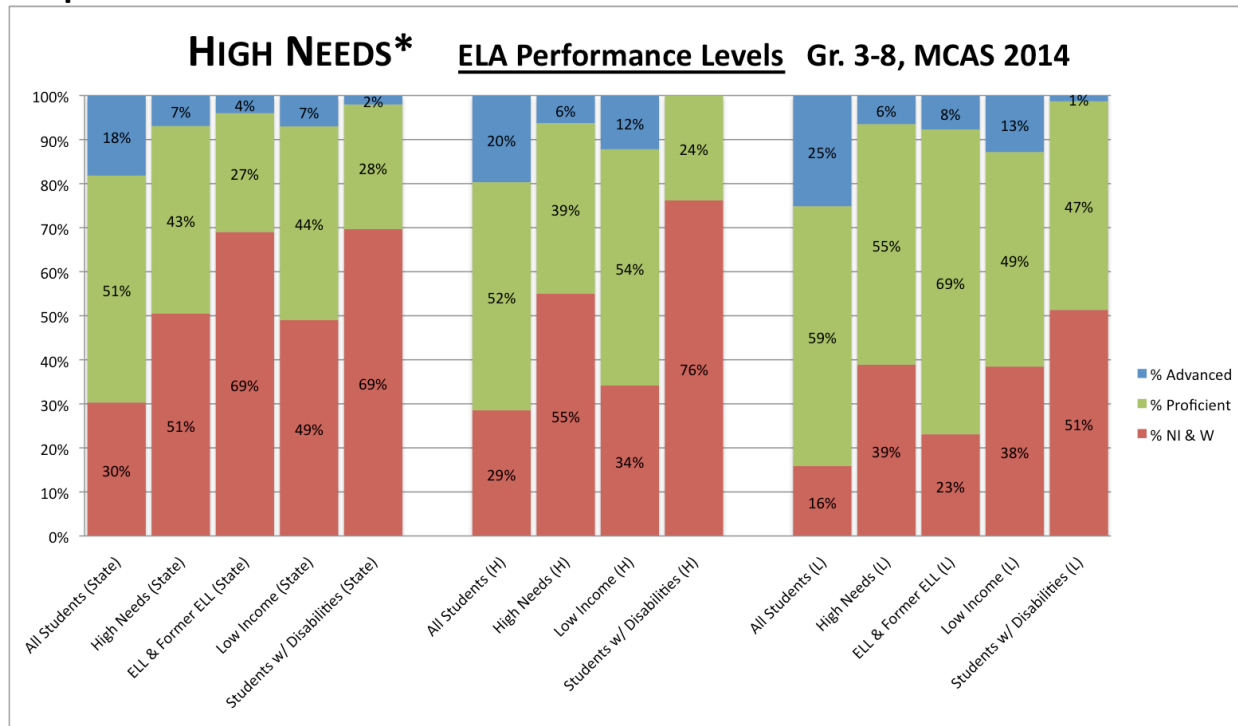
#### Strengths

- Overall, Hanscom students in the **High Needs** subgroup achieve in both ELA and Math at levels similar to those of students from across the state. (Graphs 1 and 2)
- **High Needs** students in Lincoln School score higher when compared with students from across the state. (Graphs 1 and 2)
- On both campuses, **low-income** students achieve at higher levels in ELA than do low-income students from across the state. (Graph 1)
- The growth rates (SGP) of **low-income students** are relatively high in both ELA and Math. (Graphs 3 and 4)

#### Challenges

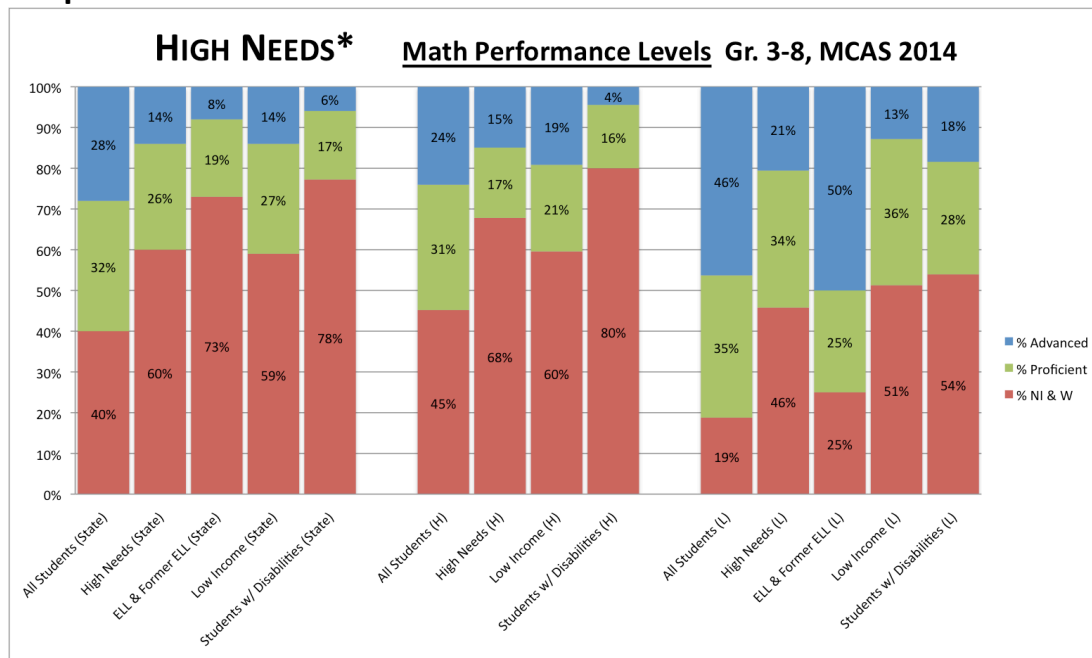
- The achievement of **students with disabilities** continues to lag far behind that of LPS students without disabilities. (Graphs 1 and 2)
- Hanscom: over three quarters of the **students with disabilities** score W/NI in both ELA and Math. (Graphs 1 and 2)
- Lincoln: over half of the **students with disabilities** score W/NI in ELA and Math. (Graphs 1 and 2)
- **Students with disabilities** on the Hanscom campus show particularly low rates of growth in ELA; only 10% have growth that is High or Very High. (Graph 3)
- **Low-income students** on both campuses achieve at lower levels than the LPS general population in both ELA and Math. This difference is more pronounced on the Lincoln Campus. (Graphs 1 and 2)

**Graph 1**



\* High Needs is an unduplicated count of students belonging to any of the following three subgroups – ELL & Former ELL, Low Income, and Students w/ Disabilities.

