Student Assessment Update

September 21 and September 22, 2015

MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION

Today's Agenda

- 2015 Official MCAS and Preliminary PARCC Results
- Overview of Student Assessment and the PARCC Decision
- The PARCC Test Development Process
- Technology Readiness
- Student Assessment Fiscal Overview
- Discussion

Tomorrow

- Perceptions of PARCC
- AIR study of testing time

2015 Official MCAS and Preliminary PARCC Results

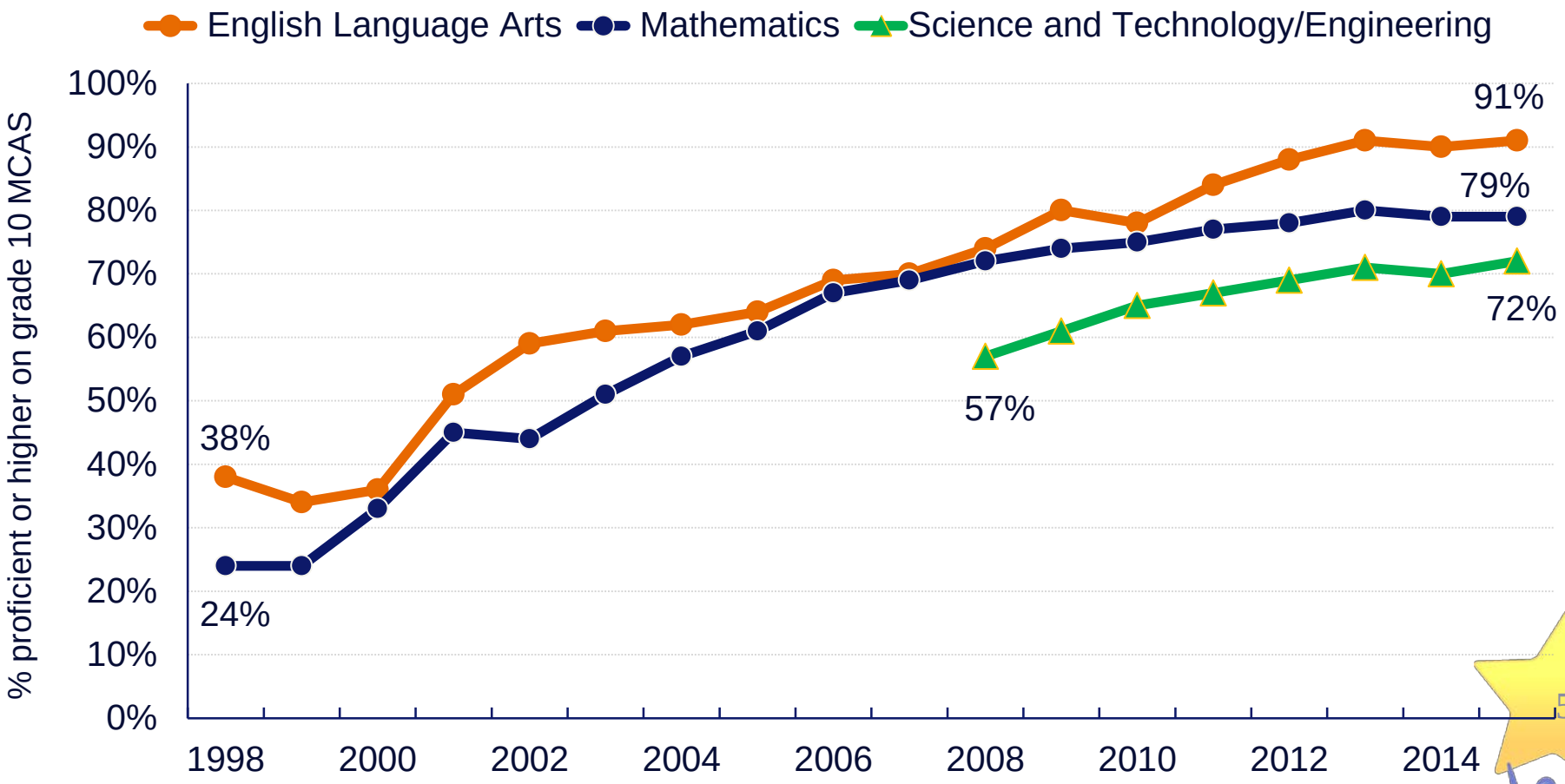
Robert Lee, MCAS Chief Analyst and Acting PARCC Coordinator

MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION

Topics

- 2015 MCAS/PARCC choice and participation
  - Caveats about the "state" data for 2015
- 2015 state MCAS results and trends
- Achievement gaps
- PARCC achievement levels
- Preliminary results from computer-based PARCC tests

Grade 10 MCAS Results



Assessment Choices for Spring 2015

Spring 2015	Number of public districts	MCAS			PARCC		
		# of districts	% of districts	# of students	# of districts	% of districts	# of students
Grades 3-8	359	165	46%	202,000	194	54%	229,500
PARCC for Grade 9 and/or 11 (optional)	295	N/A	N/A	N/A	69	23%	22,500

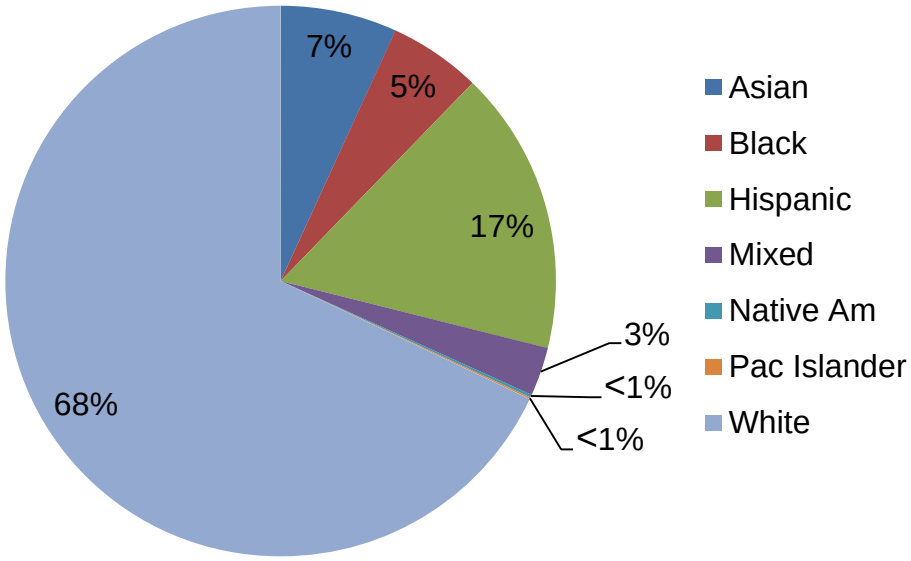
2015 Participation Rates

Spring 2015	Enrolled	Tested	Part. Rate
MCAS Grades 3-8	202,000	200,000	99%
PARCC Grades 3-8	229,500	223,500	97%
MCAS Grade 10	71,500	70,000	98%

