



Manchester-Essex  
Regional School District

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Technology

# District Data

## Growth:

- Regular education growth in ELA and math at Memorial
- Special education math at Memorial
- High school 100% A & P in ELA
- High school 97% A & P in Math

# What We Do with MCAS Data

Overall 30,000 foot and then deep analysis including:

- 5 Year Trends
- State Accountability Ratings
  - » CPI Growth/Decline
  - » Student Growth
  - » Extra Credit
- Item & Standards Analysis
- Test Question Analysis
- Writing Analysis

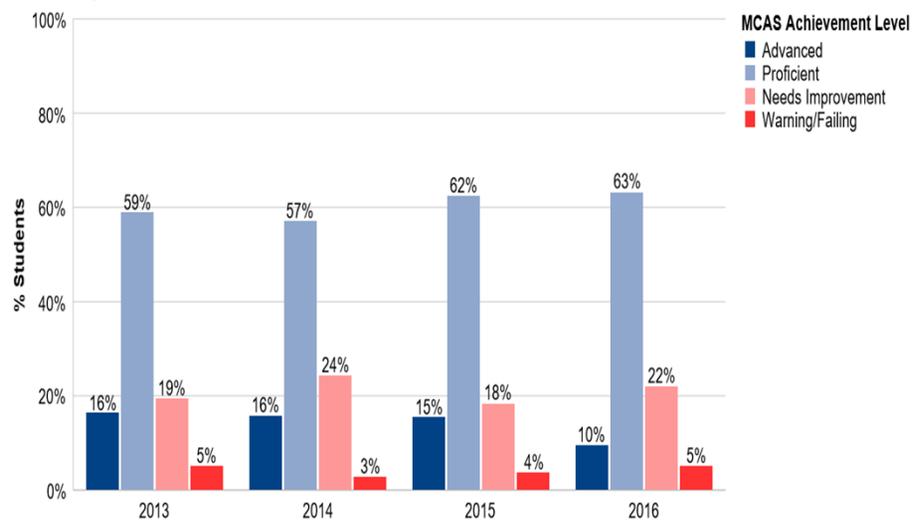
# How Standards-Based Assessment **Impacts** Curriculum and Instruction

- Curriculum Updates and Alignment Shifts (Always)
- Professional Development
- Budget & Materials
- Grant Funding and Allocations
- Educator Evaluation
- School Accountability

# Elementary ELA Trend Data

## Essex

Student Group: All Students

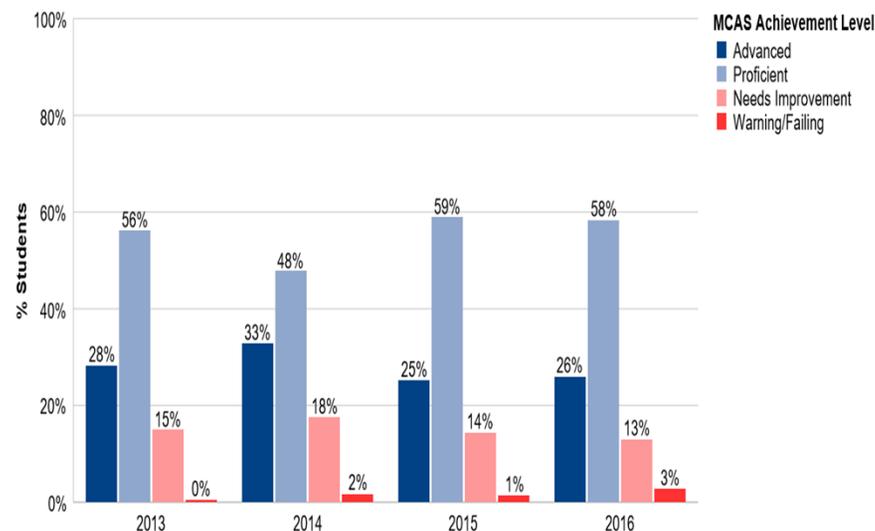


	2013			2014			2015			2016		
	School	District	State	School	District	State	School	District	State	School	District	State
Advanced	16%	35%	19%	16%	35%	18%	15%	32%	10%	25%		
Proficient	59%	54%	50%	57%	52%	51%	62%	57%	63%	59%		
Needs Improvement	19%	10%	23%	24%	12%	22%	18%	9%	22%	13%		
Warning/Failing	5%	2%	8%	3%	2%	8%	4%	2%	5%	3%		
N Students	134	843	496,175	140	842	488,744	136	855	136	836		
CPI	90.5	95.8	86.8	91.1	95.3	86.7	91.5	95.2	88.8	93.5		
Median SGP	54.0	55.0	51.0	59.5	56.0	50.0	52.0	50.0	37.5	44.0		

Spring 2016 state-level results in grades 3-8 ELA and Mathematics are not reported because most students in Massachusetts participated in the PARCC test.  
NOTE: Achievement level percentages are not calculated for student groups of less than 10.

