

# 2017 MCAS Analysis

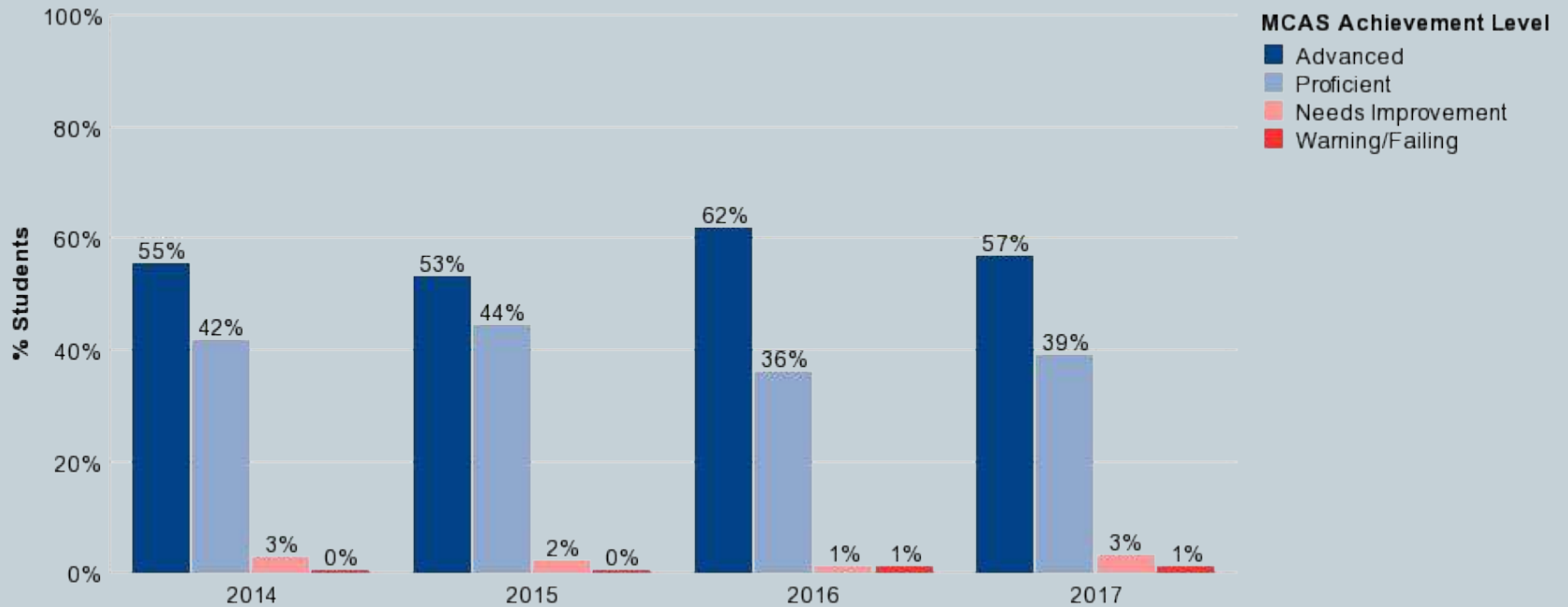


**OLIVER AMES HIGH SCHOOL**

# ELA 2014-2017 at Oliver Ames HS



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



