



# UTAH STATE BOARD OF EDUCATION

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## MEMORANDUM

**TO:** Members, Utah State Board of Education

**FROM:** Joel Coleman  
Interim Chief Executive Officer

**DATE:** September 5, 2014

**ACTION:** SAGE Proficiency Level Cut Scores

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### **Background:**

The SAGE testing window closed June 20, 2014. Student test results were analyzed over the summer and prepared for the standard setting activity August 11–15. On August 18, the standard setting results were reviewed by stakeholders and approved to be submitted to the Board.

### **Key Points:**

Standard setting is a means of identifying cut scores that indicate whether a student has achieved an established level of proficiency. The standard setting process involved expert judgment of educators and stakeholders and the SAGE student performance data. CRT, ACT and NAEP data were used as referents in the standard setting process. The standard setting procedures are intended to yield reasonable and supportable interpretations about the proficiency of students within a grade level and the growth of students' achievement across grade levels.

More than 200 educators and stakeholders were involved in the standard setting process. A stakeholder meeting was held Monday, August 18 where information was received and feedback solicited. The stakeholders unanimously agreed that the work of the standard setting participants was appropriate.

The timeline for releasing SAGE results and producing accountability reports (UCAS and School Grading) will be reviewed by the Board.

### **Anticipated Action:**

Board members will receive the proficiency level cut scores determined during the standard setting process. Board members will review the cut scores and determine if any adjustments are appropriate. After final cut scores are approved by the Board, individual student results will be prepared for release in the coming weeks.

**Contact:** Judy Park, 801-538-7550  
Jo Ellen Shaeffer, 801-538-7811

# Standard Setting Review

## Utah State Board of Education

September 4, 2014

# Overview

- Review the process to recommend standards for SAGE
- Evaluate the recommended standards:
  - Considering the performance standards and the policy implications, do the recommended standards appear to support the state's vision and objectives?
  - Is the relationship among grades and content areas reasonable and appropriate?
- Affirm current recommendations or suggest adjustments to the standards

- The Student Assessment of Growth and Excellence (SAGE)
  - SAGE measures what students know and can do in relation to the Utah Core Standards.
  - The Utah Core Standards were adopted in 2010 as a commitment to strengthening our educational standards and ensuring that all Utah high school students will be ready for college, careers, and everyday life when they graduate. The new standards emphasize deeper analysis and problem-solving skills to meet the demands of the 21st-century global economy.

