

Cut-Scores for Biology End of Course ACT Equivalent and High School Graduation Exams

State Board of Education

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OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION

Division of Assessment and Student Information

Today's Topics

- ▶ 1) ACT equivalency recommendation for Biology EOC
- ▶ 2) The next four years of the assessment transition, under current law assumptions and how the two-cut score approach interacts with other changes for the classes of 2015 – 2019
- ▶ 3) SBE position statement regarding two cut scores
 - ▶ How would OSPI implement such a position when calculating a second cut score?
 - ▶ Are there issues that we (SBE) may need to think about that are not necessarily addressed in the statement?

Assessment Menu – English Language Arts

General Assessments

- ▶ Smarter Balanced ELA
 - ▶ Exit Exam Cut Score
 - ▶ College/Career Ready Cut Score
- ▶ HSPE in Reading and Writing
(retakes for 11th and 12th graders)

Alternatives

- ▶ Collection of Evidence
- ▶ College Entrance Scores
 - ▶ SAT, ACT, IB, AP
- ▶ Out of State Tests
- ▶ Grades Comparison
- ▶ Recent Transfer Waiver
- ▶ Special Education Alternatives

Assessment Menu - Mathematics

General Assessments

- ▶ Smarter Balanced Math
 - ▶ Exit Exam Cut Score
 - ▶ College/Career Ready Cut Score
- ▶ Yr1 & Yr2 EOC Exit Exams

Alternatives

- ▶ Collection of Evidence
- ▶ College Entrance Scores
 - ▶ SAT, ACT, IB, AP
- ▶ Out of State Tests
- ▶ Grades Comparison
- ▶ Recent Transfer Waiver
- ▶ Special Education Alternatives

Assessment Menu - Science

General Assessments

- ▶ Biology EOC Exam (until new NGSS comprehensive exam is developed)

Alternatives

- ▶ Collection of Evidence
- ▶ College Entrance Scores
 - ▶ IB, AP, **ACT**
- ▶ Out of State Tests
- ▶ Grades Comparison
- ▶ Recent Transfer Waiver
- ▶ Special Education Alternatives

End-of-Course Biology:

Background

- ▶ Students began taking the End-of-Course (EOC) exam in Biology in Spring 2012
- ▶ Students in the classes of 2015 and beyond must pass the Biology EOC **or an alternative**
- ▶ SBE is being asked to approve the same process for establishing a cut-score for the ACT Science subtest in lieu of meeting standard on the Biology EOC.
 - OSPI determined that student sampling for a comparable subject area SAT cut-score was not sufficient.

College Entrance Exam:

Methodology for ACT Science

- ▶ Approximately 6,700 students from class cohorts needing to meet the science graduation requirement have scores in both the Biology EOC and the ACT Science subtest.
- ▶ OSPI completed the equipercentile linking between the percent meeting standard on the Biology EOC and the same percentile point on the ACT Science subtest.

College Entrance Exams:

OSPI Recommendations

- ▶ OSPI proposes the ACT Science cut-score for Biology EOC be set at 16
- ▶ Comparison to other College Entrance Exam cut-scores:

FOR REFERENCE	
Algebra I/Integrated Math 1	16
Geometry/Integrated Math 2	17
Reading	13
Writing	15
Science	16

Summative Assessments 2014–15 and beyond

	English/LA	Mathematics	Science (no change)
Grade 3	Smarter	Smarter	
Grade 4	Smarter	Smarter	
Grade 5	Smarter	Smarter	MSP
Grade 6	Smarter	Smarter	
Grade 7	Smarter	Smarter	
Grade 8	Smarter	Smarter	MSP
Grade 10 (or below for EOCs) (until Class of 2019)	Smarter	Year 1 or Year 2 EOC exit exam	EOC Biology exit exam (until NGSS)
Grade 11	Smarter	Smarter	
Grade 11 or 12 (class of 2015 & 2016)	HSPE Reading and/or Writing retake		
Smarter=Smarter Balanced Assessment; MSP=Measurements of Student Progress; EOC=End of Course exams; HSPE=High School proficiency Exam			



HS Tests for School and District **Accountability** (95% participation required)

Grade	ELA	Math	Science
Grade 9			
Grade 10			Biology EOC
Grade 11	Smarter Balanced (College and Career Ready cut score)	Smarter Balanced (College and Career Ready cut score)	

