Spring 2016 MCAS/PARCC Cohort Analysis

For School Committee Meeting
10/26/2016

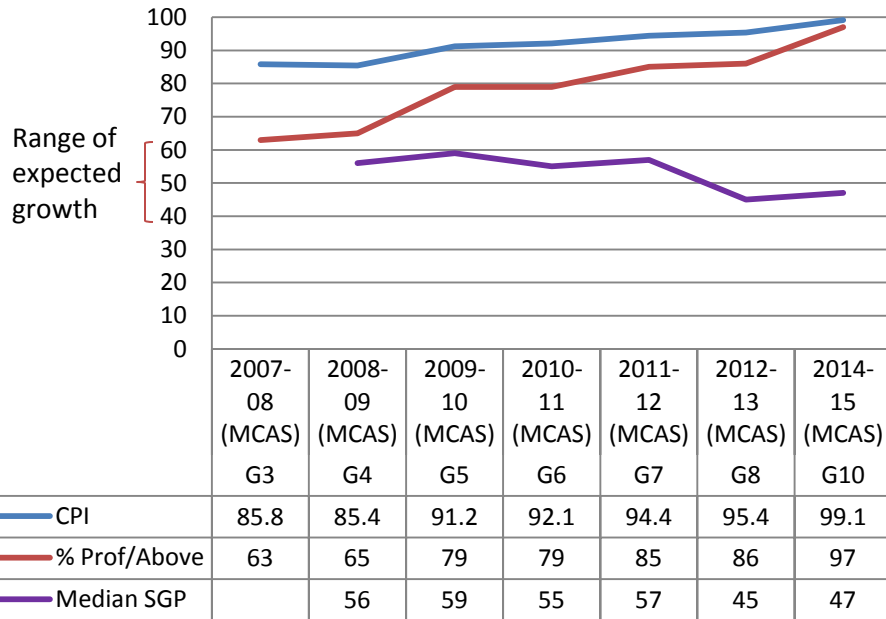Prepared by Vy Vu, Data Specialist
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Context

- In response to School Committee's request, the following cohort analyses have been put together.
    - State assessment data tracking a particular cohort from G3 to G10 (current G12, G11, and G10 cohorts)
    - Elementary cohort data by school from G3 to G5 (current G6 cohort)
    - Achievement gap data from G3 to G5 (current G6 cohort)
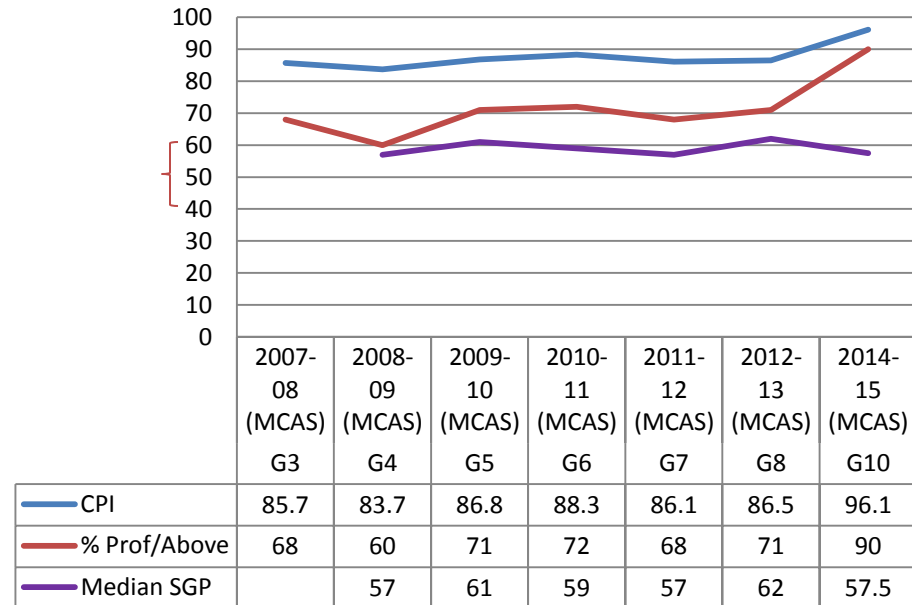   - Achievement gap data from G6 to G8 (current G9 cohort)
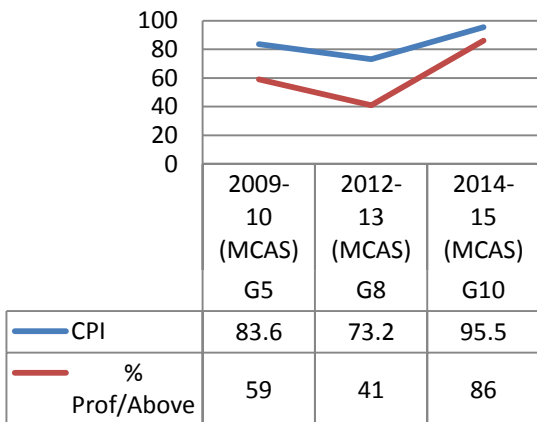
Class of 2017 (current G12)