## GRADE 10 - ENGLISH LANGUAGE ARTS ACHIEVEMENT

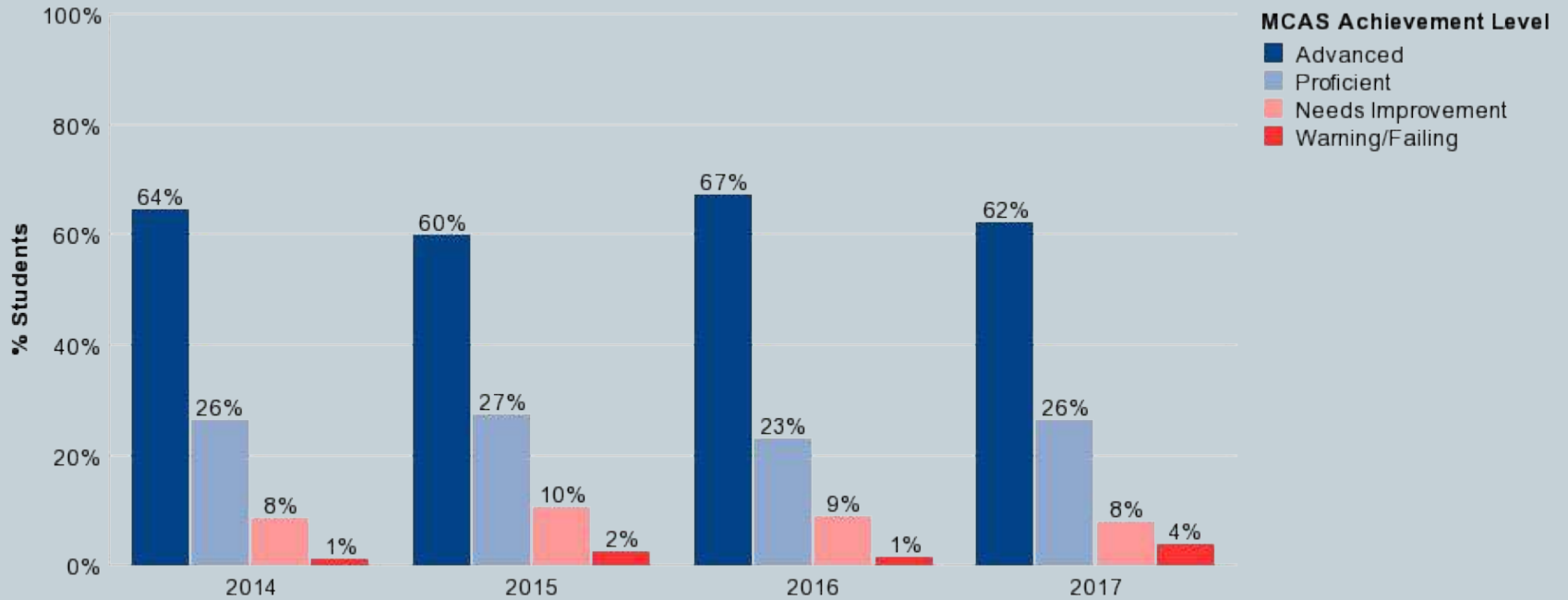


LEVEL	2014	2015	2016	2017
ADVANCED	55%	53%	62%	57%
PROFICIENT	42%	44%	36%	39%
NEEDS IMPROVEMENT	3%	2%	1%	3%
FAILING	0%	0%	1%	1%