Spring 2015 - HS Tests for **Assessment Graduation Requirements** (access required)

Grade	ELA	Math	Science
Grade 9 (Class of 2018)		EOC exit exams	Biology EOC
Grade 10 (Class of 2017)	Smarter Balanced (exit exam cut score)		
Grade 11 (Class of 2016)	Smarter Balanced (exit exam cut score) or HSPE retake if needed	EOC retake if needed or Smarter Balanced (exit exam cut score)	EOC retake if needed
Grade 12 (Class of 2015)	HSPE retake if needed		



High School Tests for Spring 2015

(accountability and exit exams combined)

	ELA	Math	Science
Grade 9 (Class of 2018)		EOC exit exams (paper)	Biology EOC (paper)
Grade 10 (Class of 2017)	Smarter Balanced (online or paper)		
Grade 11 (Class of 2016)	Smarter Balanced (online or paper)	Smarter Balanced (online or paper)	EOC retake if needed (paper)
	HSPE retake if needed (paper)	EOC retake if needed (paper)	
Grade 12 (Class of 2015)	HSPE retake if needed (paper)	EOC retake if needed (paper)	EOC retake if needed (paper)



College and Career Ready Cut Scores vs High School Graduation Cut Scores

▶ From Draft Position Statement:

- ▶ As directed by the Legislature, with the assistance of the Superintendent of Public Instruction, the Board hereby intends to adopt a performance level requirement for high school graduation that is statistically equivalent to the current high school minimum proficiency standard, and intends to periodically review this standard over time.

Smarter Balanced Achievement Level Setting Activities

- ▶ **Online Panel**
 - ▶ Over 10,000 registered
 - ▶ 5,840 logged in
 - ▶ 2,660 submitted
- ▶ **In-Person Panel**
 - ▶ 504 panelists confirmed
 - ▶ 482 completed the tasks
- ▶ **Vertical Articulation Committee**
 - ▶ 64 panelists confirmed

Achievement Level Setting Participation

	Online Panel	In-Person Panel	Cross-Grade Review Committee
Teachers	65%	64%	66%
Non-Teacher Educators & Administrators	18%	18%	19%
Higher Education	9%	12%	11%
General Public	7%	6%	5%
Total	2,660	482	64