**Graph 2**

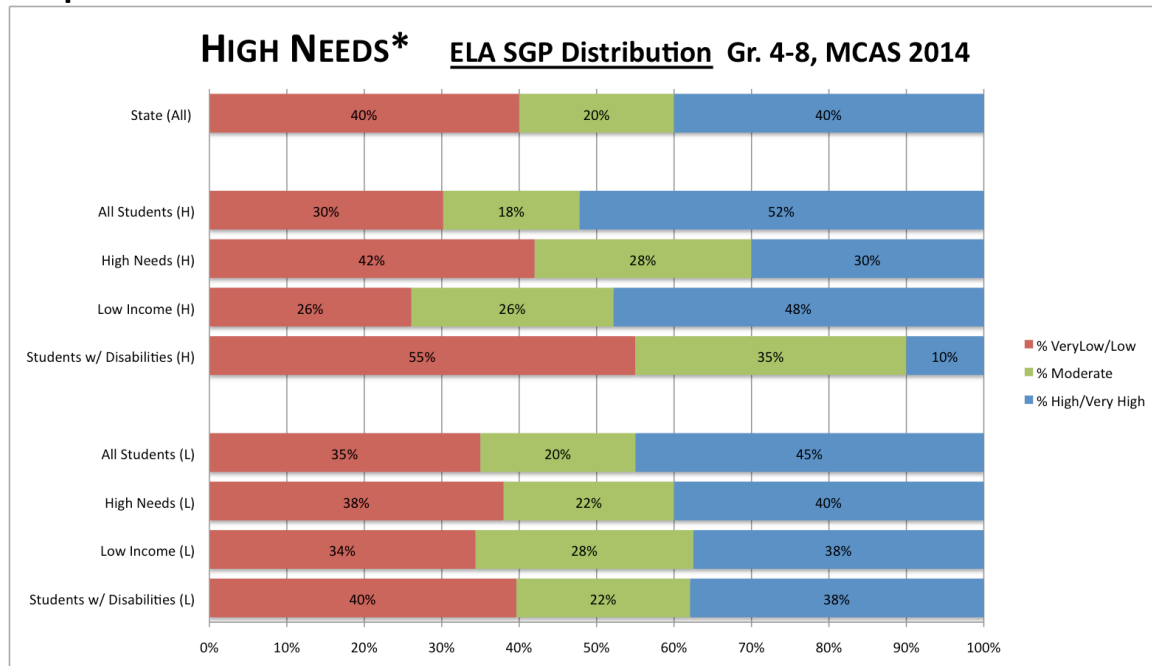


\* High Needs is an unduplicated count of students belonging to any of the following three subgroups – ELL & Former ELL, Low Income, and Students w/ Disabilities.

\*\*The first number is for ELA; the number in parentheses is for Math. When only one number appears, an equal number of students participated in both the ELA and Math exams.

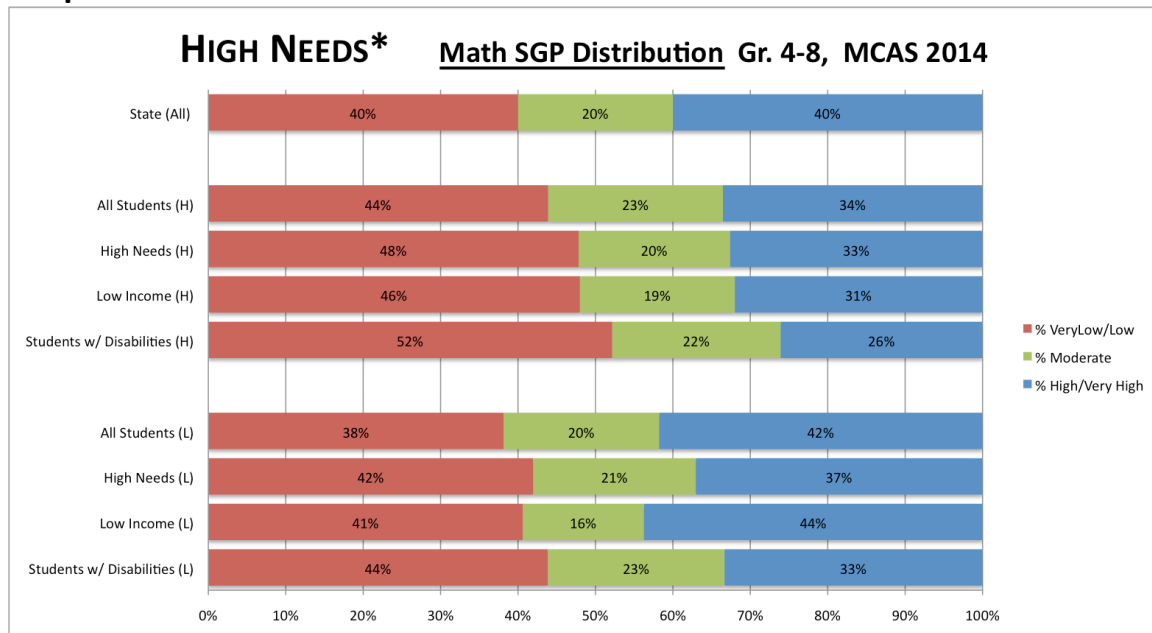
Number of students by subgroup**	All Students	High Needs	ELL & Former ELL	Low Income	Students with Disabilities
Hanscom Campus N	305 (312)	80 (87)	-	41 (47)	42 (45)
Lincoln Campus N	378	108 (107)	13 (12)	39	76

**Graph 3**



\* High Needs is an unduplicated count of students belonging to any of the following three subgroups – ELL & Former ELL, Low Income, and Students w/ Disabilities.

**Graph 4**



\* High Needs is an unduplicated count of students belonging to any of the following three subgroups – ELL & Former ELL, Low Income, and Students w/ Disabilities.

\*\*The first number is for ELA; the number in parentheses is for Math. When only one number appears, an equal number of students participated in both the ELA and Math exams.

