

# 2016 MCAS Analysis



**OLIVER AMES HIGH SCHOOL**

**EASTON MIDDLE SCHOOL**

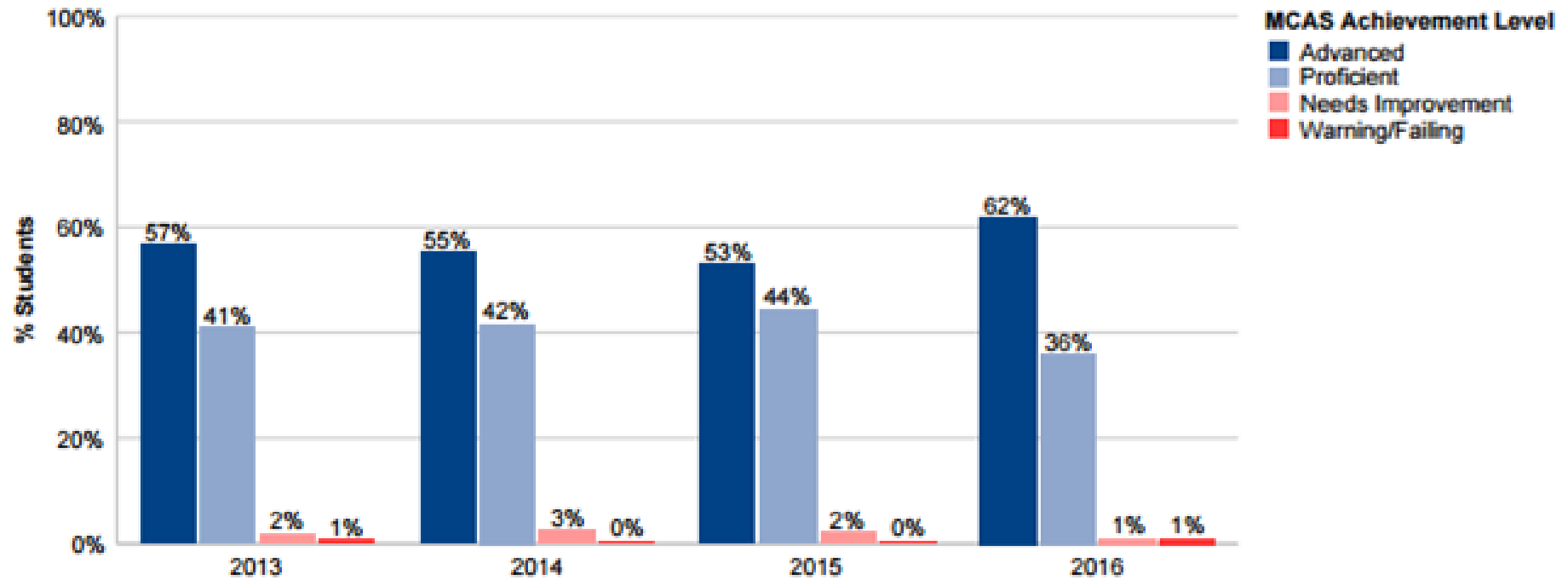
**RICHARDSON~OLMSTED SCHOOL**

# ELA 2013-2016 at Oliver Ames HS



## Grade 10 - ENGLISH LANGUAGE ARTS Percentage of Students by Achievement Level

Student Group: All Students



## GRADE 10 - ENGLISH LANGUAGE ARTS ACHIEVEMENT

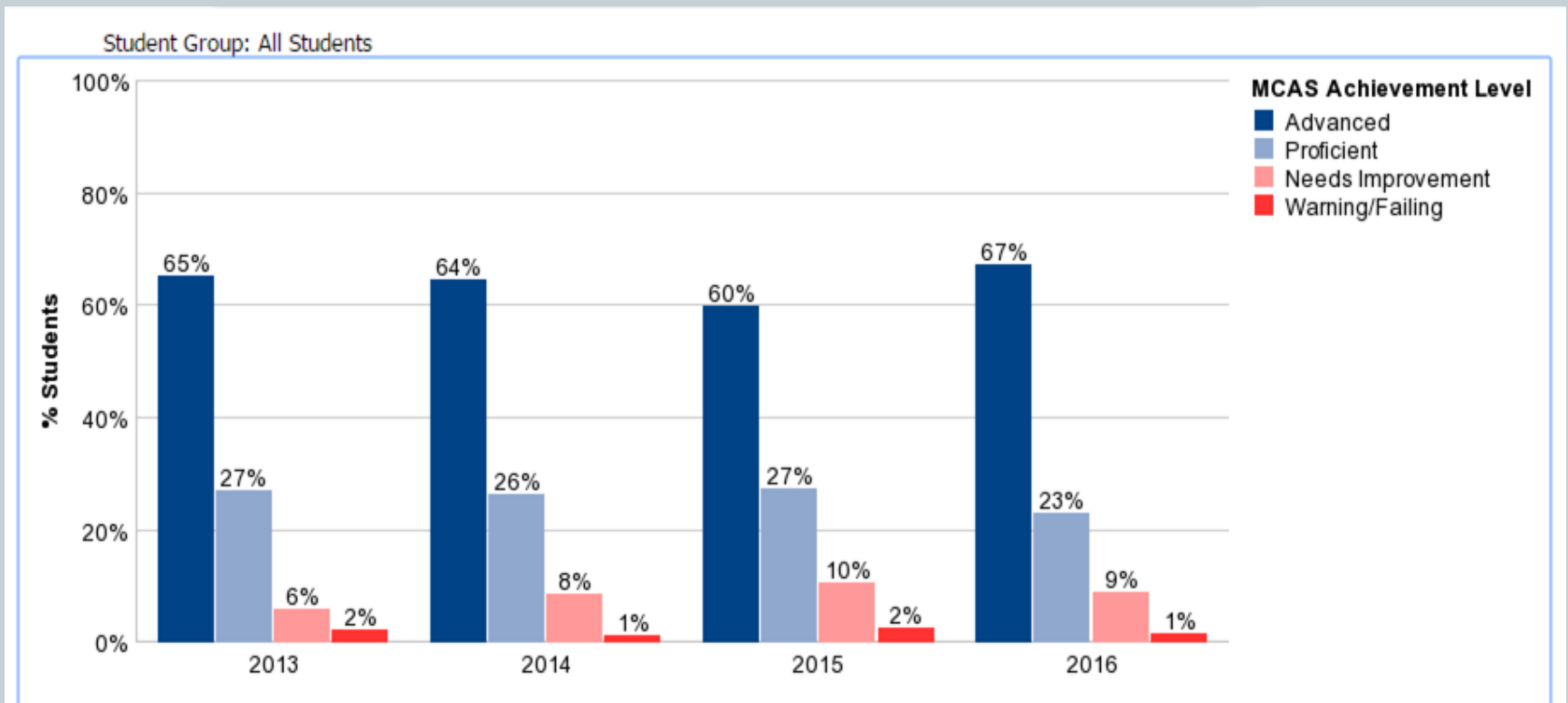


LEVEL	2013	2014	2015	2016
ADVANCED	57%	55%	53%	62%
PROFICIENT	41%	42%	44%	36%
NEEDS IMPROVEMENT	2%	3%	2%	1%
FAILING	1%	0%	0%	1%

# Math 2013-2016 at Oliver Ames HS



## Grade 10 - MATHEMATICS Percentage of Students by Achievement Level



## GRADE 10 - MATHEMATICS ACHIEVEMENT

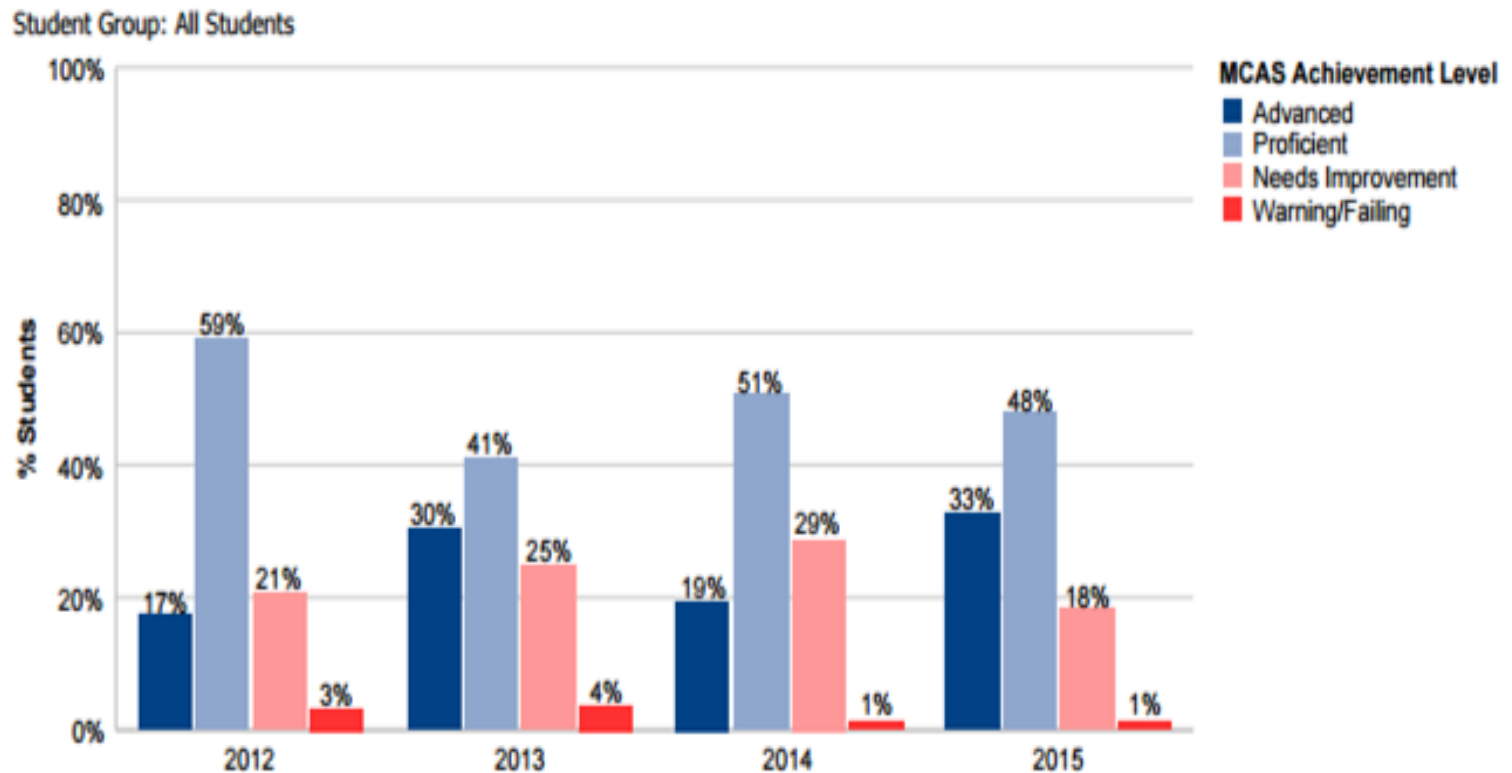


<b>LEVEL</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>ADVANCED</b>	65%	64%	60%	67%
<b>PROFICIENT</b>	27%	26%	27%	23%
<b>NEEDS IMPROVEMENT</b>	6%	8%	10%	9%
<b>FAILING</b>	2%	1%	2%	1%

# Science/Technology 2012-2015 at OAHS



## Grades 10 (Class of 2018=2015) - SCIENCE AND TECH/ENG. Percentage of Students by Achievement Level



## GRADE 10 - SCIENCE AND TECH/ENG. ACHIEVEMENT (%)



LEVEL	2012 (Class of 2015)	2013 (Class of 2016)	2014 (Class of 2017)	2015 (Class of 2018)
ADVANCED	17%	30%	19%	33%
PROFICIENT	59%	41%	51%	48%
NEEDS IMPROVEMENT	21%	25%	29%	18%
FAILING	3%	4%	1%	1%

# Student Growth Percentile

Student Performance relative to standards is useful in determining if a student met the standard. Student Growth Percentile is a measure of progress in comparison to students whose previous scores in grades 7&8 were similar.

A student growth percentile (SGP) measures how much a student's performance has improved from one year to the next relative to his or her academic peers: other students statewide with a similar MCAS test score history.

The statistic is interpreted as follows: if Student X, currently a grade 10 student, has a SGP of 65 in ELA, it means that Student X scored higher on the 10th grade test than 65 percent of students statewide with a similar MCAS test score history. Similarly, if Student X had a SGP of 40 in Math, it means he scored higher than only 40 percent of students with a similar MCAS test score history.

Source: Massachusetts Department of Elementary and Secondary Education website



# Median Student Growth Percentile

The median student growth percentile is the midpoint of student growth percentiles for a group of students (for example, a classroom, grade, subgroup, school, or district). Half of the students had SGPs higher than the median; half had lower. This is a good way of describing the typical growth of students in the group.

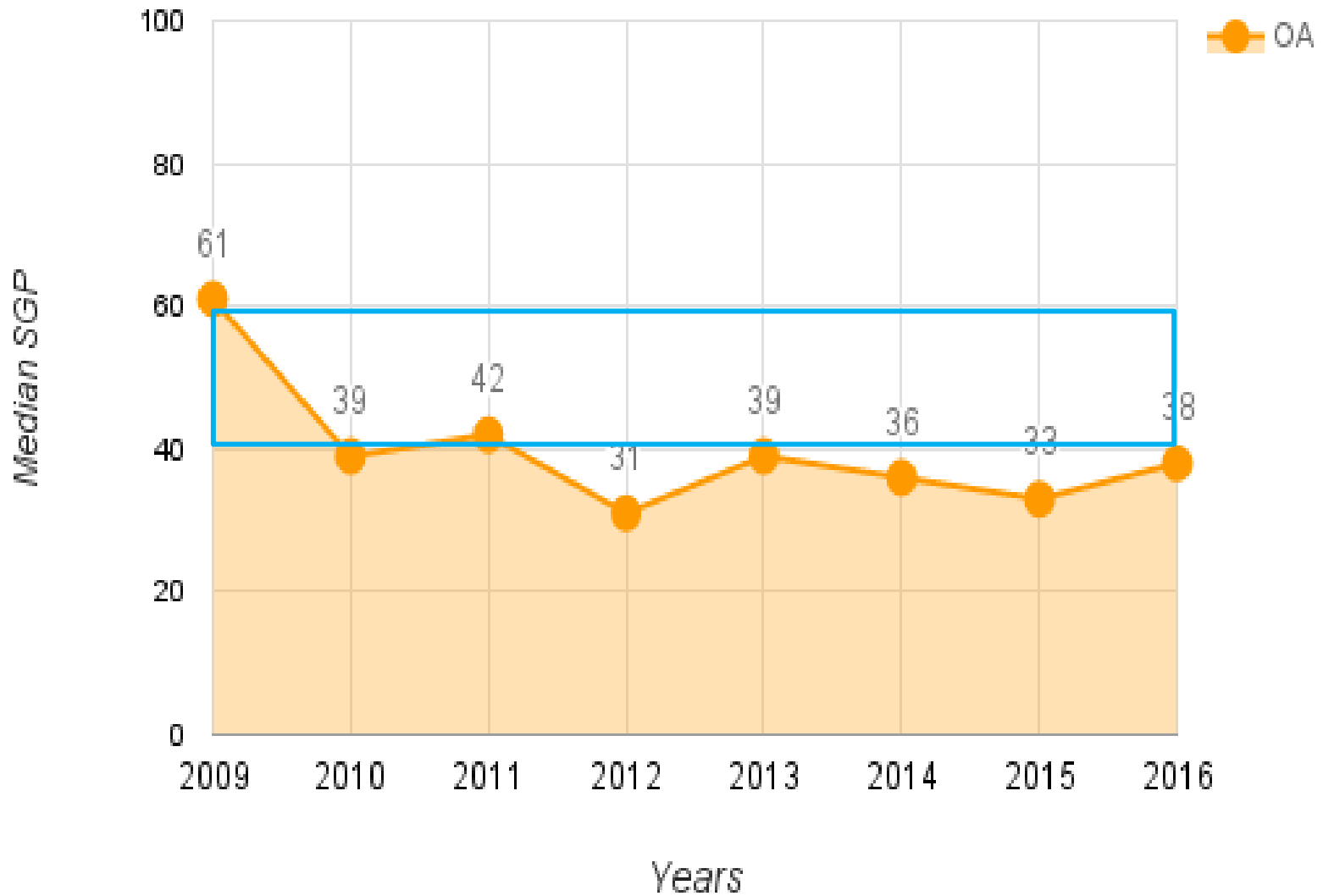
If a child scores a 260 on the ELA MCAS in grade 8, then he or she is grouped with students who earned a similar score. In grade 10 if a child scored a 272 and his or her SGP was 75, then that student scored better than 75% of the other students that were in that like group in grade 8