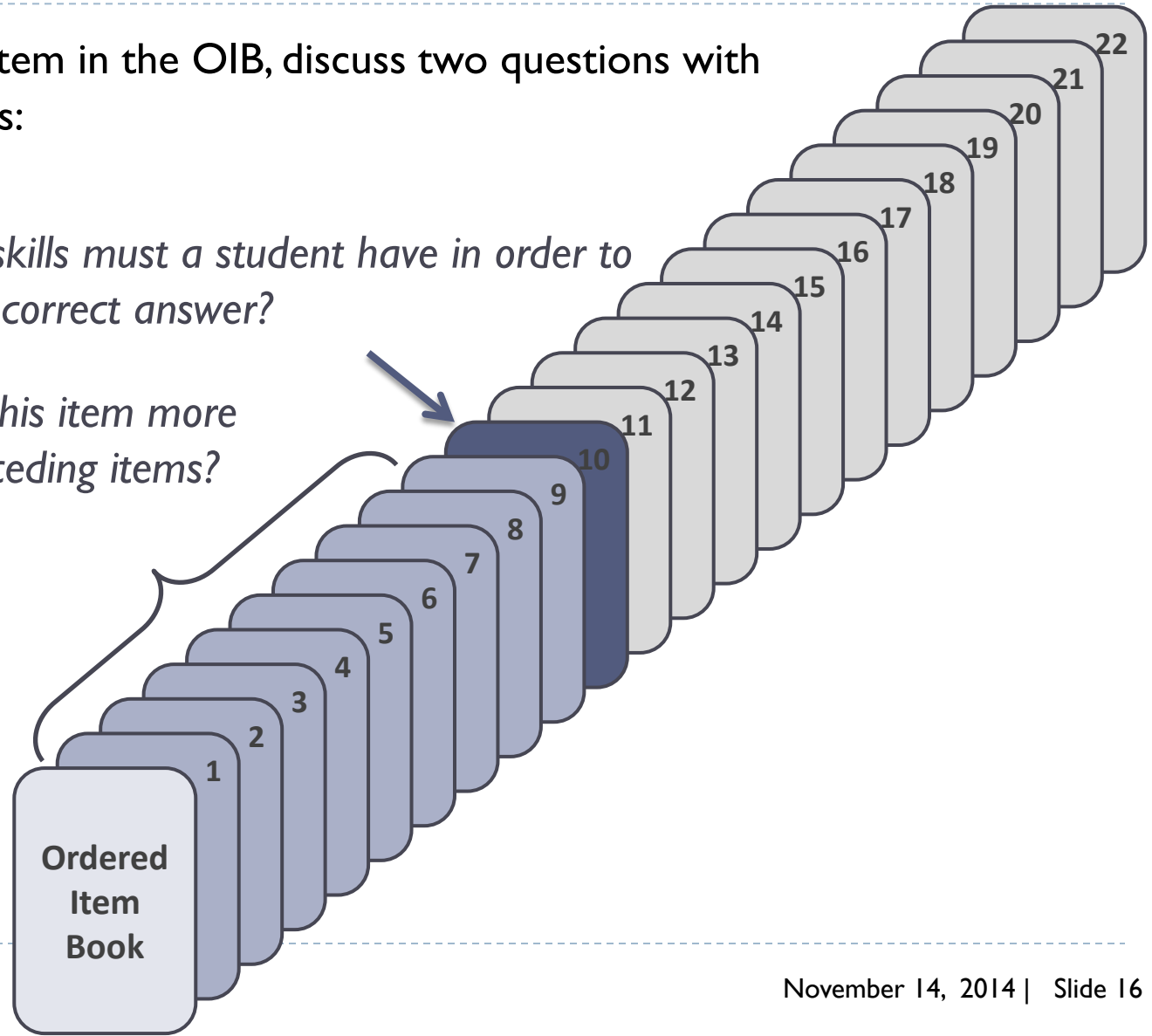


Achievement Level Setting Methodology – Ordered Item Booklet

As you study each item in the OIB, discuss two questions with your fellow panelists:

1. What skills must a student have in