Class of 2017 (current G12) - ELA

Range of expected growth

	2007-08 (MCAS) G3	2008-09 (MCAS) G4	2009-10 (MCAS) G5	2010-11 (MCAS) G6	2011-12 (MCAS) G7	2012-13 (MCAS) G8	2014-15 (MCAS) G10
CPI	85.8	85.4	91.2	92.1	94.4	95.4	99.1
% Prof/Above	63	65	79	79	85	86	97
Median SGP		56	59	55	57	45	47

Class of 2017 (current G12) - Math

	2007-08 (MCAS) G3	2008-09 (MCAS) G4	2009-10 (MCAS) G5	2010-11 (MCAS) G6	2011-12 (MCAS) G7	2012-13 (MCAS) G8	2014-15 (MCAS) G10
CPI	85.7	83.7	86.8	88.3	86.1	86.5	96.1
% Prof/Above	68	60	71	72	68	71	90
Median SGP		57	61	59	57	62	57.5

Class of 2017 - Science

|	2009-10 (MCAS) G5	2012-13 (MCAS) G8	2014-15 (MCAS) G10
CPI	83.6	73.2	95.5
% Prof/Above	59	41	86

Patterns in the data:
- ELA – lowest CPI and % Proficient/Above in Grades 3 and 4 and then steady climb to near 100% proficiency by G10.
- Math – dipped in G4, climbed back up in G5, stayed flat in middle school grades, and then upward climb in G10.
- Science - dipped in G8 before climbing up again in G10.
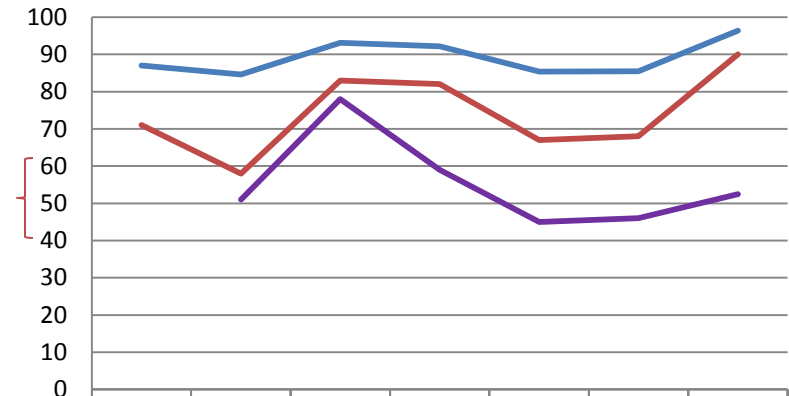- Median SGP is within the range of expected growth in all years

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Class of 2018 (current G11)

Class of 2018 (current G11) - ELA
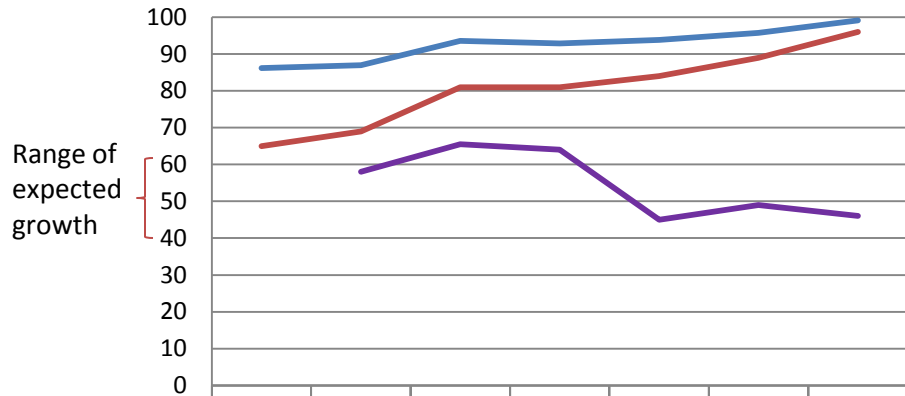
	2008-09 (MCAS) G3	2009-10 (MCAS) G4	2010-11 (MCAS) G5	2011-12 (MCAS) G6	2012-13 (MCAS) G7	2013-14 (MCAS) G8	2015-16 (MCAS) G10
CPI	86.2	87	93.6	92.9	93.8	95.7	99.1
% Prof/Above	65	69	81	81	84	89	96
Median SGP		58	65.5	64	45	49	46

Class of 2018 (current G11) - Math

	2008-09 (MCAS) G3	2009-10 (MCAS) G4	2010-11 (MCAS) G5	2011-12 (MCAS) G6	2012-13 (MCAS) G7	2013-14 (MCAS) G8	2015-16 (MCAS) G10
CPI	87	84.6	93.1	92.2	85.4	85.5	96.4
% Prof/Above	71	58	83	82	67	68	90
Median SGP		51	78	59	45	46	52.5