# Math 2014-2017 at Oliver Ames HS



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



# GRADE 10 - MATHEMATICS ACHIEVEMENT

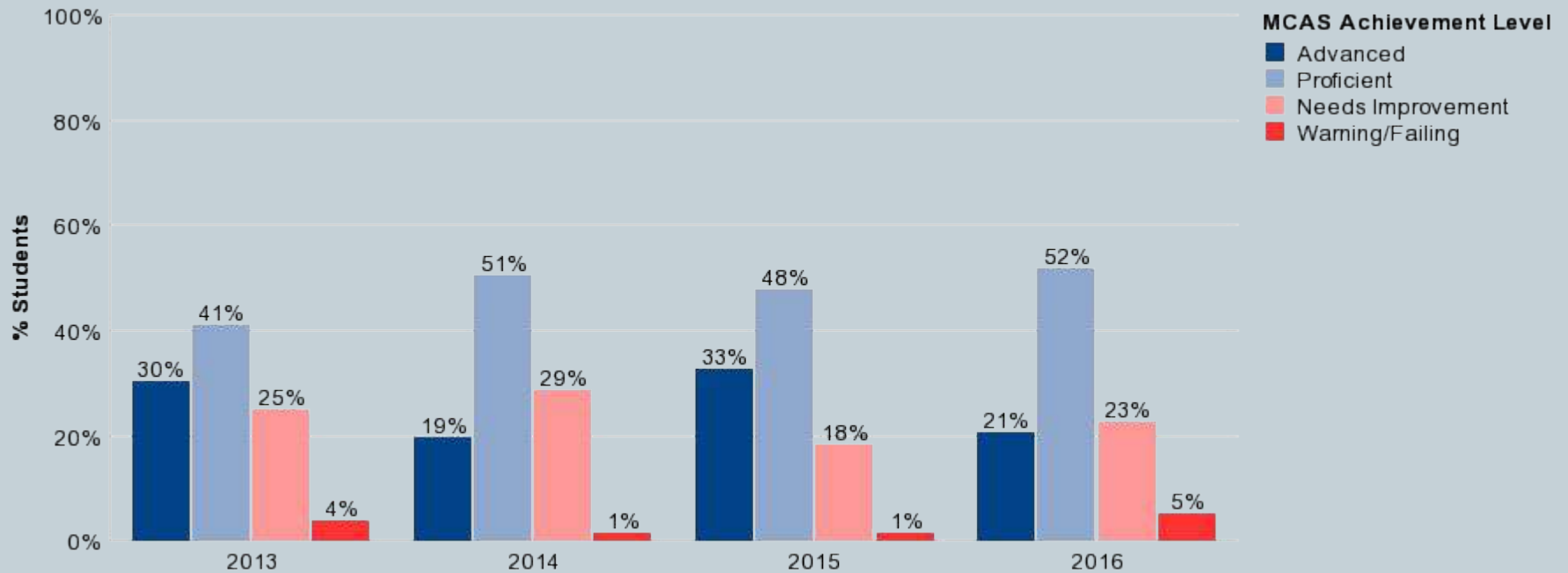


<b>LEVEL</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>ADVANCED</b>	64%	60%	67%	62%
<b>PROFICIENT</b>	26%	27%	23%	26%
<b>NEEDS IMPROVEMENT</b>	8%	10%	9%	8%
<b>FAILING</b>	1%	2%	1%	4%

# Science/Technology 2013-2016 at OAHS



## Grades 10 (Class of 2019=2016) - SCIENCE AND TECH/ENG. Percentage of Students by Achievement Level



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



<b>LEVEL</b>	<b>2013 (Class of 2016)</b>	<b>2014 (Class of 2017)</b>	<b>2015 (Class of 2016)</b>	<b>2016 (Class of 2019)</b>
<b>ADVANCED</b>	30%	19%	33%	21%
<b>PROFICIENT</b>	41%	51%	48%	52%
<b>NEEDS IMPROVEMENT</b>	25%	29%	18%	23%
<b>FAILING</b>	4%	1%	1%	5%