Source: Massachusetts Department of Elementary and Secondary Education website

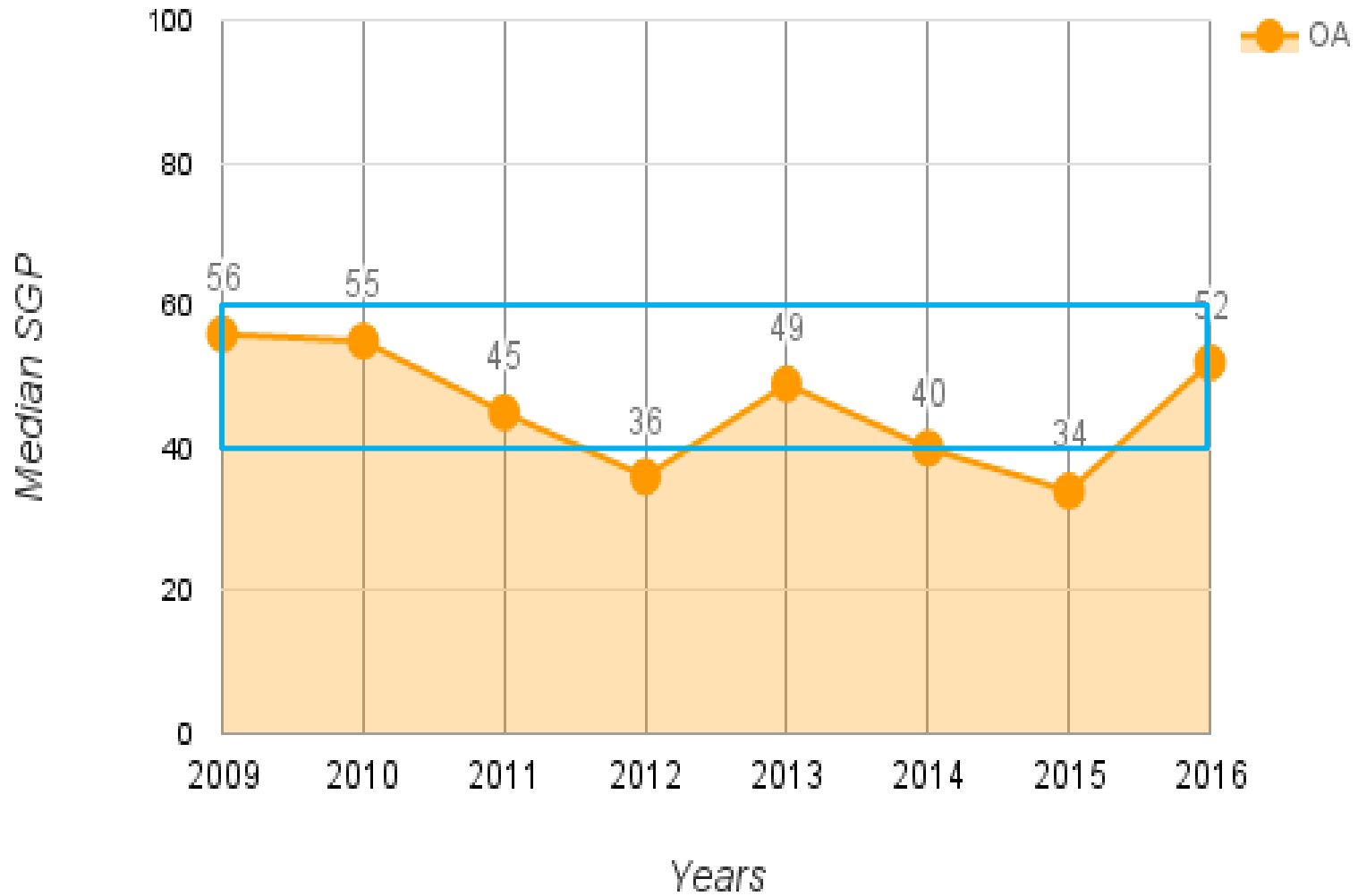
# OAHS is a High Performing Low Growth School

The Key to increased growth is targeting our High Needs Subgroup which we have been doing for 2 years

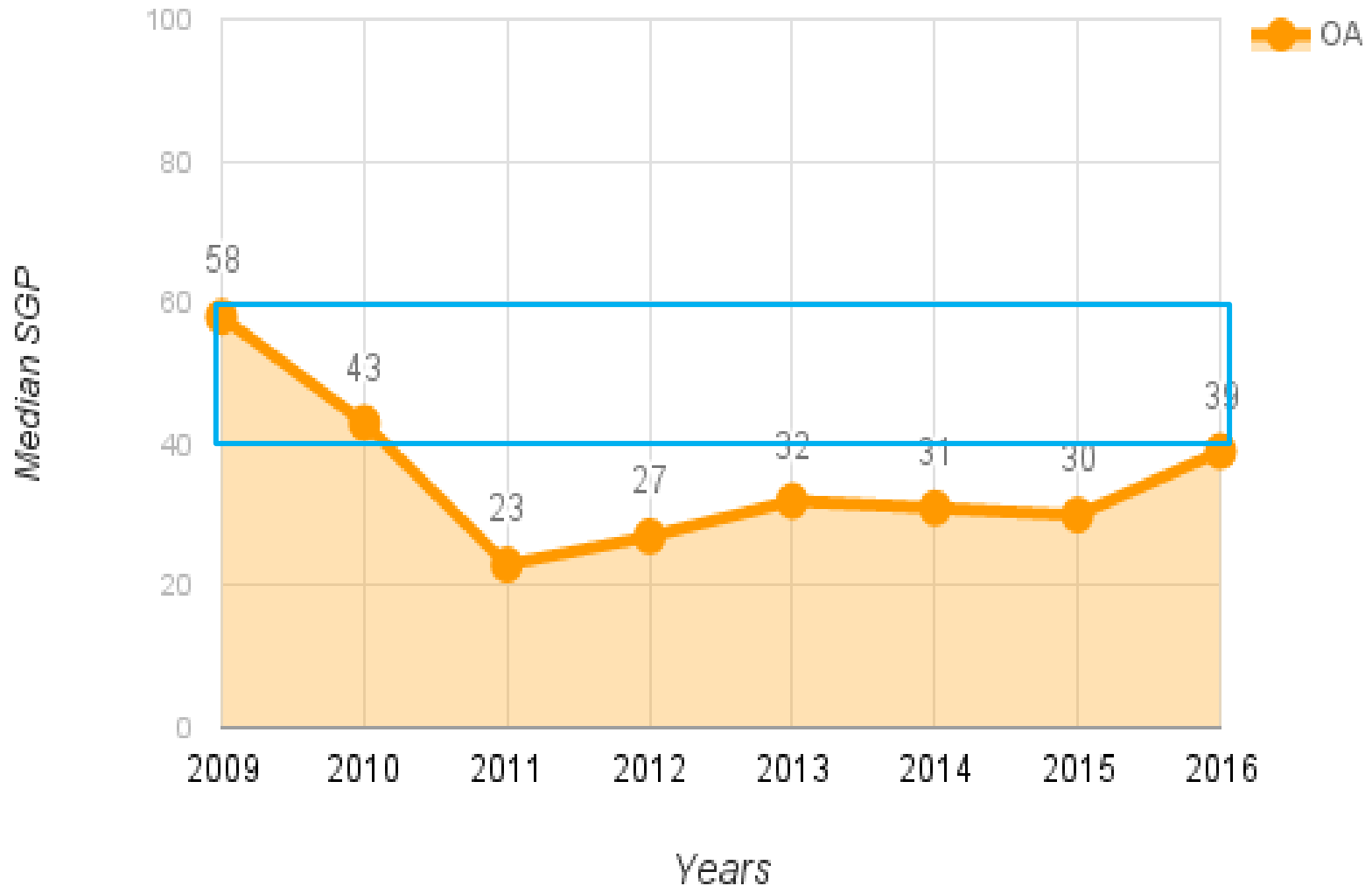
# Math MCAS Median SGP- All Students



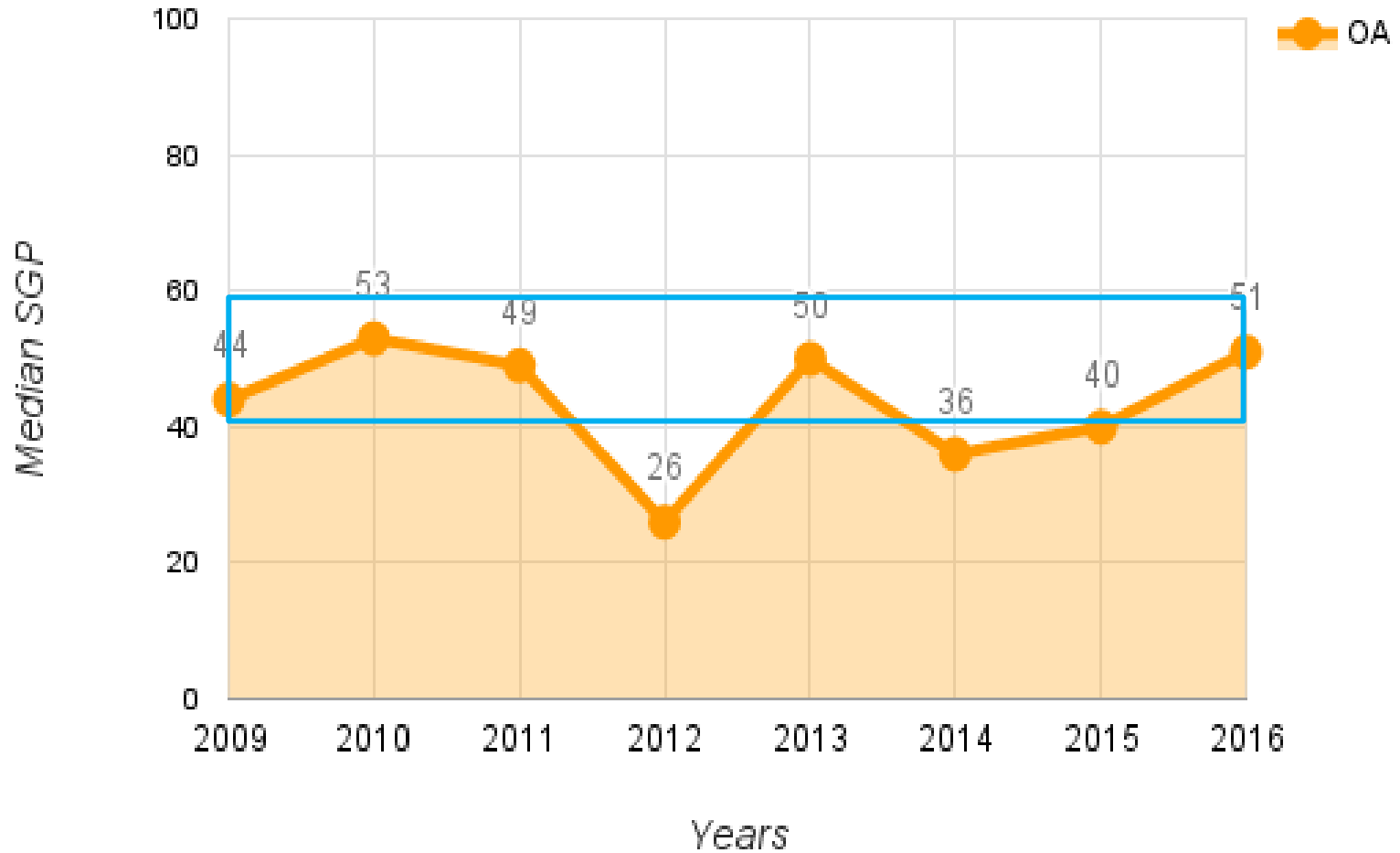
## ELA MCAS Median SGP - All Students



# High Needs Subgroup Median SGP for Math MCAS



# High Needs Subgroup Median SGP for ELA MCAS



# Progress and Performance Index PPI

The PPI combines information about narrowing proficiency gaps, growth, and graduation and dropout rates into a number between 0-100 and a PPI of 75 or higher indicates a school is on track toward meeting proficiency gap narrowing goals.

OAHS's PPI goal was 75, the school overall, counting all subgroups, scored 81 placing OA in the 63rd percentile relative to other schools in the same school type.

Students with disabilities subgroup did not meet its goal of 75 scoring a 67 in its PPI, but showed great improvement from the previous years PPI of 50

# Strengths



- **Improvements in ELA:**
  - Adv increased by 9% from 2015.
  - NI/F has decreased from 3% in 2014 to 2% in 2016.
  - For the past four years, 97% of the students scored in the Adv/Prof categories.



# Strengths



- **Improvements in Math:**
  - Adv increased by 7% from 2015.
  - NI/F decreased by 2% from 2015.
  - Adv/Prof increased 3% from 2015.
  - For the past 4 years, 87% or more of the students have scored in the Adv/Prof categories.

# Strengths



## Improvements in Physics:

- Advanced increased 14% from 2015.
- NI/F decreased by 11% from 2015.
- Advanced and proficient increased 11% from 2015.
- For the past four years at least 70% of the students scored in Adv/prof categories, and remained consistently higher than the state average.

# Strengths



- ELA/Math/Science: Student performance is consistently above state average
- ELA 98% vs. 92% Adv. & Prof.
- Math 90% vs. 78% Adv. & Prof.
- Physics 81% vs. 71% Adv. & Prof.

# Strengths-Internal Factors



- MCAS analysis is done annually by Principal and Department Heads with general results of strengths and weaknesses shared with entire faculty along with suggestions for instructional and assessment adjustments to help improve noted weaknesses.
- OA continues to offer MCAS Math and English classes in addition to the 10 grade Math and English classes.

# Strengths-Internal Factors



- Every department takes ownership of MCAS and implements strategies into its lessons and assessments.
- Detailed analysis within Math, English and Science departments is conducted using Teacher Reports during common planning time, and plans are developed to focus and correct weaknesses to be used throughout the year in preparation for the next test administration.

# Weaknesses- ELA, Math and Physics

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- Improve performance of high needs students to increase the number of students scoring in the proficiency category and decrease the number of students in the needs improvement category
- ELA close reading skills -Careful sustained interpretation of a brief passage of text-compare and contrast
- Math open response average 2.56 points (possible 4)
  - Content focus: Geometry measurement and dimension, similarity, right triangles & trigonometry
- Science free response questions are left blank in some cases.

# Opportunities



- 2016-2017 MCAS ELA and Math courses offered as part of student schedule
- MCAS courses semester-based
- Target: students scoring in needs improvement and warning categories (grade 8 MCAS)

# Opportunities (cont)



## Physics

- TEAM MCAS to offer a Physics MCAS remediation program in April/May and will continue to expand focus on and access to Google classroom lessons for at risk students
- Physics instructors work closely with resource teachers to provide instruction and direction
- The standard level class focuses on core MCAS concepts and skills
- Instructors share strategies to address weak topics and improve free response performance



## Physics Opportunities (cont)



- For the DESE grouping of 12 districts - Easton and Wilmington are the only two administering the physics exam.
- All others administer the biology MCAS.
- Easton scored 81% advanced and proficient as compared to Wilmington scored 66% advanced and proficient.

# Physics Opportunities (cont)



- Considerations: ninth grade as compared to tenth grade administration; student mathematics and developmental levels

# Threats



- Time and Money
- Foundational skills of high needs students and students scoring Needs Improvement are a threat to obtaining higher growth in proficiency.