Class of 2018 - Science
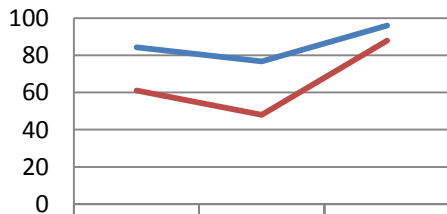
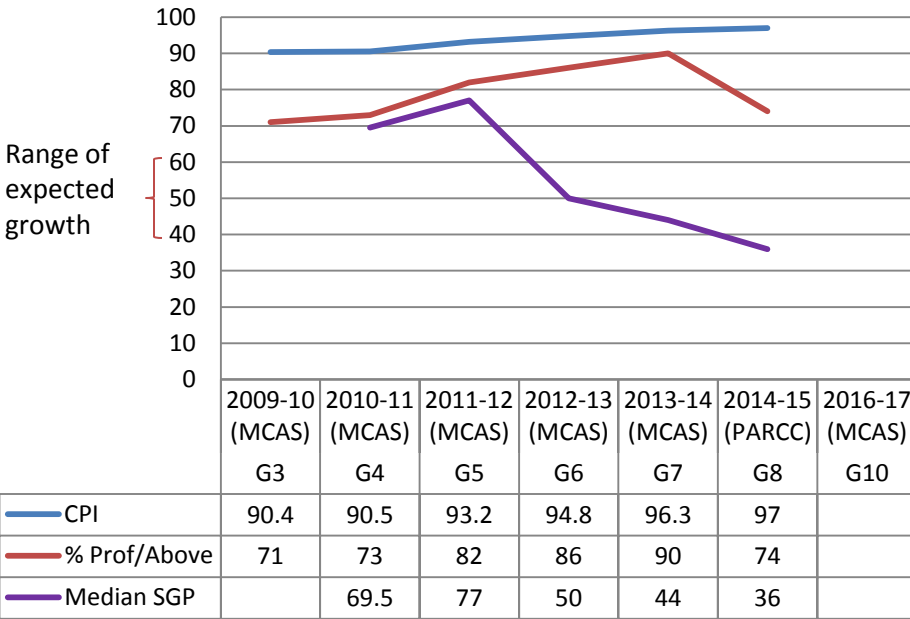|	2010-11 (MCAS) G5	2013-14 (MCAS) G8	2015-16 (MCAS) G10
CPI	84.4	76.8	96.1
% Prof/Above	61	48	88

Patterns in the data:
- ELA pattern still holds.
- Math – dip in G4, G7 and G8
- Science pattern still holds, although the "dip" in G8 is less pronounced than the previous cohort (48% proficient/above vs. 41%)
- This cohort had higher than expected growth in G5 for ELA and Math.
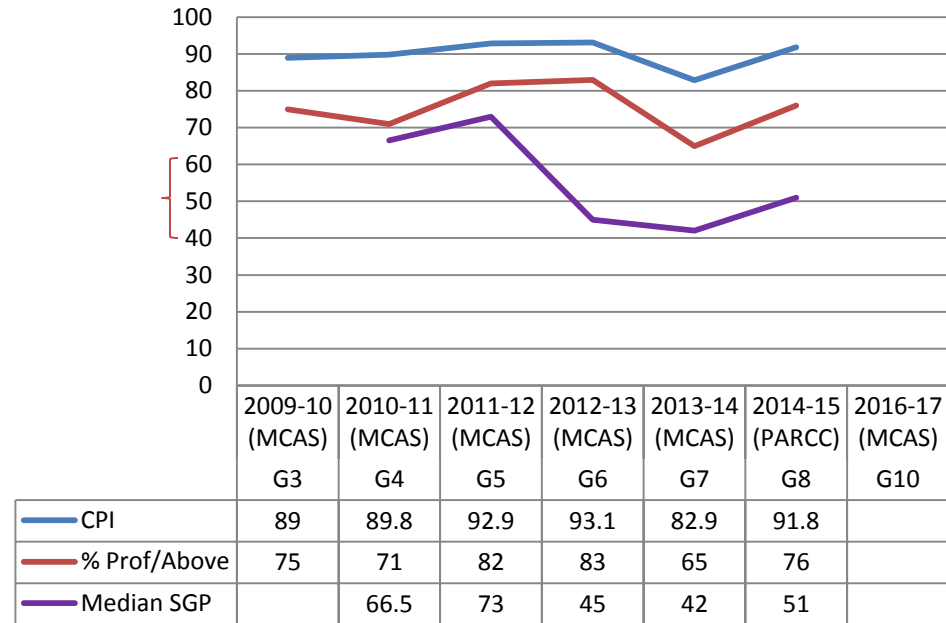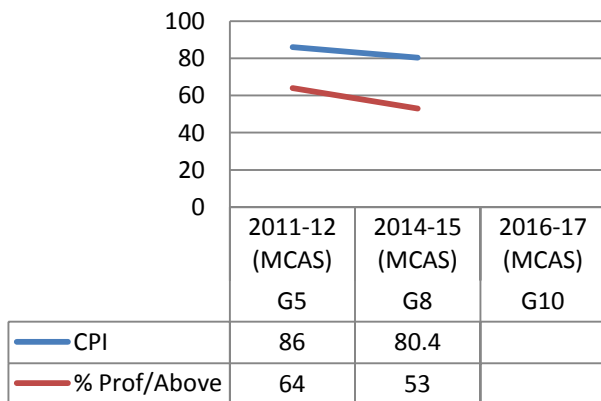
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Class of 2019 (current G10)