## GRADE 10 - SCIENCE AND TECHNOLOGY/ENGINEERING COMMENT



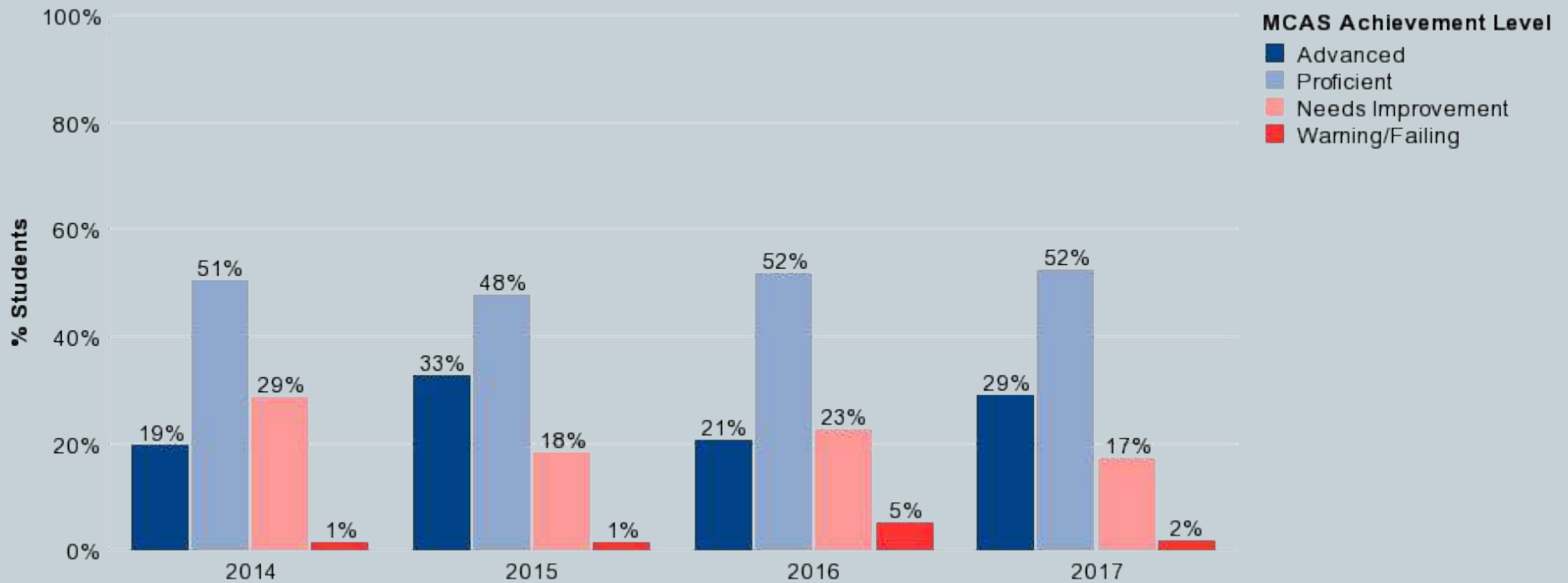
- Diminishing gains from 2015 to 2016 are linked to low level of student science and technology/engineering skills.
- High needs population from grade 8 to grade 9 (same student cohort) 10% decrease in the N/I and Warning/failing categories.
- Focus on instructional strategies, common assessments and unit design and MCAS academy offering for high needs students continue to show gains in the subsequent year (2017 test).



# Science/Technology 2014-2017 at OAHS



## 2017 Science MCAS results



# 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 typical average growth rate ranges from 40-60.

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.