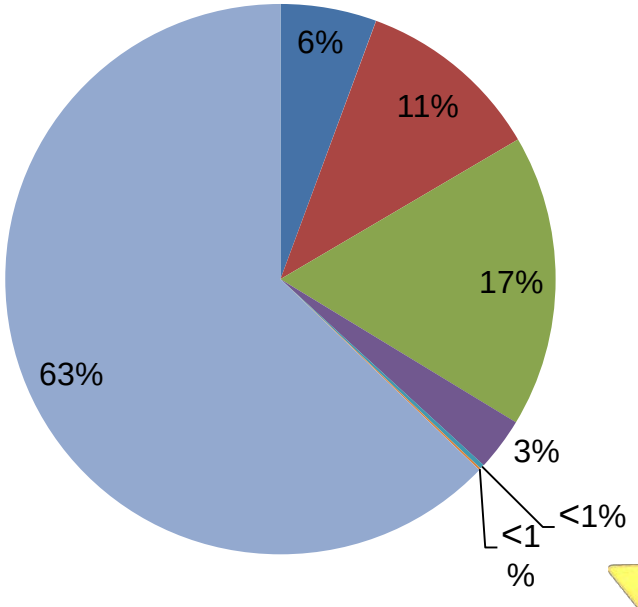
Breakdown of 2015 Choice by Race

Grades 3–8 only (2014 demographics)

MCAS Schools

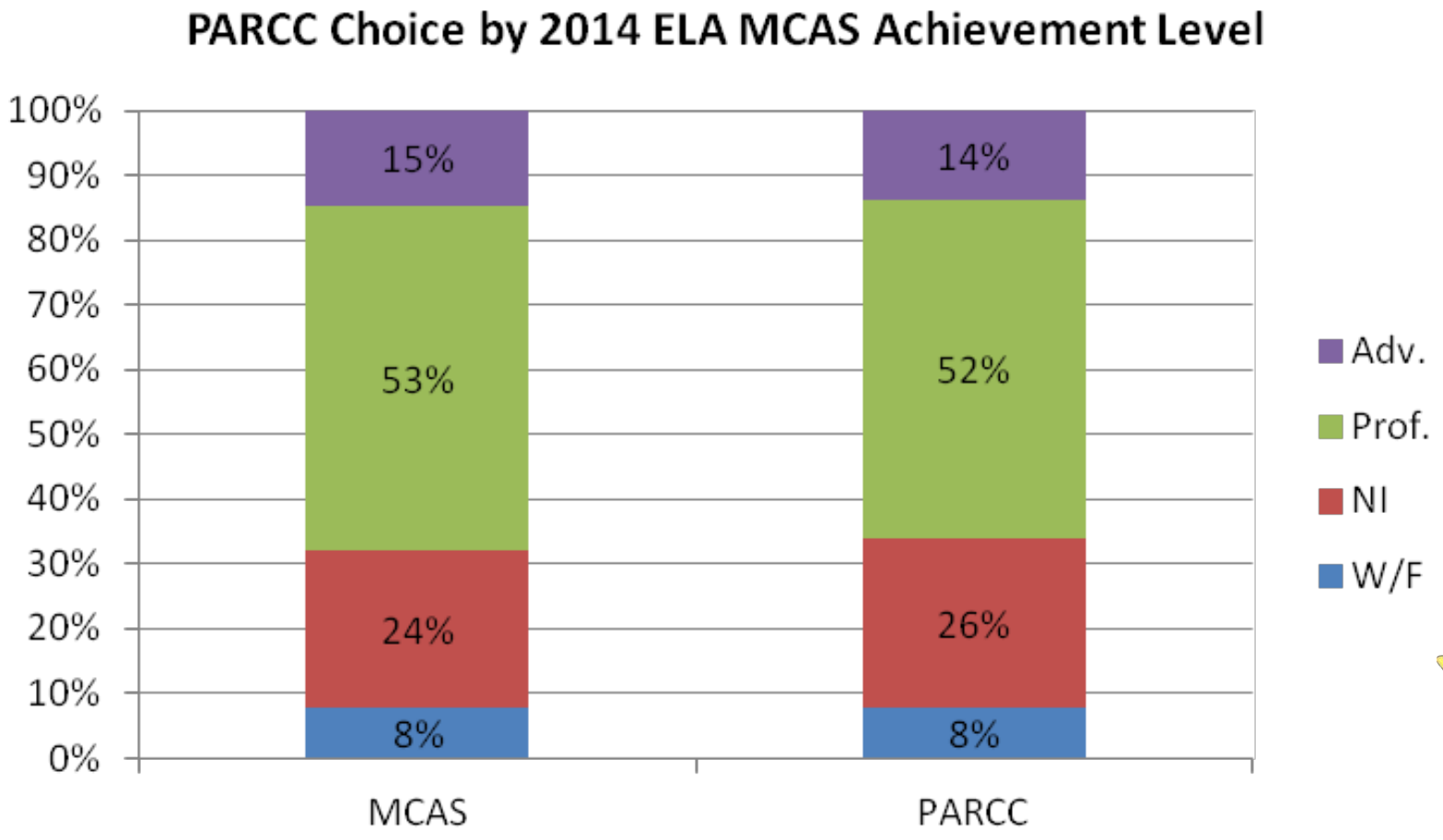


PARCC Schools



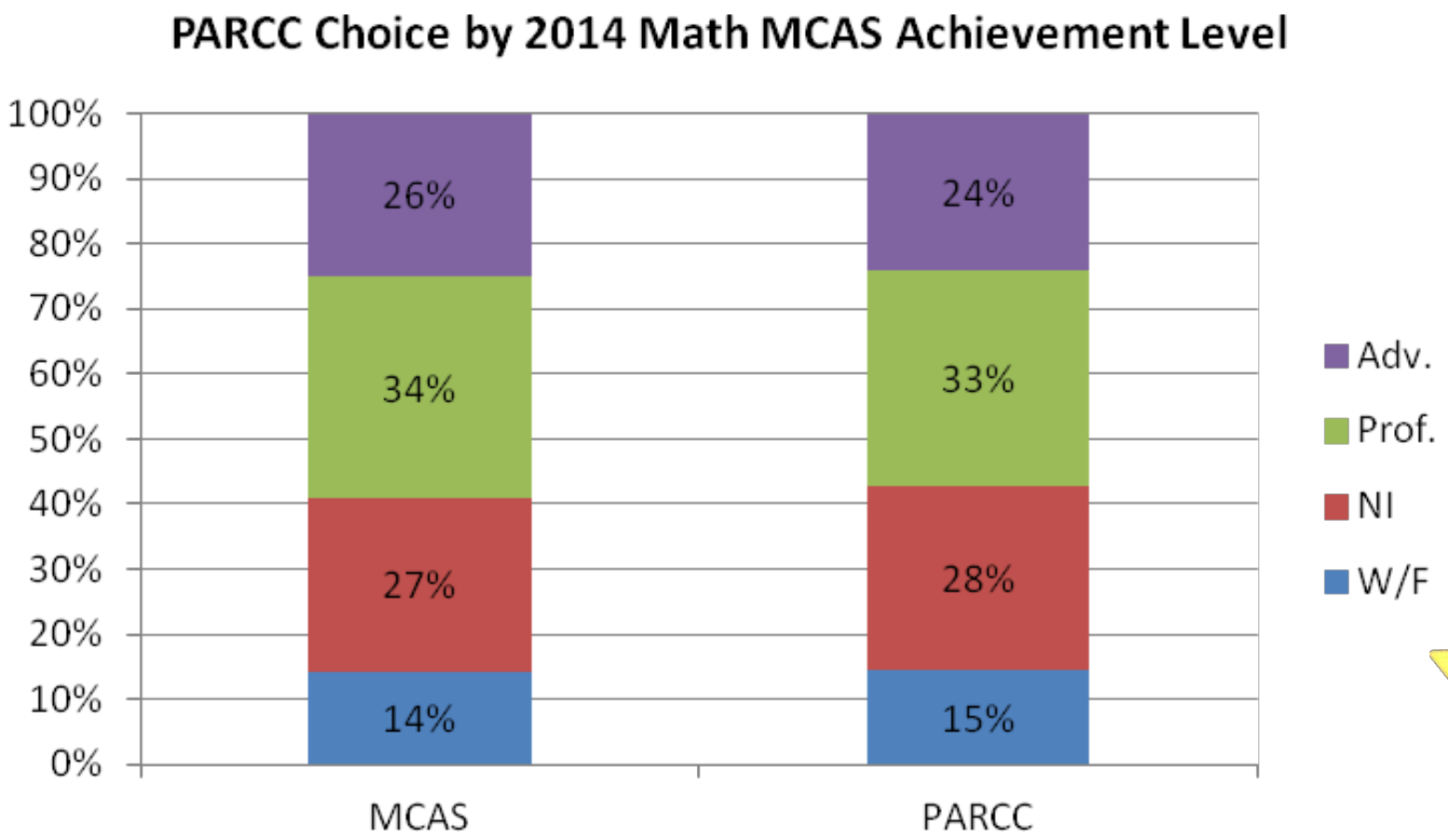
2015 Choice by 2014 MCAS Achievement Level