Number of students by subgroup**	All Students	High Needs	ELL & Former ELL	Low Income	Students with Disabilities
Hanscom MS N	159 (164)	43 (46)	-	23 (25)	20 (23)
Lincoln Campus N	303 (304)	82 (81)	-	32	58 (57)

## 2. STUDENT SUBGROUPS: RACE/ETHNICITY

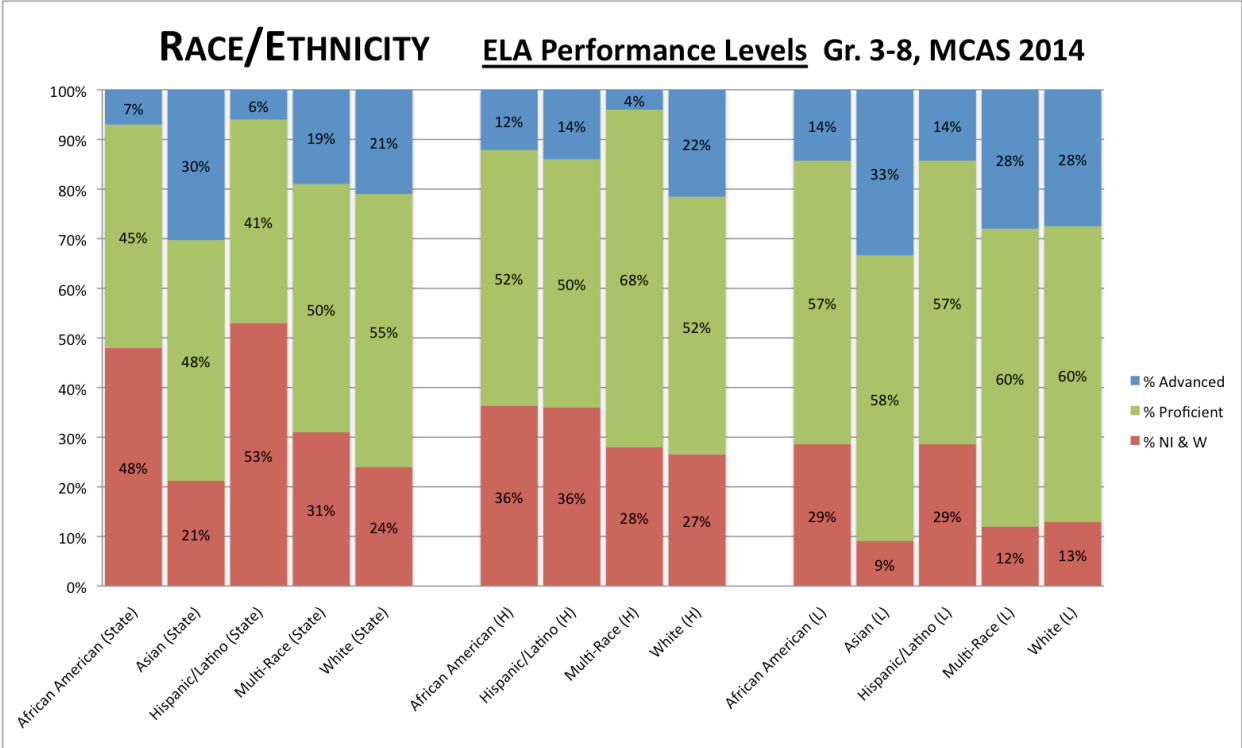
### Strengths

- **Latino** students on both the Lincoln and Hanscom campuses score at higher levels in both ELA and Math than do Latino students across the state. (Graphs 5 and 6)
- **African American** students on both campuses score better in ELA than do African American students across the state. (Graph 5)
- Lincoln School: **African American** students score Advanced at more than two times the rate of African American students across the state. (Graph 5)
- **African American** students show strong levels of student growth in ELA, with 60% having an SGP of High or Very High. (Graph 7)

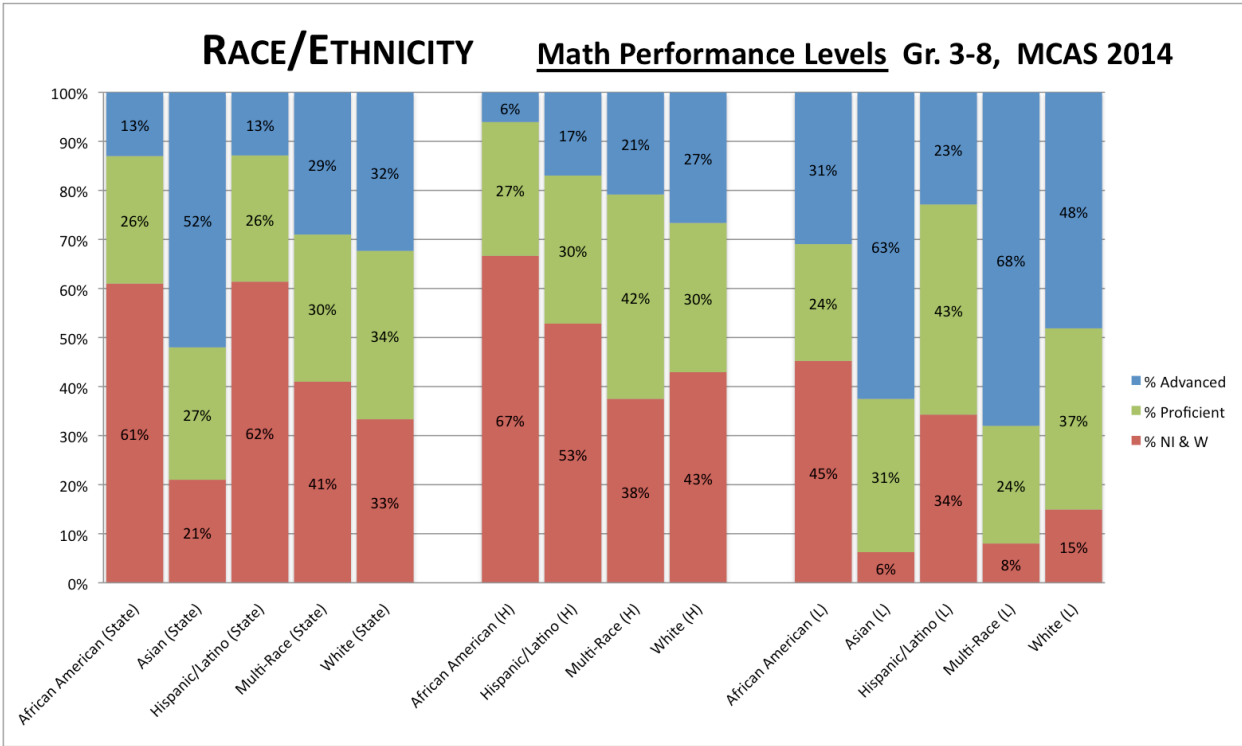
### Challenges

- Too many of our **African American** students score poorly (W/NI) on the Math MCAS:
  - Hanscom: Two thirds of African American students score W/NI.
  - Lincoln: 45% of African American students score at W/NI. (Graph 6)
- The achievement of **African American** and **Latino** students lags behind that of their **White** and **Asian** peers in both ELA and Math – on both campuses. (Graphs 5 and 6)
- **Multi-Race** students on the two campuses show very different patterns of achievement. (Graphs 5 and 6)
- Differences in Math achievement among racial/ethnic subgroups is much higher on the Lincoln campus than on the Hanscom campus. (Graph 6)

