

APPENDIX Q

CLASSICAL RELIABILITY

**Table Q-1. 2015 MCAS: Subgroup Reliabilities –
ELA**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM	
			Maximum	Mean	Standard Deviation			
3	All Students	31,497	48	35.95	8.00	0.90	2.51	
	Low Income	9,867	48	32.26	8.95	0.91	2.75	
	African American	1,655	48	32.72	8.71	0.90	2.73	
	Asian	2,259	48	37.46	7.34	0.89	2.42	
	Hispanic	5,992	48	31.23	9.23	0.91	2.81	
	Multi-race	1,162	48	36.42	7.98	0.91	2.46	
	Native American	41	48	34.90	7.59	0.88	2.63	
	Pacific Islander/Hawaiian	26	48	36.50	6.94	0.88	2.45	
	White	20,351	48	37.40	6.94	0.88	2.39	
	Female	15,445	48	36.80	7.62	0.90	2.46	
	Male	16,050	48	35.13	8.26	0.91	2.54	
	LEP	3,669	48	29.47	9.48	0.91	2.91	
	FLEP	870	48	36.11	7.58	0.89	2.52	
	LEPFLEP	4,382	48	30.53	9.54	0.91	2.85	
	Plan 504	1,478	48	35.02	7.70	0.89	2.58	
	Special Education	5,137	48	28.69	9.67	0.91	2.88	
	Title I	11,703	48	32.49	8.75	0.90	2.74	
	4	All Students	31,365	72	49.30	10.82	0.90	3.45
		Low Income	9,298	72	44.08	11.61	0.90	3.68
		African American	1,690	72	45.00	11.66	0.90	3.67
Asian		2,197	72	52.19	10.10	0.89	3.33	
Hispanic		5,517	72	43.27	11.92	0.90	3.73	
Multi-race		1,022	72	50.32	10.84	0.90	3.38	
Native American		46	72	45.98	12.30	0.91	3.66	
Pacific Islander/Hawaiian		17	72	46.71	8.64	0.84	3.43	
White		20,863	72	50.90	9.80	0.88	3.33	
Female		15,235	72	51.46	10.26	0.90	3.32	
Male		16,128	72	47.26	10.95	0.90	3.48	
LEP		2,537	72	38.87	11.97	0.89	3.94	
FLEP		1,428	72	48.85	9.74	0.87	3.49	
LEPFLEP		3,852	72	42.27	12.26	0.90	3.83	
Plan 504		1,803	72	47.12	9.81	0.88	3.43	
Special Education		5,401	72	38.26	11.73	0.89	3.80	
Title I		10,676	72	44.79	11.36	0.90	3.62	
5		All Students	32,082	52	36.19	8.90	0.90	2.78
		Low Income	8,930	52	31.70	9.52	0.90	3.00
		African American	1,639	52	32.50	9.30	0.90	2.96
	Asian	2,118	52	38.51	8.46	0.90	2.66	
	Hispanic	5,348	52	30.59	9.86	0.90	3.06	
	Multi-race	1,044	52	37.13	8.68	0.90	2.75	
	Native American	60	52	33.68	9.33	0.90	2.89	
	Pacific Islander/Hawaiian	33	52	36.91	7.76	0.86	2.86	
	White	21,832	52	37.57	7.99	0.89	2.69	
	Female	15,761	52	37.58	8.38	0.89	2.72	
	Male	16,320	52	34.84	9.17	0.91	2.80	