ELA Achievement, Grades 3–8 only



2015 Choice by 2014 MCAS Achievement Level

Math Achievement, Grades 3–8 only



What are the Representative Samples?

- Large groups (74% to 80%) of the students who took PARCC or MCAS in grades 3-8 in 2015
- Selected statistically to match the state population
  - 1. On achievement variables
  - 2. Demographically (race/ethnicity, income and special needs)
- Identified in spring **before** test scores were available

2015 MCAS Results—Statewide

1-Year Change in Performance, 2014 to 2015

	Percent of Students Scoring *Proficient* or Higher								
	English Language Arts			**Mathematics**			**Science & Tech/Eng.**		
	2015*	2014	Change	2015*	2014	Change	2015	2014	Change
Grade 3	60	57	+3	70	68	+2			
Grade 4	53	54	-1	47	52	-5			
Grade 5	71	64	+7	67	61	+6	50	53	-3
Grade 6	71	68	+3	62	60	+2			
Grade 7	70	72	-2	51	50	+1			
Grade 8	80	79	+1	60	52	+8	42	42	0
Grade 10	91	90	+1	79	79	0	72	71	+1

* Statistically representative samples were used to report state trends in grades 3-8

2015 MCAS Results—Statewide

9-Year Change in Performance, 2007 to 2015

	Percent of Students Scoring *Proficient* or Higher								
	English Language Arts			**Mathematics**			**Science & Tech/Eng.**		
	2015*	2007	Change	2015*	2007	Change	2015	2007	Change
Grade 3	60	59	+1	70	60	+10			
Grade 4	53	56	-3	47	48	-1			
Grade 5	71	63	+8	67	51	+16	50	51	-1
Grade 6	71	67	+4	62	53	+9			
Grade 7	70	69	+1	51	46	+5			
Grade 8	80	75	+5	60	45	+15	42	33	+9
Grade 10	91	70	+21	79	69	+10	72	57+	+15

* Statistically representative samples were used to report state trends in grades 3-8 for ELA and Mathematics

Gaps Narrowing, but Remain Large: ELA

ELA	% of Students Scoring *Proficient* or Higher						Between-Group Gap: Pct. Point Difference, 2015 (Gap Change, 2007-2015)	
	Afr. American/ Black		Hispanic/Latino		White		White-African American/ Black	White-Hispanic/ Latino
	2015*	**2007**	**2015***	**2007**	**2015***	**2007**		
Grade 3	40	36	36	32	67	66	27 (-3)	30 (-4)
Grade 4	38	31	31	28	60	63	22 (-10)	29 (-3)
Grade 5	52	39	46	34	78	70	26 (-5)	32 (-4)
Grade 6	53	42	45	38	77	75	24 (-9)	32 (-5)
Grade 7	51	48	45	42	76	76	25 (-3)	28 (-6)
Grade 8	67	55	61	48	85	82	18 (-9)	27 (-7)
Grade 10	84	47	79	43	95	77	11 (-19)	16 (-18)

* Statistically representative samples were used to report state trends in grades 3-8 for ELA and Mathematics

Gaps Narrowing, but Remain Large: Math

Math	% of Students Scoring *Proficient* and higher						Between-Group Gap: Pct. Point Difference, 2015 (Gap Change, 2007-2015)	
	Afr. American/ Black		Hispanic/Latino		White		White-African American/ Black	White-Hispanic/ Latino
	2015*	**2007**	**2015***	**2007**	**2015***	**2007**		
Grade 3	51	35	54	34	76	67	25 (-7)	22 (-11)
Grade 4	29	22	28	24	53	54	24 (-8)	25 (-5)
Grade 5	43	26	43	25	73	57	30 (-1)	30 (-2)
Grade 6	40	27	39	25	78	60	28 (-5)	28 (-7)
Grade 7	26	19	26	19	56	52	30 (-3)	30 (-3)
Grade 8	36	19	39	18	64	52	28 (-4)	25 (-9)
Grade 10	62	45	56	42	85	75	23 (-7)	29 (-4)

* Statistically representative samples were used to report state trends in grades 3-8 for ELA and Mathematics

Preliminary Computer-Based PARCC State Results

- First, some caveats
  1. 53% of students took PARCC in grades 3-8; 15%-23% in grades 9 and 11
  2. 41% of PARCC students took paper based tests; those results are not yet available
  3. Testing at the high school level was voluntary
  4. 40% of the students taking Algebra II on a computer were from three urban districts
  5. 15% of the grade 8 students took Algebra I End of Course tests instead of the grade 8 PARCC Math tests (86% of whom were Proficient in grade 7)

New Scales and Achievement Levels

PARCC Achievement Levels		Scaled Score range
Level 5	Exceeded expectations	Varies by grade - 850
Level 4	Met expectations	750- varies by grade
Level 3	Approached expectations	725-749
Level 2	Partially met expectations	700-724
Level 1	Did not yet meet expectations	650-699

MCAS Achievement Levels	Scaled Score range
Advanced	260-280
Proficient	240-258
Needs Improvement	220-238
Warning (3-8) Failing (HS)	200-218

Preliminary Computer-Based MA PARCC State Results: English Language Arts, grades 3-8

	Level 1	Level 2	Level 3	Meeting Expectations	
				Level 4	Level 5
Grade 3	13%	17%	23%	43%	4%
Grade 4	6%	13%	26%	42%	13%
Grade 5	6%	14%	25%	49%	6%
Grade 6	6%	13%	27%	45%	9%
Grade 7	8%	12%	23%	37%	20%
Grade 8	8%	12%	23%	44%	13%

Preliminary Computer-Based MA PARCC State Results: English Language Arts, grades 3-8