# SAGE Grades and Content Areas

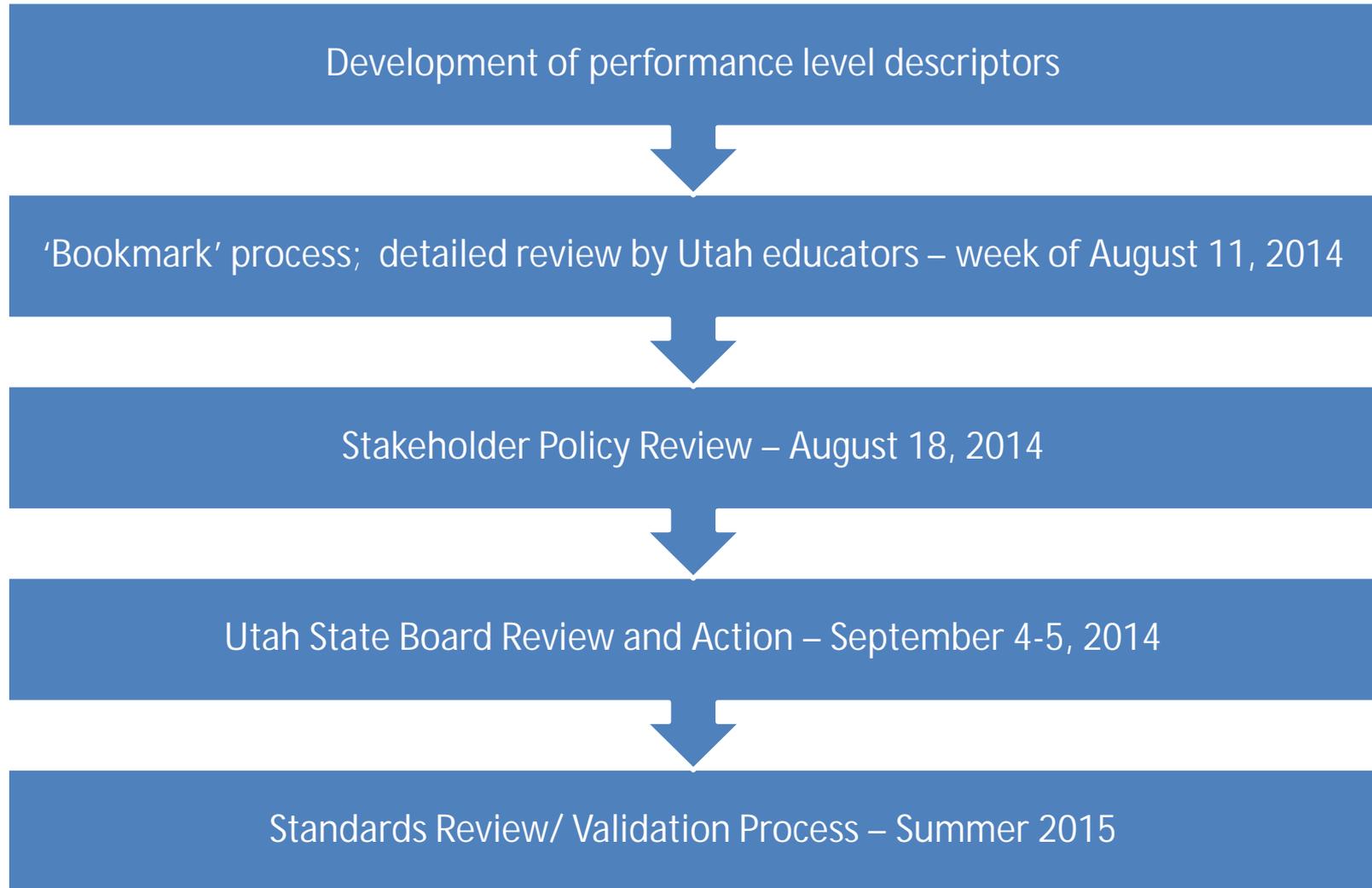
- ELA
  - Grades 3-11
- Math
  - Grades 3-8
  - Secondary Math I, II, and III
- Science
  - Grades 4-8
  - Secondary: Earth Science, Biology, Physics, and Chemistry

# Standard Setting

- Standard Setting is the process of determining 'cut scores' for SAGE that indicate whether a student has achieved an established level of proficiency.

Performance Levels and Standards	
Performance Levels	Performance Standards
Level 4: Highly Proficient	Highly Proficient
Level 3: Proficient	Proficient
Level 2: Approaching Proficient	Approaching Proficient
Level 1: Below Proficient	

# Standard Setting Process



# Standard Setting

- Standard setting necessarily involves expert judgment and is informed by data
- The process used to establish the recommended standards is termed “Bookmark”
- The week of August 11-15, nearly 200 educators broadly representative of the state met to:
  - Study the tests and performance level descriptors
  - Recommend standards using an iterative process (i.e. multiple rounds of judgment, review, and discussion)
  - Evaluate the standards holistically

# Stakeholder Review

- On August 18, 2014 an open stakeholder review meeting was conducted at USOE
- Attendees included
  - State Board members
  - Policy Advisory Committee members
  - Selected participants from the August 11-15 standard setting event
  - Other stakeholders and interested parties (e.g. educators, parents, etc.)
- The participants reviewed the results and affirmed the recommendations from standard setting