## Memorial

Student Group: All Students

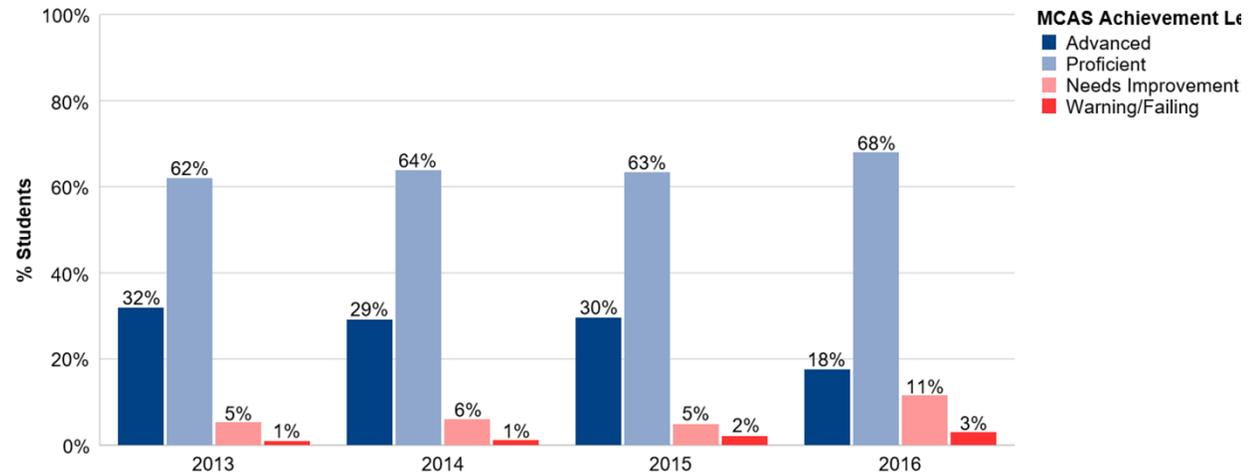


	2013			2014			2015			2016		
	School	District	State	School	District	State	School	District	State	School	District	State
Advanced	28%	35%	19%	33%	35%	18%	25%	32%	26%	25%		
Proficient	56%	54%	50%	48%	52%	51%	59%	57%	58%	59%		
Needs Improvement	15%	10%	23%	18%	12%	22%	14%	9%	13%	13%		
Warning/Failing	0%	2%	8%	2%	2%	8%	1%	2%	3%	3%		
N Students	238	843	496,175	228	842	488,744	217	855	216	836		
CPI	95.1	95.8	86.8	92.7	95.3	86.7	93.9	95.2	94.0	93.5		
Median SGP	55.0	55.0	51.0	52.5	56.0	50.0	58.0	50.0	68.0	44.0		

Spring 2016 state-level results in grades 3-8 ELA and Mathematics are not reported because most students in Massachusetts participated in the PARCC test.  
NOTE: Achievement level percentages are not calculated for student groups of less than 10.

# Middle School ELA Trend Data

Student Group: All Students

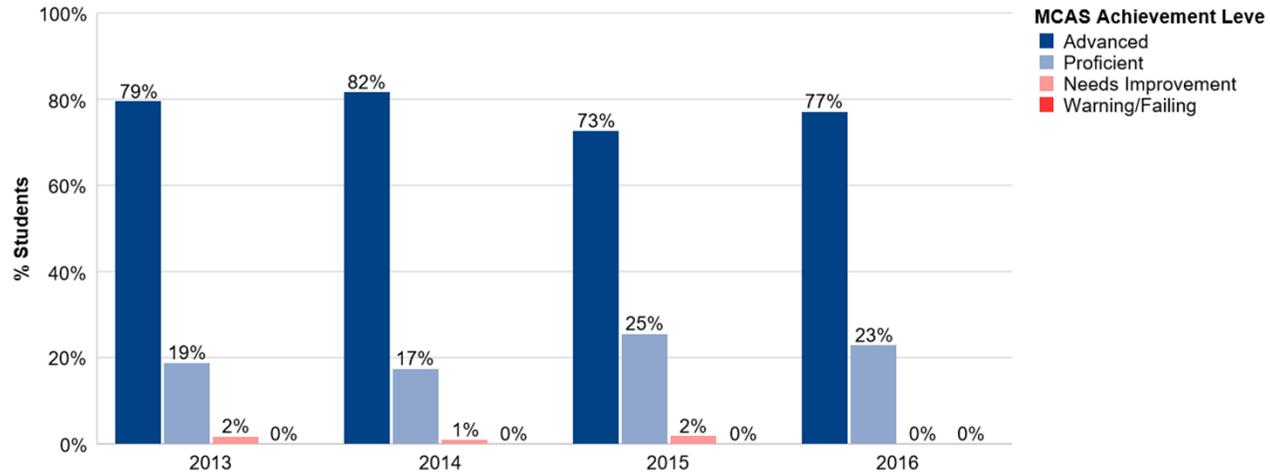


	2013			2014			2015			2016		
	School	District	State	School	District	State	School	District	State	School	District	State
Advanced	32%	35%	19%	29%	35%	18%	30%	32%		18%	25%	
Proficient	62%	54%	50%	64%	52%	51%	63%	57%		68%	59%	
Needs Improvement	5%	10%	23%	6%	12%	22%	5%	9%		11%	13%	
Warning/Failing	1%	2%	8%	1%	2%	8%	2%	2%		3%	3%	
N Students	342	843	496,175	353	842	488,744	368	855		374	836	
CPI	97.5	95.8	86.8	97.5	95.3	86.7	96.8	95.2		94.1	93.5	
Median SGP	52.0	55.0	51.0	56.0	56.0	50.0	48.0	50.0		38.0	44.0	

Spring 2016 state-level results in grades 3-8 ELA and Mathematics are not reported because most students in Massachusetts participated in the PARCC test.  
 NOTE: Achievement level percentages are not calculated for student groups of less than 10.