Graph 5



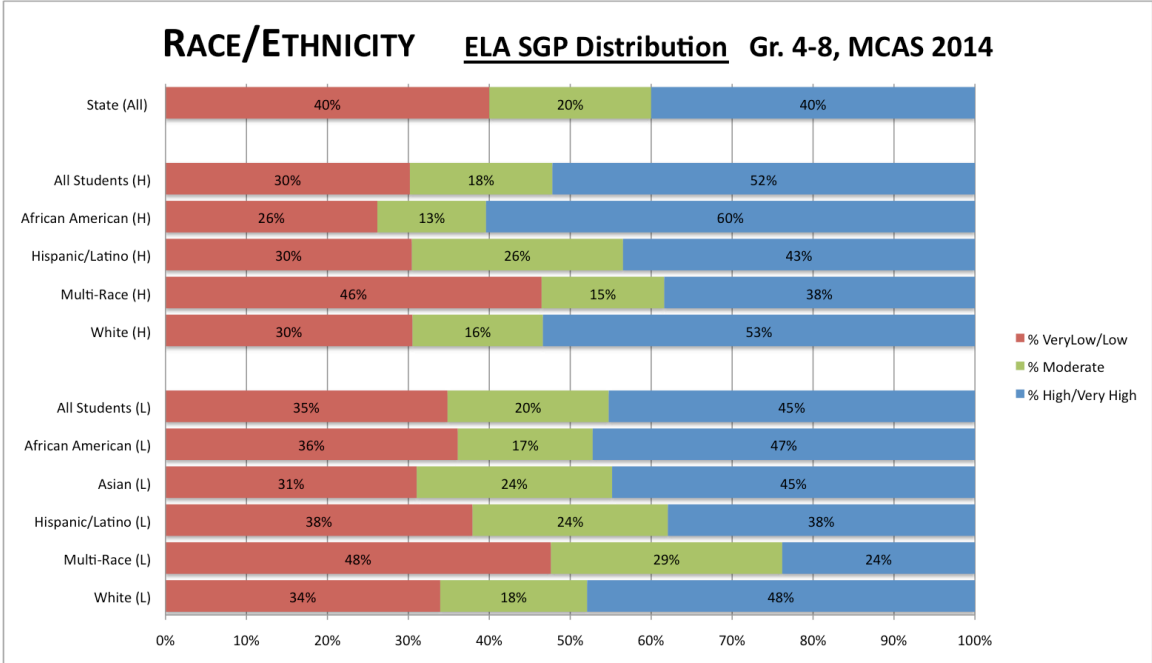
Graph 6



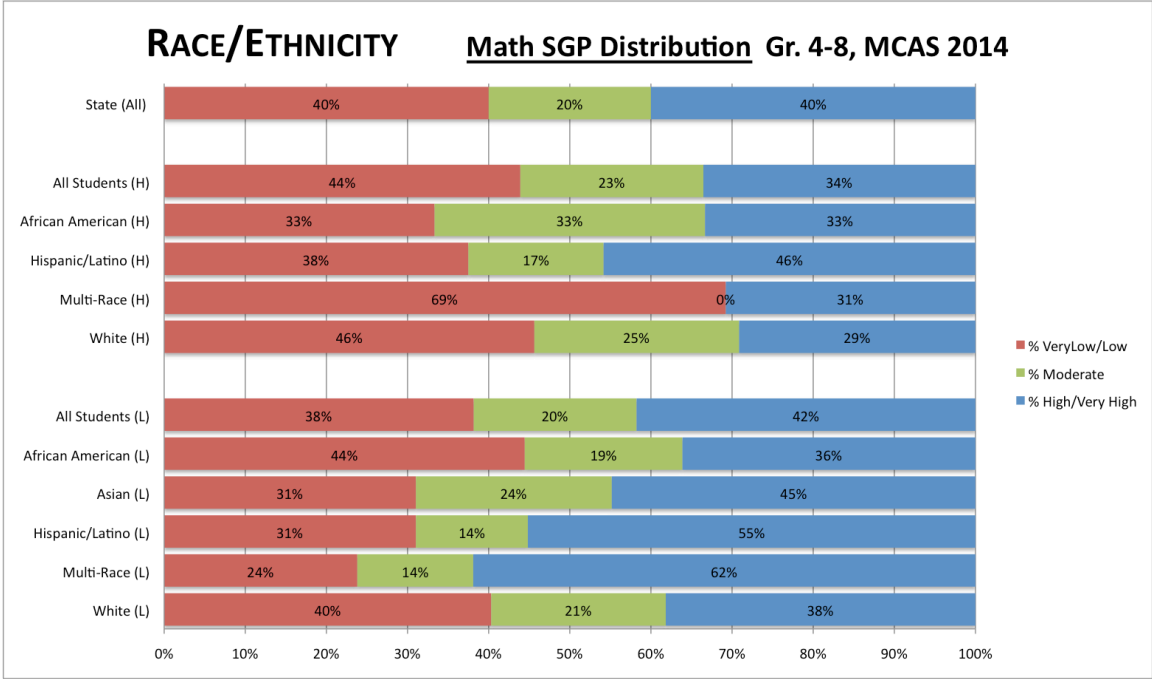
\*\*The first number is for ELA; the number in parentheses is for Math. When only one number appears, an equal number of students participated in both the ELA and Math exams.