# Standards Review and Validation

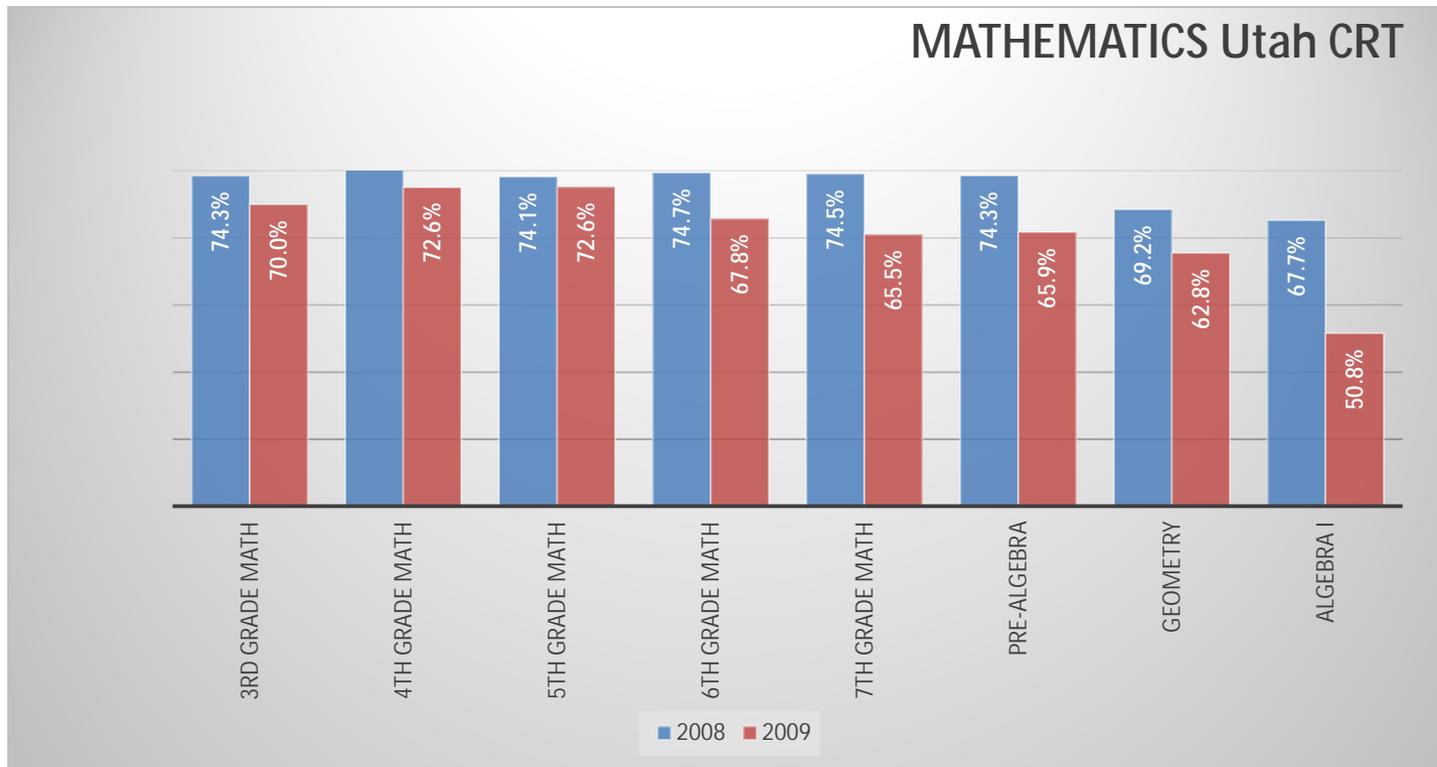
- Because we know that having multiple years of data can improve our perspective and inform decision making, a 'standards validation' will be conducted following the 2014-2015 year
- This process will involve another standards review panel, incorporating both data and judgment
- Next year the State Board will have an opportunity to consider affirming or adjusting the standards established this year

# Proficiency Level Descriptors

SAGE Summative Proficiency Level Descriptors	
Level 4 – Highly Proficient	<p>The Level 4 student is highly proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly above the standard for the grade level/course, is able to access above grade-level content, and engages in higher order thinking skills independently.</p> <p>* For Secondary Math III and English 11, this level of performance also likely indicates the student is well prepared for postsecondary success in mathematics and language arts.</p>
Level 3- Proficient	<p>The Level 3 student is proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs at the standard for the grade level/course, is able to access grade-level content, and engages in higher order thinking skills with some independence and minimal support.</p> <p>** For Secondary Math III and English 11, this level of performance also likely indicates the student is sufficiently prepared for postsecondary success in mathematics and language arts.</p>
Level 2- Approaching Proficient	<p>The Level 2 student is approaching proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs slightly below the standard for the grade level/course, is able to access grade-level content and engages in higher order thinking skills with some independence and support.</p>
Level 1 - Below Proficient	<p>The Level 1 student is below proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly below the standard for the grade-level/course, is likely able to partially access grade level content and engages with higher order thinking skills with extensive support.</p>