	Level 1	Level 2	Level 3	Meeting Expectations	
				Level 4	Level 5
Grade 3	53%			47%	
Grade 4	45%			55%	
Grade 5	45%			55%	
Grade 6	46%			54%	
Grade 7	43%			57%	
Grade 8	43%			57%	

Preliminary Computer-Based MA PARCC State Results: Math, grades 3-8

	Level 1	Level 2	Level 3	Meeting Expectations	
				Level 4	Level 5
Grade 3	7%	17%	25%	42%	9%
Grade 4	5%	19%	28%	43%	5%
Grade 5	7%	17%	28%	40%	8%
Grade 6	6%	16%	29%	42%	7%
Grade 7	5%	18%	32%	39%	6%
Grade 8	13%	19%	22%	39%	7%

Preliminary Computer-Based MA PARCC State Results: Math, grades 3-8

	Level 1	Level 2	Level 3	Meeting Expectations	
				Level 4	Level 5
Grade 3	49%			51%	
Grade 4	52%			48%	
Grade 5	52%			48%	
Grade 6	51%			49%	
Grade 7	55%			45%	
Grade 8	54%			46%	

Preliminary Computer-Based MA PARCC State Results: Grades 9, 11

		Level 1	Level 2	Level 3	College and Career Ready	
					Level 4	Level 5
ELA/L	Grade 9	23%	22%	24%	25%	6%
	Grade 11	23%	21%	20%	27%	9%
Math E.O.C. Tests	Algebra I	14%	26%	21%	35%	4%
	Geometry	8%	28%	37%	26%	1%
	Algebra II	47%	24%	16%	12%	1%
	Int Math I	13%	19%	15%	38%	15%
	Int Math III	39%	26%	22%	13%	0%

Preliminary Computer-Based MA PARCC State Results: Grades 9, 11

		Level 1	Level 2	Level 3	College and Career Ready	
					Level 4	Level 5
ELA/L	Grade 9	69%			31%	
	Grade 11	64%			36%	
Math E.O.C. Tests	Algebra I	61%			39%	
	Geometry	73%			27%	
	Algebra II	87%			13%	
	Int Math I	47%			53%	
	Int Math III	87%			13%	