# High School ELA Trend Data

Student Group: All Students



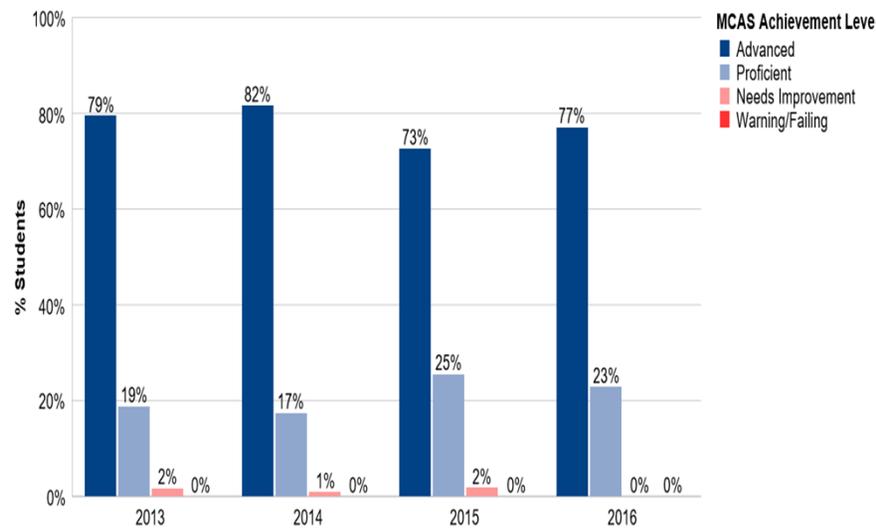
	2013			2014			2015			2016		
	School	District	State	School	District	State	School	District	State	School	District	State
Advanced	79%	35%	19%	82%	35%	18%	73%	32%		77%	25%	
Proficient	19%	54%	50%	17%	52%	51%	25%	57%		23%	59%	
Needs Improvement	2%	10%	23%	1%	12%	22%	2%	9%		0%	13%	
Warning/Failing	0%	2%	8%	0%	2%	8%	0%	2%		0%	3%	
N Students	117	843	496,175	115	842	488,744	110	855		96	836	
CPI	99.6	95.8	86.8	99.8	95.3	86.7	99.3	95.2		100.0	93.5	
Median SGP	63.5	55.0	51.0	63.0	56.0	50.0	56.0	50.0		61.0	44.0	

Spring 2016 state-level results in grades 3-8 ELA and Mathematics are not reported because most students in Massachusetts participated in the PARCC test.  
NOTE: Achievement level percentages are not calculated for student groups of less than 10.

# Elementary Math Trend Data

## Essex

Student Group: All Students

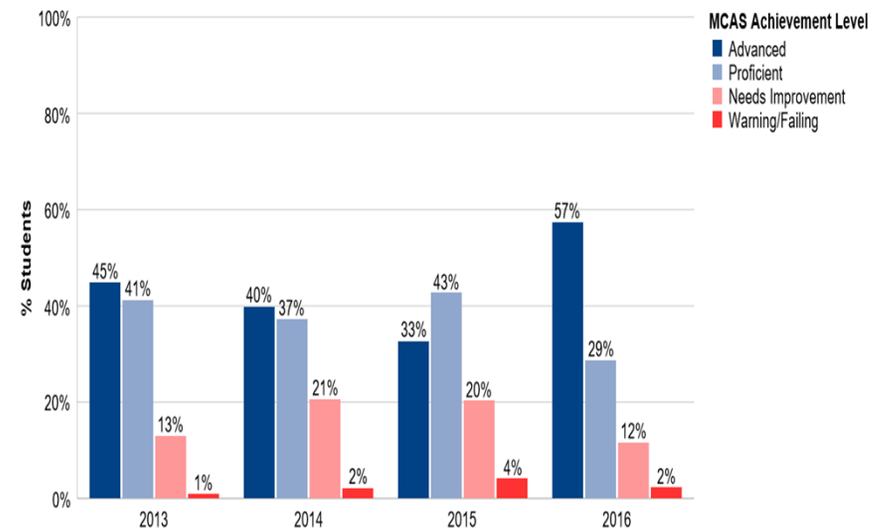


	2013			2014			2015			2016		
	School	District	State	School	District	State	School	District	State	School	District	State
Advanced	79%	35%	19%	82%	35%	18%	73%	32%	77%	25%		
Proficient	19%	54%	50%	17%	52%	51%	25%	57%	23%	59%		
Needs Improvement	2%	10%	23%	1%	12%	22%	2%	9%	0%	13%		
Warning/Failing	0%	2%	8%	0%	2%	8%	0%	2%	0%	3%		
N Students	117	843	496,175	115	842	488,744	110	855	96	836		
CPI	99.6	95.8	86.8	99.8	95.3	86.7	99.3	95.2	100.0	93.5		
Median SGP	63.5	55.0	51.0	63.0	56.0	50.0	56.0	50.0	61.0	44.0		

Spring 2016 state-level results in grades 3-8 ELA and Mathematics are not reported because most students in Massachusetts participated in the PARCC test.  
NOTE: Achievement level percentages are not calculated for student groups of less than 10.