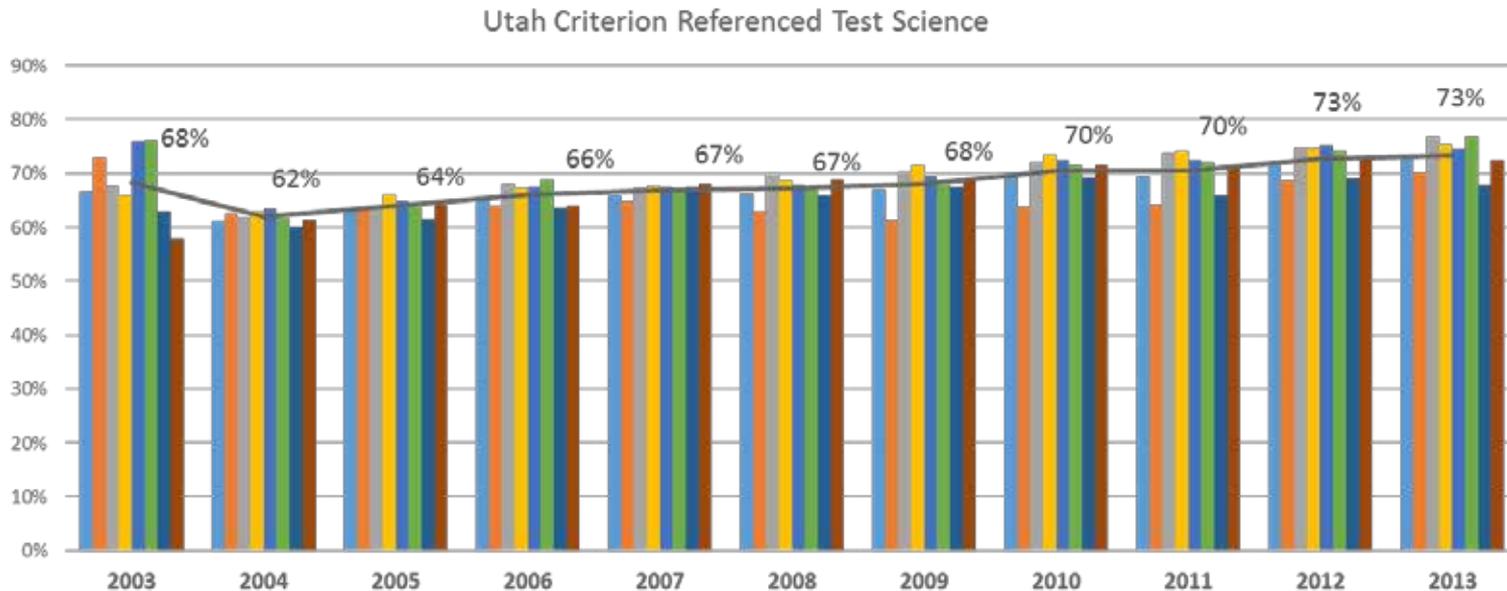
# Context

- It is not unusual for performance to drop on state tests when the standards/test is changed, as with the introduction of Utah's new math standards in 2009.



# Context

- Data from the Utah science tests illustrate the point that following an initial decrease, gradual improvement is often observed.



SCIENCE 4th Grade Science 5th Grade Science 6th Grade Science 7th Grade Science  
8th Grade Science Earth Science Biology AVERAGE

# Context

- Other states that have recently changed their tests to incorporate performance standards associated with college and career readiness experienced an initial drop in scores.
- Of course, this is NOT an indication of decrease in student achievement, rather it reflects an increase in rigor
- For example, in Kentucky proficiency rates for reading and math dropped sharply with the first year of implementation in 2012, but modest gains were evident in some areas in 2013

	2011	2012	2013
3-5 Reading	76	48	48
3-5 Math	73	40	44
6-8 Reading	70	47	51
6-8 Math	65	41	41

# Context

- As another example, in New York proficiency dropped sharply after implementing a new test in 2013 linked to college and career readiness.
- In results just released late last week, math rose sharply in 2014, while ELA remained steady (.1 gain).

	2012	2013	2014
3-8 ELA	55	31	31
3-8 Math	65	31	36

# Benchmarking

- Another way to gauge the 'reasonableness' of Utah's standards is to consider information from national indicators.
- Accordingly, we present ACT and NAEP data. While these are not presented as precise targets for Utah, they serve as yet another piece of information to guide review of Utah's standards.

# NAEP Benchmarks

SAGE Test	NAEP	Utah % Proficient
ELA Grade 4	Reading Grade 4	37% (2013)
ELA Grade 8	Reading Grade 8	39% (2013)
Math Grade 4	Math Grade 4	44% (2013)
Math Grade 8	Math Grade 8	36% (2013)
Science Grade 4	Science Grade 4	38% (2009)
Science Grade 8	Science Grade 8	43% (2011)

# ACT Benchmarks

SAGE Test	ACT Grade 11	Utah % College and Career Ready*
ELA Grade 11	Reading	41%
Math I	Mathematics	31%
Math II	Mathematics	31%
Math III	Mathematics	36%
Biology	Science	30%
Earth Science	Science	20%
Chemistry	Science	39%
Physics	Science	48%

\*Represents the percentage of Utah students currently or previously enrolled in the indicated course (or similar course) who reached the ACT readiness benchmark.