# Recommendations



- UbD PD that will focus common instruction and assessment
- TEAM MCAS should continue to offer a Physics remediation program prior to the test
- Continuation of Principal, ELA, Math and Science Departments, Special Education Teachers working together and meeting to develop and use instructional and assessment resources, identify at risk students and provide interventions and work to improve motivation.

# Recommendations



- Increase MCAS Math and ELA offerings to grade 9 students based on grade 8 performance (Warning and NI) - This increased Math and ELA time concentrated on the unique needs of each student should continue to help us raise the growth of our high needs students. We currently offer four MCAS Classes (two MCAS math semester classes and two MCAS ELA semester classes) and if we extended to grade 9 we would need four more classes.

# MCAS 2016 at Easton Middle School



English Language Arts 6,7,8

Mathematics 6,7,8

Science, Technology/Engineering 8

# Progress and Performance Index (PPI)

The PPI combines information about narrowing proficiency gaps, growth, and graduation and dropout rates into a number between 0-100 and a PPI of 75 or higher indicates a school is on track toward meeting proficiency gap narrowing goals.

**All Students:** EMS's PPI goal was 75, the school overall, counting all subgroups, scored 80 in PPI, but that number comes from a four year formula. (2016-110 Target Score)

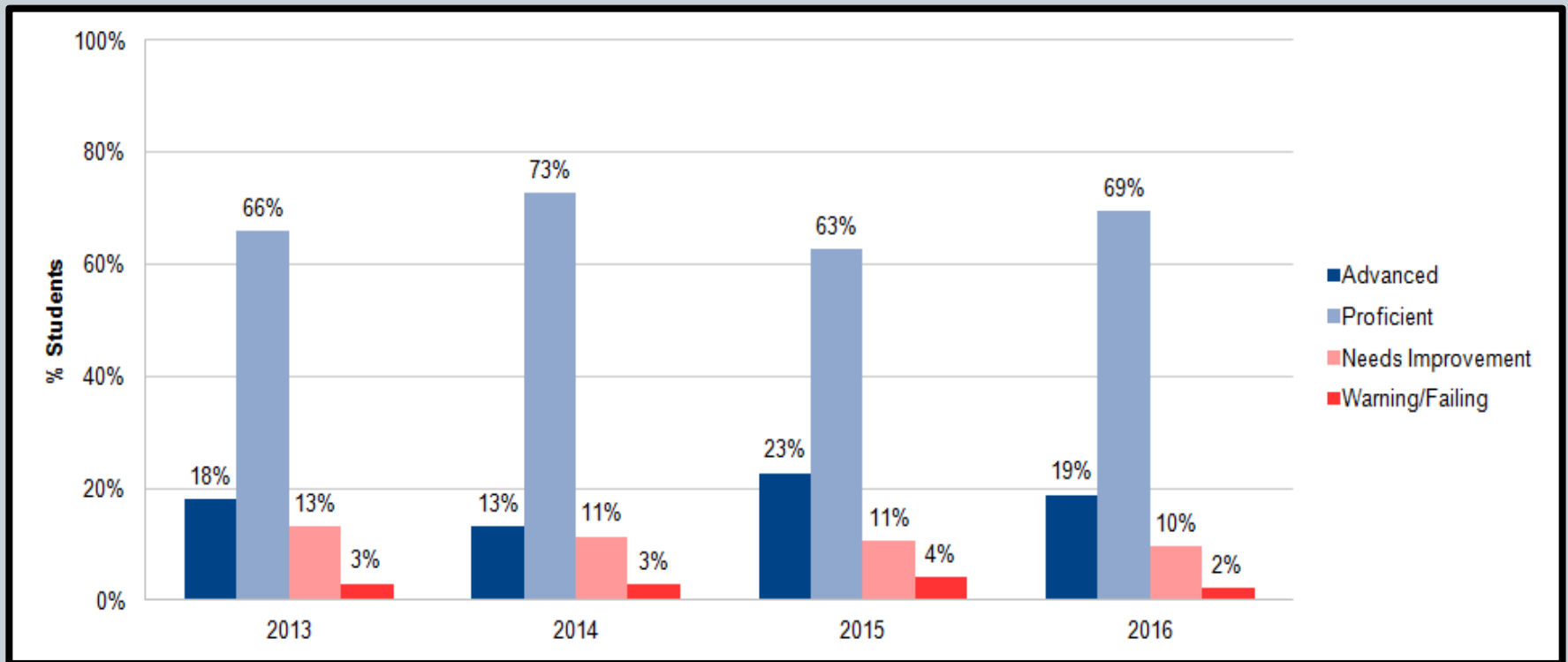
**High Needs:** EMS did not meet its goal of 75 PPI scoring a 70, but that number comes from a four year formula. (2016-90 Target Score)

This places EMS in the 86th percentile relative to other schools in the same school type. (Top 15%)

# ELA Strengths- All Students



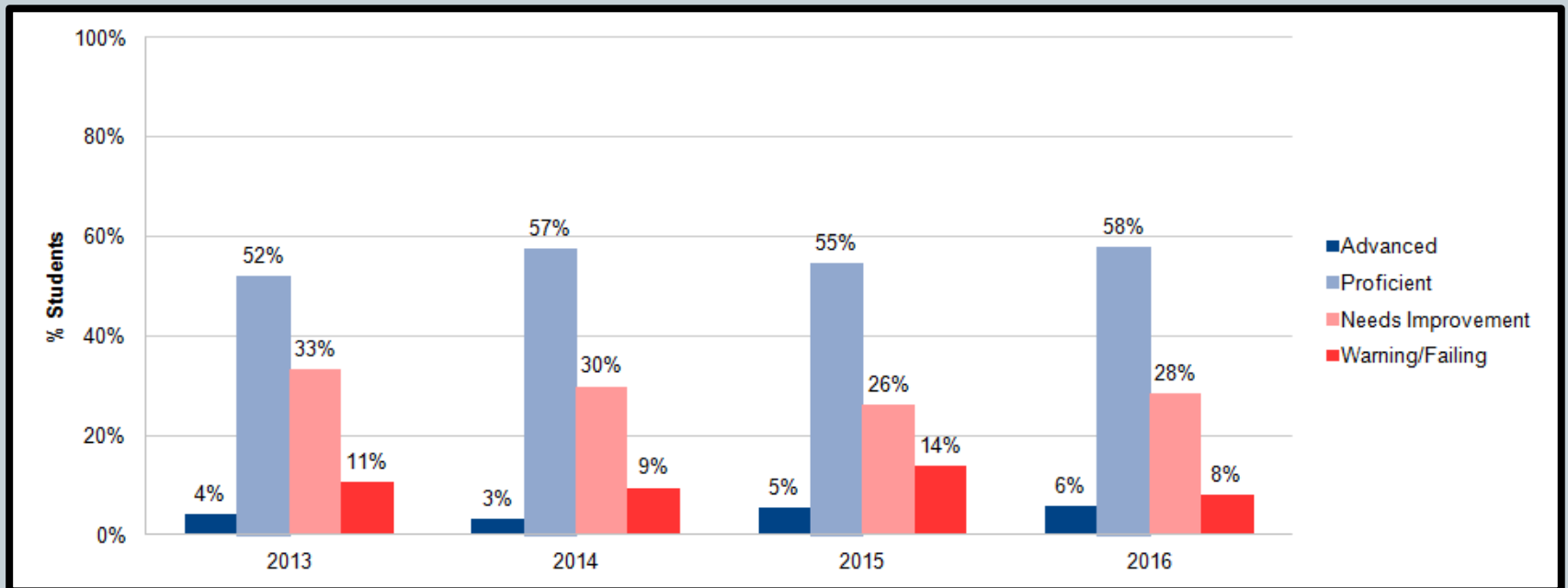
- The best year we have had in ELA (CPI score 96)
- As a school 88% Advanced/Proficient combined- Highest since 2012
- 2% of students scoring in Warning- Lowest since 2012





# ELA Strengths-High Needs

- Statistically the best year since 2012
- Increasing percentages in Advanced
- Adv/Pro combined growth overall was up 4% from previous year
- Special Education students SGP increased by 15% to 59% in 2016
- Gr.7 Special Education group decreased Warning from 17% to 4%



# EMS Strengths ELA- Grade Levels

Year	ELA Grade 6						ELA Grade 7						ELA Grade 8					
	ADV.	PRO.	A/P	NI	Warn.	W/NI	ADV.	PRO.	A/P	NI	Warn.	W/NI	Adv.	Pro.	A/P	NI	Warn.	W/NI
2011	18	62	80	23	15	38	27	64	91	9	0	9	30	62	92	7	1	8
2012	24	59	83	15	1	16	23	65	88	9	2	11	30	63	93	7	1	8
2013	17	59	76	18	6	24	16	71	87	12	1	13	21	68	89	9	2	11
2014	15	67	82	14	4	18	9	74	83	14	3	17	15	76	91	7	1	8
2015	23	59	82	14	4	18	14	71	85	11	4	15	29	59	88	7	5	12
2016	21	64	85	12	3	15	11	77	88	11	1	12	25	67	91	6	3	9



## Grade 8 student increases from grade 7

- 91% of Gr. 8 Students are scoring in Advanced or Proficient (up 6%)
- Advanced up 11% from grade seven
- The students in Warning dropped to 3% (all Special Education students)



## Grade 7 student increases from grade 6

- Adv/Pro combined up 6% from previous year
- The students in Warning fell to 1% (all Special Education students)

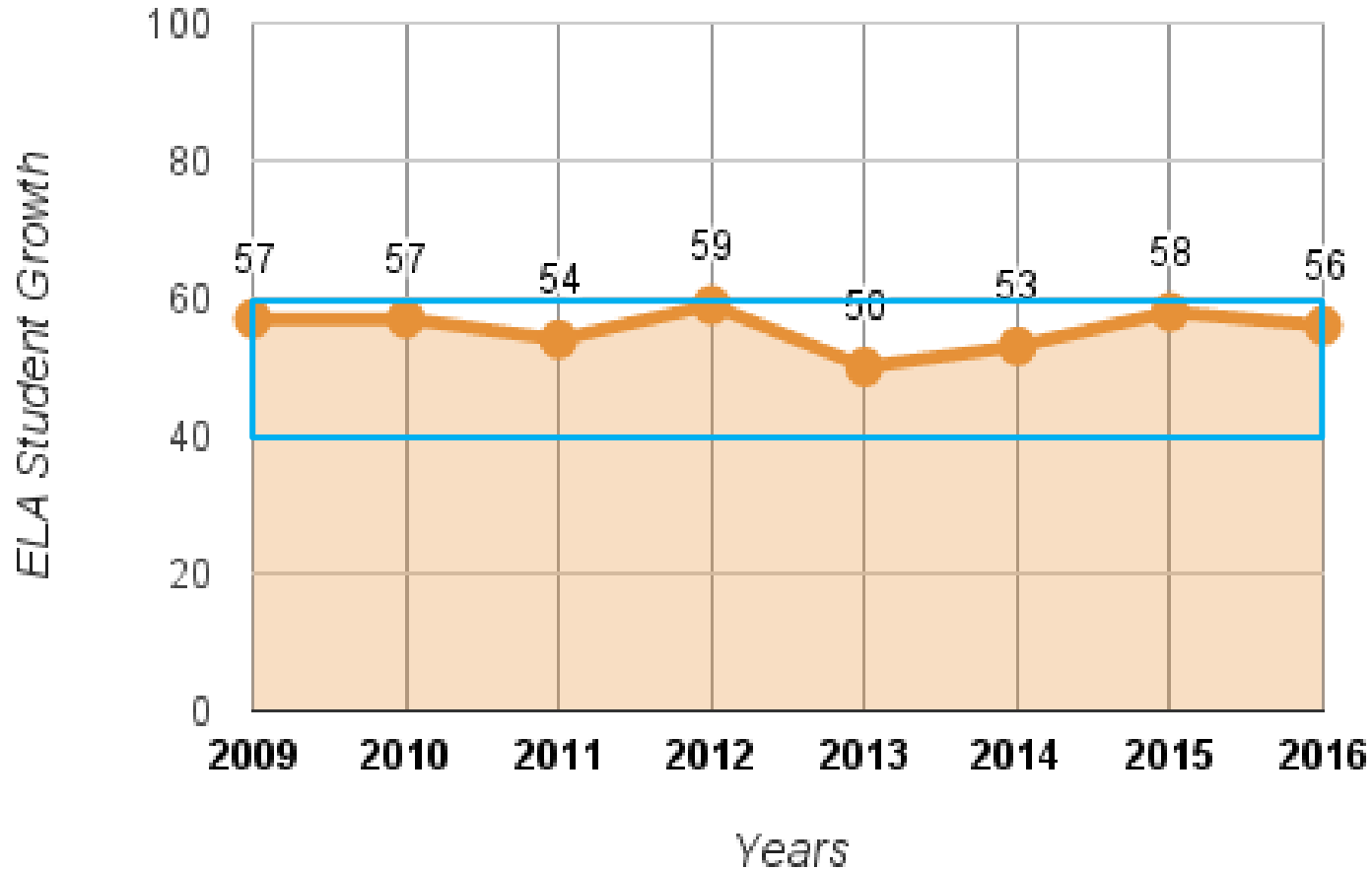


## Grade 6 Highest Adv/Pro combined and lowest NI/Warn- Gr.6 best

- Three percent of students in Warning (all Special Education students)