Number of students by subgroup**	African American	Asian	Hispanic/Latino	Multi-Race, Non- Hispanic	White
Hanscom Campus N	33	-	50 (53)	25 (24)	181 (184)
Lincoln Campus N	42	33 (32)	35	25	240 (241)

Graph 7



Graph 8



Number of students by subgroup**	African American	Asian	Hispanic/Latino	Multi-Race, Non-Hispanic	White
Hanscom MS N	15	-	23 (24)	13	99 (103)
Lincoln Campus N	36	29	29	21	187 (188)

\*\*The first number is for ELA; the number in parentheses is for Math. When only one number appears, an equal number of students participated in both the ELA and Math exams.

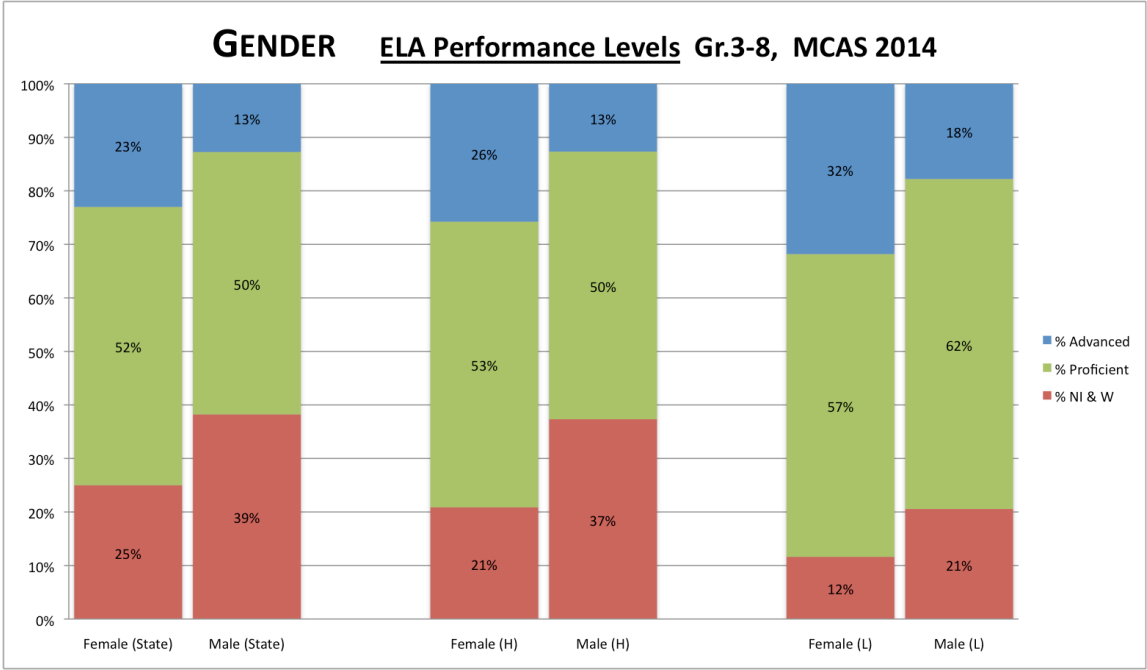
### 3. STUDENT SUBGROUPS: GENDER

For the Gender subgroup analysis, rather than list important points by strength and challenge, we provide the following observations:

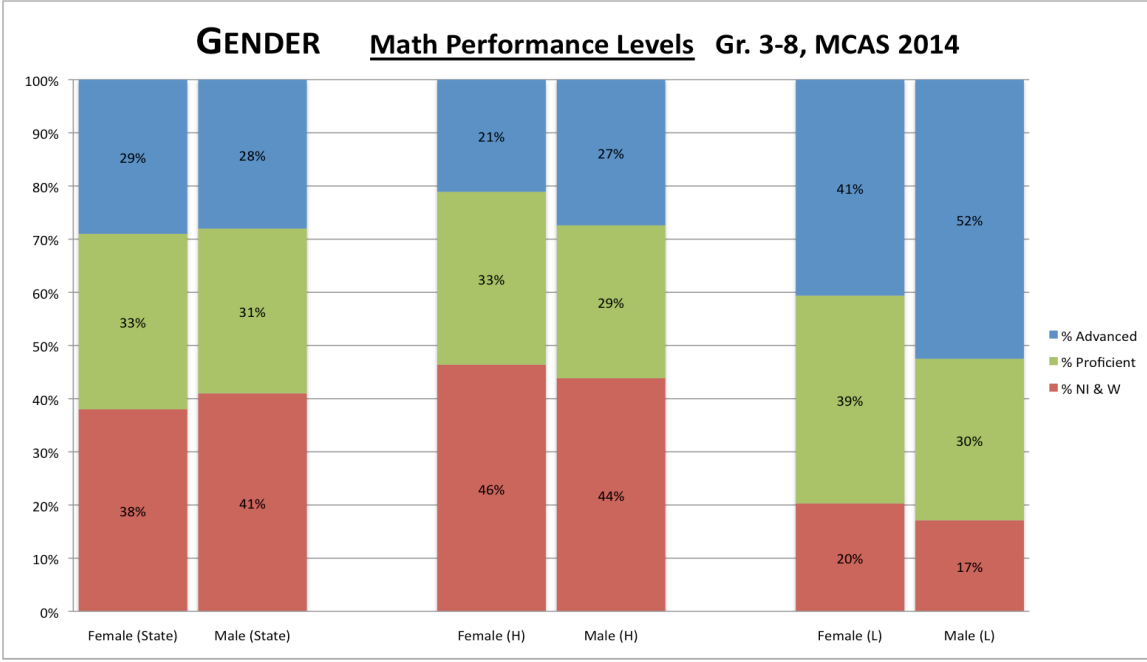
- Across the state and on both LPS campuses, there is a **gender gap** in ELA performance, with girls typically scoring higher than boys. The gaps on our campuses, however, are greater than the gap in the overall state population. (Graph 9)
- While there is no **gender gap** at the state level in MCAS Math achievement, there is a gender gap in LPS. Boys score higher than girls on both campuses. This gender gap in Math achievement is smaller than the gender gap in ELA. (Graphs 9 and 10)
- On both campuses, **girls** outpace **boys** in terms of student growth in both ELA and Math. (Graphs 11 and 12)