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	LEP	1,790	52	24.93	9.30	0.88	3.20
	FLEP	1,460	52	33.95	8.41	0.88	2.95
	LEPFLEP	3,174	52	28.92	10.01	0.90	3.12
	Plan 504	1,968	52	34.76	8.33	0.88	2.83
	Special Education	5,692	52	27.30	9.42	0.89	3.07
	Title I	9,678	52	31.98	9.41	0.90	2.99
6	All Students	32,003	52	35.36	9.17	0.90	2.93
	Low Income	8,440	52	30.24	9.72	0.90	3.12
	African American	1,494	52	31.17	9.28	0.89	3.10
	Asian	2,215	52	38.02	8.49	0.89	2.80
	Hispanic	5,037	52	28.94	10.04	0.90	3.16
	Multi-race	955	52	36.66	8.63	0.89	2.89
	Native American	62	52	33.23	9.44	0.89	3.11
	Pacific Islander/Hawaiian	22	52	34.32	9.11	0.89	3.07
	White	22,205	52	36.80	8.26	0.88	2.86
	Female	15,623	52	36.76	8.73	0.89	2.88
	Male	16,379	52	34.03	9.37	0.90	2.94
	LEP	1,462	52	23.07	8.88	0.87	3.24
	FLEP	1,293	52	31.83	8.88	0.88	3.10
	LEPFLEP	2,709	52	27.17	9.87	0.89	3.20
	Plan 504	2,016	52	34.61	8.38	0.88	2.94
Special Education	5,742	52	26.01	9.39	0.89	3.16	
Title I	8,227	52	30.19	9.69	0.90	3.12	
7	All Students	31,724	72	51.06	10.82	0.91	3.28
	Low Income	8,377	72	44.98	11.70	0.91	3.52
	African American	1,545	72	45.66	11.44	0.91	3.48
	Asian	2,125	72	54.50	10.01	0.91	3.07
	Hispanic	5,010	72	43.78	11.98	0.91	3.57
	Multi-race	837	72	51.51	11.07	0.91	3.28
	Native American	58	72	45.81	13.30	0.94	3.36
	Pacific Islander/Hawaiian	32	72	47.13	14.83	0.94	3.72
	White	22,104	72	52.77	9.65	0.89	3.16
	Female	15,642	72	53.58	9.73	0.90	3.08
	Male	16,079	72	48.61	11.25	0.91	3.36
	LEP	1,369	72	35.19	11.83	0.89	3.84
	FLEP	869	72	46.30	10.62	0.90	3.43
	LEPFLEP	2,213	72	39.47	12.60	0.91	3.75
	Plan 504	2,002	72	49.51	9.43	0.88	3.32
Special Education	5,608	72	39.59	11.48	0.90	3.71	
Title I	7,408	72	44.93	11.63	0.91	3.49	
8	All Students	32,679	52	39.02	9.02	0.90	2.81
	Low Income	8,518	52	34.28	9.97	0.91	3.03
	African American	1,588	52	34.89	9.79	0.90	3.02
	Asian	2,146	52	41.71	8.32	0.90	2.62
	Hispanic	5,011	52	33.12	10.31	0.91	3.09
	Multi-race	944	52	39.83	8.72	0.90	2.77
	Native American	55	52	36.96	8.47	0.88	2.91

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Pacific Islander/Hawaiian	32	52	39.69	9.35	0.91	2.86
	White	22,881	52	40.33	8.06	0.89	2.71
	Female	16,030	52	40.79	8.19	0.89	2.69
	Male	16,645	52	37.32	9.45	0.91	2.85
	LEP	1,434	52	25.88	9.80	0.89	3.29
	FLEP	582	52	35.26	8.88	0.89	3.01
	LEPFLEP	1,987	52	28.47	10.45	0.90	3.25
	Plan 504	2,086	52	38.27	7.96	0.88	2.80
	Special Education	5,781	52	29.45	9.90	0.90	3.16
	Title I	7,399	52	34.16	9.97	0.91	3.03
10	All Students	68,880	72	54.14	10.22	0.90	3.26
	Low Income	18,094	72	49.08	11.12	0.89	3.66
	African American	5,784	72	49.31	10.75	0.89	3.61
	Asian	3,893	72	56.98	9.93	0.91	3.04
	Hispanic	10,588	72	47.36	12.07	0.90	3.85
	Multi-race	1,557	72	54.22	10.18	0.90	3.26
	Native American	158	72	51.54	9.96	0.87	3.57
	Pacific Islander/Hawaiian	58	72	52.47	11.54	0.93	3.16
	White	46,842	72	56.04	8.76	0.88	3.03
	Female	34,324	72	55.79	9.57	0.90	3.06
	Male	34,556	72	52.50	10.57	0.90	3.37
	LEP	2,995	72	35.46	12.01	0.84	4.75
	FLEP	1,641	72	48.23	8.90	0.85	3.49
	LEPFLEP	4,442	72	39.66	12.66	0.87	4.48
	Plan 504	4,025	72	54.42	8.53	0.86	3.15
	Special Education	10,819	72	43.81	11.30	0.88	3.95
	Title I	15,841	72	48.78	11.16	0.89	3.64