# ELA Student Growth- All Students

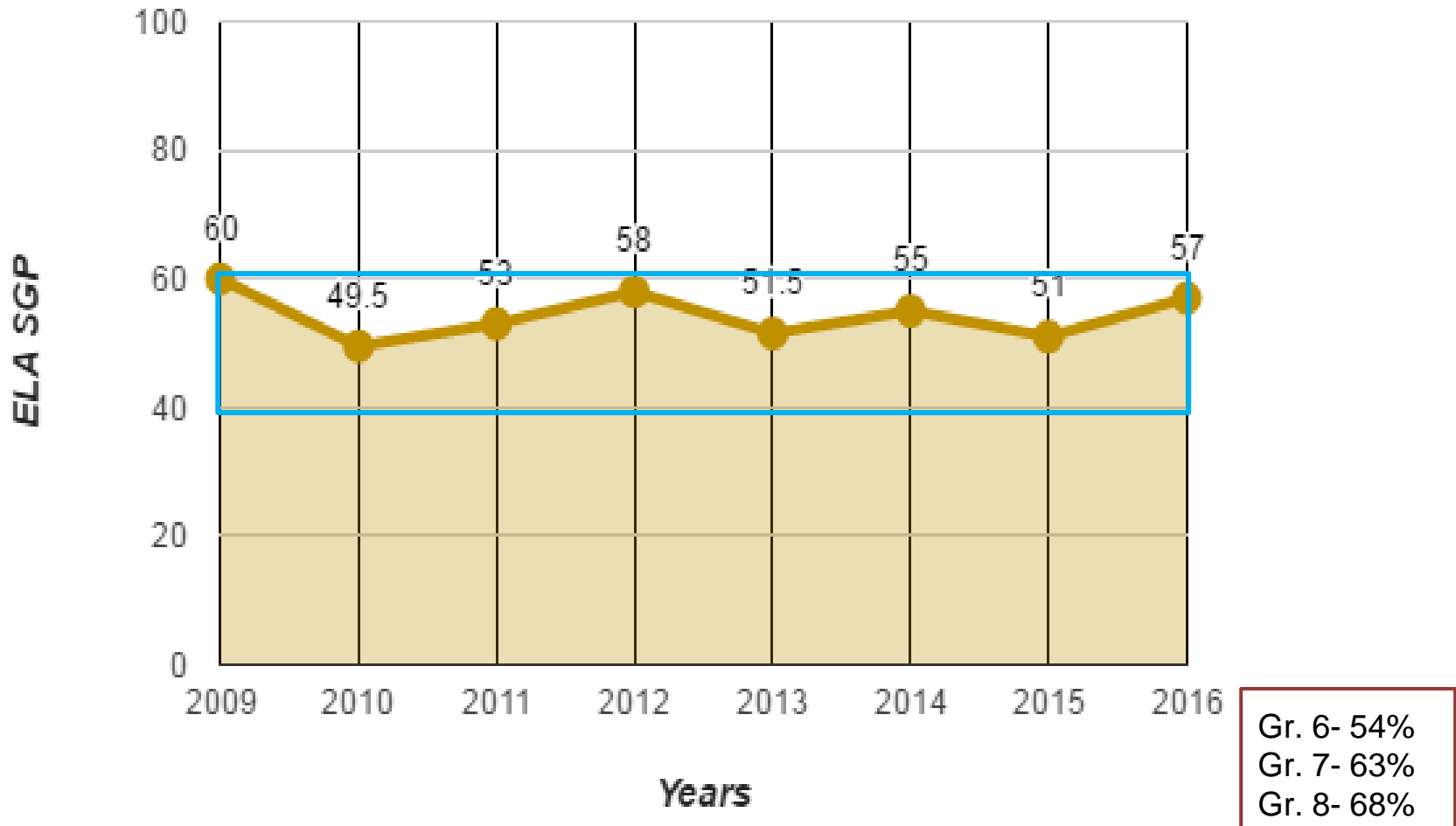
## EMS ELA SGP



Gr. 6- 54%  
Gr. 7- 61%  
Gr. 8- 58%

# ELA Student Growth- High Needs

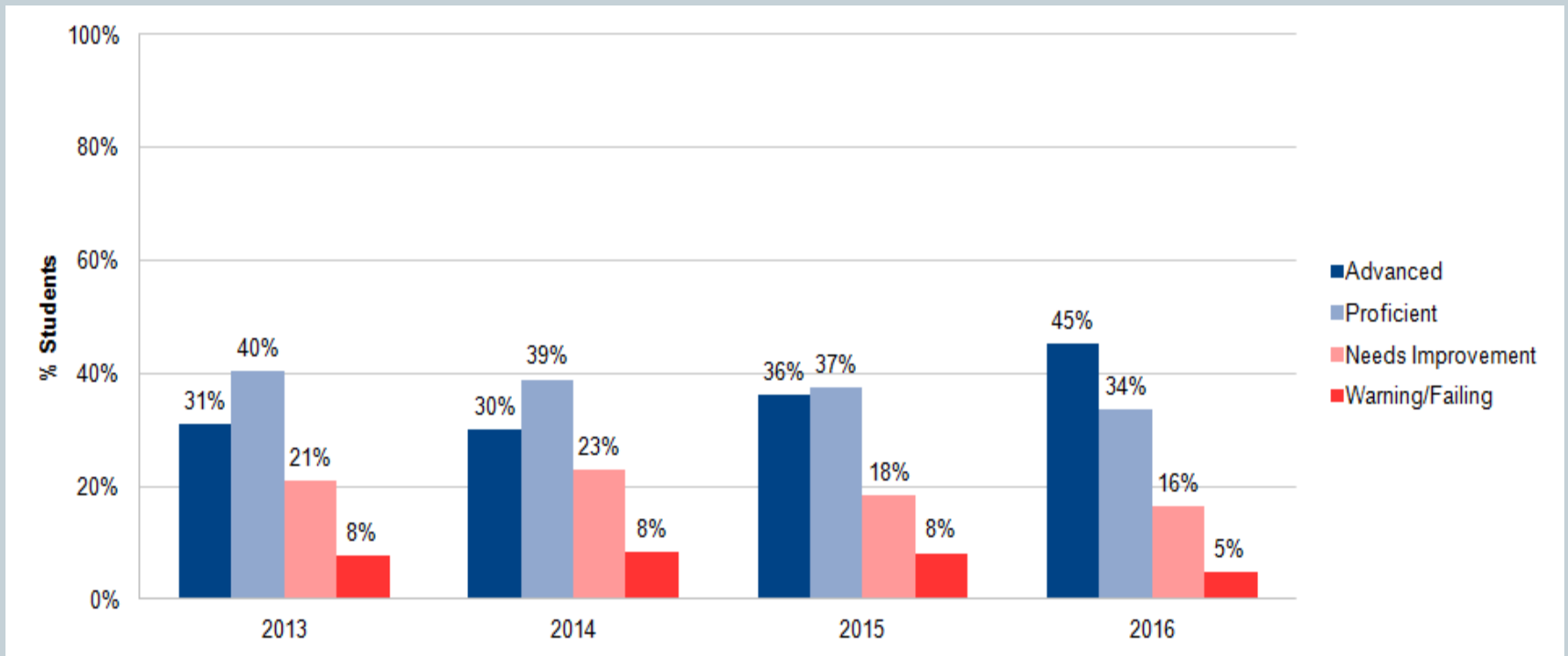
## ELA High Needs



# Math Strengths- All Students



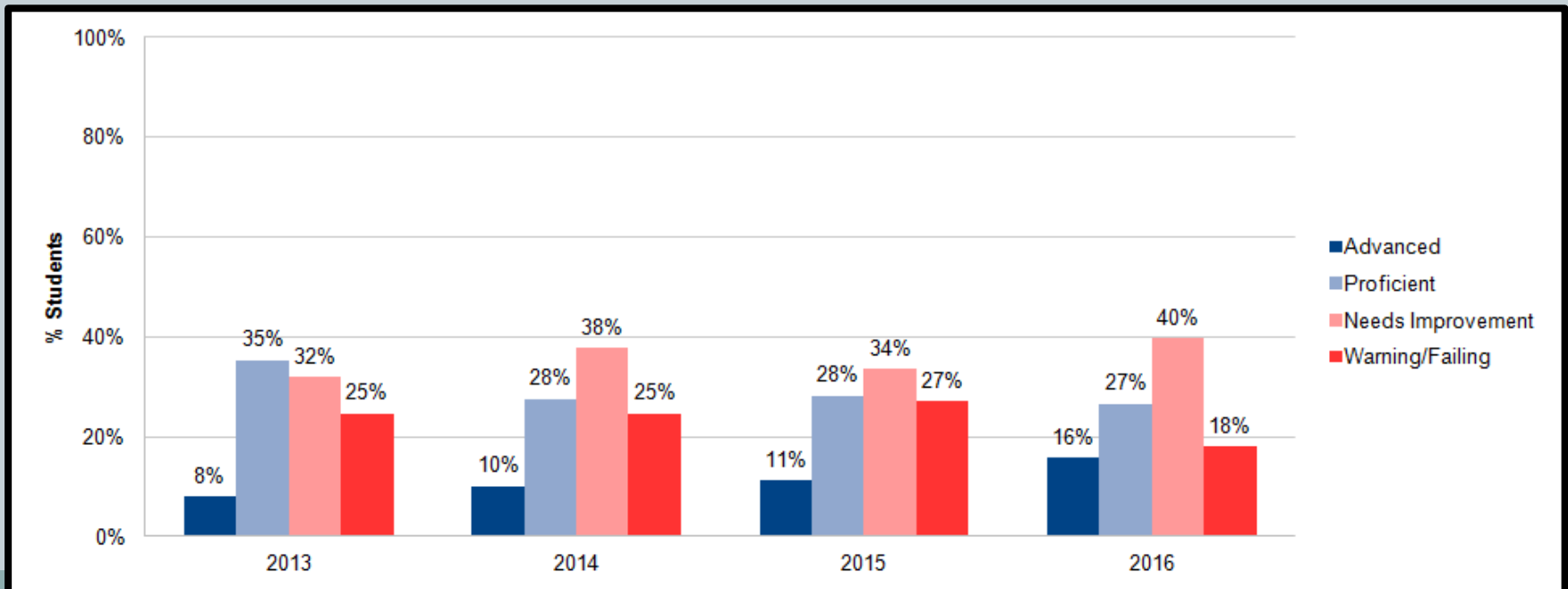
- The best year EMS has ever had in math
- 79% Proficient or above is an all time best for EMS (+5% compared to 2012)
- 45% Advanced as a school is an all time best for EMS (+5 % compared to 2012)



# Math Strengths- High Needs



- Statistically the best year we have ever had in math (high needs grouping)
- 16% Advanced- Highest
- 43% Combined Advanced/Proficient- Highest
- Warning Percentages at 18% - Our Lowest
- SGP for student with disabilities grew from 52% in 2015 to 67.5% in 2016



# Math Strengths- Grade levels

Year	Math Gr. 6						Math Gr. 7						Math Gr. 8					
	Adv.	Pro.	A/P	NI	Warn.	W/NI	Adv.	Pro.	A/P	NI	Warn.	W/NI	Adv.	Pro.	A/P	NI	Warn	W/NI
2011	37	40	77	18	6	24	40	38	78	17	5	22	25	36	61	30	8	38
2012	49	31	80	16	4	20	32	39	71	23	5	28	37	33	70	23	7	30
2013	41	36	77	15	8	23	30	40	70	24	6	30	22	45	67	24	9	33
2014	45	33	78	16	6	22	25	39	64	25	11	36	23	43	66	26	8	34
2015	43	37	80	16	4	20	39	40	79	13	7	20	28	36	64	24	12	36
2016	49	34	83	13	4	17	42	36	78	17	5	22	44	31	75	19	6	25

## Best EMS math scores ever



- Gr. 8 44% Advanced and 75% Adv/Pro combined
- Gr. 8 6% Warning (all Special Education students)
- Gr. 7 42% Advanced
- Gr. 6 83% combined Advanced and Proficient

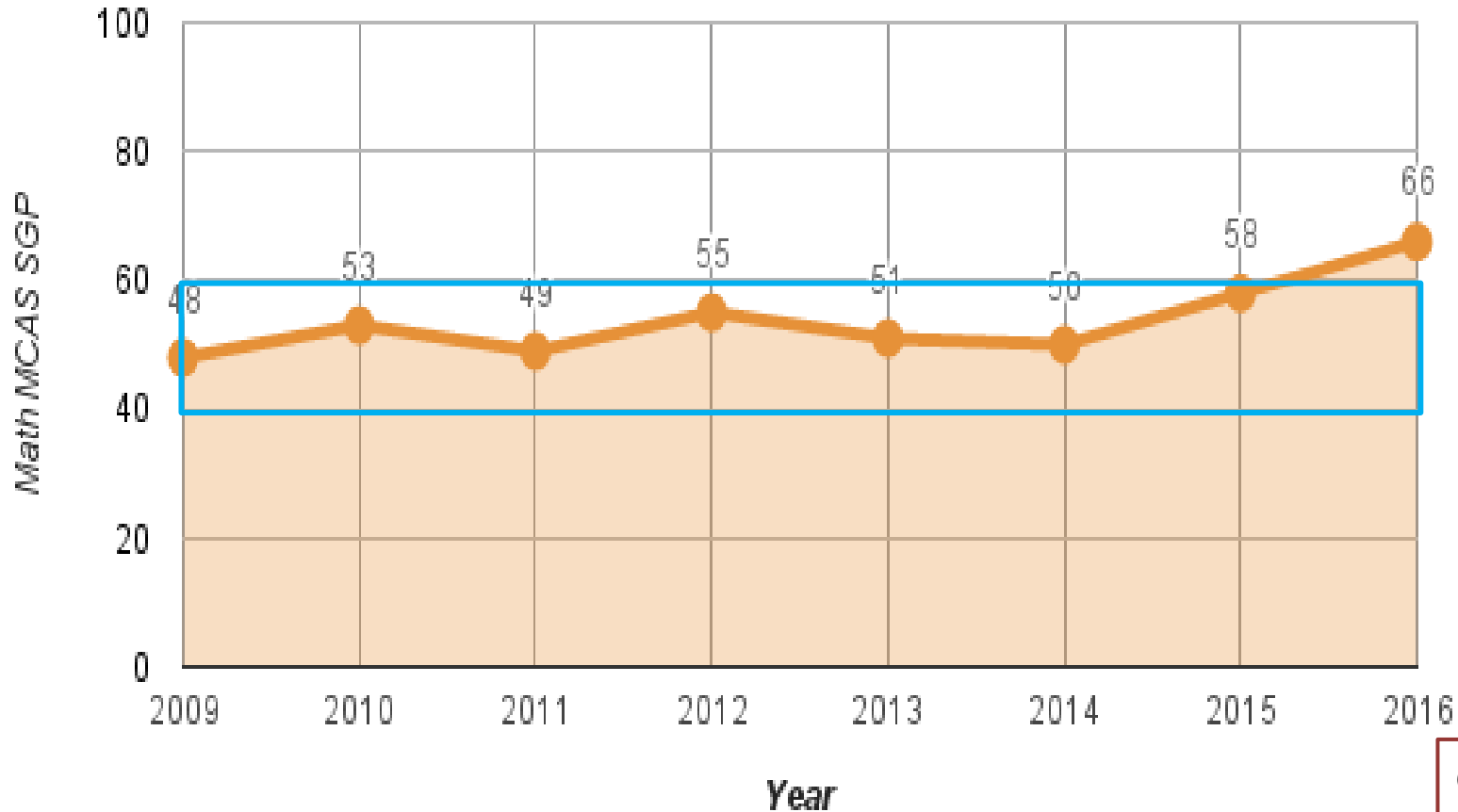
## Tied for best EMS math scores ever



- Gr. 7 78% Advanced and Proficient combined
- Gr. 7 5% Warning (all Special Education students)
- Gr. 6 49% Advanced and 4% Warning (all Special Education students)