Graph 9



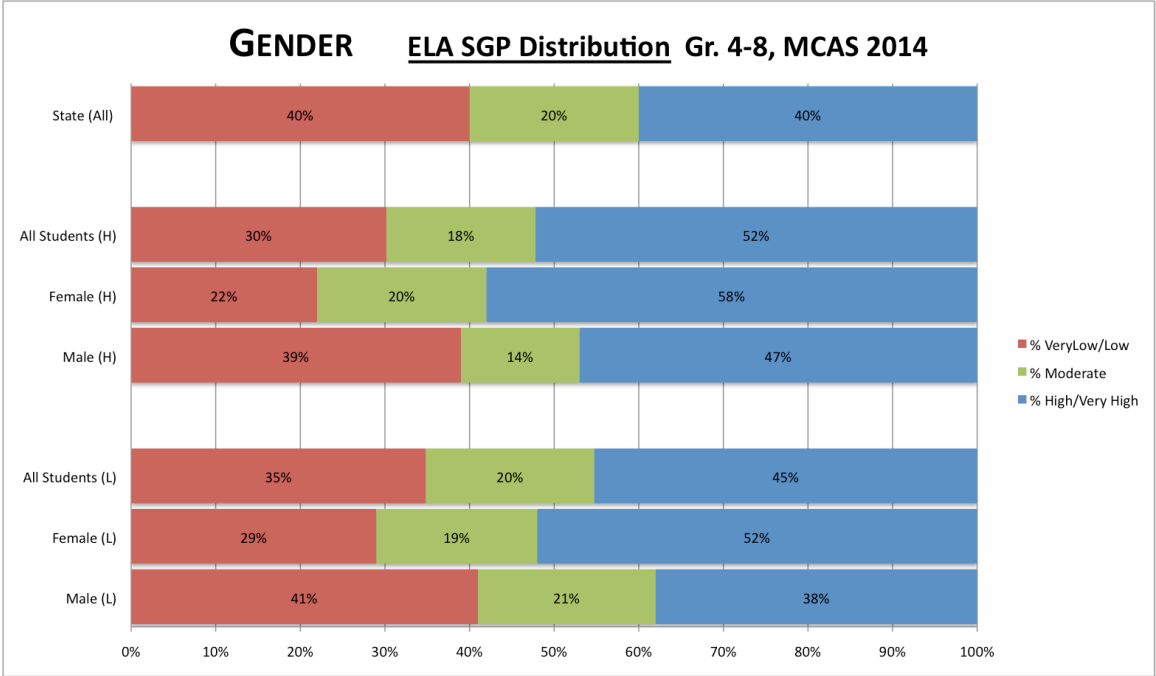
Graph 10



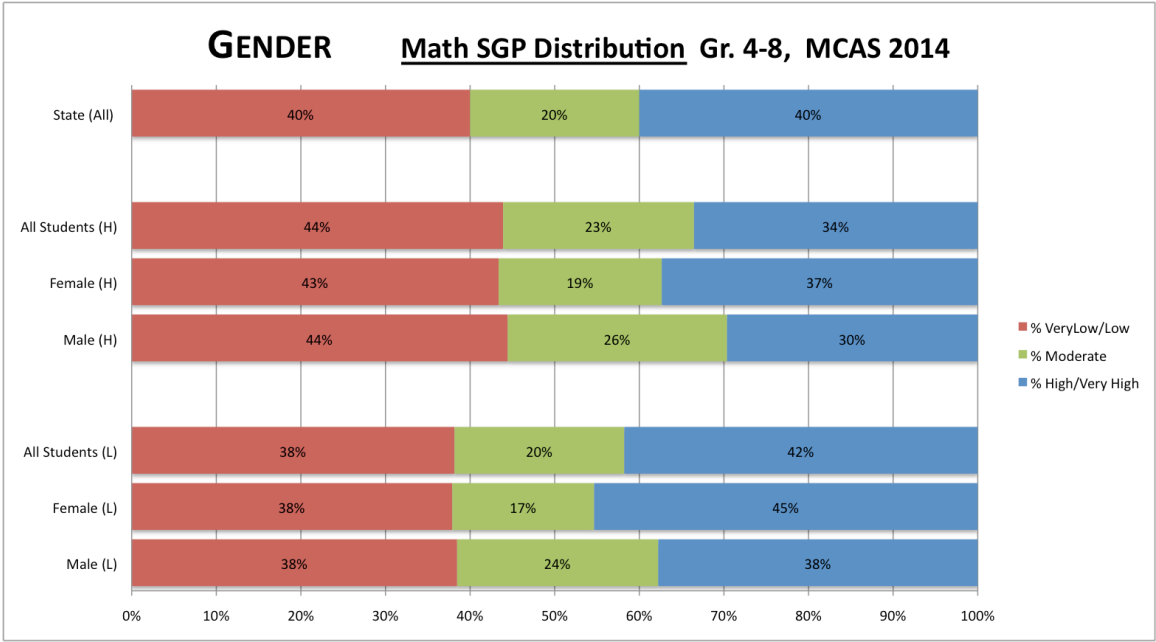
Number of students by subgroup**	Female	Male
Hanscom Campus N	163 (166)	142 (146)
Lincoln Campus N	198 (197)	180 (181)

\*\*The first number is for ELA; the number in parentheses is for Math. When only one number appears, an equal number of students participated in both the ELA and Math exams.

**Graph 11**



**Graph 12**



Number of students by subgroup**	Female	Male
Hanscom MS N	83	76 (81)
Lincoln Campus N	162 (161)	141 (143)

\*\*The first number is for ELA; the number in parentheses is for Math. When only one number appears, an equal number of students participated in both the ELA and Math exams