## Memorial

Student Group: All Students



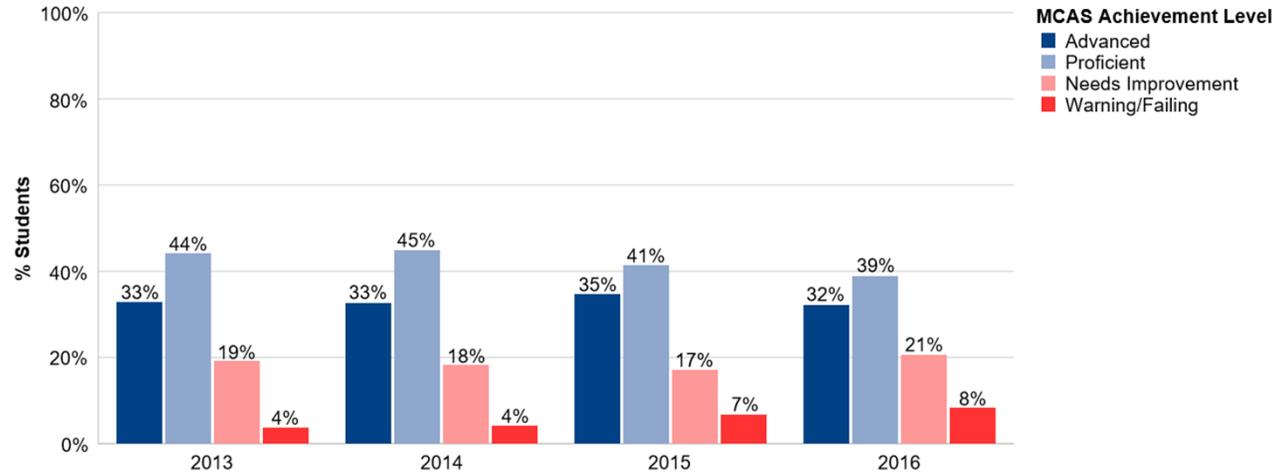
	2013			2014			2015			2016		
	School	District	State	School	District	State	School	District	State	School	District	State
Advanced	45%	42%	28%	40%	43%	28%	33%	39%	57%	45%		
Proficient	41%	40%	33%	37%	36%	32%	43%	37%	29%	33%		
Needs Improvement	13%	15%	25%	21%	18%	25%	20%	19%	12%	16%		
Warning/Failing	1%	3%	14%	2%	3%	15%	4%	6%	2%	6%		
N Students	238	843	497,090	228	839	490,288	217	856	216	838		
CPI	95.1	92.3	80.8	90.8	91.5	80.3	90.0	89.3	94.1	89.7		
Median SGP	54.0	54.0	51.0	53.0	50.0	54.0	48.5	73.0	56.0			

Spring 2016 state-level results in grades 3-8 ELA and Mathematics are not reported because most students in Massachusetts participated in the PARCC test.  
NOTE: Achievement level percentages are not calculated for student groups of less than 10.

# Middle School Math

## Trend Data

Student Group: All Students



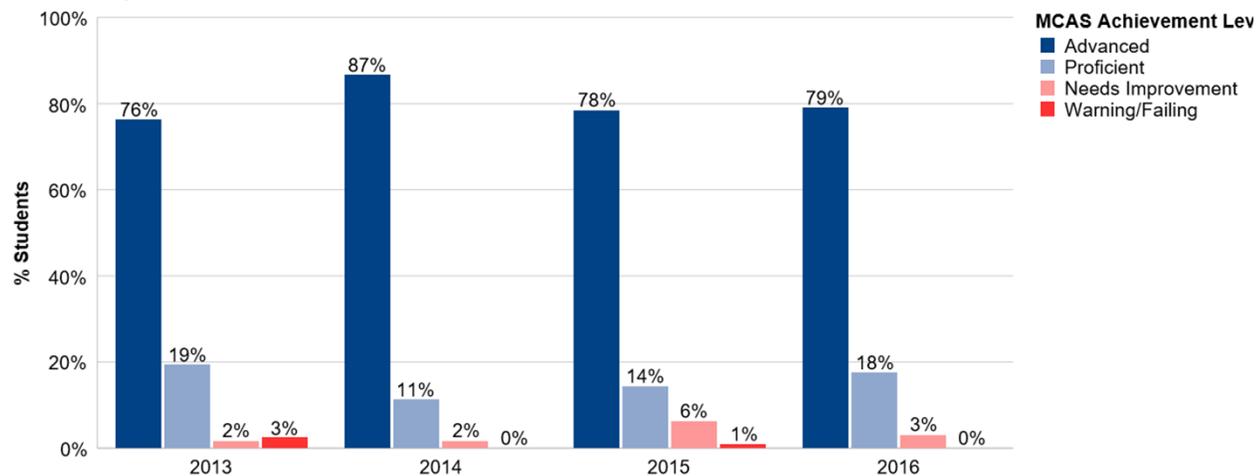
	2013			2014			2015			2016		
	School	District	State	School	District	State	School	District	State	School	District	State
Advanced	33%	42%	28%	33%	43%	28%	35%	39%		32%	45%	
Proficient	44%	40%	33%	45%	36%	32%	41%	37%		39%	33%	
Needs Improvement	19%	15%	25%	18%	18%	25%	17%	19%		21%	16%	
Warning/Failing	4%	3%	14%	4%	3%	15%	7%	6%		8%	6%	
N Students	340	843	497,090	352	839	490,288	368	856		375	838	
CPI	90.2	92.3	80.8	90.5	91.5	80.3	89.2	89.3		86.3	89.7	
Median SGP	54.0	54.0	51.0	53.0	53.0	50.0	42.0	48.5		46.5	56.0	