Class of 2019 (current G10) - ELA

Range of expected growth

	2009-10 (MCAS) G3	2010-11 (MCAS) G4	2011-12 (MCAS) G5	2012-13 (MCAS) G6	2013-14 (MCAS) G7	2014-15 (PARCC) G8	2016-17 (MCAS) G10
CPI	90.4	90.5	93.2	94.8	96.3	97	
% Prof/Above	71	73	82	86	90	74	
Median SGP		69.5	77	50	44	36	

Class of 2019 (current G10) - Math

	2009-10 (MCAS) G3	2010-11 (MCAS) G4	2011-12 (MCAS) G5	2012-13 (MCAS) G6	2013-14 (MCAS) G7	2014-15 (PARCC) G8	2016-17 (MCAS) G10
CPI	89	89.8	92.9	93.1	82.9	91.8	
% Prof/Above	75	71	82	83	65	76	
Median SGP		66.5	73	45	42	51	

Class of 2019 - Science

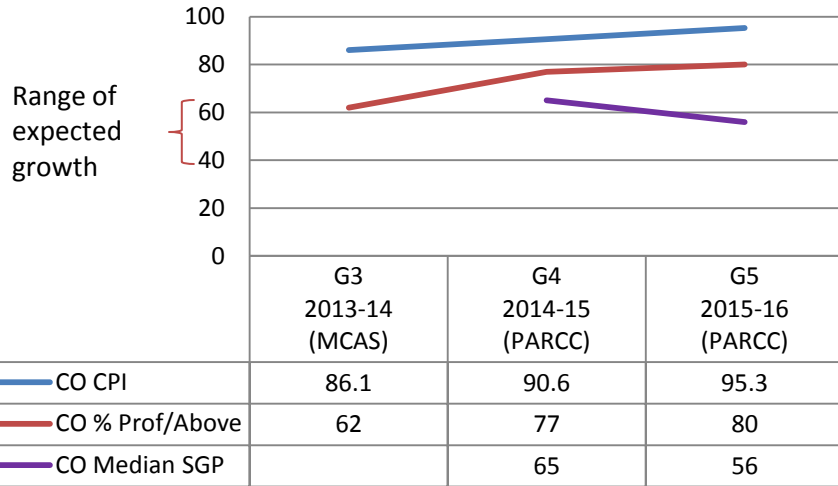|	2011-12 (MCAS) G5	2014-15 (MCAS) G8	2016-17 (MCAS) G10
CPI	86	80.4	
% Prof/Above	64	53	