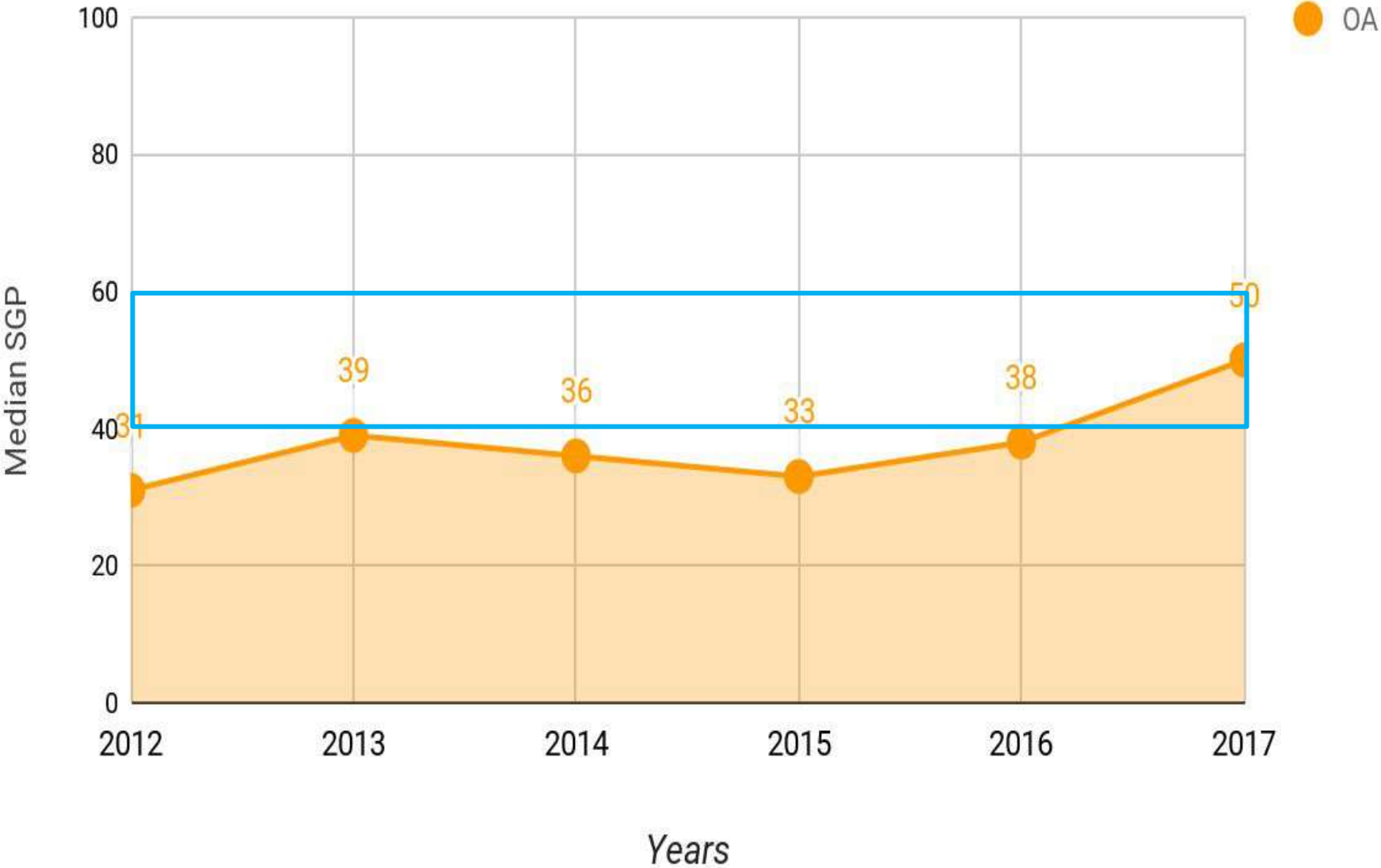
If a child scores a 260 on the ELA MCAS in grade 8, then he or she is grouped with students who earned a similar score. In grade 10 if a child scored a 272 and his or her SGP was 75, then that student scored better than 75% of the other students that were in that like group in grade 8