order to know the correct answer?

2. What makes this item more difficult than preceding items?



Achievement Level Descriptors

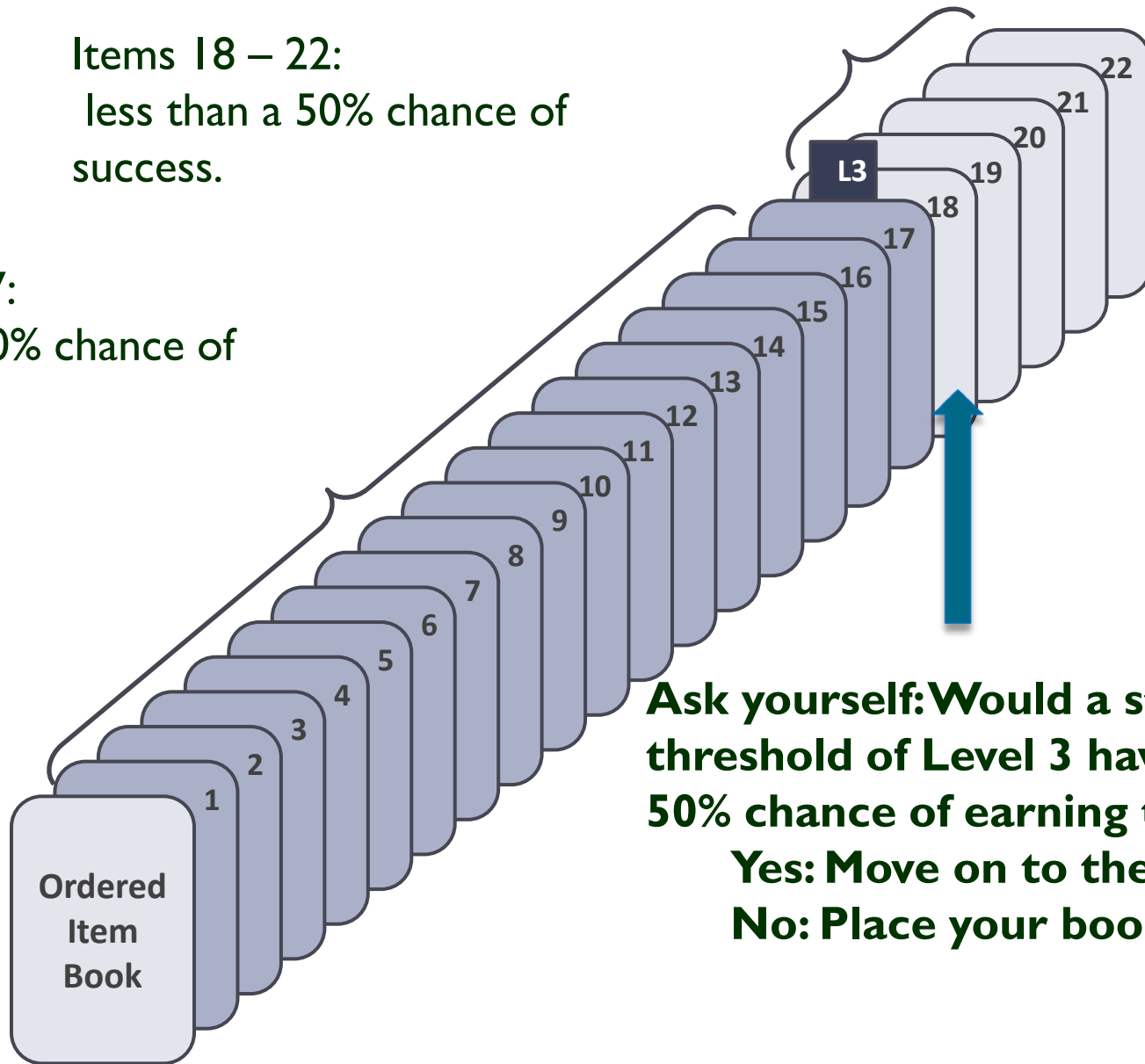
The student who just enters Level 3 should be able to:

**Targets
1-7:
Reading
Literary
Text**

- Use details and information from texts of moderate complexity to support answers and inferences.
- Identify or summarize central ideas/key events in texts of moderate complexity.
- Begin to determine the intended meanings of words, including words with multiple meanings, based on context, word relationships, word structure, and use of resources in texts of moderate complexity.
- Use supporting evidence to justify/explain own inferences in texts of moderate complexity.
- Interpret, specify, or compare how information is presented across texts of moderate complexity.
- Begin to relate knowledge of text structures, genre-specific features, or formats to obtain, interpret, explain, or connect information within texts of moderate complexity.
- Determine or interpret figurative language, literary devices, or connotative meanings of words and phrases used in context and partially explain the impact of those word choices on meaning and tone in texts of moderate complexity.

Items 18 – 22:
less than a 50% chance of
success.

Items 1-17:
At least 50% chance of
success

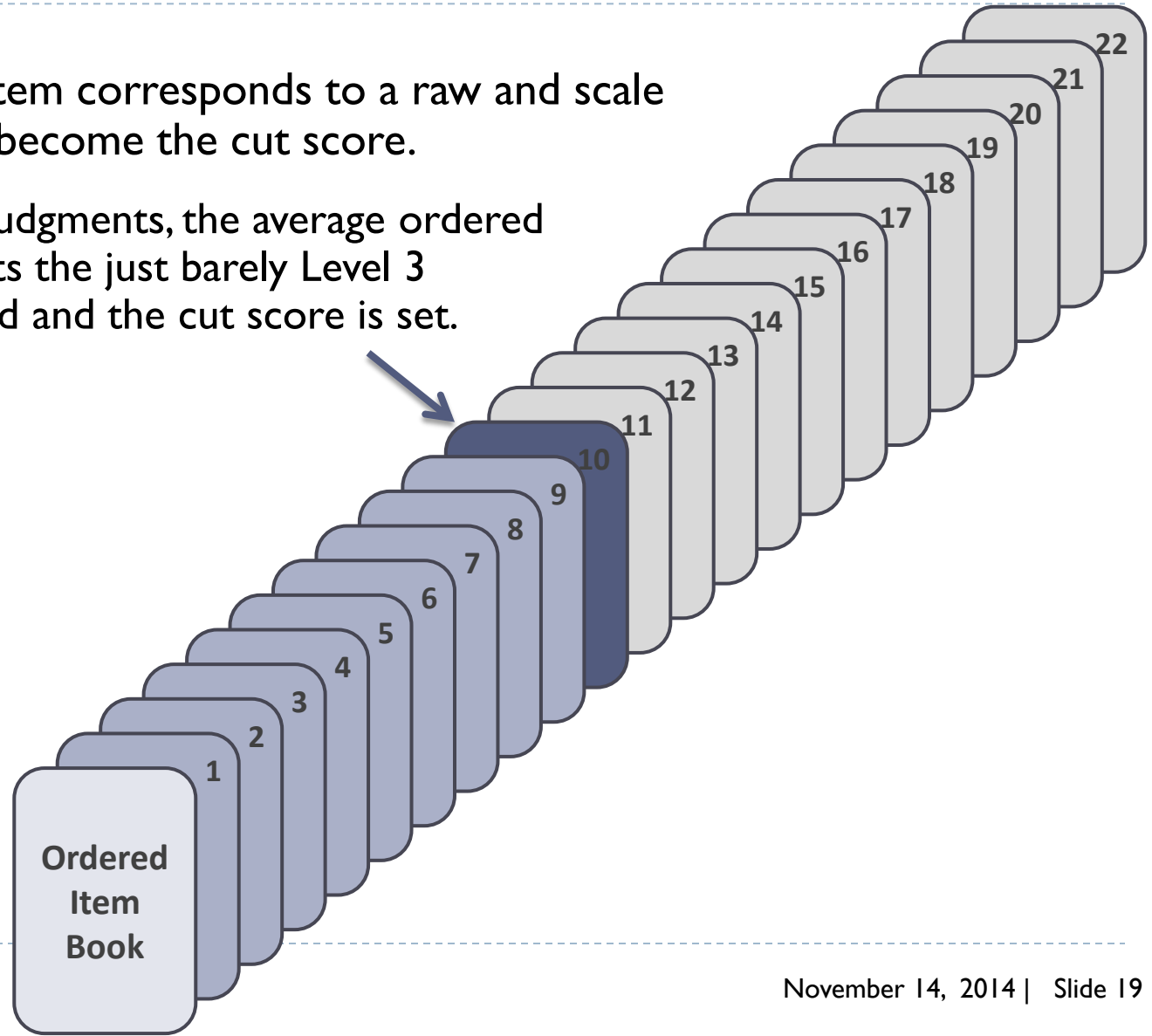


**Ask yourself: Would a student at the
threshold of Level 3 have at least a
50% chance of earning this point?
Yes: Move on to the next item.
No: Place your bookmark here.**

Achievement Level Setting Methodology – Ordered Item Booklet

Each ordered item corresponds to a raw and scale score that can become the cut score.

After 3 rounds of judgments, the average ordered item that represents the just barely Level 3 student is calculated and the cut score is set.



College and Career Ready Cut Scores vs High School Graduation Cut Scores

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Options

- ▶ **Equal Impact**
- ▶ **Achievement Levels**
 - ▶ Level 2 instead of Level 3
 - ▶ New ALD for meeting High School graduation standards



Equal Impact

- ▶ Equal impact cut scores would yield the same “passing” rates on the new tests as the former tests
 - ▶ Reading, Writing or a combination?
 - ▶ 2014 or average of past three years?
 - ▶ 10th grade pass rates or 11th grade after retakes?
 - ▶ Higher cut scores over time?

Achievement Levels

- ▶ Level 2 instead of Level 3
- ▶ New ALD for meeting High School graduation standards



Policy Achievement Level Descriptors

- The Level 4 student demonstrates **thorough understanding of and ability to apply** the English language arts and literacy (mathematics) knowledge and skills needed for success in college and careers, as specified in the Common Core State Standards.
- The Level 3 student demonstrates **adequate understanding of and ability to apply** the English language arts and literacy (mathematics) knowledge and skills needed for success in college and careers, as specified in the Common Core State Standards.
- The Level 2 student demonstrates **partial understanding of and ability to apply** the English language arts and literacy (mathematics) knowledge and skills needed for success in college and careers, as specified in the Common Core State Standards.
- The Level 1 student demonstrates **minimal understanding of and ability to apply** the English language arts and literacy (mathematics) knowledge and skills needed for success in college and careers, as specified in the Common Core State Standards.

Content Achievement Level Descriptors

Content Claim

Content ALD Level 2

Content ALD Level 3

Students can read closely and analytically to comprehend a range of increasingly complex literary and informational texts.