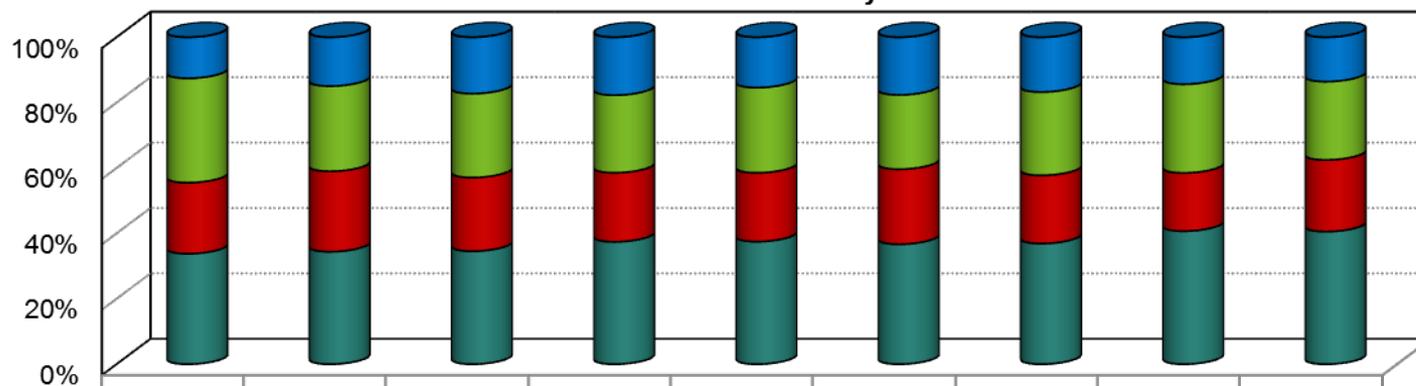
# Today's Review

- We will review the results holistically and invite feedback on whether the results should be affirmed or adjusted
- We will present the recommended cut scores and the percent of students who would achieve the target performance levels based on the cut scores
- We can show you how the impact changes should you consider raising or lowering the cut score

## English Language Arts

# Recommended Standards for English Language Arts

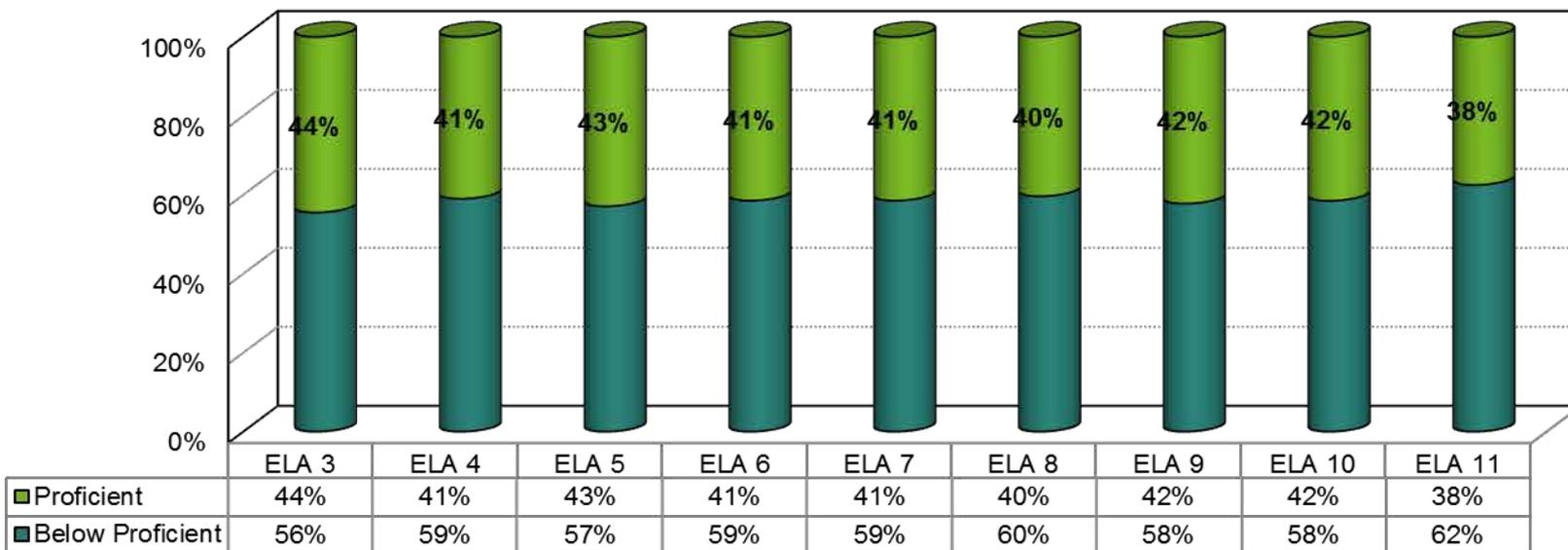
Percent of Students in each Proficiency Level in ELA