Table Q-2. 2015 MCAS: Subgroup Reliabilities – Mathematics

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	31,515	40	29.70	7.51	0.90	2.43
	Low Income	9,862	40	26.58	8.01	0.89	2.61
	African American	1,650	40	26.28	7.97	0.89	2.63
	Asian	2,257	40	32.55	6.67	0.89	2.20
	Hispanic	6,002	40	26.26	8.12	0.90	2.62
	Multi-race	1,160	40	29.78	7.67	0.90	2.42
	Native American	40	40	28.38	7.67	0.90	2.48
	Pacific Islander/Hawaiian	26	40	29.08	7.72	0.89	2.54
	White	20,368	40	30.68	6.92	0.88	2.37
	Female	15,440	40	29.92	7.32	0.89	2.42
	Male	16,074	40	29.50	7.68	0.90	2.44
	LEP	3,702	40	25.57	8.16	0.89	2.64
	FLEP	865	40	31.11	6.81	0.88	2.34
	LEPFLEP	4,410	40	26.45	8.24	0.90	2.60

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	Plan 504	1,471	40	28.50	7.36	0.88	2.53
	Special Education	5,164	40	23.48	8.34	0.89	2.73
	Title I	11,707	40	27.19	7.83	0.89	2.59
4	All Students	31,467	54	38.28	10.39	0.90	3.36
	Low Income	9,336	54	33.43	10.86	0.89	3.55
	African American	1,697	54	32.84	10.92	0.89	3.57
	Asian	2,208	54	42.78	9.32	0.90	3.00
	Hispanic	5,555	54	33.16	10.93	0.89	3.56
	Multi-race	1,023	54	39.12	10.63	0.90	3.31
	Native American	45	54	35.78	9.11	0.85	3.48
	Pacific Islander/Hawaiian	17	54	35.47	11.76	0.90	3.68
	White	20,908	54	39.59	9.63	0.88	3.28
	Female	15,267	54	38.38	10.12	0.89	3.34
	Male	16,199	54	38.20	10.63	0.90	3.37
	LEP	2,577	54	30.02	10.81	0.89	3.59
	FLEP	1,422	54	38.66	9.78	0.88	3.32
	LEPFLEP	3,884	54	32.95	11.26	0.90	3.56
	Plan 504	1,808	54	36.51	9.84	0.88	3.44
	Special Education	5,429	54	29.01	10.95	0.89	3.62
	Title I	10,732	54	34.41	10.67	0.89	3.52
	All Students	32,128	54	37.64	11.27	0.91	3.41
	Low Income	8,943	54	32.10	11.61	0.90	3.60
	African American	1,639	54	31.78	11.62	0.90	3.59
	Asian	2,128	54	42.45	10.08	0.91	3.08
Hispanic	5,372	54	31.33	11.74	0.91	3.59	
Multi-race	1,048	54	38.19	11.29	0.91	3.42	
Native American	60	54	34.25	12.09	0.91	3.55	
Pacific Islander/Hawaiian	33	54	36.64	13.04	0.93	3.47	
White	21,837	54	39.15	10.45	0.90	3.31	
Female	15,781	54	38.16	10.84	0.90	3.37	
Male	16,345	54	37.14	11.66	0.91	3.44	
LEP	1,818	54	26.15	11.27	0.90	3.60	
FLEP	1,462	54	35.74	10.76	0.89	3.49	
LEPFLEP	3,203	54	30.34	12.05	0.91	3.62	
Plan 504	1,973	54	35.95	10.74	0.89	3.50	
Special Education	5,703	54	26.80	11.56	0.90	3.65	
Title I	9,713	54	32.85	11.56	0.90	3.58	
All Students	32,019	54	37.67	11.19	0.91	3.34	
Low Income	8,441	54	31.55	11.36	0.90	3.57	
African American	1,494	54	31.25	11.35	0.90	3.61	
Asian	2,225	54	42.84	10.16	0.92	2.95	
Hispanic	5,039	54	30.68	11.53	0.90	3.60	
Multi-race	952	54	38.46	11.03	0.91	3.31	
Native American	63	54	33.24	13.38	0.93	3.56	
Pacific Islander/Hawaiian	22	54	35.50	12.40	0.92	3.47	
White	22,199	54	39.17	10.31	0.90	3.24	
Female	15,620	54	38.36	10.67	0.91	3.28	
Male	16,395	54	37.02	11.63	0.92	3.39	