Source: Massachusetts Department of Elementary and Secondary Education website

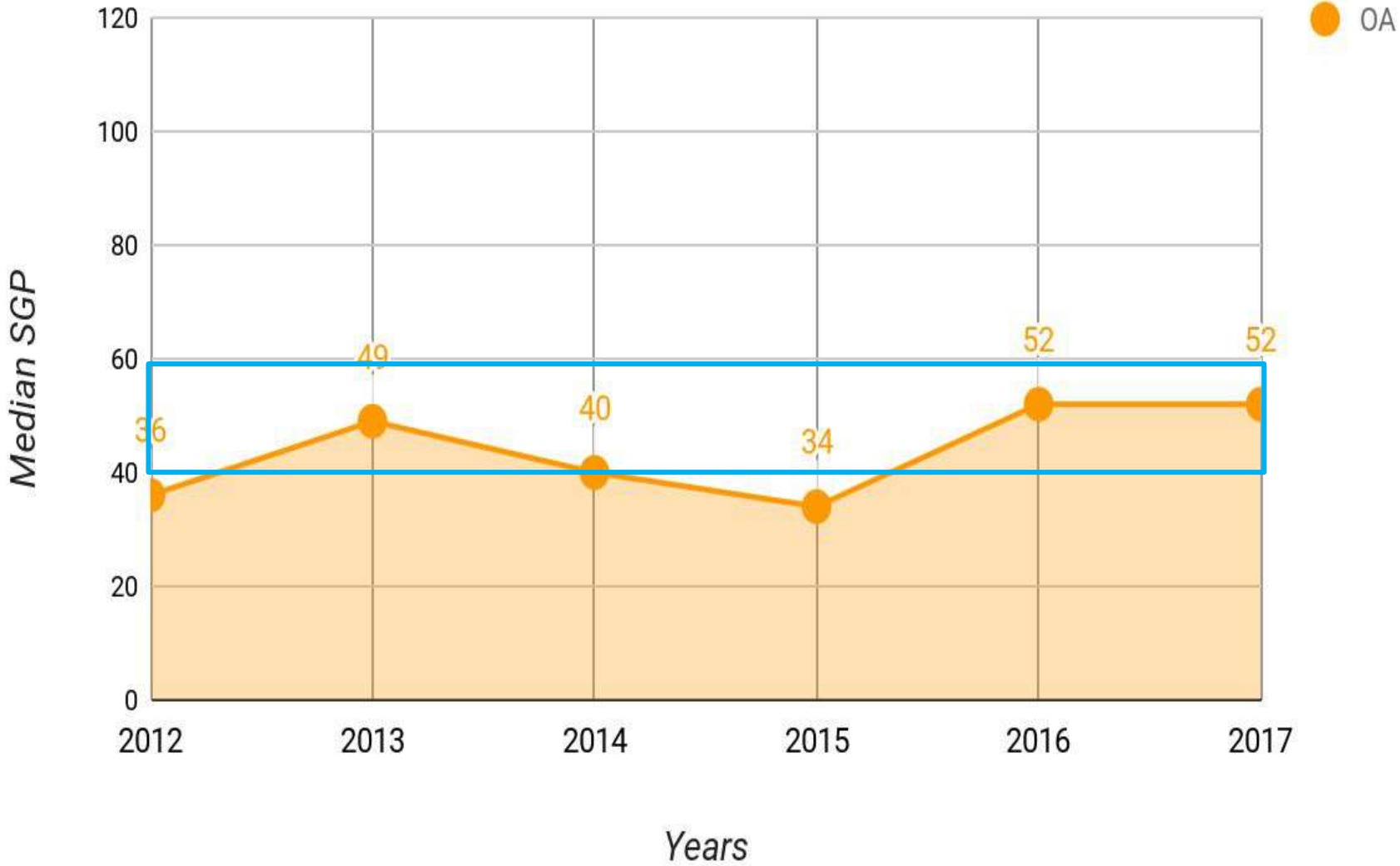
# OAHS is a High Performing Low Growth School