Patterns in the data:
- ELA – Although the CPI pattern remains the same, the pattern in % proficient/above has changed because this cohort took PARCC in G8, which has 5 levels of achievement as opposed to MCAS's four levels. PARCC is also computer-based and designed to be even more rigorous than MCAS.
- Math – dipped in G4 and G7. Higher performance in G8 even though it was PARCC.
- Science – the dip in G8 is even less pronounced than the previous two cohorts (53% proficient/above vs. 48% and 41%).
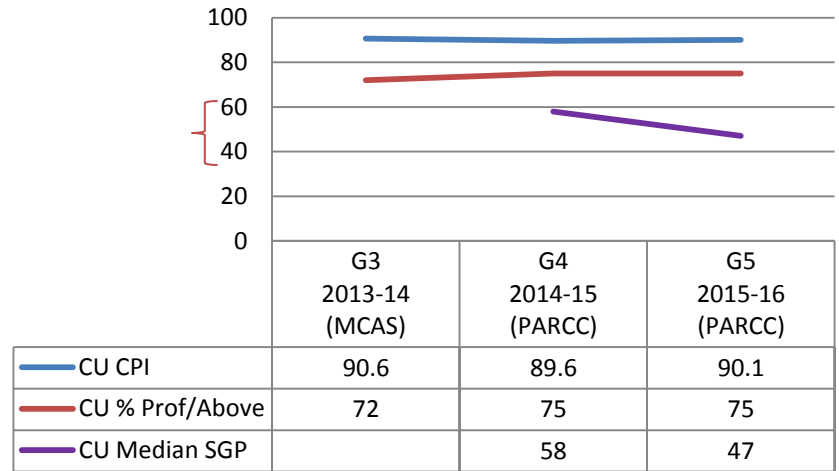- Median SGP spiked in grades 4 and 5 for this cohort.
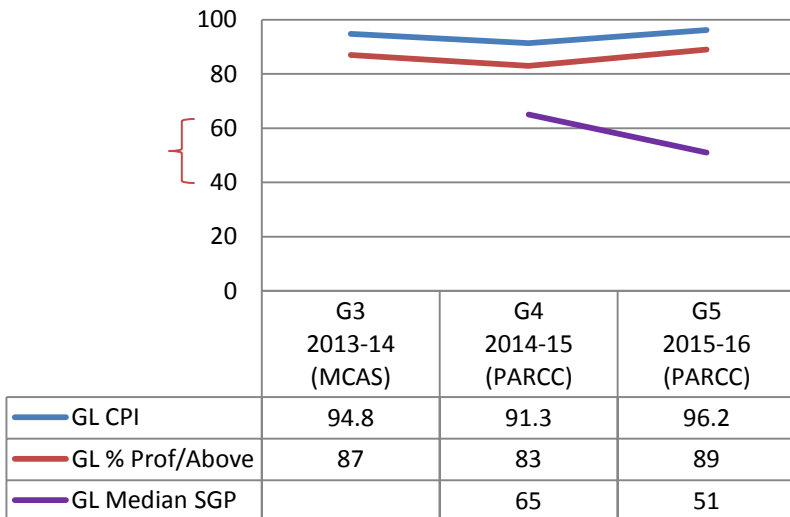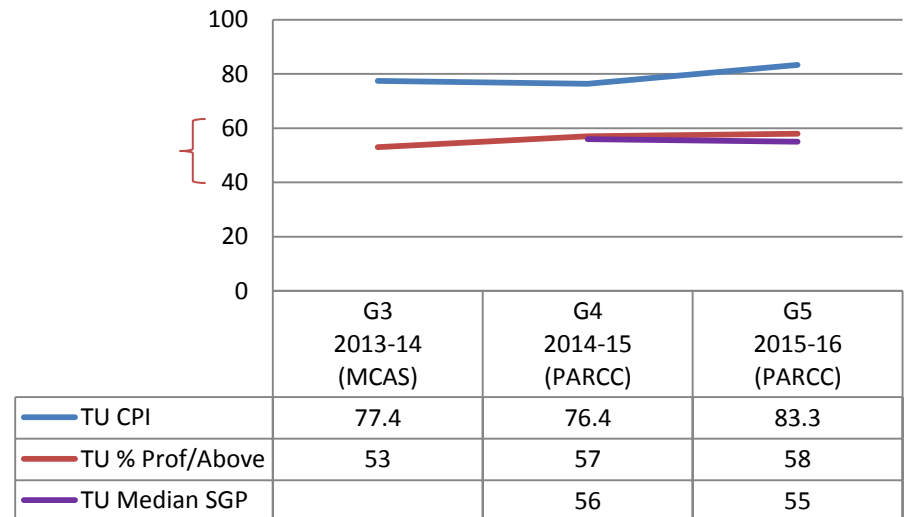
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Collicot - Class of 2023 (current G6) - ELA

Range of expected growth

	G3 2013-14 (MCAS)	G4 2014-15 (PARCC)	G5 2015-16 (PARCC)
CO CPI	86.1	90.6	95.3
CO % Prof/Above	62	77	80
CO Median SGP		65	56

Cunningham - Class of 2023 (current G6) - ELA

	G3 2013-14 (MCAS)	G4 2014-15 (PARCC)	G5 2015-16 (PARCC)
CU CPI	90.6	89.6	90.1
CU % Prof/Above	72	75	75
CU Median SGP		58	47

Glover - Class of 2023 (current G6) - ELA

	G3 2013-14 (MCAS)	G4 2014-15 (PARCC)	G5 2015-16 (PARCC)
GL CPI	94.8	91.3	96.2
GL % Prof/Above	87	83	89
GL Median SGP		65	51