Student Assessment: An Overview

Jeff Wulfson, Deputy Commissioner

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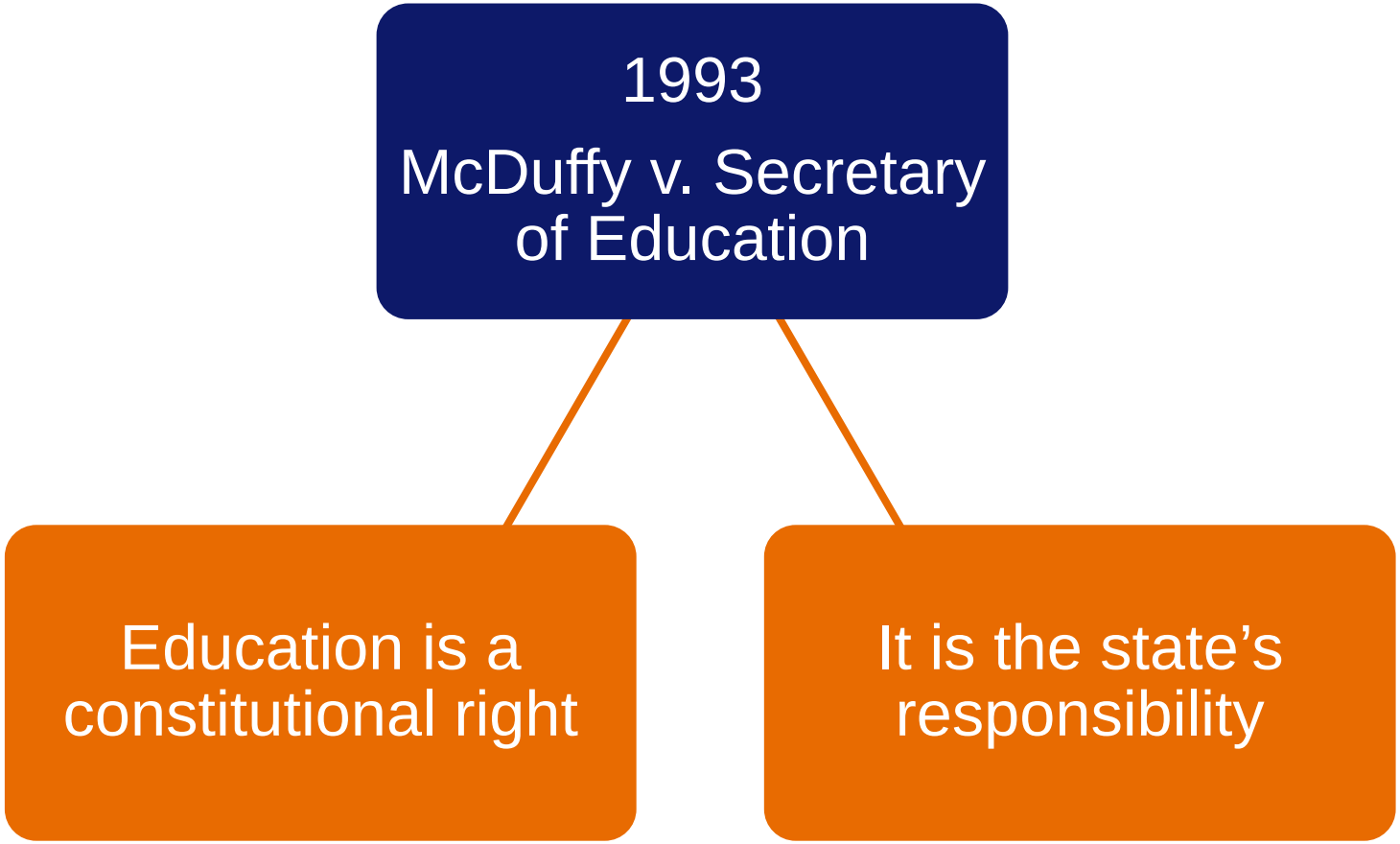
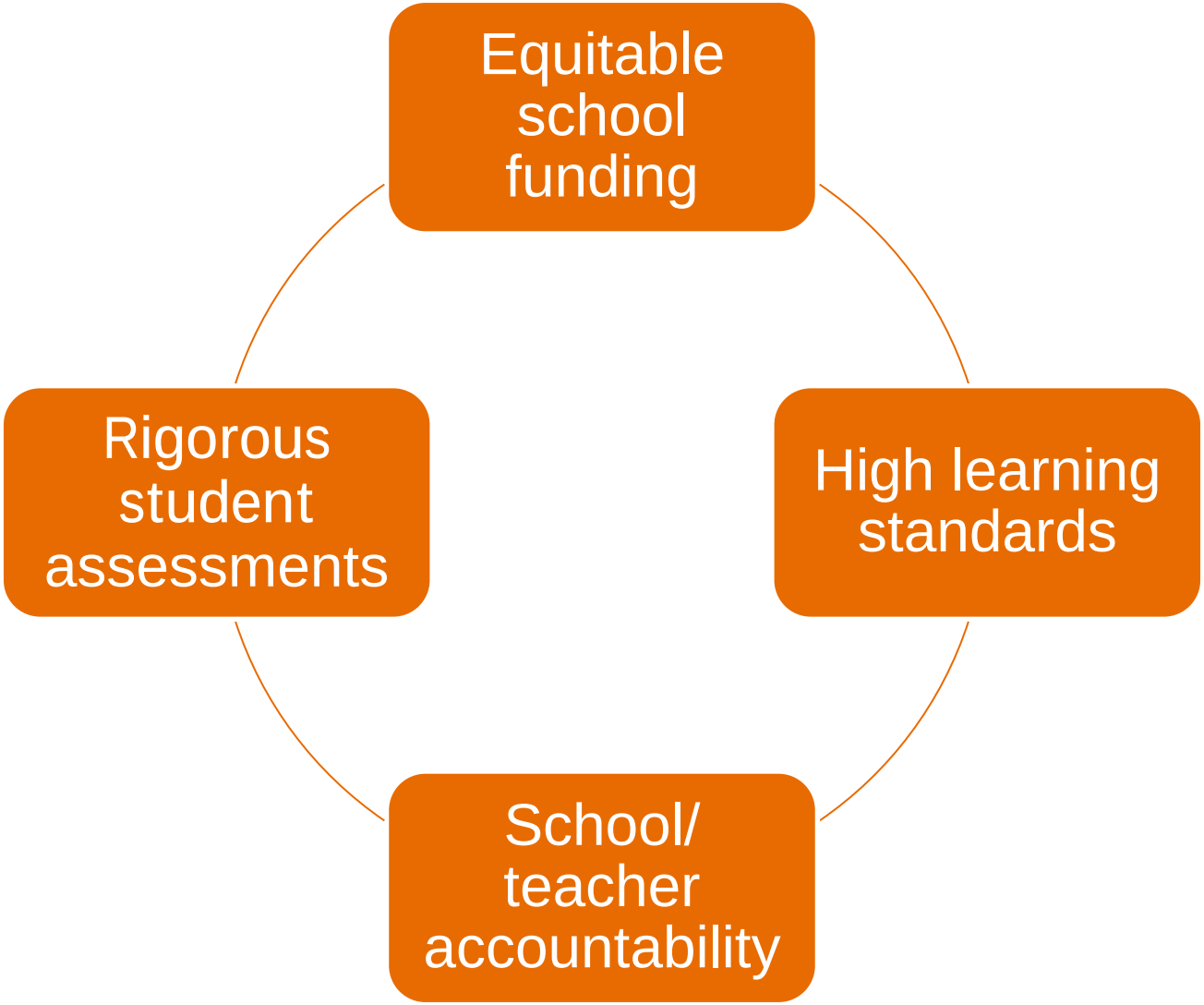
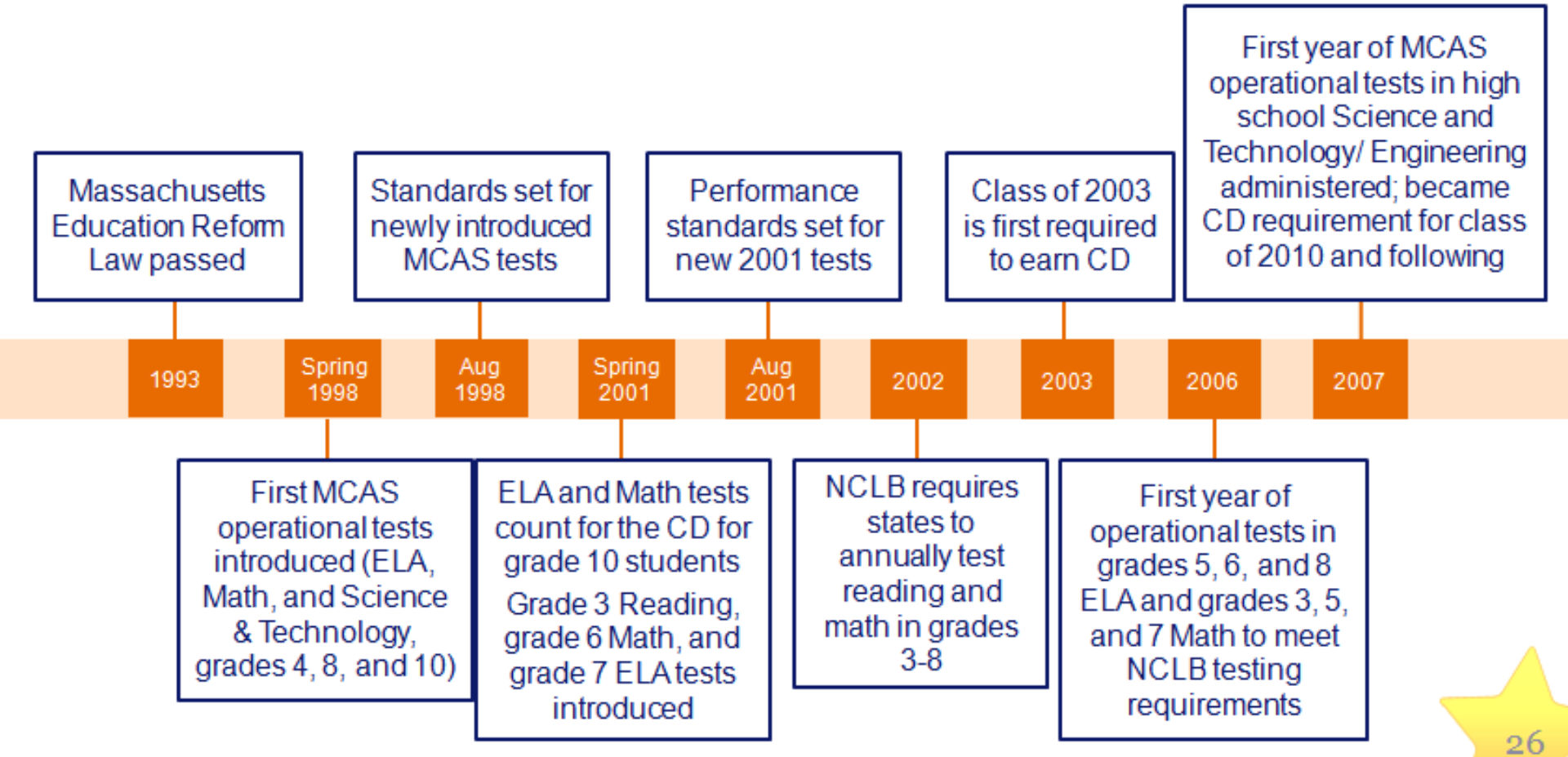
Education Reform in Massachusetts



