

LAST MINUTE MEMORANDUM

DATE: March 2004

TO: MEMBERS, STATE BOARD OF EDUCATION

FROM: Geno Flores, Deputy Superintendent
Assessment and Accountability Branch

RE: Item No. 5

SUBJECT: Standardized Testing and Reporting (STAR) Program: Approval of Performance Standards (Levels) for the Grade 5 Science California Standards Test (CST)

The State Superintendent of Public Instruction (SSPI) recommends that the State Board of Education (SBE) approve performance standards (levels) for the Grade 5 CST in science.

California *Education Code* Section 60605 requires SBE to adopt statewide performance standards (levels) in core curriculum areas of reading, writing, mathematics, history/social science, and science and to conduct regional hearings prior to the adoption of the performance standards (levels).

In February 2004, Educational Testing Service (ETS) conducted a performance standard (level) setting for the Grade 5 CST in science. The Performance Level Setting Panel was comprised of fourth and fifth grade teachers, Content Review Panel (CRP) members, and community members, representing California's various regions and diversity, as well as English learners and special education students.

Results from the 2003 census Grade 5 science field test were the basis for the performance standard (level) setting. ETS used the Bookmark Method to set cut scores and determine the five performance standards (levels) for the Grade 5 CST in science. The Bookmark Method is a three-round standard (level) setting process that requires panelists to independently examine test items and place bookmarks at the points at which they consider students have demonstrated sufficient knowledge and skills to be minimally competent at each performance level. After round one, two additional standard setting sessions and discussion follow. The group discussion provides panelists the opportunity to discuss their placements.

The Bookmark Method also was used to set the 2001 performance standards (levels) for the mathematics, high school science, and history-social science CSTs, as well as for the California High School Exit Examination (CAHSEE), and the California English Language Development Test (CELDT).

The SSPI recommendation is based on analyses conducted by the California Department of Education (CDE) and ETS, and differs from the panel's recommendation primarily for two reasons.

The first reason regards setting the cut score between Far Below Basic and Below Basic, which is based on the lowest score above chance performance. With the panel's recommendation, a student could achieve Below Basic by guessing at random to every test question. The SSPI recommendation adjusts the Below Basic cut score to ameliorate this situation.

Secondly, given the panel's recommendation, the percentage of students that would score Advanced on the science test is substantially lower than the percentages of students that would score Advanced on the other elementary CSTs. The SSPI recommendation adjusts the cut score to be more in line with the other adopted CST cut scores.

[Attachment 1](#): Superintendent's Recommendation for the Performance Standards (Levels) Grade 5 California Standards Test in Science with Predicted Student Impact Data (1 Page)

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**California Department of Education
 Superintendent's Recommendation for the Performance Standards (Levels)
 Grade 5 California Standards Test in Science with Predicted Student Impact Data**

	Far Below Basic	Below Basic	Basic	Proficient	Advanced
# Items Correct	<17	17	24	36	48
% of Students	12%	21%	43%	21%	3%
% of Items Correct	<28%	28%	40%	60%	80%

**California Department of Education
Predicted Student Impact Data for the Proposed Performance Standards (Levels)
for the Grade 5 California Standards Test in Science
Based on the Superintendent's Recommendation**

	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Proficient or Advanced
# Items Correct	<17	17	24	36	48	36>
All Students	12% 54,805	21% 96,697	43% 198,675	21% 99,474	3% 13,296	24% 112,770
Male	11% 26,910	20% 46,600	42% 98,403	23% 54,233	4% 8,708	27% 62,941
Female	12% 28,251	22% 49,957	44% 100,056	20% 45,255	2% 4,533	22% 49,758
Asian	7% 2,605	15% 5,454	40% 14,876	32% 11,762	7% 2,632	39% 14,394
Hispanic	17% 36,277	27% 57,113	43% 92,267	12% 26,538	1% 1,367	13% 27,905
African American	16% 6,191	26% 9,956	43% 16,288	13% 5,081	1% 283	14% 5,364
White	5% 8,266	13% 20,040	43% 65,129	33% 50,810	6% 8,426	39% 59,236
Economically Disadvantaged	17% 42,085	27% 66,556	43% 107,909	12% 31,931	1% 1,694	13% 33,625
English Learners	22% 27,267	31% 38,100	40% 49,084	7% 9,065	1% 284	8% 9,349
Special Education	22% 8,662	28% 10,692	37% 14,230	12% 4,719	2% 558	14% 5,277

**California Department of Education
Performance Standard (Level) Percentages for Current California Standards Tests (CSTs)
English Language Arts, Mathematics, and Science***

	Far Below Basic		Below Basic		Basic		Proficient		Advanced	
	Range Across Grades or Disciplines	Grade 5	Range Across Grades or Disciplines	Grade 5	Range Across Grades or Disciplines	Grade 5	Range Across Grades or Disciplines	Grade 5	Range Across Grades or Disciplines	Grade 5
Mathematics										
% of Students	7%-15%	10%	26%-35%	31%	27%-33%	29%	17%-28%	23%	4%-13%	7%
% of Items Correct	<31%	<32%	31%-37%	32%	45%-58%	48%	60%-74%	63%	80%-88%	83%
English language arts										
% of Students	12%-18%	12%	19%-24%	22%	29%-38%	38%	20%-24%	21%	7%-11%	7%
% of Items Correct	<30%	<31%	30%-37%	31%	43%-52%	43%	66%-73%	66%	80%-88%	81%
Science										
% of Students	8%-20%	N/A	15%-23%	N/A	38-46%	N/A	15%-24%	N/A	4%-10%	N/A
% of Items Correct	<30%	N/A	30%	N/A	40%	N/A	63%	N/A	80%	N/A

* Performance standards (levels) adopted by SBE November 2001, based on Spring 2001 results

**California Department of Education
 Performance Standard (Level) Setting Panel's
 Recommendation for the Performance Standards (Levels)
 Grade 5 California Standards Test in Science with Predicted Student Impact Data**

	Far Below Basic	Below Basic	Basic	Proficient	Advanced
# Items Correct	<11	11	20	33	51
% of Students	3%	17%	46%	33%	1%
% of Items Correct	<18%	18%	33%	55%	85%

**California Department of Education
 Cut Point Comparison for Grade 5 English-Language Arts, Math, and Science
 State Board Adopted Cut Points for ELA and Math
 and SSPI and PLSP Recommendations for Science with Predicted Student Impact Data**

Grade 5 Cut Points	ELA*		Math*		SSPI Recommendation		PLSP Recommendation	
	Percent Correct	Percent of Students	Percent Correct	Percent of Students	Percent Correct	Percent of Students	Percent Correct	Percent of Students
Far Below Basic	<31	12	<32	10	<28	12	<18	3
Below Basic	31	22	32	31	28	21	18	17
Basic	43	38	48	29	40	43	33	46
Proficient	66	21	63	23	60	21	55	33
Advanced	81	7	83	7	80	3	85	1

* Based on grade 5 Spring 2001 results