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
6	LEP	1,473	54	25.22	10.74	0.89	3.59
	FLEP	1,293	54	34.41	10.89	0.90	3.48
	LEPFLEP	2,720	54	29.48	11.74	0.91	3.61
	Plan 504	2,010	54	36.35	10.49	0.89	3.42
	Special Education	5,729	54	26.01	10.92	0.89	3.57
	Title I	8,239	54	32.22	11.32	0.90	3.55
7	All Students	31,871	54	36.27	12.31	0.93	3.33
	Low Income	8,435	54	29.47	12.36	0.92	3.55
	African American	1,555	54	28.31	12.07	0.91	3.56
	Asian	2,136	54	42.87	11.00	0.93	2.85
	Hispanic	5,060	54	28.31	12.59	0.92	3.55
	Multi-race	840	54	36.71	12.73	0.93	3.31
	Native American	56	54	31.80	11.98	0.91	3.53
	Pacific Islander/Hawaiian	31	54	34.03	16.25	0.96	3.41
	White	22,176	54	38.01	11.25	0.92	3.23
	Female	15,678	54	36.84	12.05	0.93	3.27
	Male	16,188	54	35.72	12.53	0.93	3.37
	LEP	1,396	54	22.29	11.82	0.91	3.53
	FLEP	878	54	31.82	12.61	0.92	3.49
	LEPFLEP	2,247	54	25.91	12.98	0.92	3.58
Plan 504	2,010	54	34.56	10.91	0.90	3.39	
Special Education	5,680	54	23.44	11.23	0.90	3.56	
Title I	7,445	54	29.91	12.42	0.92	3.52	
8	All Students	32,695	54	36.14	12.35	0.91	3.62
	Low Income	8,529	54	29.49	12.55	0.91	3.76
	African American	1,599	54	28.70	12.19	0.90	3.77
	Asian	2,149	54	42.69	10.94	0.92	3.16
	Hispanic	5,015	54	28.79	12.77	0.91	3.75
	Multi-race	947	54	36.82	12.49	0.92	3.62
	Native American	54	54	32.93	12.10	0.91	3.73
	Pacific Islander/Hawaiian	31	54	36.32	13.11	0.92	3.75
	White	22,880	54	37.65	11.46	0.91	3.53
	Female	16,050	54	36.77	11.75	0.91	3.58
	Male	16,643	54	35.54	12.87	0.92	3.64
	LEP	1,451	54	22.78	11.42	0.90	3.59
	FLEP	585	54	32.85	12.63	0.91	3.71
	LEPFLEP	2,004	54	25.59	12.62	0.91	3.71
Plan 504	2,079	54	34.75	11.43	0.90	3.66	
Special Education	5,765	54	23.05	10.90	0.89	3.66	
Title I	7,413	54	30.58	12.73	0.91	3.75	
10	All Students	68,887	60	40.71	13.32	0.92	3.83
	Low Income	18,051	60	33.93	13.44	0.92	3.92
	African American	5,799	60	33.64	13.26	0.91	3.92
	Asian	3,907	60	48.06	11.72	0.92	3.41
	Hispanic	10,582	60	31.96	13.63	0.92	3.90
	Multi-race	1,550	60	40.63	13.55	0.92	3.86
	Native American	164	60	35.91	13.47	0.91	4.03