	ELA 3	ELA 4	ELA 5	ELA 6	ELA 7	ELA 8	ELA 9	ELA 10	ELA 11
Highly Proficient	13%	15%	17%	18%	15%	18%	17%	14%	14%
Proficient	32%	26%	26%	24%	26%	23%	26%	27%	24%
Approaching Proficient	22%	25%	23%	21%	21%	23%	21%	18%	22%
Below Proficient	34%	34%	35%	37%	37%	37%	37%	41%	41%

# Percent Proficient English Language Arts

Percent of Students Proficient and Below Proficient in ELA

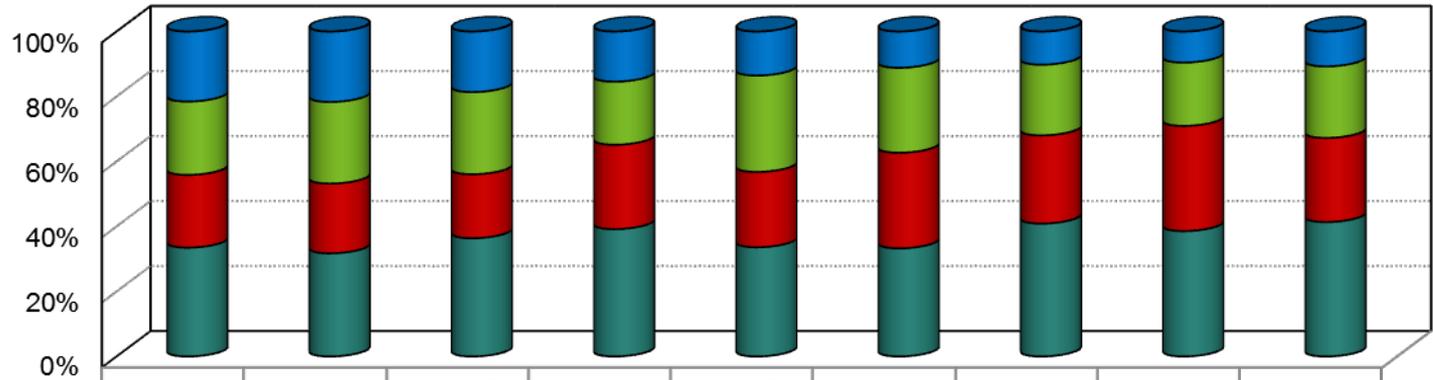


- Discussion
  - Considering the performance standards and the policy implications, do the recommended standards appear to support the state's vision and objectives?
  - Is the relationship among grades and content areas reasonable and appropriate?
- Decision
  - Affirm the recommendations
  - Adjust the recommendations