The Level 2 student demonstrates partial ability to read closely to comprehend a range of literary and informational texts of moderate complexity and to use partial textual evidence that demonstrates critical thinking.

The Level 3 student demonstrates adequate ability to read closely and analytically to comprehend a range of literary and informational texts of moderate-to-high complexity and to use textual evidence to demonstrate critical thinking.

Students can produce effective and well-grounded writing for a range of purposes and audiences.

The Level 2 student demonstrates partial ability to produce writing for a range of purposes and audiences.

The Level 3 student demonstrates adequate ability to produce effective and well-grounded writing for a range of purposes and audiences.

Students can employ effective speaking and listening skills for a range of purposes and audiences.

The Level 2 student demonstrates partial ability to employ listening skills for a range of purposes with competency.

The Level 3 student demonstrates adequate ability to employ listening skills for a range of purposes with competency.

Students can engage in research and inquiry to investigate topics, and to analyze, integrate, and present information.

The Level 2 student demonstrates partial ability to use research/inquiry methods to produce an explanation of a topic and analyze or integrate information.

The Level 3 student demonstrates adequate ability to use research/inquiry methods to explore a topic and analyze, integrate, and present information.

Current HS Reading Achievement Level Descriptors

Proficient Reading Behavioral Characteristics

- ▶ Students are motivated, independent, and self-directed.
- ▶ Students attack different kinds of text with confidence.
- ▶ Students follow directions and push through selections to achieve success.
- ▶ Students are able to prioritize information.
- ▶ Students use their understanding of context and vocabulary to make connections to a new text.
- ▶ Students take a “read to learn” attitude towards reading material.
- ▶ Students are “fluent readers”—they read smoothly, with expression, and can adjust for the purpose and type of material.
- ▶ Students identify genres and types of informational texts.
- ▶ Students have a wide range of metacognitive strategies to aid in comprehension and analysis.
- ▶ Students can visualize and use other sensory images to construct meaning, especially with literary texts.
- ▶ Students are willing to persevere with text due to their bank of strategies to support their understanding.

Current HS Reading Achievement Level Descriptors

Proficient Reading Skill Characteristics

- ▶ Students possess a wide range of reading skills including the ability to comprehend, interpret, and evaluate texts, both informational and literary.
- ▶ Students use text features as “signs” to help them find their way in texts and they are able to summarize by selecting significant main ideas.
- ▶ Students are able to employ a solid working vocabulary including an understanding of root words, suffixes, and prefixes; they can also use context syntactical cues/organizational patterns to figure out vocabulary and meanings.
- ▶ Students read the entire question, identify the task, search for evidence and construct a response when they write in response to what they read.
- ▶ Students are able to understand and identify themes.
- ▶ Students are able to connect different text with similar themes.
- ▶ Students are able to compare/contrast texts and parts of text, identify and apply literary elements to text, and understand purpose and bias of author in text.
- ▶ Students are able to differentiate the distinctions between fact and opinion while also clarifying what they’ve read.
- ▶

Timeline for Developing New ALDs and Setting New Achievement Levels

▶ February

- ▶ One committee of 15 panelists will be needed for each set of ALDs to be developed, e.g., HS ELA exit cut, math yr 1 EOC, math yr 2 EOC, HS math exit cut

▶ March/April

- ▶ Online training and contrasting group study predictions

▶ March-June

- ▶ Testing and scoring

▶ July

- ▶ One committee of 30 panelists for each 3-day Achievement Level Setting event (e.g., HS ELA exit exam, math yr 1 EOC, math yr 2 EOC, HS math exit cut)

Higher cut scores over time?

K	2027	
I	2026	
2	2025	
3	2024	
4	2023	
5	2022	
6	2021	
7	2020	
8	2019	
9	2018	
10	2017	
11	2016	
12	2015	NA

Higher cut scores over time?

K	2027	CCR
I	2026	
2	2025	
3	2024	
4	2023	new
5	2022	
6	2021	
7	2020	
8	2019	new
9	2018	
10	2017	
11	2016	HSPE
12	2015	NA

Next Steps

- ▶ Feedback from SBE
- ▶ National Technical Advisory Committee consideration in January 2015
- ▶ Schedule activities
- ▶ Develop communications plan
- ▶ Plan for re-visiting

Questions?