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
10	Pacific Islander/Hawaiian	59	60	37.49	14.77	0.93	3.93
	White	46,826	60	42.98	12.07	0.90	3.72
	Female	34,283	60	40.84	13.08	0.91	3.82
	Male	34,604	60	40.59	13.55	0.92	3.84
	LEP	3,055	60	23.75	12.87	0.91	3.75
	FLEP	1,635	60	34.15	12.63	0.90	3.91
	LEPFLEP	4,495	60	27.00	13.61	0.92	3.86
	Plan 504	4,013	60	40.88	11.70	0.89	3.80
	Special Education	10,864	60	27.45	12.34	0.90	3.82
	Title I	15,842	60	34.23	13.69	0.92	3.91

**Table Q-3. 2015 MCAS: Subgroup Reliabilities –
STE**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	All Students	69,722	54	35.50	8.98	0.88	3.09
	Low Income	21,206	54	31.23	9.06	0.87	3.21
	African American	5,590	54	29.84	9.18	0.87	3.25
	Asian	4,402	54	38.36	8.68	0.88	3.02
	Hispanic	12,182	54	30.23	9.37	0.88	3.24
	Multi-race	2,347	54	36.03	9.01	0.88	3.07
	Native American	167	54	34.11	8.81	0.87	3.18
	Pacific Islander/Hawaiian	72	54	34.83	9.13	0.88	3.16
	White	44,940	54	37.33	7.95	0.86	3.00
	Female	34,238	54	35.53	8.89	0.88	3.09
	Male	35,477	54	35.48	9.07	0.88	3.08
	LEP	4,827	54	25.17	8.84	0.86	3.29
	FLEP	3,446	54	32.78	8.36	0.85	3.20
	LEPFLEP	7,960	54	28.25	9.47	0.88	3.28
	Plan 504	3,997	54	35.25	8.23	0.86	3.06
	Special Education	12,402	54	28.60	9.09	0.87	3.22
Title I	25,128	54	31.35	9.19	0.88	3.21	
8	All Students	70,793	54	33.43	9.69	0.89	3.25
	Low Income	20,259	54	28.23	9.53	0.88	3.36
	African American	5,846	54	27.22	9.09	0.86	3.36
	Asian	4,299	54	37.12	9.38	0.89	3.12
	Hispanic	11,516	54	26.84	9.80	0.88	3.38
	Multi-race	2,004	54	34.15	9.65	0.89	3.24
	Native American	149	54	31.05	8.89	0.86	3.29
	Pacific Islander/Hawaiian	79	54	32.84	10.06	0.89	3.33
	White	46,867	54	35.47	8.63	0.87	3.15
	Female	34,807	54	33.18	9.37	0.88	3.25
	Male	35,977	54	33.67	9.98	0.89	3.24
	LEP	3,863	54	20.56	8.43	0.84	3.37
	FLEP	1,604	54	28.64	8.57	0.85	3.36
	LEPFLEP	5,369	54	22.84	9.22	0.86	3.40

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Plan 504	4,348	54	33.86	8.80	0.87	3.22
	Special Education	12,284	54	25.21	9.21	0.87	3.37
	Title I	20,845	54	28.32	9.65	0.88	3.36