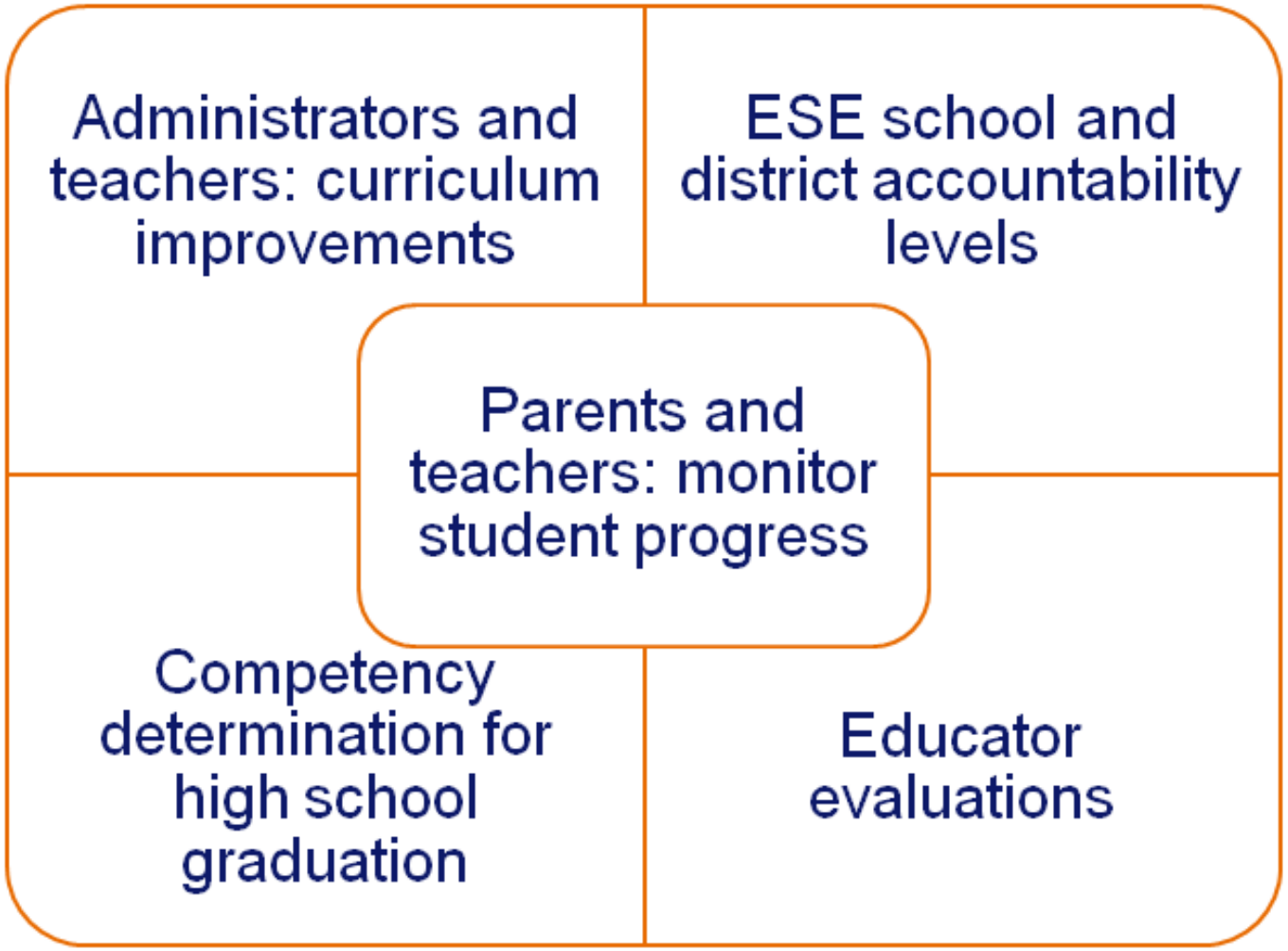
1993 Massachusetts Education Reform Act



History of MCAS



Student Assessment Results: Uses



Progress and Challenges

20+ years of steady progress

- Massachusetts students outperform all other states
- We rank right near the top internationally
- High school graduation rates are at all-time high and drop-out rates are the lowest in decades

Persistent gaps in performance

- Low-income, minority, and English language learners continue to lag in performance
- More than 1 in 3 high school graduates who enroll in public higher education require remedial courses
- For community college, 65% of students are placed in non-credit bearing courses

Increasing Expectations

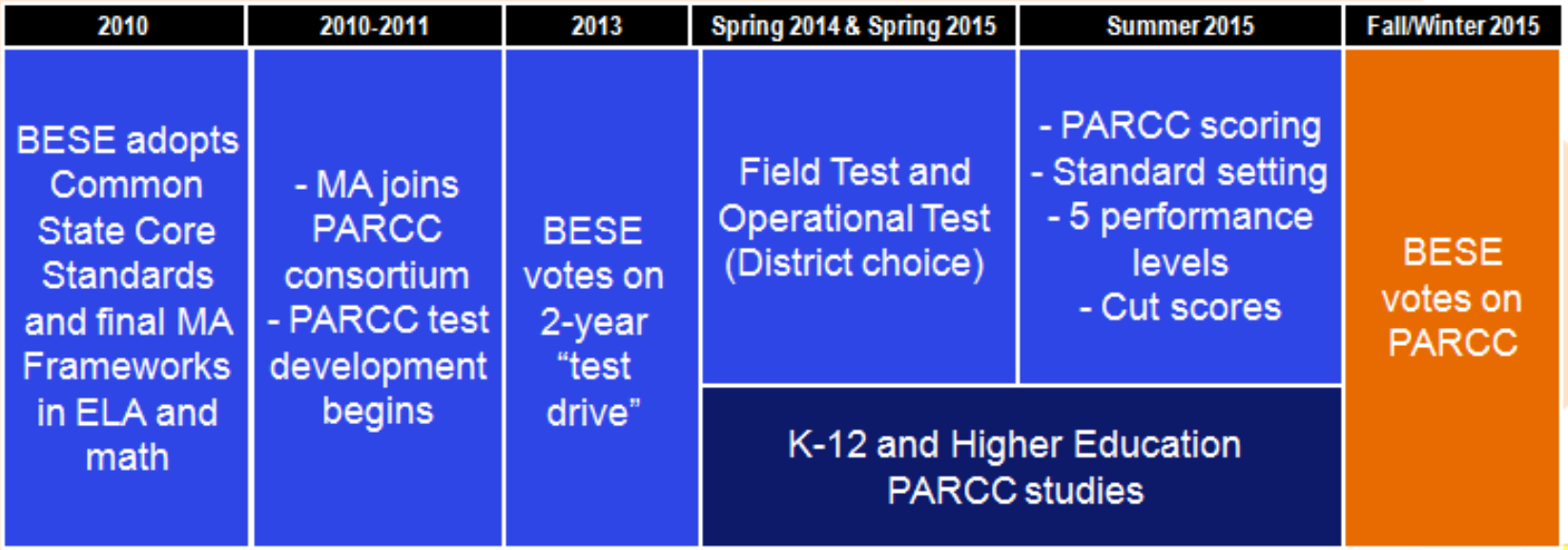
New Frameworks for English Language Arts and Mathematics

- Revisions to Massachusetts ELA and Math Frameworks began in 2008
- In 2009, MA joined multistate effort sponsored by NGA and CCSSO to develop common frameworks.
- Board vote in 2010 to adopt new MA Frameworks based on Common Core, but including additional state-specific material
- Since 2010, districts have been designing and implementing new curricula based on revised frameworks

The Need for a Next-Generation Assessment

- Full alignment to updated 2010 ELA & math frameworks
- More emphasis on critical thinking and reasoning
- Better feedback on readiness for next level
- Richer data to inform instruction
- Online platform
  - More timely results
  - Efficiencies
  - More options for accommodations
  - Increasing use of technology
- Pathway to entry level college credit