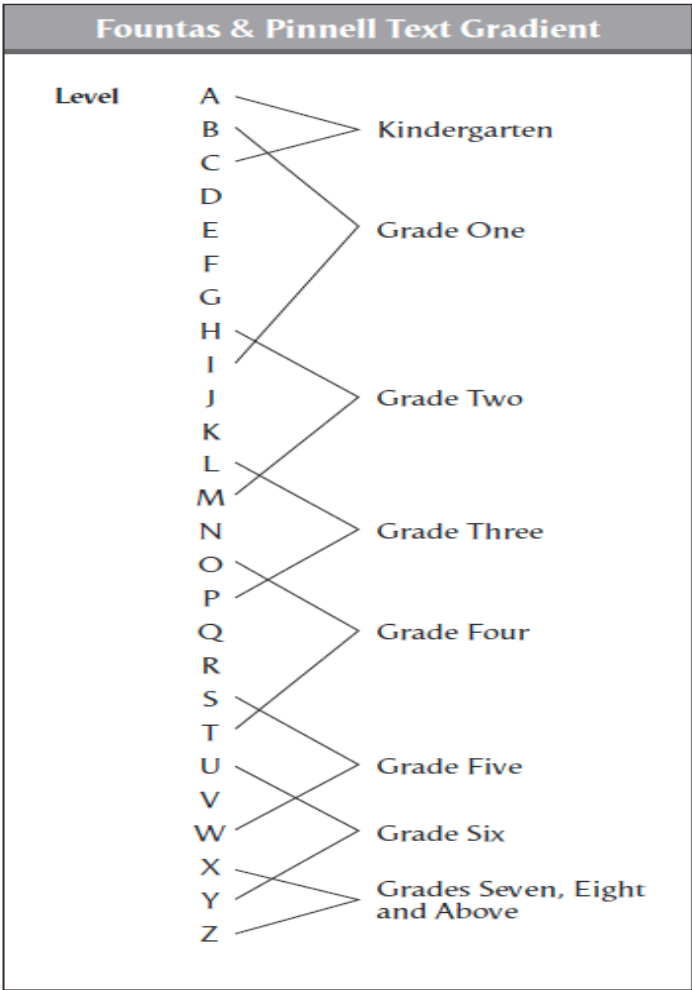
**Fountas and Pinnell Reading Data Analysis**

The Fountas and Pinnell Benchmark Assessment System (F&P), used in grades K-5, is an assessment of oral reading abilities and reading comprehension. It is a one-on-one measure; teachers sit with an individual student, listen to and notate the student’s oral reading, and engage in a comprehension conversation. Students typically read between three to six texts, alternating between fiction and non-fiction, during a single F&P assessment cycle.

F&P assessment texts are leveled on a gradient, with the least challenging texts at Level A, and the most challenging at Level Z. See **Graph 13** for the complete F&P text gradient. **Graph 14** lists the LPS-specific expectations for achievement on F&P by grade level.

When analyzing F&P results (**Graph 15**) from the Spring 2014 assessment cycle, we see patterns that mirror those of the MCAS results. Students with disabilities, students from low-income backgrounds, ELLs, African American, and Latino students score at lower levels than do other students.

**Graph 13**



Graph 14

**Lincoln Public Schools**  
**Fountas and Pinnell Benchmark Instructional Levels**

	Beginning of Year September	1 <sup>st</sup> Interval December	2 <sup>nd</sup> Interval March	End of Year June
K	Below A	A+	B+	C+
		A	B	C
		Below A	Below A	A
				Below A
1	D+ 6	F+ 10	H+ 14	J+
	C 3/4	E 8/10	G 12	J 18
	B2	D 6	F	H
	Below B	Below D	Below F	Below H
2	J+	K+	M+	N+
	J 18	K 20	L 24	M 28
	I 16	J 18	K 20	L 24
	Below I 16	Below J 18	Below K 20	Below L 24
3	N+	O+	P+	Q+
	M	N	O	P
	L	M	N	O
	Below L	Below M	Below N	Below O
4	Q+	R+	S+	T+
	P	Q	R	S
	O	P	Q	R
	Below O	Below P	Below Q	Below R
5	T+	U+	V+	W+
	S	T	U	V
	R	S	T	U
	Below R	Below S	Below T	Below U
6	W+	X+	Y+	Z
	V	W	X	Y
	U	V	W	X
	Below U	Below V	Below W	Below X
7	Z	Z	Z+	Z+
	Y	Y	Z	Z
	X	X	Y	Y
	Below X	Below X	Below Y	Below Y
8	Z+	Z+	Z+	Z+
	Z	Z	Z	Z
	Y	Y	Y	Y
	Below Y	Below Y	Below Y	Below Y