Table Q-4. 2015 MCAS: Subgroup Reliabilities – High School Biology

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	50,404	60	39.55	11.14	0.92	3.25
Low Income	13,172	60	33.78	11.12	0.91	3.40
African American	3,960	60	32.99	10.81	0.90	3.43
Asian	2,974	60	43.96	11.06	0.92	3.08
Hispanic	7,580	60	31.98	11.53	0.91	3.43
Multi-race	1,195	60	39.11	11.34	0.92	3.27
Native American	111	60	34.39	11.94	0.92	3.39
Pacific Islander/Hawaiian	54	60	37.76	11.17	0.91	3.43
White	34,428	60	41.67	9.93	0.90	3.14
Female	25,325	60	40.08	10.81	0.91	3.24
Male	25,029	60	39.05	11.43	0.92	3.24
LEP	2,408	60	24.02	10.26	0.89	3.47
FLEP	1,055	60	32.63	10.44	0.89	3.44
LEPFLEP	3,383	60	26.48	11.04	0.90	3.49
Plan 504	2,886	60	39.53	9.95	0.89	3.23
Special Education	8,097	60	29.61	10.78	0.90	3.45
Title I	11,043	60	33.73	11.32	0.91	3.41

Table Q-5. 2015 MCAS: Subgroup Reliabilities – High School Chemistry

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	1,103	60	39.46	11.35	0.90	3.55
Low Income	214	60	34.56	11.34	0.89	3.73
African American	195	60	35.84	10.96	0.89	3.67
Asian	87	60	45.25	8.86	0.87	3.22
Hispanic	102	60	30.88	13.99	0.93	3.65
Multi-race	25	60	40.80	9.87	0.88	3.46
Native American	2					
Pacific Islander/Hawaiian	1					
White	688	60	41.07	10.31	0.89	3.49
Female	593	60	40.12	11.08	0.90	3.55
Male	509	60	38.74	11.56	0.91	3.54

continued

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
LEP	43	60	24.21	14.16	0.94	3.54
FLEP	15	60	37.53	10.48	0.89	3.54
LEPFLEP	55	60	27.38	14.78	0.94	3.60
Plan 504	52	60	39.38	10.18	0.87	3.62
Special Education	80	60	29.71	11.94	0.90	3.68
Title I	140	60	29.63	10.73	0.89	3.63

Table Q-6. 2015 MCAS: Subgroup Reliabilities – High School Introductory Physics

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	16,007	60	38.40	12.11	0.91	3.54
Low Income	4,434	60	31.35	11.54	0.90	3.64
African American	1,803	60	30.79	11.31	0.90	3.65
Asian	1,036	60	46.34	10.40	0.91	3.14
Hispanic	2,785	60	30.13	11.53	0.90	3.66
Multi-race	434	60	41.34	12.56	0.92	3.45
Native American	30	60	38.80	9.84	0.86	3.63
Pacific Islander/Hawaiian	25	60	41.56	8.60	0.84	3.47
White	9,883	60	41.16	10.65	0.90	3.42
Female	7,933	60	38.19	11.96	0.91	3.54
Male	8,069	60	38.62	12.25	0.92	3.54
LEP	1,054	60	26.33	11.52	0.90	3.68
FLEP	497	60	33.40	11.11	0.89	3.63
LEPFLEP	1,391	60	28.26	12.01	0.91	3.69
Plan 504	917	60	38.53	10.94	0.90	3.52
Special Education	2,385	60	29.00	11.11	0.89	3.62
Title I	3,886	60	30.23	11.62	0.90	3.66

Table Q-7. 2015 MCAS: Subgroup Reliabilities – High School Technology/Engineering