Tucker - Class of 2023 (current G6) - ELA

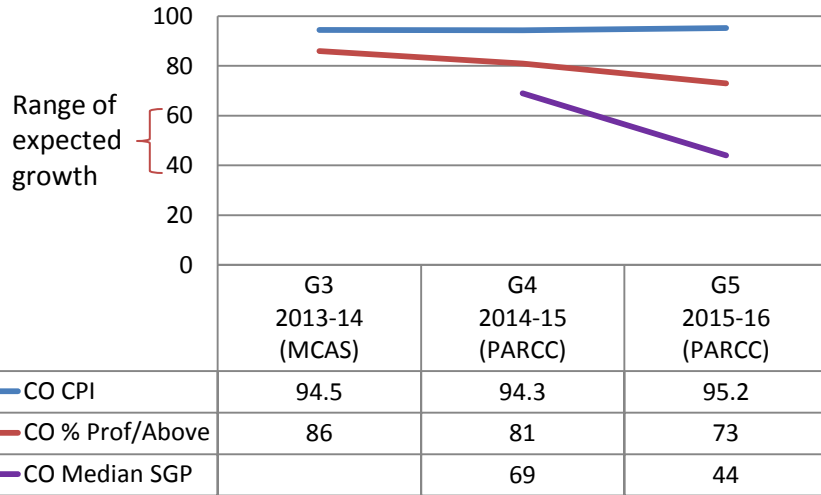|	G3 2013-14 (MCAS)	G4 2014-15 (PARCC)	G5 2015-16 (PARCC)
TU CPI	77.4	76.4	83.3
TU % Prof/Above	53	57	58
TU Median SGP		56	55

Class of 2023 (current G6) - ELA

- Patterns in the data:
  - Note the change over to PARCC in 2014-15 and 2015-16
  - As such, this cohort's data does not follow in the previous patterns of the current G10, G11 or G12 cohorts where the data is all MCAS.
  - Median SGP is within or higher than the range of expected growth.
  - There is a difference in performance of this cohort among the different schools.
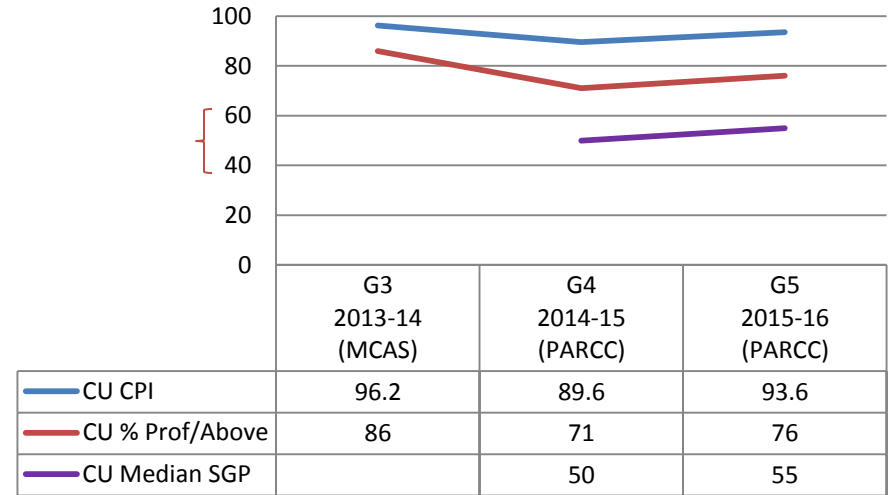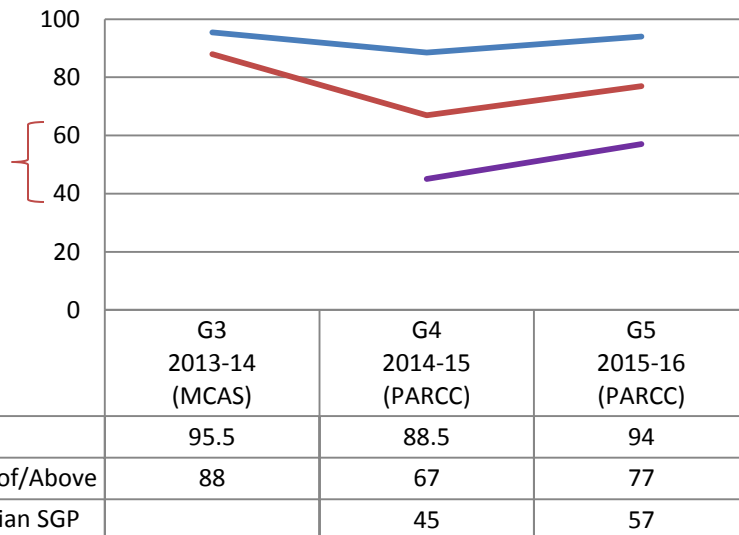
Class of 2023 (current G6) - Math
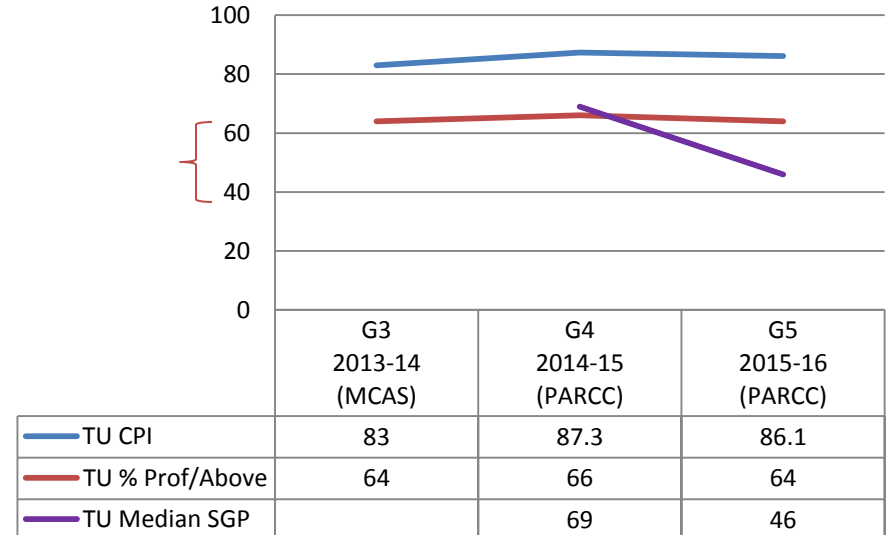
Collicot - Class of 2023 (current G6) - Math