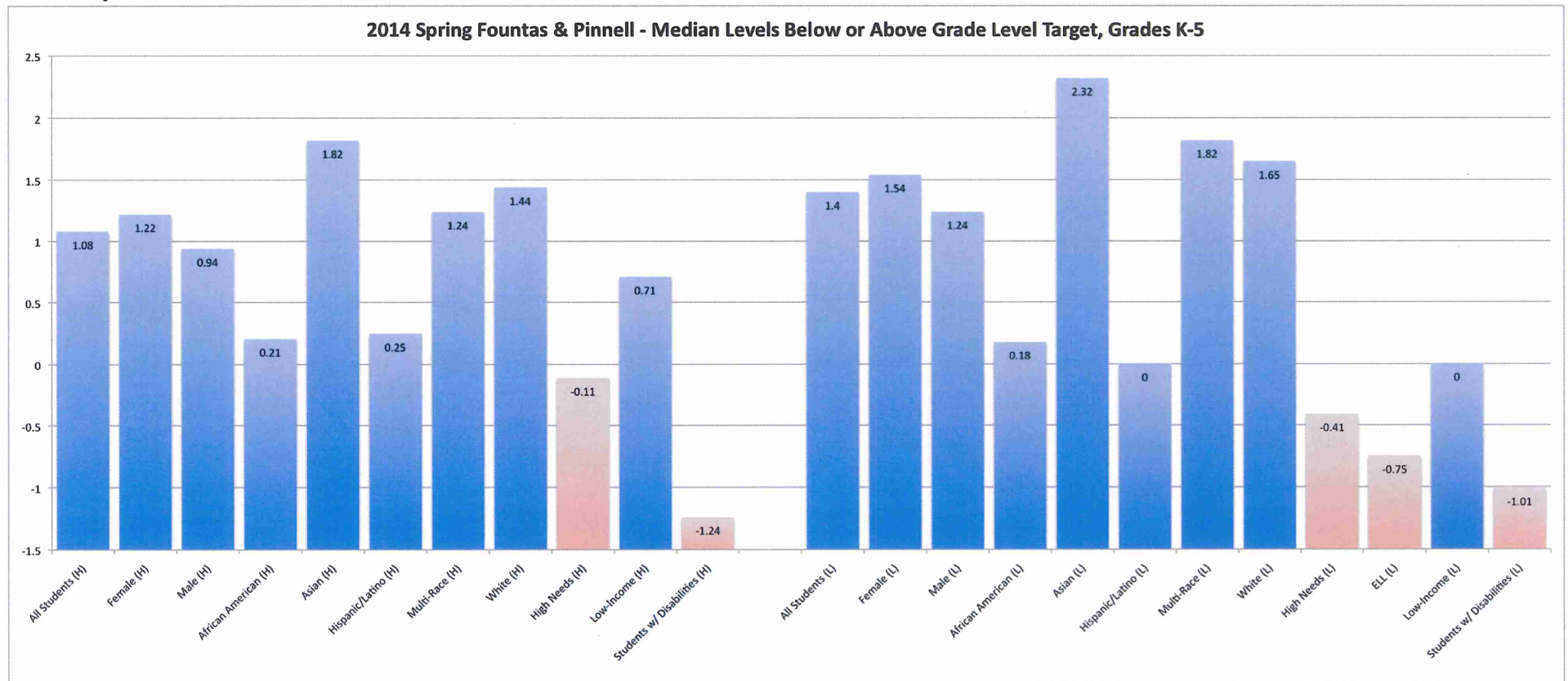
Blue = Exceeds Expectations

Green = Meets Expectations

Yellow = Approaches Expectations: Needs Short-Term Intervention

Orange = Does Not Meet Expectations: Needs Intensive Intervention

Graph 15



Number of students by subgroup	All Students	Female	Male	African American	Asian	Hispanic/Latino	Multi-Race, Non- Hispanic	White	High Needs	ELL	Low Income	Students w/ Disabilities
Lincoln Campus N	402	211	191	40	28	39	28	264	111	12	50	67
Hanscom Campus N	350	169	181	47	17	57	29	198	106	-	49	63

### **Overlapping Subgroup Membership**

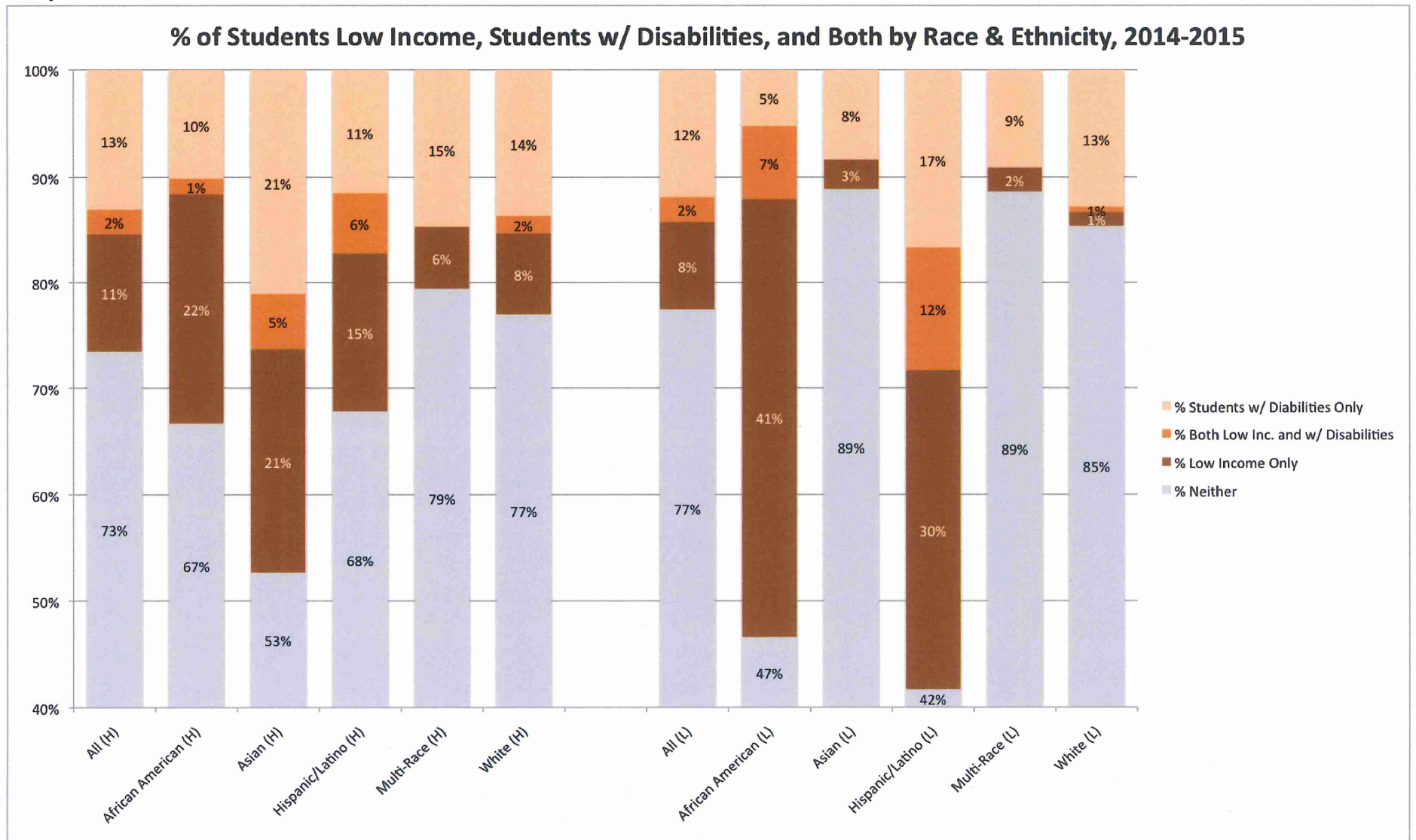
This report looks at MCAS and F&P achievement through the lens of student membership in demographic subgroups. The overlapping nature of group membership in these categories will need to be considered when considering next steps in addressing achievement gaps.

The overlapping nature of subgroup membership is outlined in **Graph 16**.

On the Lincoln campus, for instance, over 50% of Latino and African American students are also members of one of the High Needs categories: either they come from low-income households, they have disabilities, or they are both low-income and have disabilities. On the Hanscom campus, almost half of Asian students have similar subgroup membership.

Educators walk an important and fine line when pointing out patterns of achievement among subgroups whose membership is determined by demographic characteristics. We stand firm in our belief that all students are capable of excellence. At the same time, we are aware that all students are affected by the weight – or the lift – of the social opportunities afforded to them outside the schoolhouse doors. Our job in the Lincoln Public Schools is to learn about each student as an individual, to understand their current strengths and learning needs, and to create systems of academic and social opportunity that shepherd them forward in their development. Our hope is that by looking more closely at patterns of achievement and growth through a lens of subgroup membership, we will improve our ability to refine instructional programs that close existing gaps.

Graph 16



Student count as of 11/13/14	All Students	African American	Asian	Hispanic/Latino	Multi-Race, Non-Hispanic	White
Lincoln Campus N	590	58	36	60	44	390
Hanscom Campus N	513	69	19	87	34	300