## Mathematics

# Recommended Standards for Mathematics

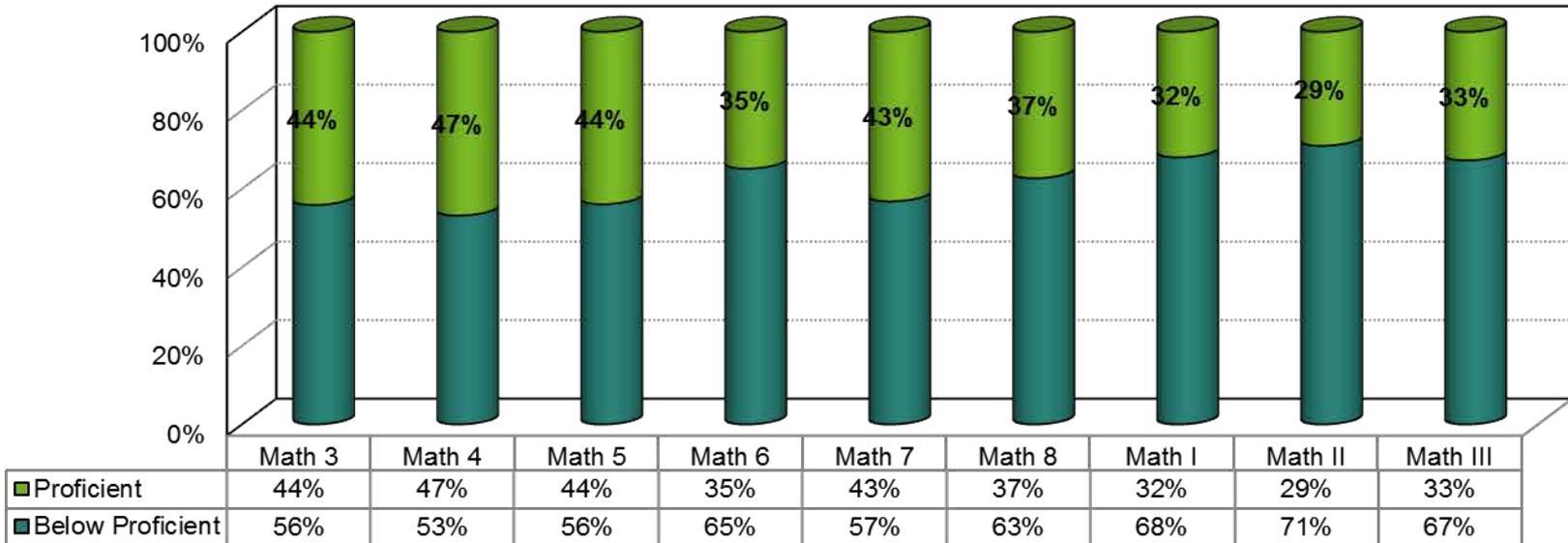
Percent of Students in each Proficiency Level in Mathematics



	Math 3	Math 4	Math 5	Math 6	Math 7	Math 8	Math I	Math II	Math III
Highly Proficient	22%	22%	19%	15%	14%	11%	10%	10%	11%
Proficient	23%	25%	25%	19%	30%	26%	22%	20%	22%
Approaching Proficient	22%	21%	20%	26%	23%	29%	27%	32%	26%
Below Proficient	33%	32%	36%	39%	34%	33%	41%	39%	41%