Spring 2016 state-level results in grades 3-8 ELA and Mathematics are not reported because most students in Massachusetts participated in the PARCC test.

NOTE: Achievement level percentages are not calculated for student groups of less than 10.

# High School Math Trend Data

Student Group: All Students



	2013			2014			2015			2016		
	School	District	State	School	District	State	School	District	State	School	District	State
Advanced	76%	42%	28%	87%	43%	28%	78%	39%		79%	45%	
Proficient	19%	40%	33%	11%	36%	32%	14%	37%		18%	33%	
Needs Improvement	2%	15%	25%	2%	18%	25%	6%	19%		3%	16%	
Warning/Failing	3%	3%	14%	0%	3%	15%	1%	6%		0%	6%	
N Students	118	843	497,090	114	839	490,288	111	856		96	838	
CPI	97.7	92.3	80.8	99.3	91.5	80.3	97.1	89.3		98.7	89.7	
Median SGP	55.5	54.0	51.0	55.0	53.0	50.0	63.0	48.5		63.0	56.0	

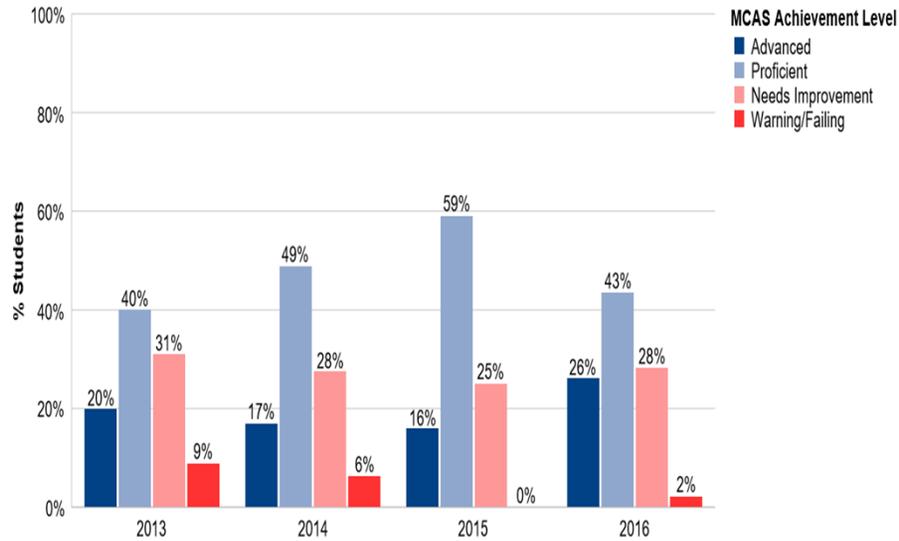
Spring 2016 state-level results in grades 3-8 ELA and Mathematics are not reported because most students in Massachusetts participated in the PARCC test.

NOTE: Achievement level percentages are not calculated for student groups of less than 10.