	G3 2013-14 (MCAS)	G4 2014-15 (PARCC)	G5 2015-16 (PARCC)
CO CPI	94.5	94.3	95.2
CO % Prof/Above	86	81	73
CO Median SGP		69	44

Cunningham - Class of 2023 (current G6) - Math

	G3 2013-14 (MCAS)	G4 2014-15 (PARCC)	G5 2015-16 (PARCC)
CU CPI	96.2	89.6	93.6
CU % Prof/Above	86	71	76
CU Median SGP		50	55

Glover - Class of 2023 (current G6) - Math

	G3 2013-14 (MCAS)	G4 2014-15 (PARCC)	G5 2015-16 (PARCC)
GL CPI	95.5	88.5	94
GL % Prof/Above	88	67	77
GL Median SGP		45	57

Tucker - Class of 2023 (current G6) - Math

|	G3 2013-14 (MCAS)	G4 2014-15 (PARCC)	G5 2015-16 (PARCC)
TU CPI	83	87.3	86.1
TU % Prof/Above	64	66	64
TU Median SGP		69	46

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- Patterns in the data:
  - Note the change over to PARCC in 2014-15 and 2015-16
  - Median SGP is within or higher than the range of expected growth.
  - The pattern of the dip in G4 is not as clear, as G5 data does not climb back up significantly. But again, the data in grades 4 and 5 data is PARCC, not MCAS.
  - There is a difference in performance of this cohort among the different schools, but the difference is not as wide as in the ELA data.

Class of 2023 (current G6) - G5 Science MCAS
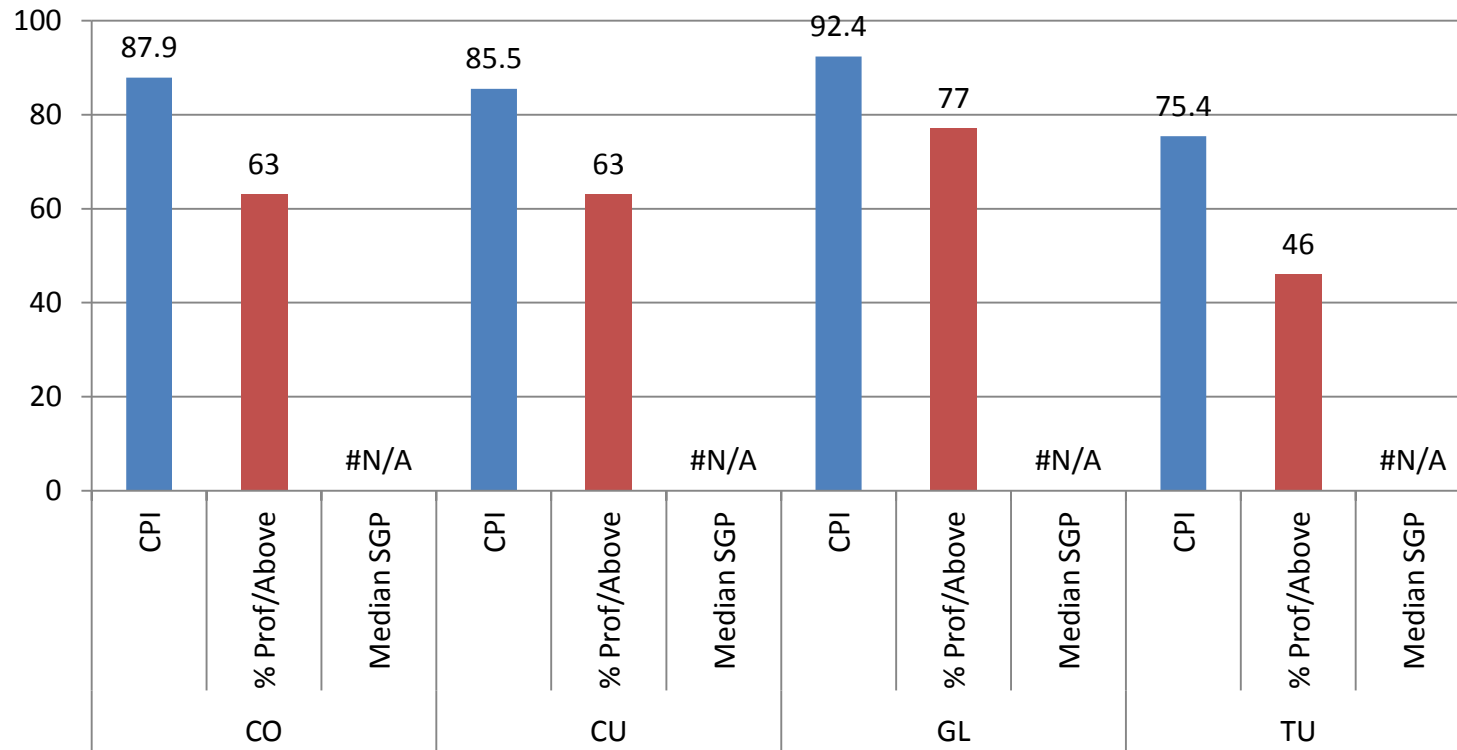
Notes:
• Since the Science MCAS in only given in G5 in elementary school, there is no previous year's science data for this cohort.
• There is also no SGP data for Science.