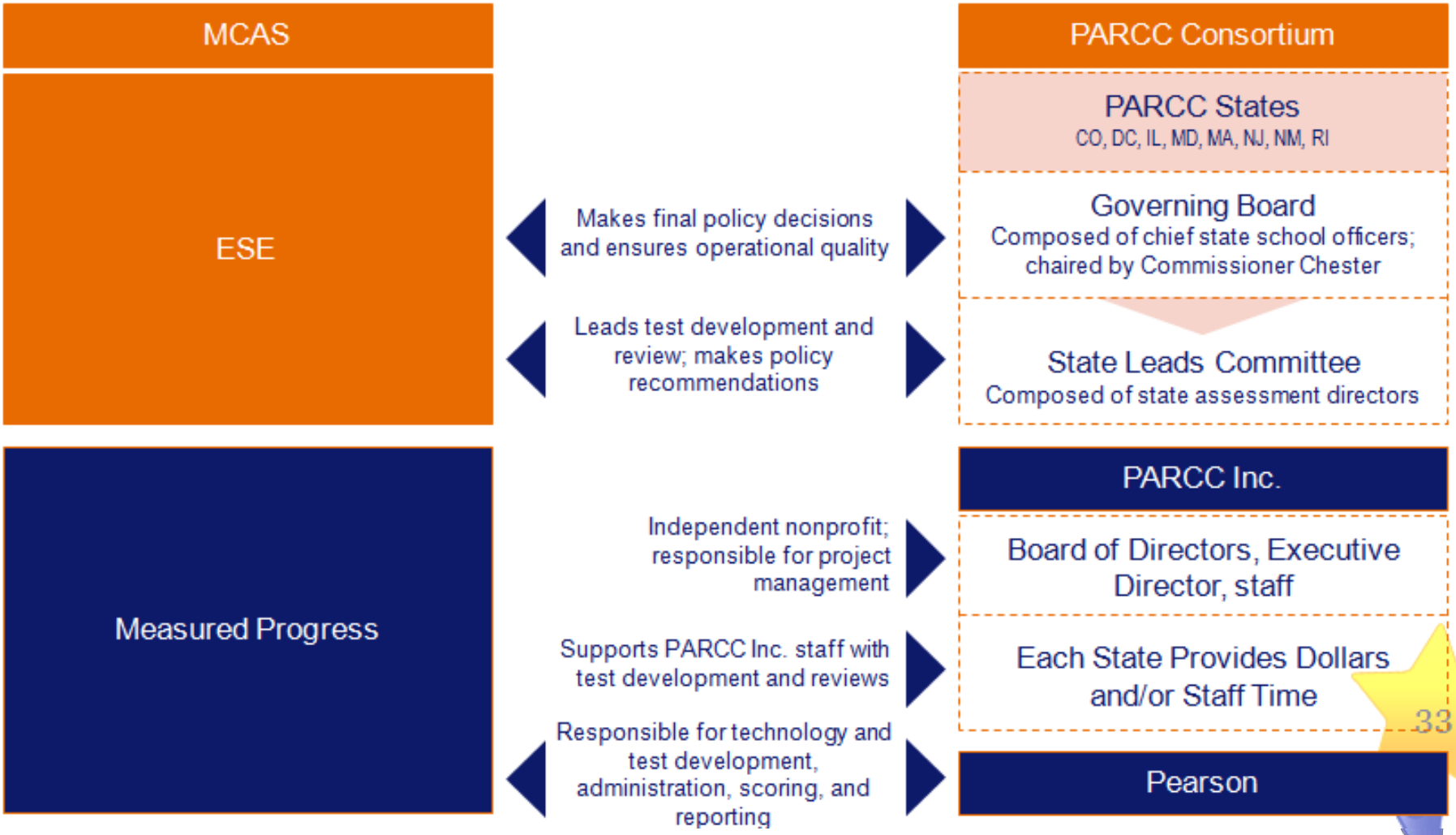
Board Decisions and PARCC Timeline



MCAS and PARCC—Basic Differences

	MCAS	PARCC
Subjects	• ELA, math, science, alternative	• ELA and math
Grades tested	• 3-8, 10	• ELA 3-11 • Math 3-8, plus 3 high school end of course tests
Format	• Paper only	• Online and paper versions
Testing time	• Untimed	• Timed

MCAS and PARCC Management



Sources of Evidence for Vetting PARCC

- Consortium sponsored studies
- Independent studies
- Post-test surveys
- Feedback from teachers and administrators
- Public comment
- Student test results

PARCC Assessment Development Overview

Elizabeth Davis, Associate Commissioner,
Student Assessment

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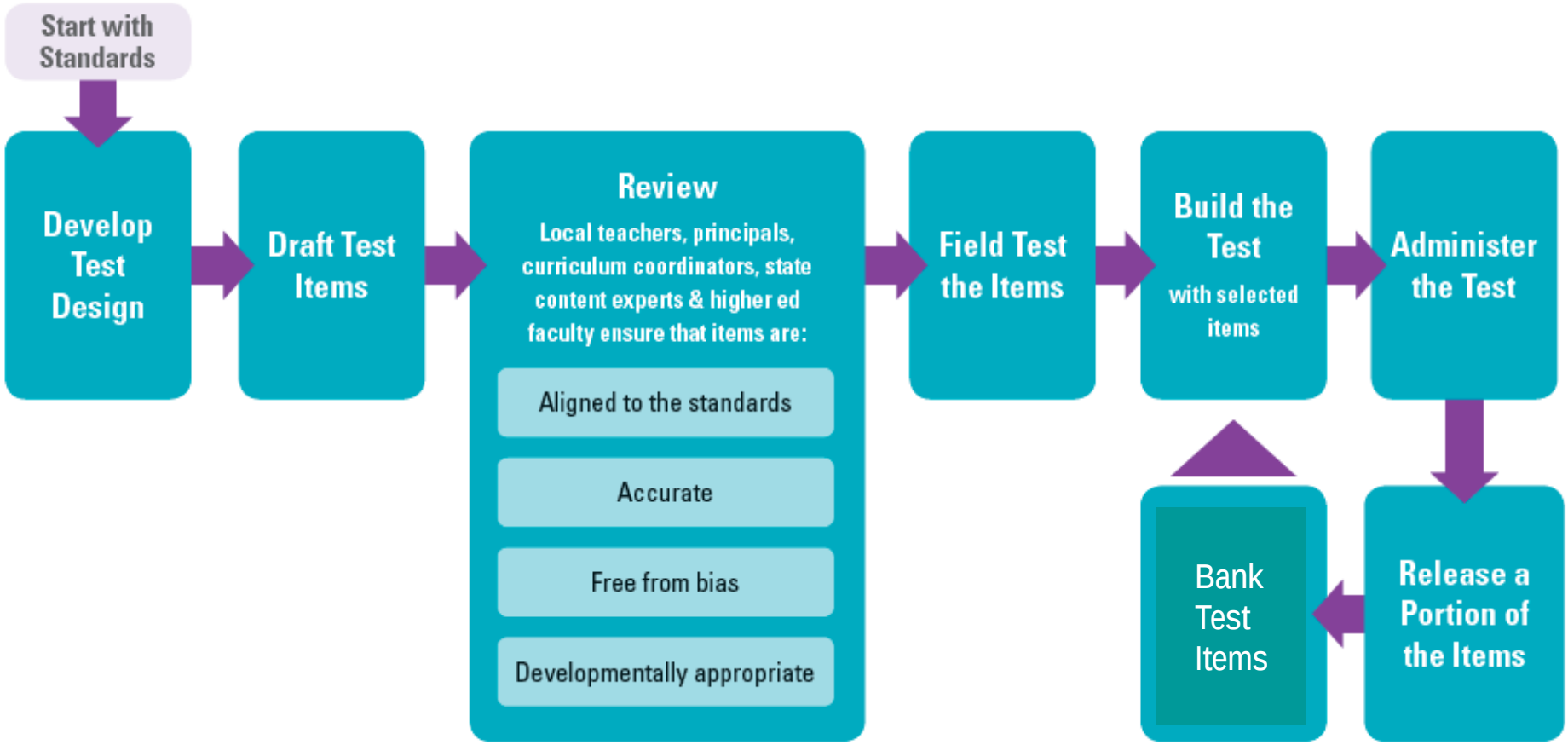
Life Cycle of a Test Item



Participation of MA Educators and ESE Staff

Develop Test Design

- ESE staff involved in the initial test design and subsequent revisions.