# Elementary Science Trend Data

## Essex

Student Group: All Students

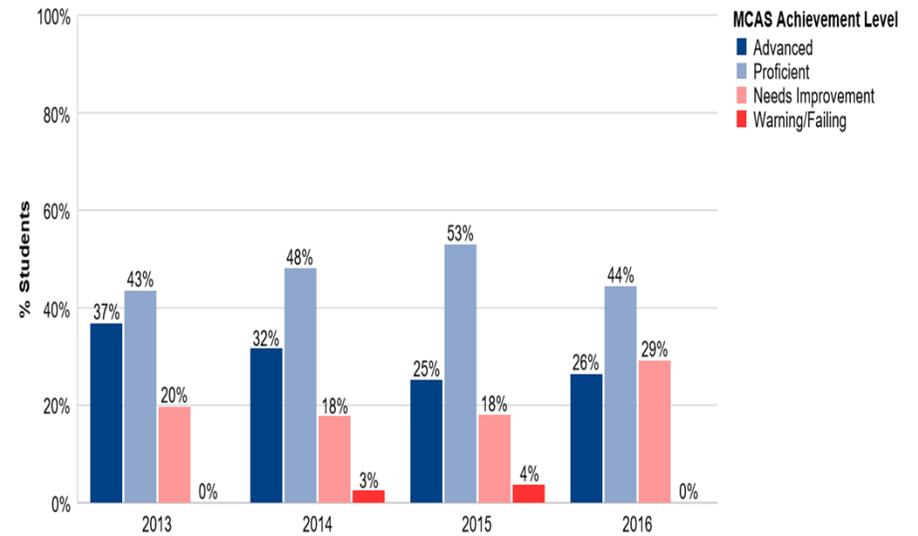


	2013			2014			2015			2016		
	School	District	State									
Advanced	20%	30%	20%	17%	26%	20%	16%	21%	16%	26%	26%	16%
Proficient	40%	42%	31%	49%	48%	33%	59%	53%	35%	43%	43%	31%
Needs Improvement	31%	25%	36%	28%	21%	34%	25%	23%	37%	28%	28%	38%
Warning/Failing	9%	3%	12%	6%	4%	13%	0%	3%	13%	2%	2%	14%
N Students	45	122	70,842	47	126	70,994	44	132	70,861	46	123	69,681
CPI	85.6	90.2	78.5	89.4	91.3	79.0	92.0	90.0	78.2	89.7	89.6	76.4
Median SGP												

NOTE: Achievement level percentages are not calculated for student groups of less than 10.

## Memorial

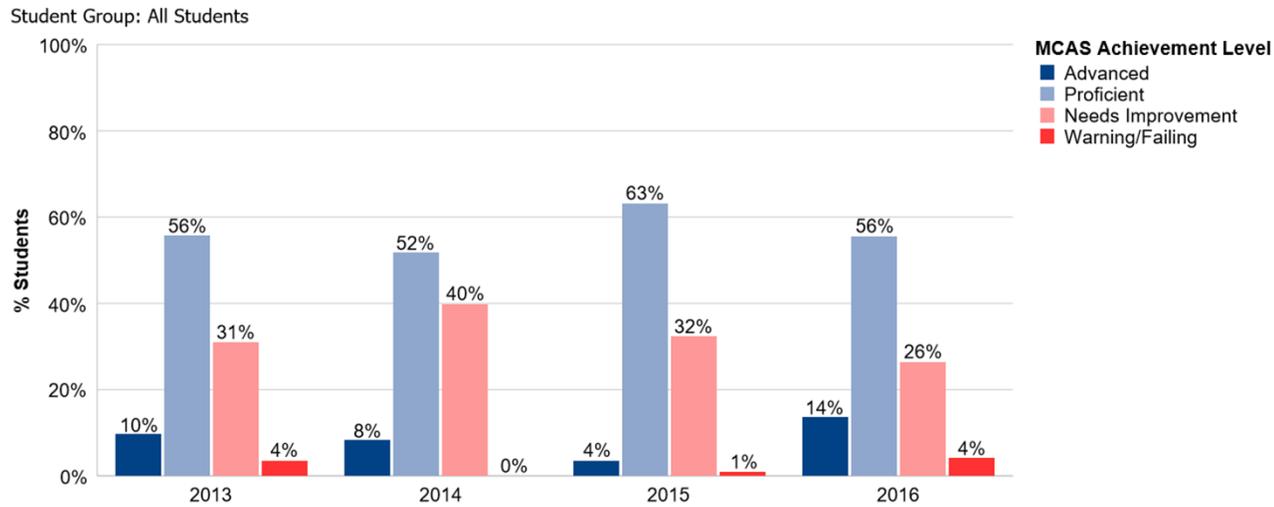
Student Group: All Students



	2013			2014			2015			2016		
	School	District	State									
Advanced	37%	30%	20%	32%	26%	20%	25%	21%	16%	26%	26%	16%
Proficient	43%	42%	31%	48%	48%	33%	53%	53%	35%	44%	43%	31%
Needs Improvement	20%	25%	36%	18%	21%	34%	18%	23%	37%	29%	28%	38%
Warning/Failing	0%	3%	12%	3%	4%	13%	4%	3%	13%	0%	2%	14%
N Students	76	122	70,842	79	126	70,994	83	132	70,861	72	123	69,681
CPI	93.1	90.2	78.5	92.4	91.3	79.0	90.7	90.0	78.2	91.3	89.6	76.4
Median SGP												

NOTE: Achievement level percentages are not calculated for student groups of less than 10.