# Percent Proficient Mathematics

Percent of Students Proficient and Below Proficient in Mathematics



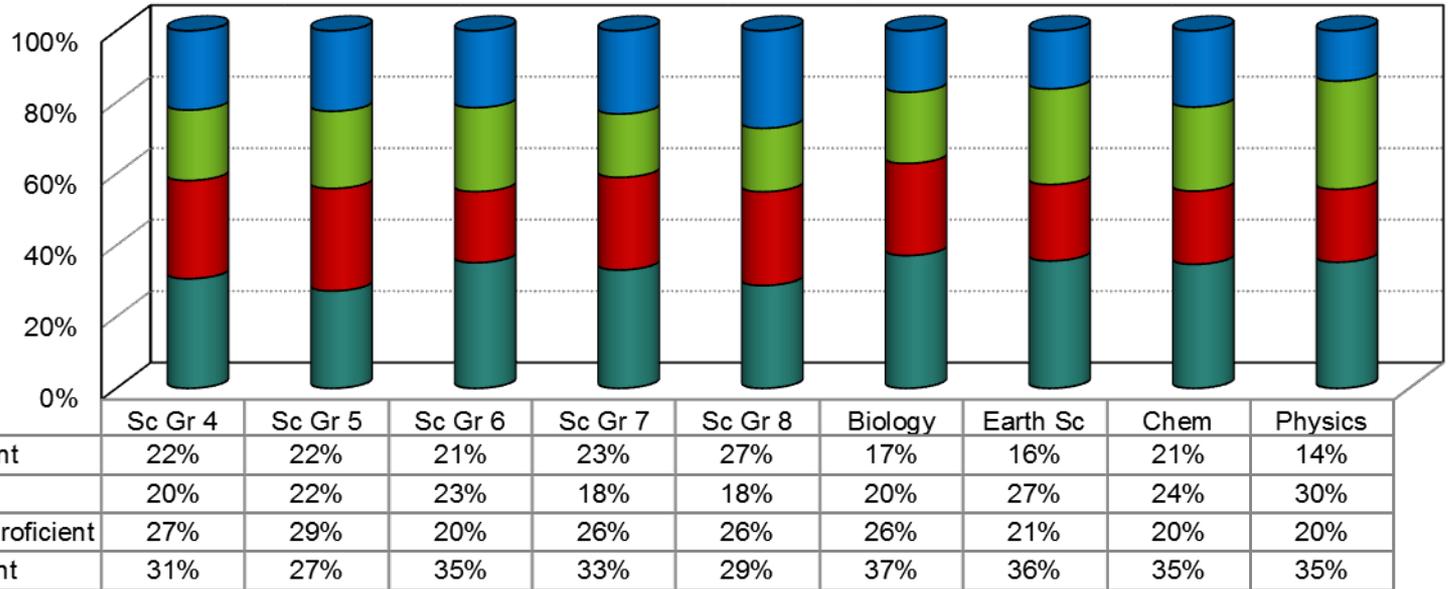
# Mathematics

- Discussion
  - Considering the performance standards and the policy implications, do the recommended standards appear to support the state's vision and objectives?
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## Science

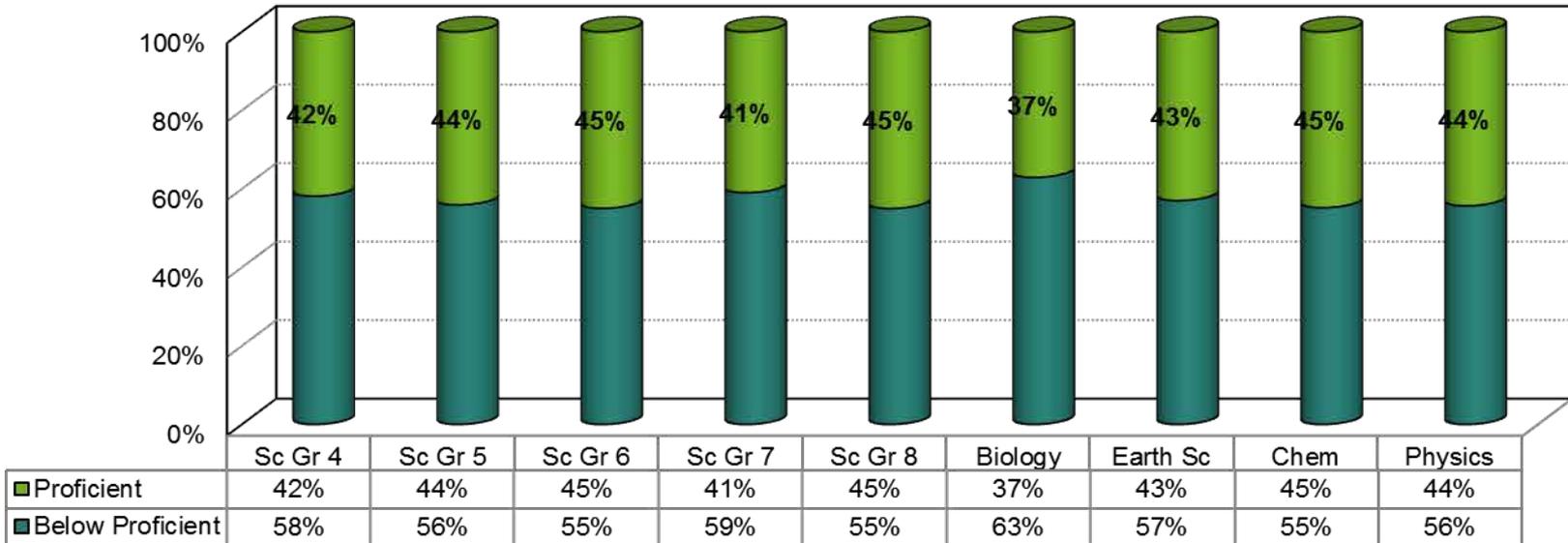
# Recommended Standards for Science

Percent of Students in each Proficiency Level in Science



# Percent Proficient Science

Percent of Students Proficient and Below Proficient in Science



- Discussion
  - Considering the performance standards and the policy implications, do the recommended standards appear to support the state's vision and objectives?
  - Is the relationship among grades and content areas reasonable and appropriate?
- Decision
  - Affirm the recommendations
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# Conclusion

Thank you for your review and feedback today.  
Are there any additional questions or concerns we can address?