Item Review

- Approximately **50 Massachusetts educators** and ESE staff participated in item reviews
- In addition, **13 Massachusetts educators** and ESE staff participated in PARCC's Bias and Sensitivity Committees

Test Construction

- After a bank of items is developed and field-tested, ESE staff participate in analysis of the data and test construction.

Scoring and Reporting

- **21 Massachusetts educators** from elementary through higher education, along with ESE staff, attended PARCC performance level setting meetings in summer 2015.
- ESE staff work closely with PARCC Inc./contractor on scoring and reporting processes

Additional Areas of Engagement

- Research Studies
  - ESE staff serve on research and psychometric committees that review and approve research methodologies and processes.
- Accommodations/Accessibility
  - ESE staff person co-chairs working group on accommodations and accessibility and was lead author of policy manuals
- Technology
  - ESE staff serve on technology planning committees

Steps in the Performance-Level Setting Process

- Governing Board defined "College Ready"
  - A 75% likelihood of earning a "C" or higher in credit bearing freshman course
- Post Secondary Educators' Judgment Study
  - College professors look at the tests and weigh in
- Benchmark study
  - What do SAT, NAEP, ACT and international tests tell us about college readiness?
- Pre-Policy meeting
  - Commissioners and policy makers set expectations
- Performance-Level Setting (PLS) meetings
  - Teachers and educators recommend performance level threshold scores
- Governing Board
  - Commissioners adopt performance level threshold scores

Technology Readiness

Ken Klau, Director, Digital Learning

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Technology Readiness Update

Technology is about more than online assessment: it is about rethinking the structure and delivery of learning, building a more student-centered educational system, and creating the next generation of K–12 learning environments.

1,634 Schools	#	%
Ready for PARCC & digital learning	912	55.8
Ready for PARCC only	1,234	75.5
Not ready for PARCC or digital learning	388	23.7
No data reported	12	.7

Reasons for lack of readiness
388 schools:

- Insufficient broadband: 252 (64.9%)
- Insufficient devices: 158 (40.7%)
- Insufficient Wi-Fi: 67 (17.3%)
- Demand for strong EdTech leaders

Efforts to build readiness
Since SY2014-15:

- $5M released for IT Bond Grant
- E-rate reform
- Strengthen qualifications for EdTech leaders

Student Assessment Fiscal Overview

Bill Bell, Associate Commissioner, Budget and Finance

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Student Assessment Budget

- Funding includes both state and federal funding.
- Spending has risen since FY14 to accommodate the district-choice element of the Commonwealth's test drive of the PARCC assessment.
  - FY14 = $32M
  - FY15 = $37M
  - FY16 = $37M
- Spending represents less than .50% of our annual appropriations.
- Spending includes:
  - ESE assessment staff (13%)
  - Assessment contracts (87%)

Assessment Contracts: Scope

- PARCC - Pearson
  - ELA and Mathematics tests in grades 3-11
  - High school retests
- MCAS - Measured Progress
  - ELA and Mathematics tests in grades 3-8 and 10
  - Science and Tech/Eng tests in grades 5, 8, and HS
  - High school retests
  - MCAS Alternate Assessment
- ACCESS – WIDA Consortium
  - Assessment of English language proficiency for ELLs in grades K-12

Cost Variability

- Predicting future costs for both assessment programs depends on numerous variables:
  - PARCC
    - Cost is driven by multi-state student volumes and by MA optional-service election.
    - Price agreement effective through FY18, with possibility of renegotiation in FY17.
    - Computer-based v. paper-based affect cost.
  - MCAS
    - Requires new procurement for the 2016-2017 school year.
    - Revisions to current tests and potential addition of testing in grades 9 and 11.
    - Introduction of computer-based testing

Cost Overview

- PARCC & MCAS contracts have different scope and financial structures, resulting in an extrapolation of comparative per student costs.
  - PARCC current combined ELA & Math test cost averages $32 per student, including state optional services & project management costs. Cost average projected to increase per current contract terms.
  - MCAS test cost for ELA & Math averages $42 per student. New procurement and scope will dictate cost in subsequent years.
- Presently there is no clear conclusion that either assessment program is more or less expensive than the other.

Perceptions of PARCC

Carrie Conaway, Associate Commissioner,
Research, Planning, and Delivery

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Studies Included

Study	Data collection date	Sample		
Stand for Children principal survey (by MassInc)	October 2014	285 principals		
TeachPlus teacher survey	Fall 2014	1,014 teachers, including 351 Massachusetts teachers		
PARCC student operational *computer-based* test surveys	Spring 2015	ELA: 127,410 students Math: 127,621 students		
PARCC test administrator operational test survey	Spring 2015		PBA	EOY
		Computer	693	752
		Paper	662	449

Principals think that PARCC will be similar to or better than MCAS

- 71% think that PARCC will be more demanding; 1% think it will be less demanding
- 40% think it will better assess students' ability to think critically; 30% "about the same"
- 40% think it will present test material in a format relevant to today's students; 25% "about the same"
- Many reported "unsure" (~25% to 40% of respondents)

Note: from October 2014

Teachers think the quality of PARCC is higher than MCAS

- 72% of MA teachers think that PARCC is a higher quality assessment than MCAS
- 67% of MA teachers think that PARCC does extremely or very well at measuring critical thinking skills
- Similar results in other states

Source: TeachPlus teacher survey

Test administrators gained experience in administering computer-based tests

- Fewer CBT administrators had never before administered a computer-based test
  - PBA 68%, EOY 56%
  - Last year: 81%
- But, less than half of administrators agreed or strongly agreed that the PARCC online trainings prepared them to resolve basic problems
  - PBA 48%, EOY 43% agree/strongly agree
  - Last year: 34%

Most administrators reported that students had sufficient time to finish

Percent reporting that students completed very early or on time

	Computer test	Paper test
Performance-based assessment	86%	75%
End-of-year assessment	93%	81%

The content is familiar to students, and they had sufficient time to finish

- Students report that few or none of the questions ask about things they had not learned in school this year (82% ELA, 79% math)
- Many say that the test was easier than or the same as their school work (62% ELA, 52% math)
- Almost all say they finished very early or on time (92% ELA, 92% math)
- A quarter said they had a technology problem during the test (24% ELA, 25% math)

Recall, student survey questions were asked only of those students taking the computer-based test.