# Middle School Science Trend Data

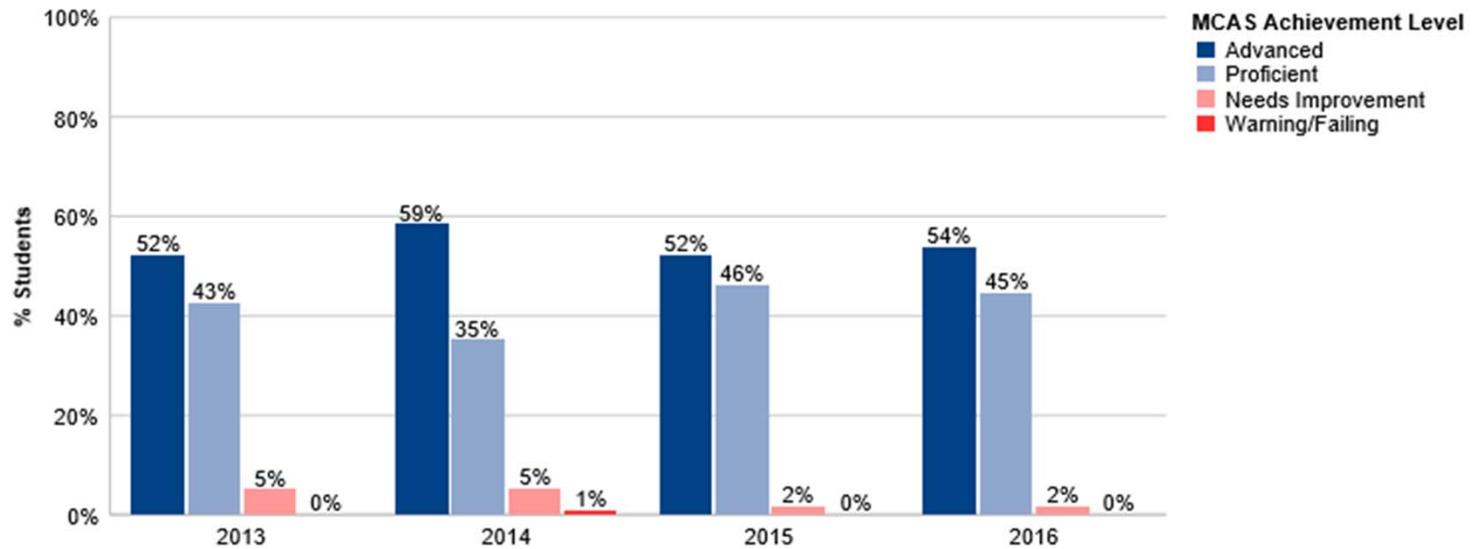


	2013			2014			2015			2016		
	School	District	State									
Advanced	10%	9%	4%	8%	8%	4%	4%	3%	3%	14%	13%	6%
Proficient	56%	54%	35%	52%	52%	38%	63%	63%	39%	56%	55%	35%
Needs Improvement	31%	32%	43%	40%	40%	41%	32%	33%	40%	26%	27%	40%
Warning/Failing	4%	4%	18%	0%	0%	18%	1%	1%	18%	4%	5%	19%
N Students	113	118	72,038	108	108	71,951	114	116	71,860	117	119	70,640
CPI	86.5	85.2	71.0	86.6	86.6	72.4	88.6	88.6	72.4	88.0	87.4	71.3
Median SGP												

NOTE: Achievement level percentages are not calculated for student groups of less than 10.

# High School Science Trend Data

Student Group: All Students



	2013			2014			2015			2016		
	School	District	State									
Advanced	52%	51%	31%	59%	57%	30%	52%	52%	27%	54%	54%	34%
Proficient	43%	42%	42%	35%	34%	43%	46%	46%	46%	45%	45%	41%
Needs Improvement	5%	8%	20%	5%	7%	20%	2%	2%	19%	2%	2%	17%
Warning/Failing	0%	0%	8%	1%	2%	8%	0%	0%	7%	0%	0%	8%
N Students	115	118	49,339	111	114	50,574	117	117	51,103	173	177	51,903
CPI												
Median SGP												

NOTE: Achievement level percentages are not calculated for student groups of less than 10.

# What Does It All Mean?

## K-12 Standards Analysis

School	ELA	Math	Science	Recommendation
Essex	<p>Writing:</p> <ul style="list-style-type: none"> <li>Open Response</li> <li>Short Response</li> <li>Key Ideas and Details</li> <li>Conventions</li> </ul>	<ul style="list-style-type: none"> <li>Measurement and Data</li> <li>Geometry</li> <li>Operations and Algebraic Thinking</li> <li>Write and Interpret Numerical Expressions</li> </ul>	<p>Very strong in the following:</p> <ul style="list-style-type: none"> <li>Earth and Space Science</li> <li>Life</li> <li>Physical</li> <li>Technology and Engineering Sciences</li> </ul>	<ul style="list-style-type: none"> <li>Prepare for Shift from OEQ to Literary Analysis and Four Modes of Writing</li> <li>Reading Comprehension</li> <li>Continue with EM4 and assess weak areas using AimsWeb</li> <li>Support the mastery of foundational skill development-traditional algorithms-at each grade level</li> </ul>
Memorial	<p>Writing</p> <ul style="list-style-type: none"> <li>Open Response</li> <li>Short Response</li> <li>Conventions</li> </ul>	<ul style="list-style-type: none"> <li>Operations and Algebraic Thinking (Grade 5)</li> </ul>	<p>Very strong in the following:</p> <ul style="list-style-type: none"> <li>Earth and Space Science</li> <li>Life</li> <li>Physical</li> <li>Technology and Engineering Sciences</li> </ul>	<ul style="list-style-type: none"> <li>Prepare for Shift from OEQ to Literary Analysis and Four Modes of Writing</li> <li>Reading Comprehension</li> <li>Support the mastery of foundational skill development-traditional algorithms-at each grade level</li> </ul>