# Math Student Growth- All Students

## EMS SGP Math All Grades

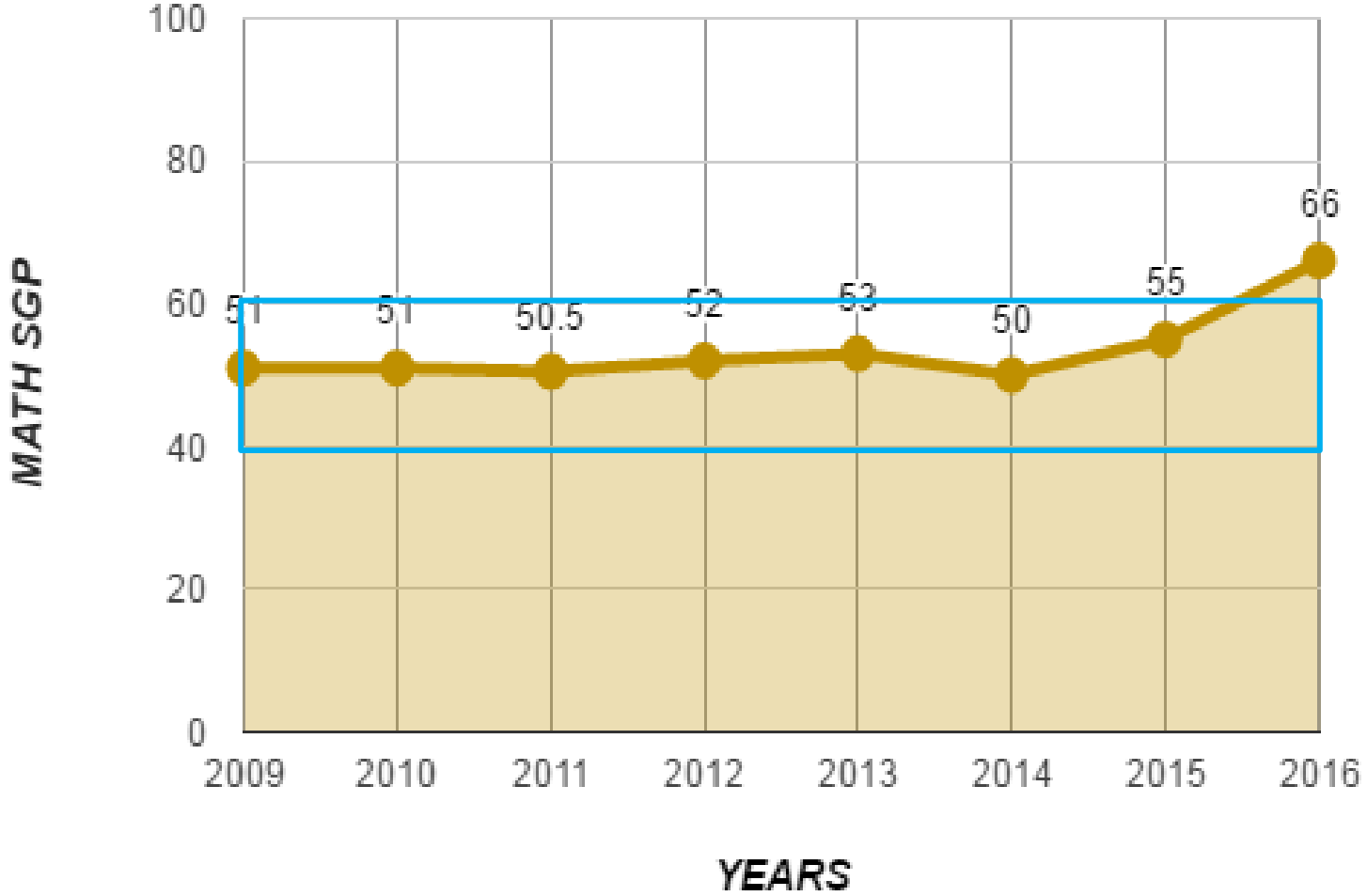


Gr. 6- 78%  
Gr. 7- 67%  
Gr. 8- 48%



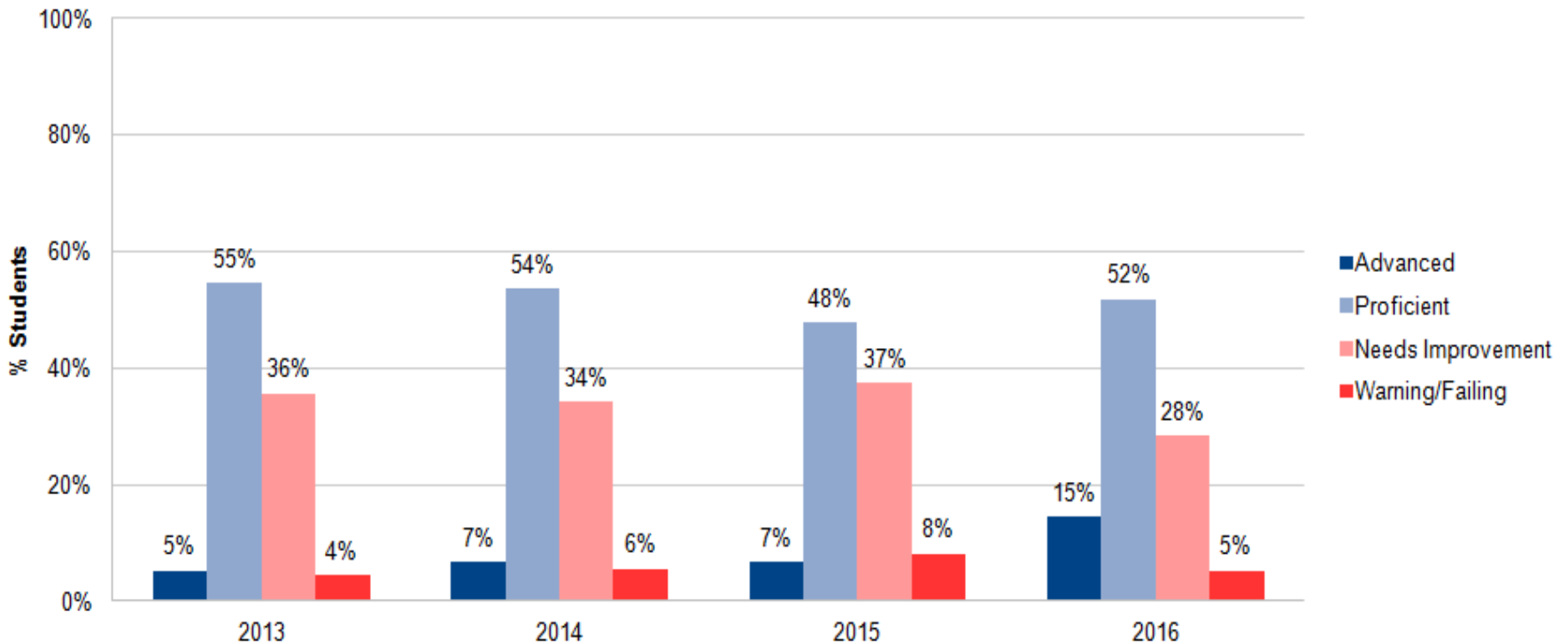
# Math Student Growth- High Needs

## Math High Needs SGP



# STE- All Students

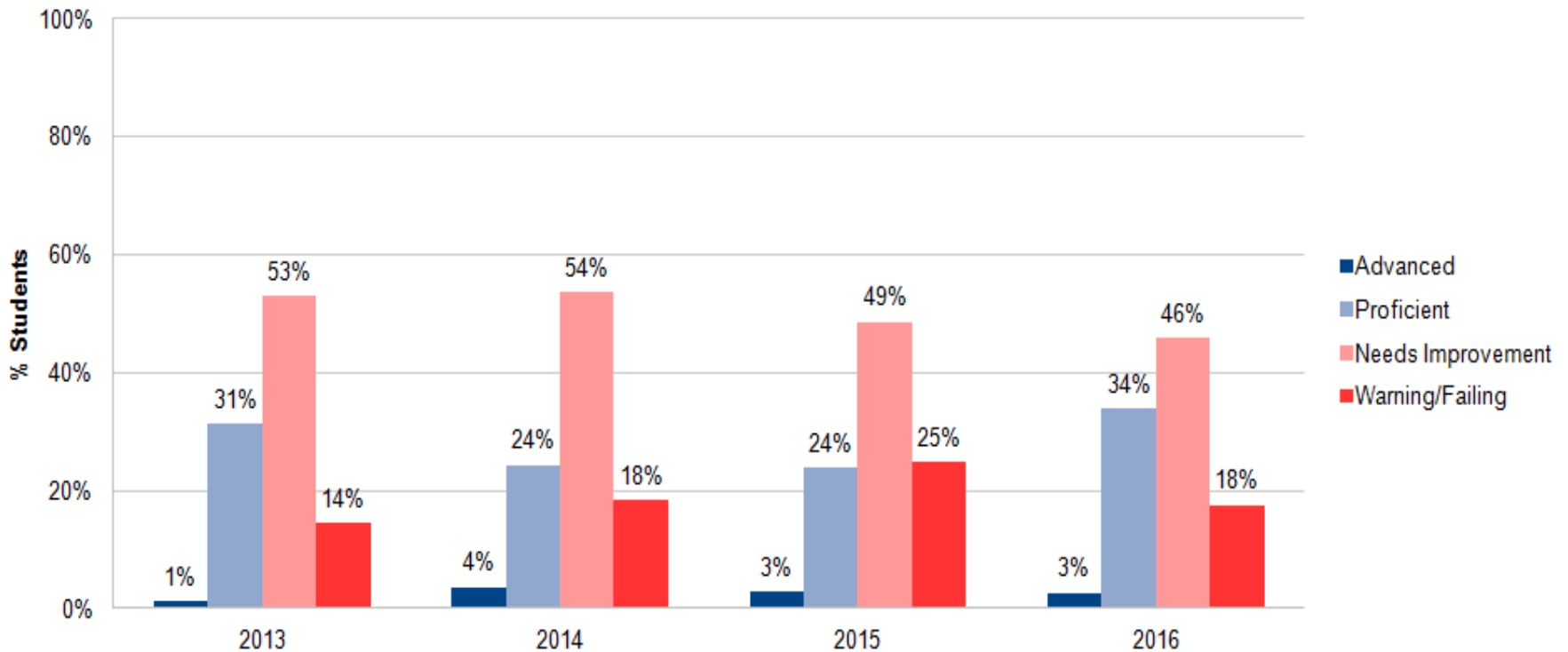
- EMS statistically the best year in Science Technology and Engineering
- 5% Warning is an improvement and is 15% better than the state average
- 15% scoring Advanced is 10% percent above that of the state



# STE- High Needs



- EMS statistically the best year Science Technology (HN)
- 25% in Warning cut to 18%
- Steady Improvement



# EMS STE Strengths- Grade Level



Year	Sci. and Tech./Engineering					
	Adv.	Pro.	A/P	NI	Warn.	W/NI
2011	6	48	54	41	5	46
2012	7	57	64	30	6	36
2013	5	55	60	36	4	40
2014	7	54	61	34	6	40
2015	7	48	55	37	8	45
2016	15	52	67	28	5	33

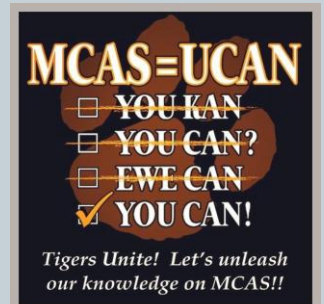
## Science Technology/Engineering Strengths:

- ↑ ○ 15% Our Highest Advanced Percentage
- ↑ ○ 67% Our Highest Advanced/Proficient Combined
- ↑ ○ 33% Combined Warning and Needs Improvement Our Lowest

# EMS Strengths-Internal Factors



- Google Drive Folder by Grade Level shared with teachers
  - SGP and Curriculum Analysis Distribution to the teachers
  - Departmental time and additional data analysis blocks...Data Meetings
  - Edwin Analytics Teacher Pilot
- Gr. 7 Math and ELA Team Based Remediation
- Ongoing Curriculum work with UbD
  - Common Assessments Development and Alignment to Standards
  - Increased STEAM opportunities in special subjects
- MCAS=UCAN program to increase student motivation (Year two)
- SPED co-teaching in ELA and math in all three grades
  - Push in Pilot in Gr. 7 & Gr. 8 ELA
    - Special Education Higher in ELA
    - Gr. 6 NDS 54% & SWD 53%
    - **Gr. 7 NDS 60% & SWD 67% (+7)**
    - **Gr. 8 NDS 56% & SWD 69% (+13)**



# Weaknesses



- **ELA Open response/ Supporting Claims with Evidence targeted for improvement**
  - Reading Anchor Standard *Key Ideas and Details*
- **ELA Students with disabilities:**
  - 11% Warning
  - 38% Needs Improvement
- **Math All Grades targeted for Improvement**
  - *Real World Mathematical Problems*
- **Math Students with disabilities:**
  - Grade 8 SGP 45%
  - 31% Warning
  - 43% Needs Improvement
- **Math Gr. 8 Open response and the standards targeted for improvement**
  - *Linear Equations, Statistics and Probability*
- **Math Gr. 7 Open response and the standards targeted for improvement**
  - *Ratio and Proportional Relationships and Geometry*
- **Science standards below state average targeted for improvement**
  - *Systems In Living Things, Forms Of Energy, Materials Tools and Machines, Living Things and Their Environment, Engineering and design, Heat Transfer in The Earth System*

# Weaknesses-Internal Factors



- Pull-out Special Education students are removed from the content areas specialist
  - This has increased in grade six in the past two years
- Lack of consistency in our intervention programs
- UbD curriculum work ongoing
- Departmental communication beyond grade level is a challenge
- ELA/math classes 75 min. in gr. 6 drop to 48 min.
- Classroom differentiated learning professional development needed
- Class sizes and limited schedule flexibility

# Opportunities



- UbD alignment of the curriculum to the Common Core
- Explore and transition the use of data and interventions being used in Gr. 3-5 in grade six
- Focused common planning time by department
- Increased additional sources of wide ranging student data
- Science from Scientists has been continued



# Threats



- Reduction in Special Education staffing
  - Students in need of daily reading intervention rising
  - Special Education pull-out math and ELA classes rising
  - Co-Teaching model has not expanded in three years
  - Number sense remediation needed
  - Content area specialists can't push-in to pull-out math and ELA classes, even though data reflects the benefit
- The lack of flexibility within the existing schedule
  - Shared staff with other schools
- The Computer Based Assessment (CBT)

# Recommendations



- Professional development in the area of differentiated instruction in grade seven and eight
- Continue to grow the grade six intervention model
- Continue to increase co-teaching in inclusion classrooms
  - Reduce pull-out instruction
  - Increase push-in co-teaching
  - Increase everyday reading support
  - Divide Foundations program
- Continue ongoing schedule committee work