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

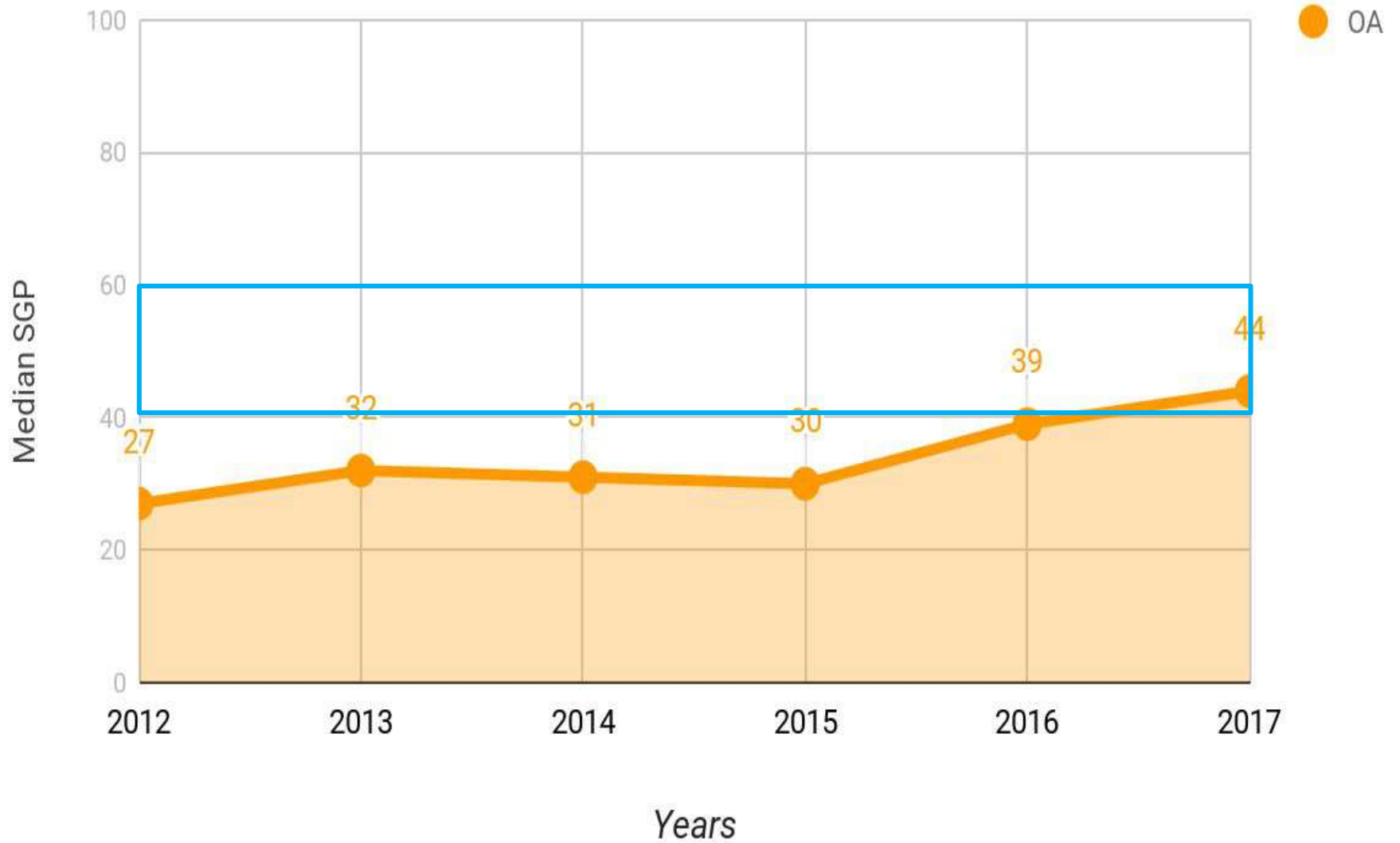
# Math MCAS Median SGP- All Students



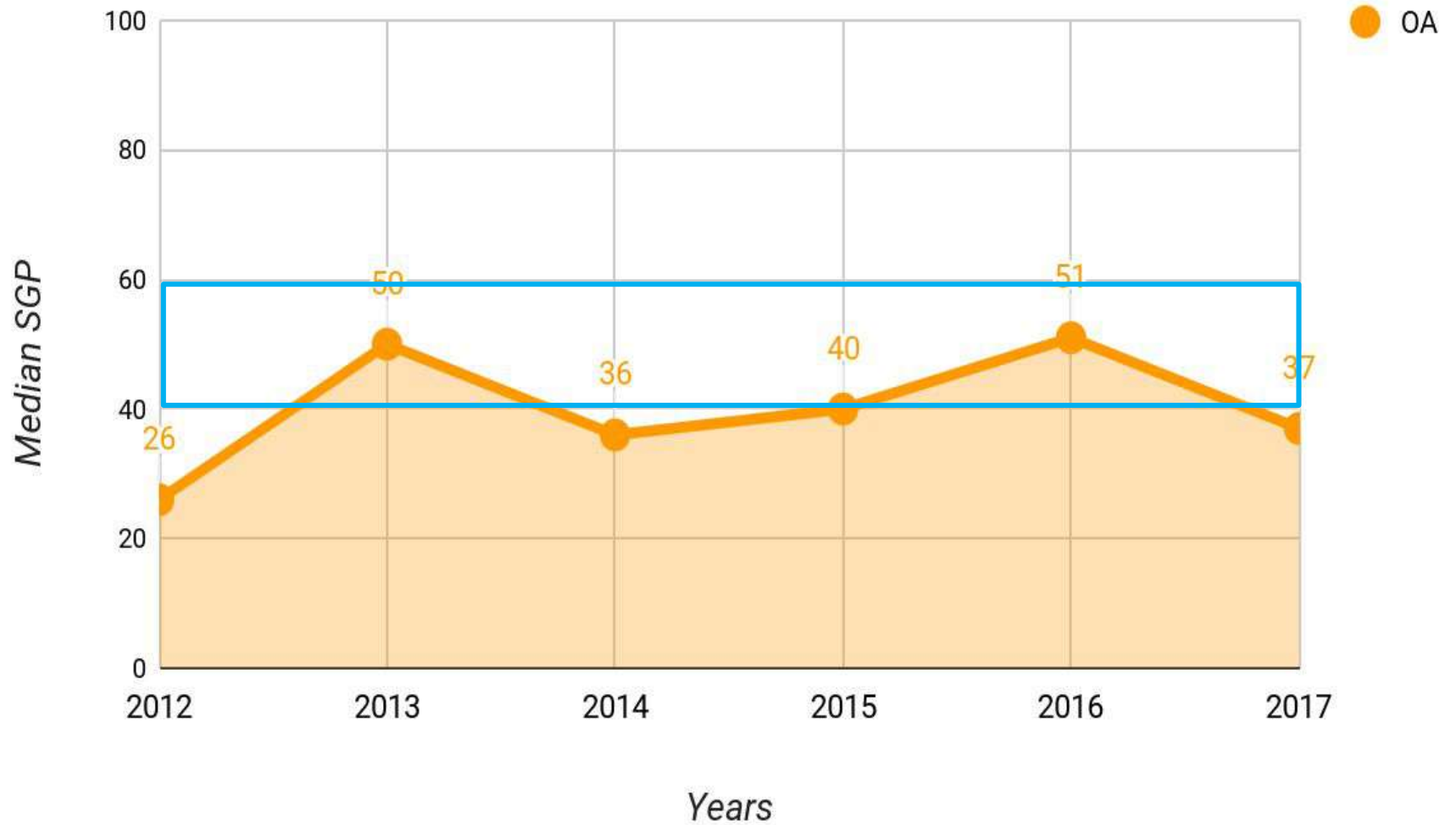
# ELA MCAS Median SGP- All Students



# High Needs Subgroup Median SGP for Math MCAS



# High Needs Subgroup Median SGP for ELA MCAS





# Strengths



- **Improvements in ELA:**
  - From grade 8 to grade 10 (same student cohort):
    - Increase of 8% in Adv/P
    - Decrease of 8% in NI/W
  - 95% or more of students consistently score in the Adv/P

# Strengths



- **Improvements in Math:**
  - From grade 8 to grade 10 (same student cohort):
    - Increase of 24% in Adv/P
    - Decrease of 24% in NI/W
  - 87% or more of the students consistently score in the Adv/P

# Strengths



- Improvements in STE (Science Technology Engineering):
  - From grade 8 to grade 9 (same student cohort):
    - Increase of 18% in Adv/P
    - Decrease of 17% in NI/W
  - 70% or more of the students consistently score in the Adv/P

# Strengths



**ELA/Math/Science: Student performance is consistently above state average**

Subject	OAHS	State
ELA	A-57% P-39% NI-3% F-1%	A-47% P-44% NI-6% F-3%
Math	A-62% P-26% NI-8% F-4%	A-53% P-26% NI-14%F-8%
Science	A-21% P-52% NI-23%F-5%	A-26% P-42% NI-23%F-9%

# Strengths-Internal Factors



- MCAS analysis is done annually by Principal and Department Heads with general results of strengths and weaknesses.
- Department Heads work within their departments to identify more specific strengths and weaknesses that are then 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 along with academic support teachers collaborates to implement strategies into their lessons to help students improve their skills.
- 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 focus on integration of knowledge and ideas with close reading
- Math grade 10 geometry classes incorporate additional practice and application of algebraic problem solving
- Science open response questions are left blank in some cases.

# Opportunities



- 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

- A Physics MCAS remediation program is offered in April/May and it 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)



- Emphasis continues on improvement of scores for the high needs population.
- The 2017 results demonstrate that the focus on content skills, test taking strategies and unit design and assessment continue to improve scores.

# Threats



- Time for more collaboration amongst teachers regarding data analysis
- More resources for high need students that are in need of support in grade 9 (MCAS Math, ELA and Science)
- The achievement gap and foundational skills of high needs students are a continual point of focus.

# 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, Academic Support 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.