Class of 2023 (current G6) – Elementary Cohort Achievement Gap

ELA	G3 2013-14 (MCAS)	2013-14 CPI gap	G4 2014-15 (PARCC)	2014-15 CPI gap	G5 2015-16 (PARCC)	2015-16 CPI gap	Direction of gap
SWD (counterpart)	63.3 (93.4)	**30.1**	60 (94)	**34**	73.1 (96.7)	**23.6**	closing
AfAm/Bl	70.2 (91.2)	**21**	67 (92)	**25**	77 (95.4)	**18.4**	closing
EconDis	x	**x**	66 (91)	**25**	79.2 (93.5)	**14.3**	closing

Based on the three years of Advancement Initiatives, all the achievement gaps in ELA are closing for this particular cohort, which benefited from all three years of Advancement funding. Results in Math are more mixed. Note that the data here is combined district-wide, as most of our elementary schools individually do not have enough students in all subgroups to report out data.

Math	G3 2013-14 (MCAS)	2013-14 CPI gap	G4 2014-15 (PARCC)	2014-15 CPI gap	G5 2015-16 (PARCC)	2015-16 CPI gap	Direction of gap
SWD (counterpart)	75.8 (96.2)	**20.4**	71 (95)	**24**	75.4 (97.1)	**21**	no change
AfAm/Bl	75 (96.8)	**21.8**	76 (93)	**17**	81 (95.7)	**14.7**	closing
EconDis	x	**x**	77 (92)	**15**	77 (94.8)	**17.8**	increasing

X = data reported out for Low Income, and not Economically Disadvantaged, which DESE adopted in 2014-15

Class of 2020 (current G9) –
Middle School Cohort Achievement Gap

ELA	G6 2013-14 (MCAS)	2013-14 CPI gap	G7 2014-15 (PARCC)	2014-15 CPI gap	G8 2015-16 (PARCC)	2015-16 CPI gap	Direction of gap
SWD (counterpart)	75.8 (97.2)	**21.4**	71.0 (94.0)	**23**	85.2 (97.8)	**12.6**	closing
AfAm/Bl	87.8 (96.3)	**8.5**	79.0 (94.0)	**15**	92.6 (98.1)	**5.5**	closing
EconDis	x	**x**	78.0 (93.0)	**15**	89.4 (97.5)	**8.1**	closing

Following this middle school cohort, we see all the achievement gaps in ELA are also closing. Results in Math are more mixed.

Math	G6 2013-14 (MCAS)	2013-14 CPI gap	G7 2014-15 (PARCC)	2014-15 CPI gap	G8 2015-16 (PARCC)	2015-16 CPI gap	Direction of gap
SWD (counterpart)	69.5 (94.5)	**25**	56.0 (92.0)	**36**	63.9 (94.1)	**30.2**	increasing
AfAm/Bl	78.3 (94.7)	**16.4**	71.0 (92.0)	**21**	77.7 (94.3)	**16.6**	no change
EconDis	x	**x**	69.0 (90.0)	**21**	75.8 (93.2)	**17.4**	closing

X = data reported out for Low Income, and not Economically Disadvantaged, which DESE adopted in 2014-15

District - Next Steps

- Our district has taken up a more robust, data-driven approach to curriculum work at every level.
  - First year all teachers at the elementary and middle schools are provided with internal/state assessments results for every child
  - Culture shift around using data to identify learning needs and strategies to address those needs
- Every year, we refine our common assessments to ensure alignment with new standards and state expectations.
  - Piloting new writing assessments in elementary schools
  - Providing PD on newly adopted Science standards
- Having common planning time at all levels to allow for more focus on curriculum work.
  - First year elementary schools have common planning time with curriculum coordinators/principals
  - Critical investment!