# MCAS 2016 at Richardson/Olmsted



**ELA 3,4,5**

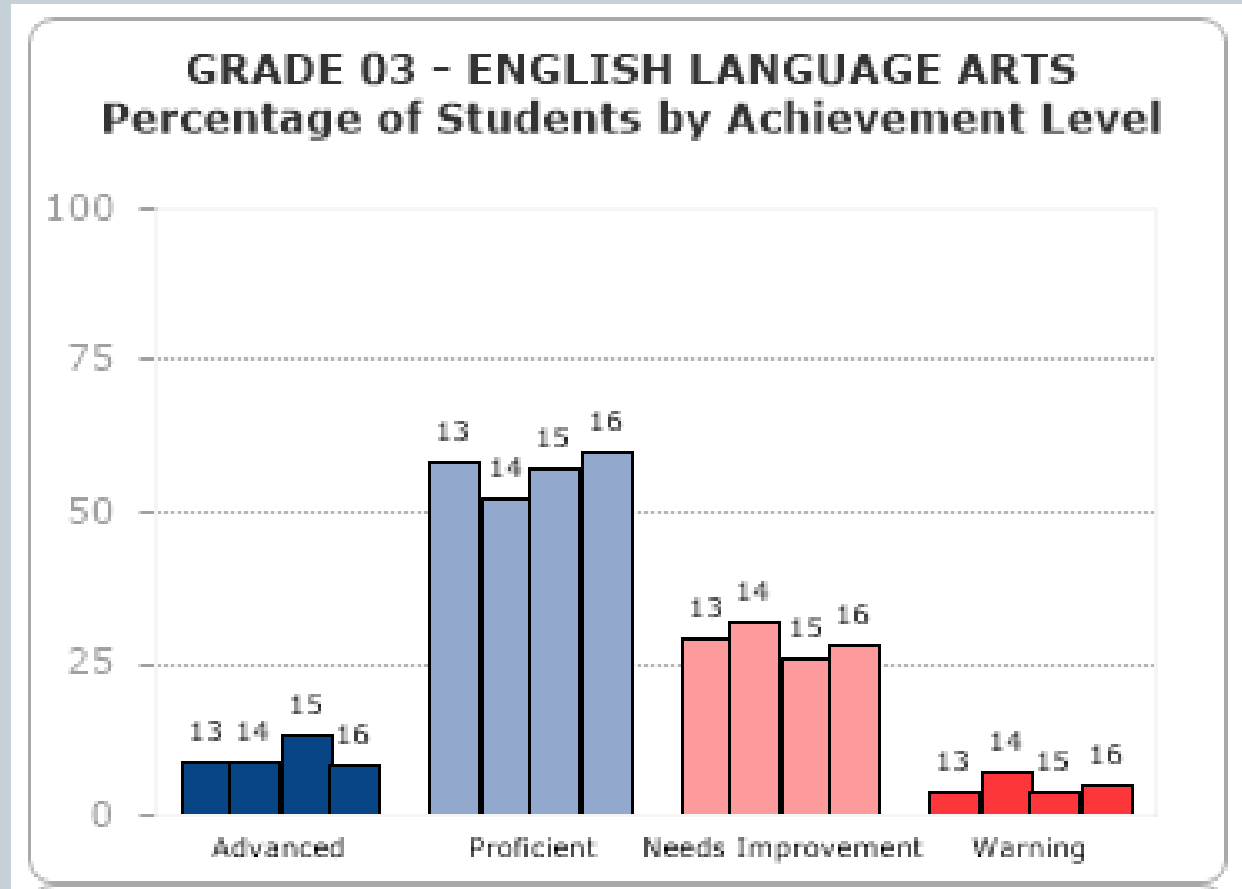
**Math 3,4,5**

**Science, Technology/Engineering 5**

# ELA 2013-2016 at Richardson Olmsted



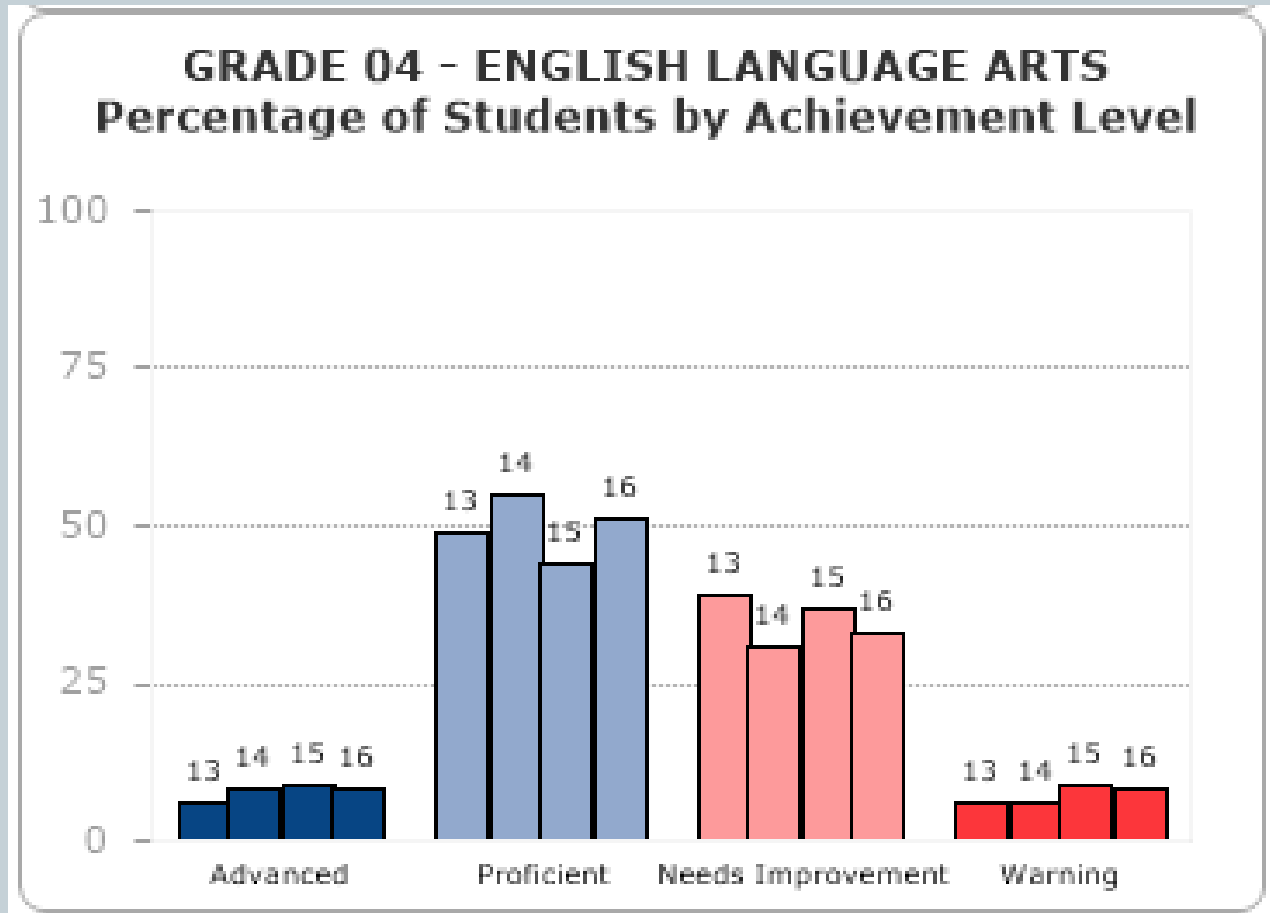
## Grade 3 ELA



# ELA 2012-2016 at Richardson Olmsted



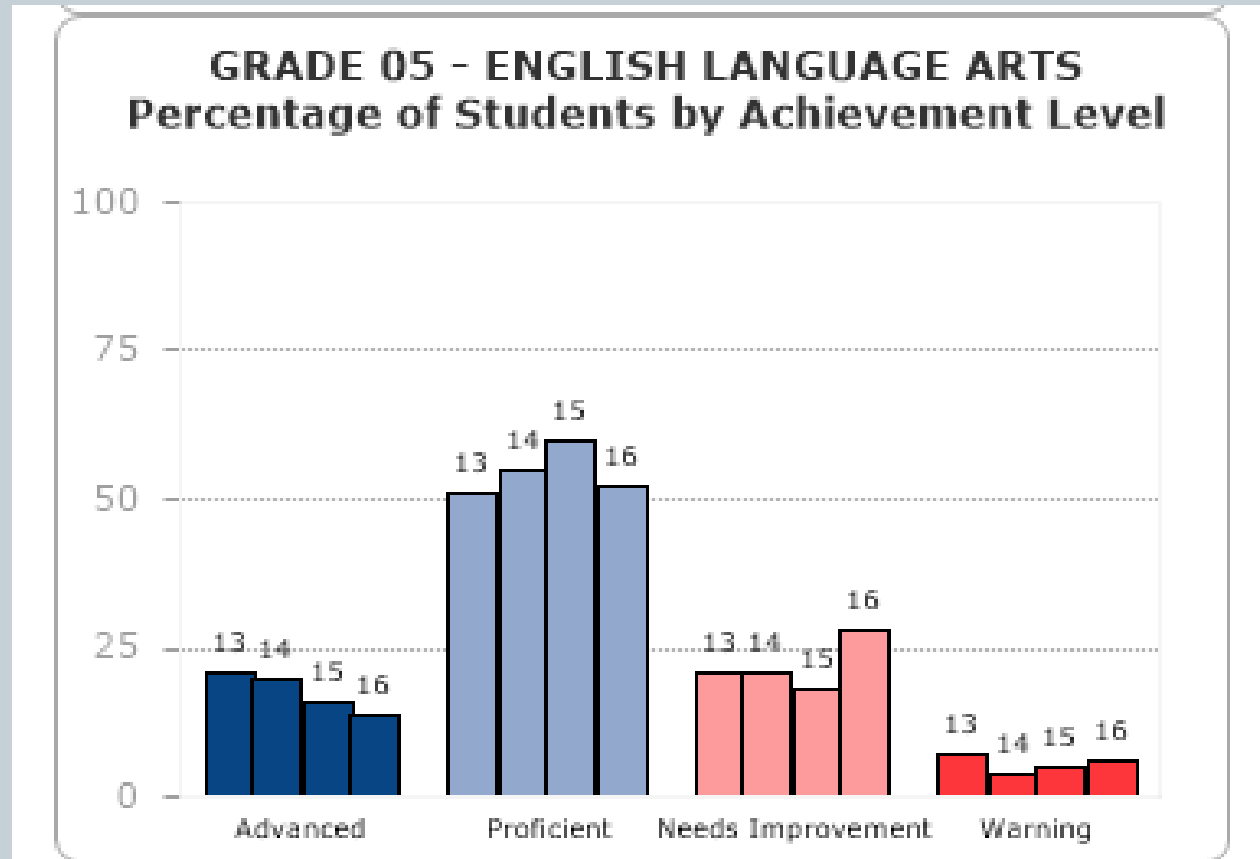
Grade 4 ELA



# ELA 2012-2016 at Richardson/Olmsted



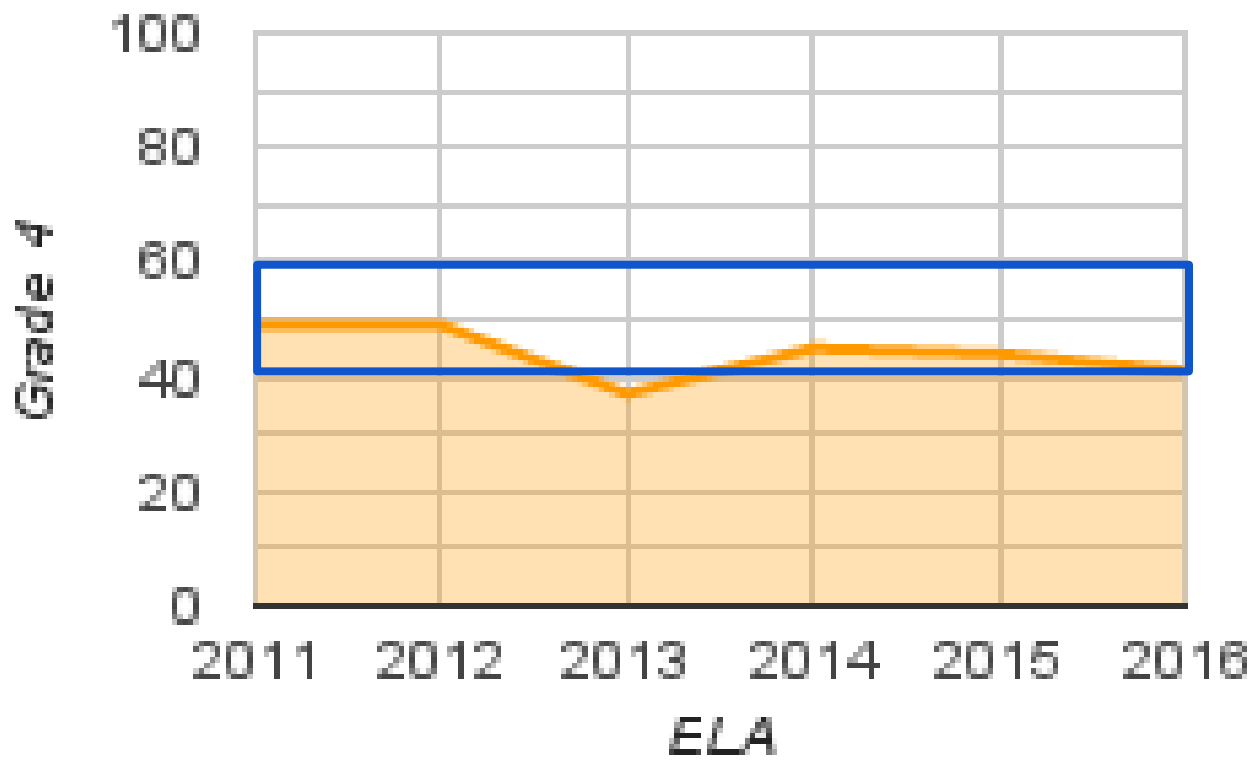
Grade 5 ELA



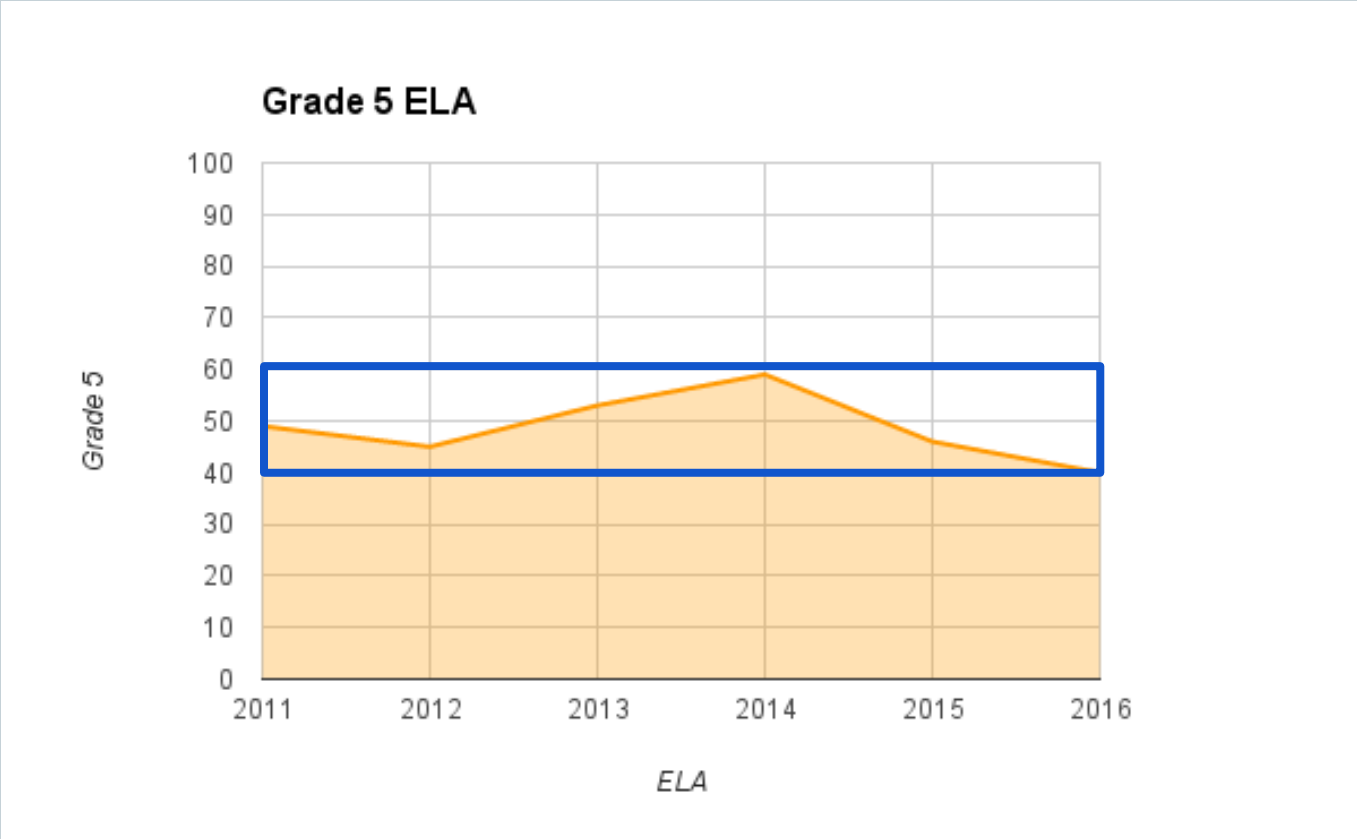
# Grade 4 All Students Growth ELA 2011-2016