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	2,632	60	35.08	10.66	0.89	3.58
Low Income	1,062	60	31.64	10.54	0.88	3.63
African American	189	60	30.36	9.13	0.84	3.65
Asian	67	60	38.73	9.63	0.87	3.43
Hispanic	649	60	28.20	10.29	0.87	3.66
Multi-race	49	60	33.86	11.33	0.90	3.67
Native American	8					
Pacific Islander/Hawaiian	2					
White	1,666	60	38.14	9.47	0.87	3.48

continued

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
Female	981	60	32.82	10.25	0.87	3.67
Male	1,650	60	36.42	10.67	0.89	3.52
LEP	187	60	22.60	10.04	0.87	3.56
FLEP	100	60	31.31	9.04	0.84	3.59
LEPFLEP	260	60	24.83	10.38	0.88	3.61
Plan 504	166	60	38.02	9.91	0.88	3.50
Special Education	719	60	28.90	10.51	0.88	3.63
Title I	1,429	60	32.93	10.48	0.88	3.61

Table Q-8. 2015 MCAS: Reliabilities by Reporting Category by Grade – ELA

Grade	Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	LA	9	9	7.56	1.94	0.77	0.93
	LT	32	39	28.39	6.38	0.87	2.32
4	CC	1	8	6.48	1.46		
	CT	1	12	6.87	1.76		
	LA	10	10	7.63	2.14	0.70	1.17
	LT	30	42	28.33	6.95	0.87	2.46
5	LA	5	5	3.88	1.23	0.55	0.82
	LT	35	47	32.30	8.00	0.89	2.65
6	LA	7	7	5.14	1.68	0.63	1.03
	LT	33	45	30.22	7.87	0.88	2.74
7	CC	1	8	6.85	1.30		
	CT	1	12	7.15	1.62		
	LA	6	6	5.19	1.17	0.61	0.73
	LT	34	46	31.86	7.96	0.90	2.57
8	LA	6	6	4.74	1.30	0.57	0.86
	LT	34	46	34.28	8.05	0.89	2.67
10	CC	1	8	7.13	1.33		
	CT	1	12	7.48	1.59		
	LA	4	4	3.16	0.99	0.48	0.71
	LT	36	48	36.37	7.57	0.89	2.56

* Reporting category definitions follow table P-14.

Table Q-9. 2015 MCAS: Reliabilities by Reporting Category by Grade – Mathematics

Grade	Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	GE	4	5	3.92	1.18	0.42	0.90
	MD	9	10	6.63	2.18	0.67	1.24
	NF	5	6	4.22	1.42	0.48	1.02

continued

Grade	Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	NT	6	6	4.70	1.52	0.69	0.85
	OA	12	13	10.24	2.70	0.76	1.33
4	GE	5	8	5.02	1.91	0.54	1.30
	MD	8	11	7.20	2.85	0.62	1.75
	NF	8	11	7.92	2.53	0.62	1.56
	NT	10	10	7.53	1.97	0.63	1.20
	OA	11	14	10.62	2.97	0.70	1.62
5	GE	5	5	3.92	1.16	0.51	0.81
	MD	7	10	6.47	2.58	0.61	1.60
	NF	10	13	8.76	3.20	0.68	1.80
	NT	13	16	10.82	3.79	0.76	1.84
	OA	7	10	7.67	2.15	0.60	1.36
6	EE	13	16	11.07	3.51	0.73	1.81
	GE	8	8	4.87	2.06	0.71	1.11
	NS	7	10	7.89	2.15	0.69	1.21
	RP	7	10	6.69	2.57	0.56	1.71
	SP	7	10	7.15	2.48	0.61	1.56
7	EE	8	11	7.03	2.73	0.73	1.42
	GE	8	11	7.82	2.78	0.67	1.61
	NS	9	12	7.20	3.30	0.69	1.83
	RP	8	11	8.25	2.60	0.72	1.37
	SP	9	9	5.96	2.37	0.76	1.16
8	EE	13	16	11.14	4.17	0.79	1.90
	FN	10	13	7.84	3.33	0.71	1.80
	GE	13	16	10.27	4.11	0.72	2.16
	NS	3	3	1.94	0.92	0.35	0.74
	SP	3	6	4.95	1.46	0.48	1.05
10	AF	12	18	10.78	4.60	0.76	2.27
	GE	11	17	12.07	4.35	0.78	2.06
	NQ	10	13	8.62	3.18	0.70	1.73
	SP	9	12	9.24	2.45	0.61	1.54

* Reporting category definitions follow table P-14.