# What Does It All Mean?

## K-12 Standards Analysis

School	ELA	Math	Science	Recommendations
Middle School	<ul style="list-style-type: none"> <li>• Open Response</li> <li>• Integration of Knowledge and Key Ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Multiplication and Division</li> <li>• Multiplication and dividing of fractions</li> <li>• Properties of Operations (Grade 6)</li> </ul>	Very strong in the following: <ul style="list-style-type: none"> <li>• Earth and Space Science</li> <li>• Life</li> <li>• Physical</li> <li>• Technology and Engineering Sciences</li> </ul>	<ul style="list-style-type: none"> <li>• Review math materials at MS</li> <li>• Assess comparability to standards</li> <li>• Special education-solidifying fundamental math skills</li> <li>• Shift from OEQ to Literary Analysis and Four Modes of Writing</li> </ul>
High School	ELA 100%	Math 98.7%	Science 98.7%	<ul style="list-style-type: none"> <li>• Hold tight!</li> </ul>

# 2016 OR Writing Data



Grade and Subject	District			State		
	#	%	Tested	#	%	Tested
GRADE 04 - ENGLISH LANGUAGE ARTS	74	64	116	10,458	53	19,556
GRADE 04 - MATHEMATICS	103	90	115	15,117	77	19,579
GRADE 05 - ENGLISH LANGUAGE ARTS	74	61	121	11,765	59	19,793
GRADE 05 - MATHEMATICS	105	86	122	14,855	75	19,826
GRADE 05 - SCIENCE AND TECH/ENG	100	82	122	41,309	60	68,495
GRADE 06 - ENGLISH LANGUAGE ARTS	54	41	133	13,723	67	20,604
GRADE 06 - MATHEMATICS	109	82	133	16,357	79	20,594
GRADE 07 - ENGLISH LANGUAGE ARTS	119	93	128	16,155	81	20,031
GRADE 07 - MATHEMATICS	95	74	128	13,239	66	20,018
GRADE 08 - ENGLISH LANGUAGE ARTS	110	93	118	15,822	79	20,047
GRADE 08 - MATHEMATICS	97	82	119	13,109	65	20,030
GRADE 08 - SCIENCE AND TECH/ENG	92	77	119	41,022	59	69,572
GRADE 10 - ENGLISH LANGUAGE ARTS	92	96	96	57,875	84	69,027
GRADE 10 - MATHEMATICS	90	93	97	45,508	66	69,032
HS - BIOLOGY	133	75	177	25,031	49	51,147
HS - CHEMISTRY				435	52	840
HS - INTRODUCTORY PHYSICS				7,237	47	15,317
HS - TECHNOLOGY / ENGINEERING				1,246	46	2,713
ALL GRADE - ENGLISH LANGUAGE ARTS	523	73	712	125,798	74	169,058
ALL GRADE - MATHEMATICS	599	84	714	118,185	70	169,079
ALL GRADE - SCIENCE AND TECH/ENG	325	78	418	116,280	56	208,084

# High School AP Data

## Writing and Application

<u>Subject</u>	<u>Tests Taken</u>	<u>% Score 1-2</u>	<u>% Score 3-5</u>
All Subjects	282	13.5	86.5
Arts	2		
Studio Art: 2-D Design	2		
English Language Arts	35	0.0	100.0
English Lang/Comp	15	0.0	100.0
English Lit/Comp	20	0.0	100.0
Foreign Languages	40	5.0	95.0
French Lang	9		
Spanish Lang	17	0.0	100.0
Spanish Lit	14	0.0	100.0
History and Social Science	113	17.7	82.3
Govt & Pol: Comp	15	73.3	26.7
Govt & Pol: U.S.	15	6.7	93.3
History: European	1		
History: U.S.	44	15.9	84.1
Psychology	38	2.6	97.4
Math and Computer Science	49	16.3	83.7
Calculus AB	22	13.6	86.4
Calculus BC	1		
Computer Sci A	16	31.3	68.8
Statistics	10	0.0	100.0
Science and Technology	43	18.6	81.4
Biology	11	9.1	90.9
Chemistry	10	20.0	80.0
Environmental Sci	5		
Physics C: Mech	17	17.6	82.4

# High School SAT Data

## Writing and Application

<u>Student Group</u>	<u>Test Takers</u>	<u>Reading</u>	<u>Writing</u>	<u>Math</u>
All Students	104	595	582	601
Lim. English Prof.	1			
Economic Disadv.	6			
Special Education	4			
High Needs	11	488	506	555
Female	49	580	581	581
Male	55	609	583	619
White	104	595	582	601

# Next Steps

- Review curricular expectations for reading and writing connections in ELA (K-8)
- Review existing writing curriculum development (K-8)
- Assess foundational math skill development at elementary levels
- Review the application of foundational skills in 6<sup>th</sup> grade mathematics
- Review updates and changes in science curriculum grades (K-8)