## Grade 4 ELA



# Grade 5 Growth All Students ELA 2011-2016

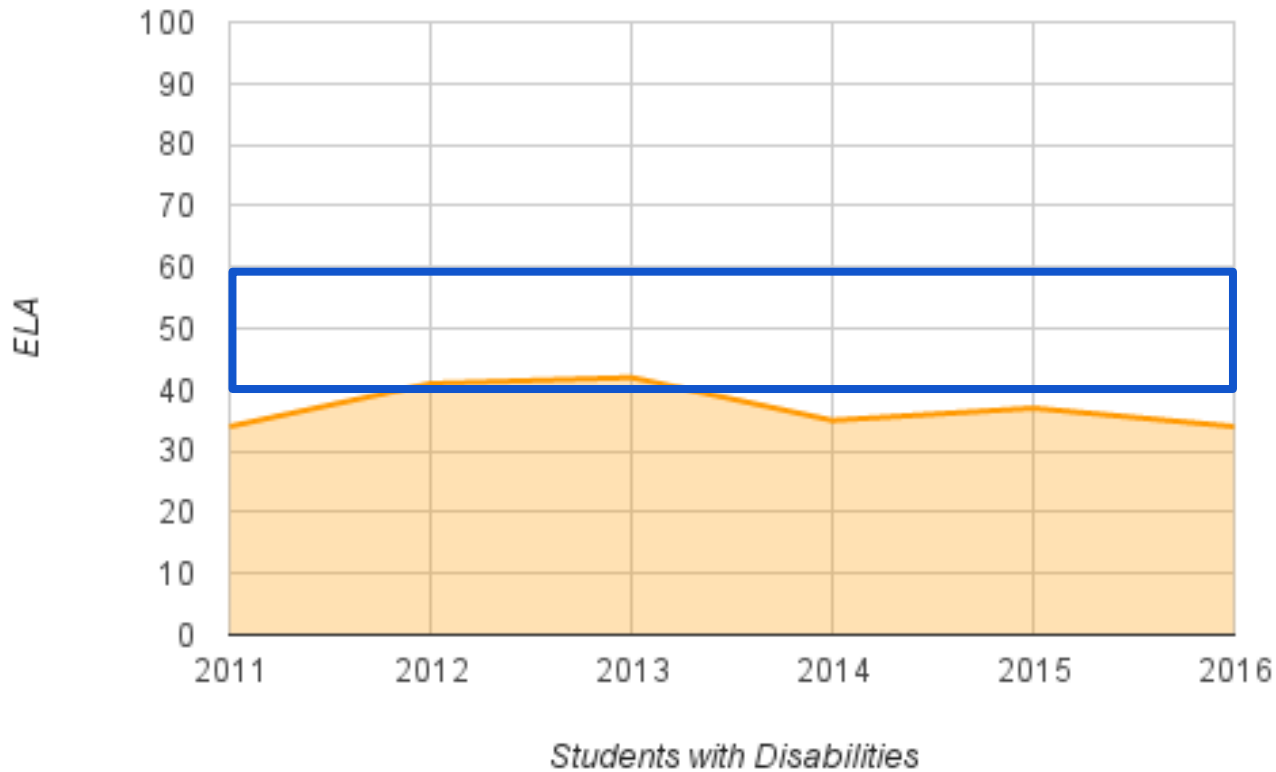




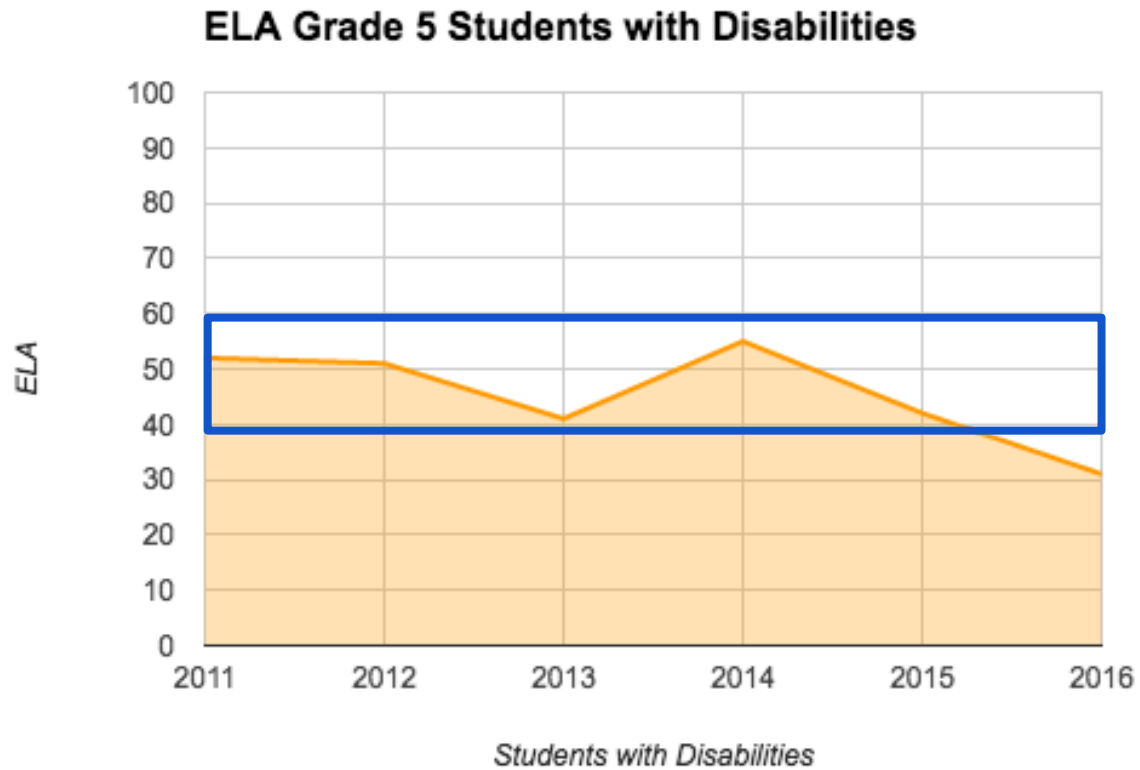
# Grade 4 Students with Disabilities Growth ELA 2011-2016



## ELA Students with Disabilities Grade 4



# Grade 5 Students with Disabilities Growth ELA 2011-2016



# Strengths at Richardson/Olmsted



## English Language Arts 2016

Grade 3 All multiple choice questions were slightly above the state average

Grade 4 All CCRA.R1 at or above state average

Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

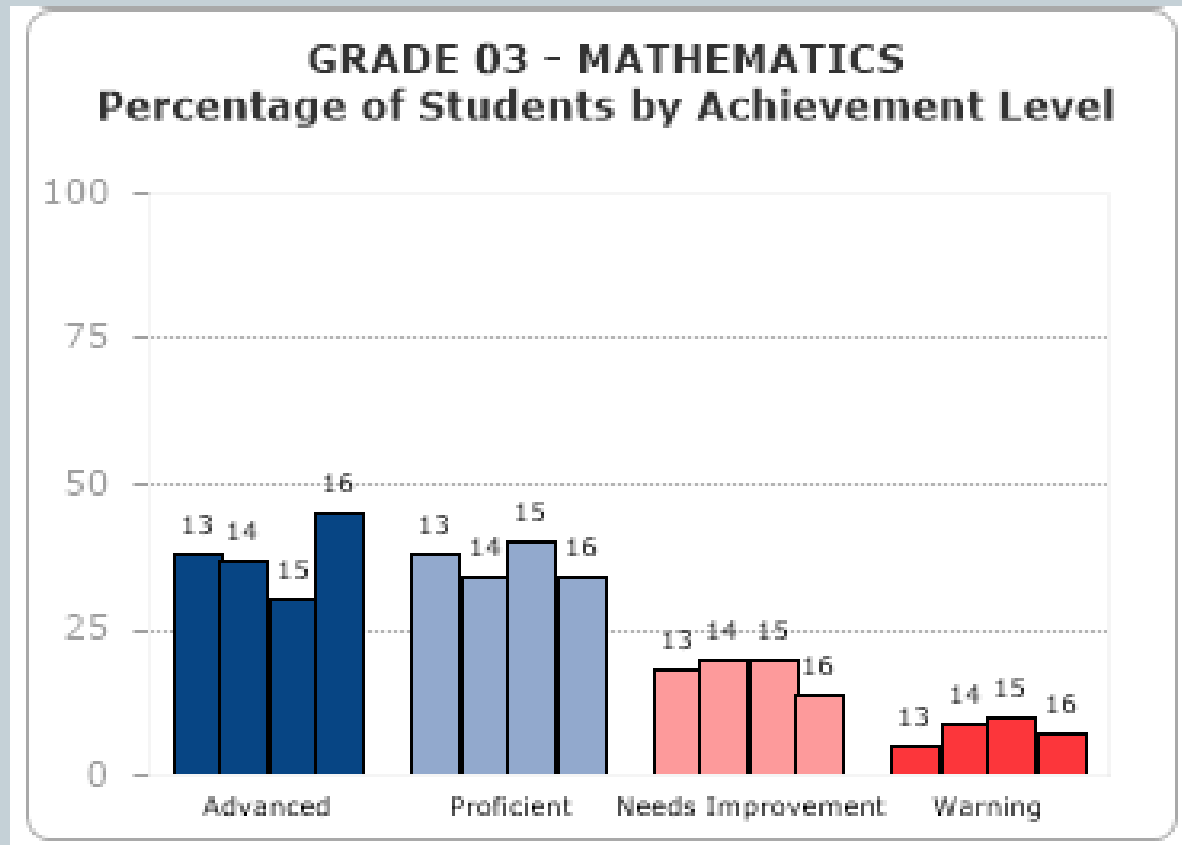
Grade 5 All CCRA L.4 were above grade level

Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

# MATH 2013-2016 at Richardson/Olmsted



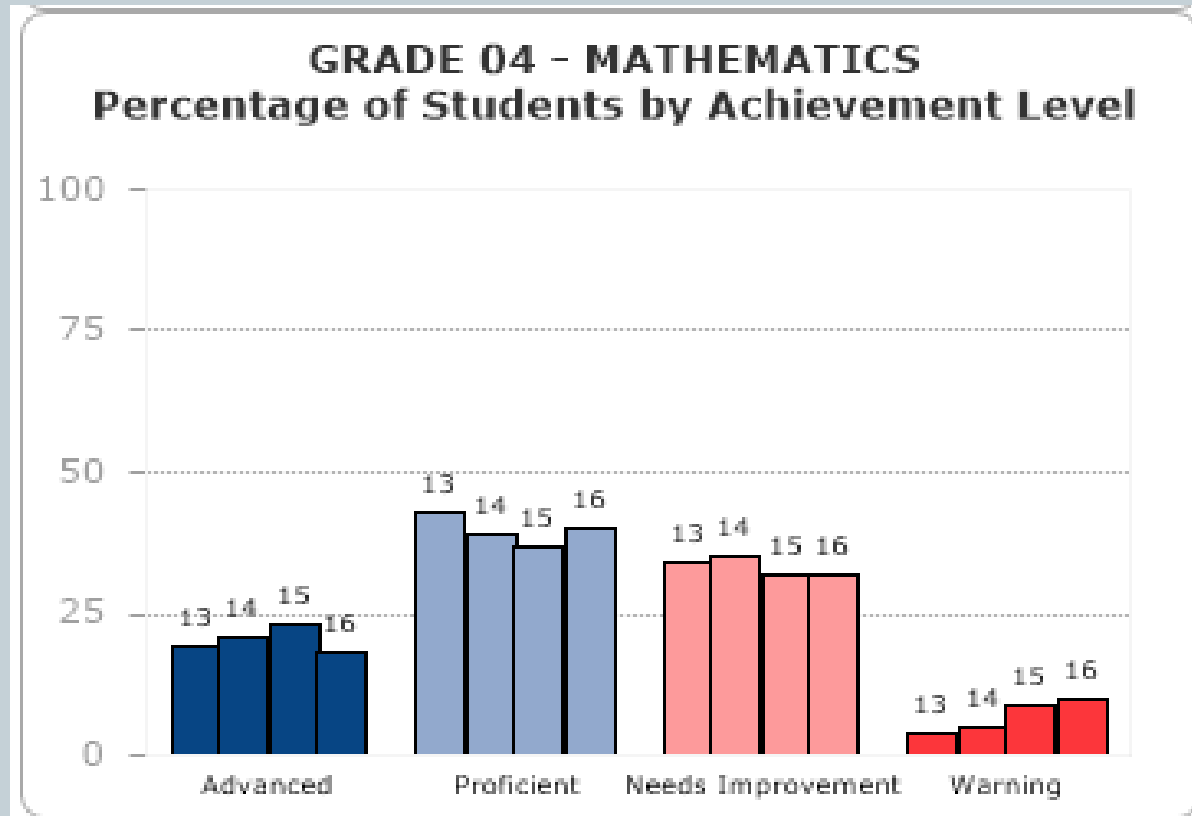
Grade 3



# MATH 2013-2016 at Richardson/Olmsted



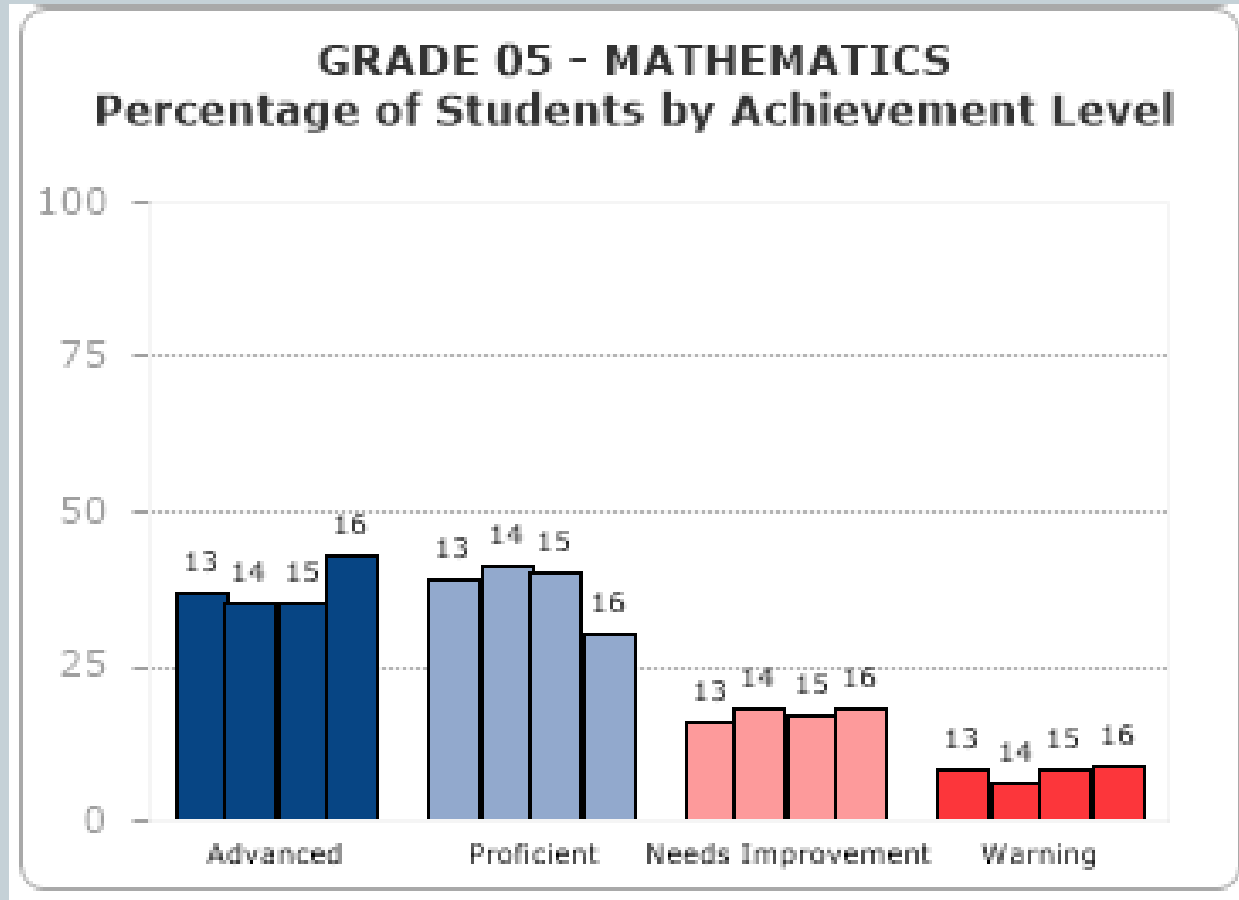
Grade 4



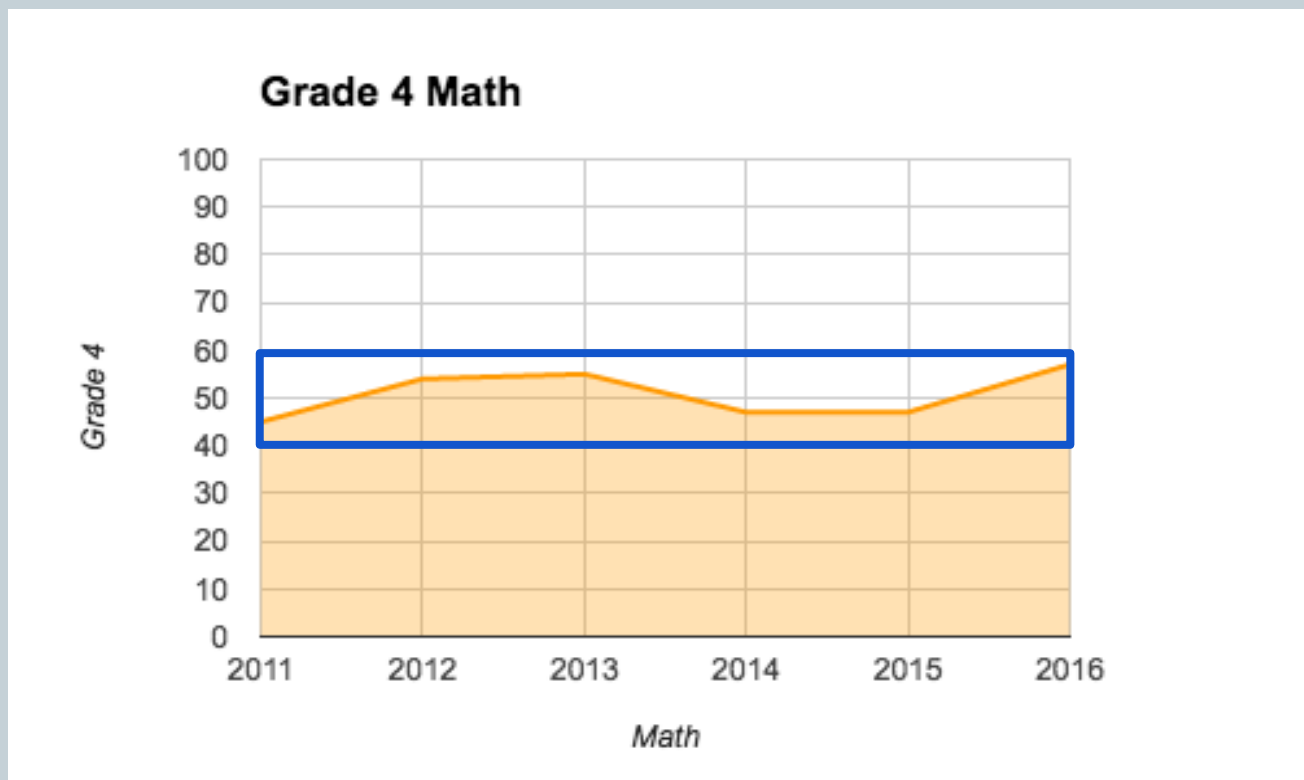
# MATH 2013-2016 at Richardson Olmsted



Grade 5



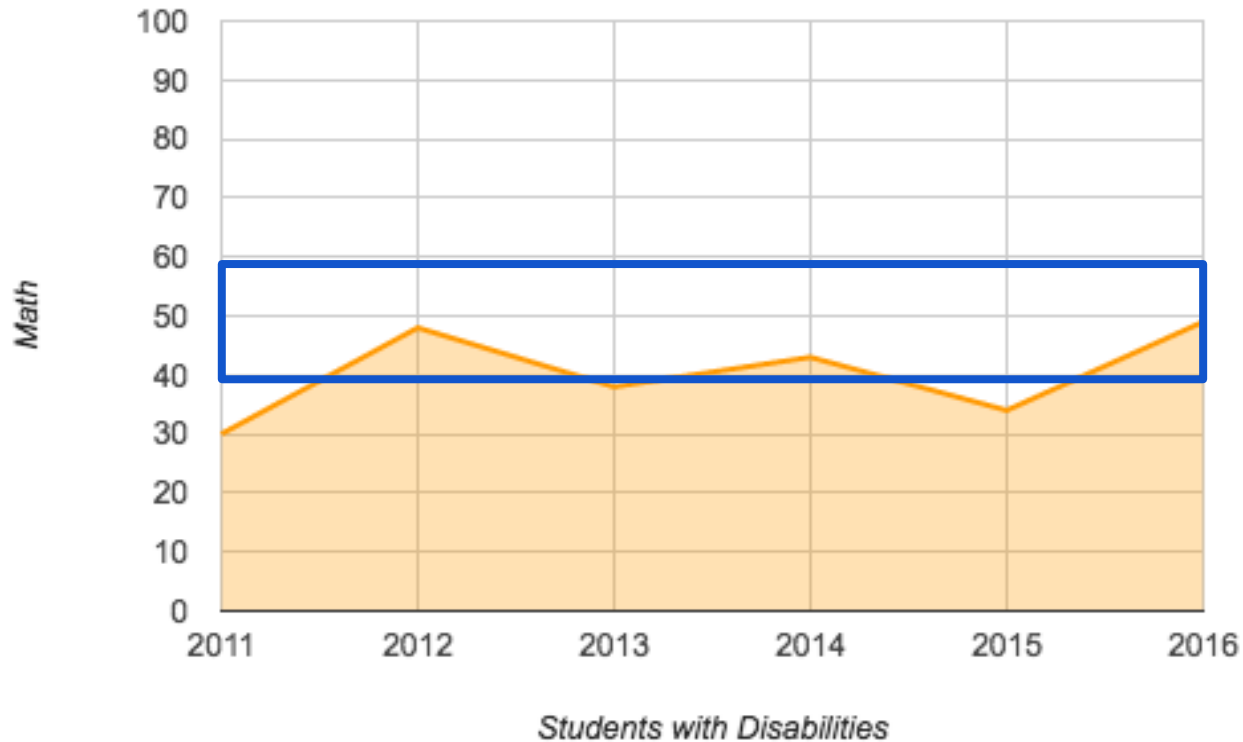
# Grade 4 All Students Growth Math 2011-2016



# Grade 4 Students with Disabilities Growth Math 2011-2016

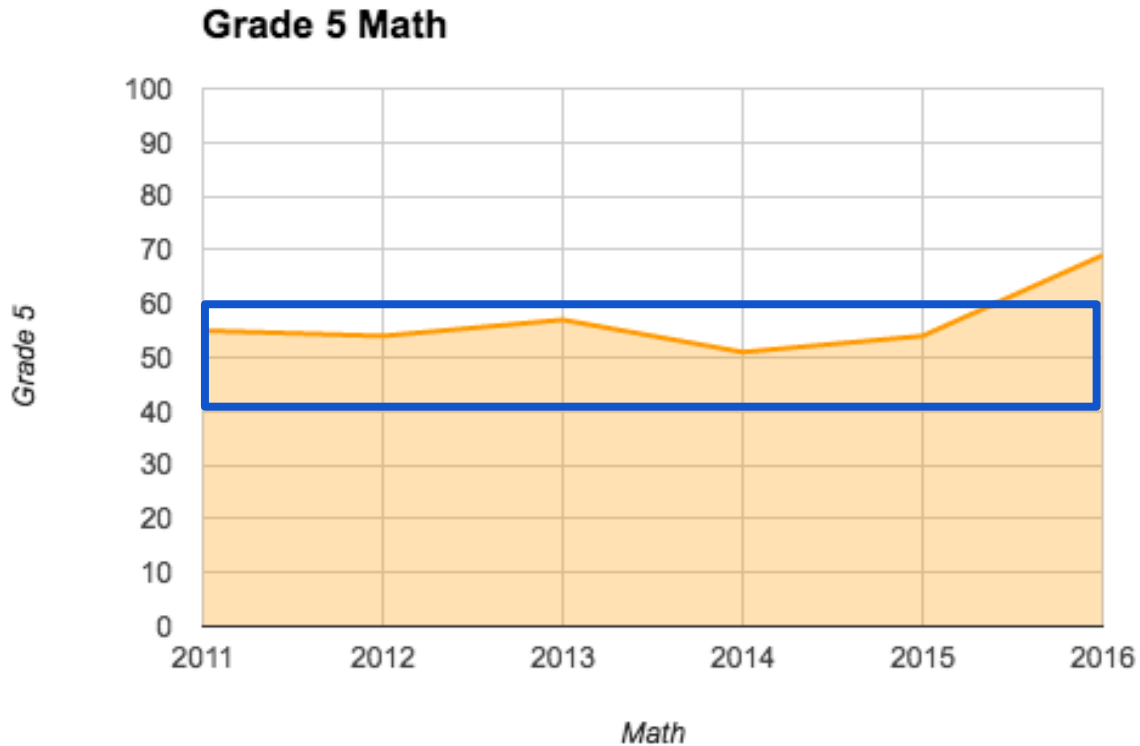


**Math Students with Disabilities Grade 4**

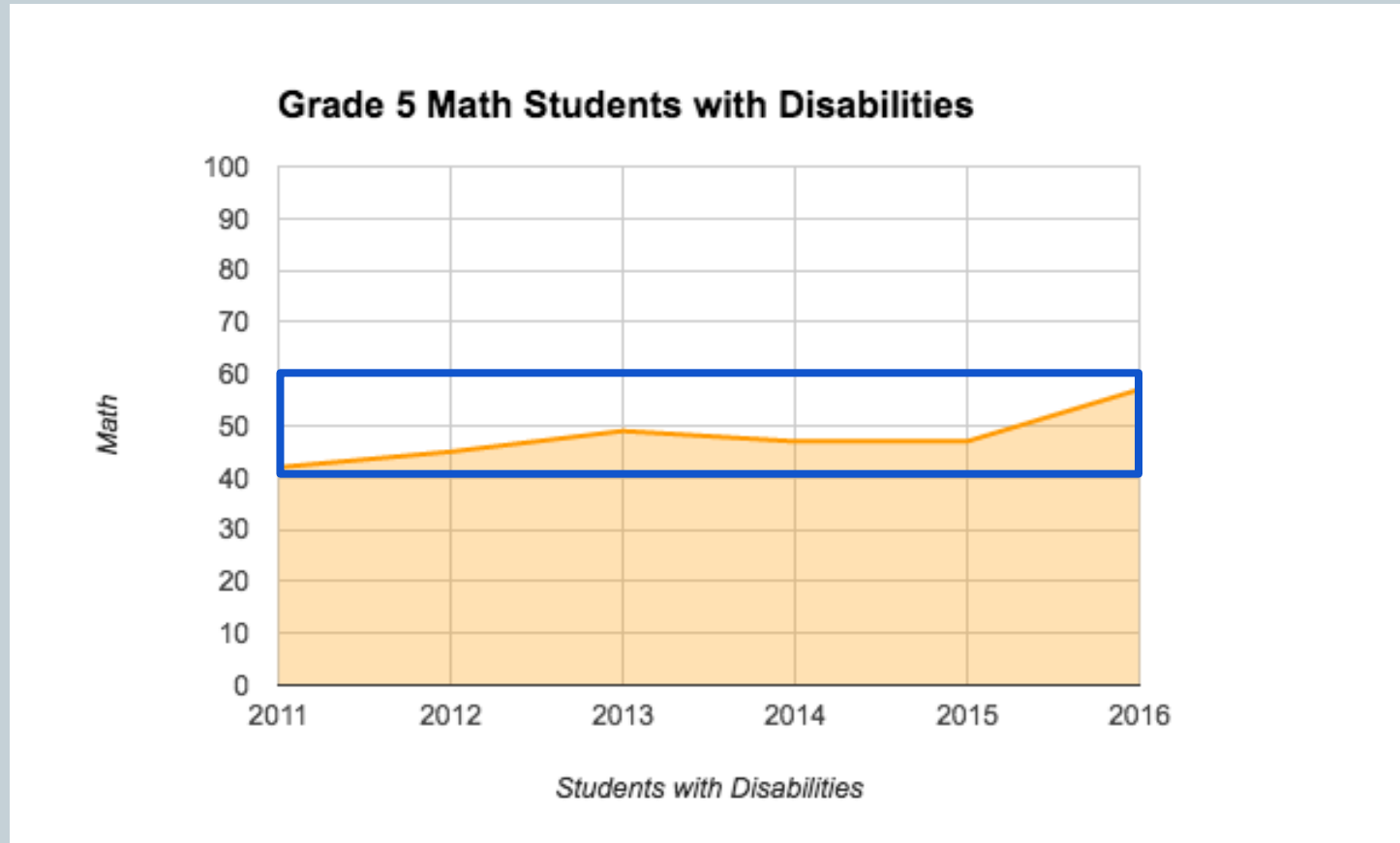




# Grade 5 All Students Growth Math 2011-2016



# Grade 5 Students with Disabilities Growth Math 2011-2016



# Math Strengths at Richardson Olmsted



## Mathematics 2016

Grade 3 Percent proficient and advanced were up 9% over 2015

All open response questions were slightly above the state and we had a 36% increase in questions about area of rectangles.

Grade 4 Math Growth is up 10% over 2015

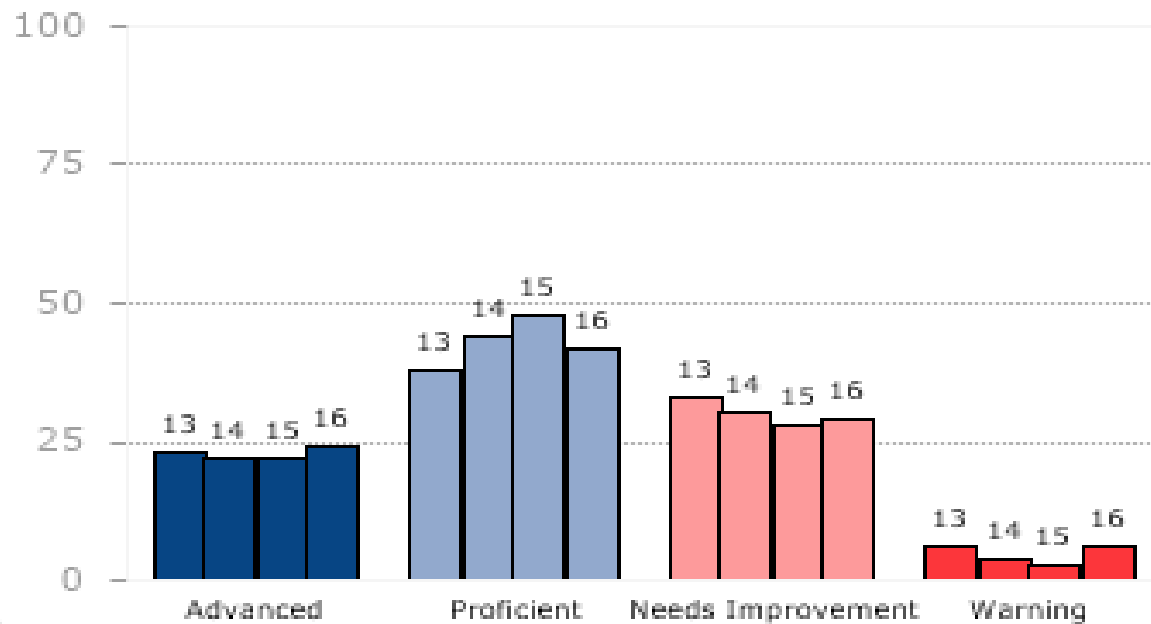
Grade 5 Math growth is up 15% over 2015 and all open response questions were slightly above the state average.

# Sci/Tech 2013-2016 at Richardson Olmsted



Grade 5

**GRADE 05 - SCIENCE AND TECH/ENG  
Percentage of Students by Achievement Level**



# Strengths at Richardson Olmsted



## Science and Technology

Grade 5 -

Only 3/43 questions were below state average.

66% Proficient or Advanced

Earth science was our strongest area with an average of 10% above state.

# Overall Strengths and Weaknesses at RO



Our overall accountability data for all subjects shows an increase in “all students” growth to 63rd percentile, the highest it’s ever been!

Our “students with disabilities” subgroup shows growth only in the 38th percentile. This percentage has decreased dramatically in the past 4 years:

2013 it was 63%

2014 it was 60%

2015 it was 50%

2016 it was 38%

# MCAS Weaknesses at Richardson Olmsted



## **ELA**

All grades -Open response and short answer questions continue to be problematic. All open response questions showed our scores slightly lower than state average.

**Grade 3** There was only one open response question. There were 4 short response questions where we scored below the state average on each.

**Grade 4 and 5** - Growth scores continue to decline. There were 4 open response questions per grade. We scored below the state average on all of them.

[Higher Level Thinking](#) Problematic

## **Math**

**Grade 3** All “reasoning with shapes and attributes” questions scored below state average.

**Grade 4** All open response answers were slightly below state average while in 2015 we were slightly above the state average on open response questions.

**Grade 5** Only 21% got question about converting milliliters to liters. (12% below the state)

## **Science and Technology**

Physical Science- light and sound energy questions were 1% below the state average.

Open response questions were 11% above the state average.

# Opportunities at Richardson/Olmsted



## Improvement Strategies

- Literacy and Math coaches will work intensively with the goal of increasing small group differentiated instruction.
- Special Education- Heterogeneously grouped classrooms and co-planning for regular and special education for coordinated small group instruction and maximizing special education resources.
- More frequent teacher observation and feedback to support differentiated curriculum.
- Clear expectations about differentiated small group standards based instruction.
- UbD work to improve the alignment between instructional objectives and the CCSS.
- Support teachers in their use of formative assessments for data driven decisions.



# Threats at Richardson Olmsted



- Existing ELA and math programs do not provide enough written response practice.
- Existing technology does not allow for daily typed responses to prompts. This will put us at a disadvantage when typed open responses are assessed by the state.
- Substitute shortage reduces opportunities for in house PD and impacts consistency of small group routines.
- Fixed vs. Growth Mindset