Table Q-10. 2015 MCAS: Reliabilities by Reporting Category – STE

Grade	Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	ES	13	16	10.08	3.40	0.72	1.80
	LS	13	16	10.77	2.86	0.68	1.62
	PS	11	14	9.56	2.48	0.68	1.41
	TE	5	8	5.09	1.69	0.42	1.29
8	ES	11	14	9.05	2.98	0.68	1.67
	LS	11	14	9.13	2.82	0.68	1.60
	PS	10	13	7.11	2.90	0.68	1.64
	TE	10	13	8.14	2.46	0.58	1.59

* Reporting category definitions follow table P-14.

Table Q-11. 2015 MCAS: Reliabilities by Reporting Category – High School Biology

<i>Item Reporting Category*</i>	<i>Number of Items</i>	<i>Raw Score</i>			<i>Alpha</i>	<i>SEM</i>
		<i>Maximum</i>	<i>Mean</i>	<i>Standard Deviation</i>		
AP	6	9	5.79	2.01	0.61	1.25
BC	12	15	9.65	3.25	0.70	1.79
EC	9	12	7.95	2.48	0.71	1.35
EV	9	12	8.02	2.45	0.64	1.46
GE	9	12	8.14	2.64	0.74	1.36

* Reporting category definitions follow table P-14.

Table Q-12. 2015 MCAS: Reliabilities by Reporting Category – High School Chemistry

<i>Item Reporting Category*</i>	<i>Number of Items</i>	<i>Raw Score</i>			<i>Alpha</i>	<i>SEM</i>
		<i>Maximum</i>	<i>Mean</i>	<i>Standard Deviation</i>		
AS	12	15	10.05	2.99	0.70	1.65
BR	12	18	12.31	4.24	0.76	2.07
SO	9	12	7.37	2.65	0.62	1.63
TH	12	15	9.73	2.87	0.64	1.73

* Reporting category definitions follow table P-14.

Table Q-13. 2015 MCAS: Reliabilities by Reporting Category – High School Introductory Physics

<i>Item Reporting Category*</i>	<i>Number of Items</i>	<i>Raw Score</i>			<i>Alpha</i>	<i>SEM</i>
		<i>Maximum</i>	<i>Mean</i>	<i>Standard Deviation</i>		
EM	9	12	7.64	2.72	0.62	1.68
HT	6	9	5.83	2.02	0.65	1.20
MF	18	24	16.09	5.06	0.80	2.26
WV	12	15	8.85	3.49	0.73	1.82

* Reporting category definitions follow table P-14.

Table Q-14. 2015 MCAS: Reliabilities by Reporting Category – High School Technology/Engineering

<i>Item Reporting Category*</i>	<i>Number of Items</i>	<i>Raw Score</i>			<i>Alpha</i>	<i>SEM</i>
		<i>Maximum</i>	<i>Mean</i>	<i>Standard Deviation</i>		
CM	9	12	7.51	2.30	0.61	1.44
ED	9	12	7.40	2.56	0.64	1.53
EL	15	18	10.64	3.67	0.66	2.13
FL	12	18	9.53	3.66	0.71	1.97

* Reporting category definitions follow table P-14.

Reporting Category Definitions

- AP = Anatomy and Physiology
- AS = Atomic Structure and Periodicity
- BC = Biochemistry and Cell Biology
- BI = Biology
- BR = Bonding and Reactions
- CC = Composition/Conventions
- CH = Chemistry
- CM = Construction and Manufacturing
- CT = Composition/Topic Development
- EC = Ecology
- ED = Engineering Design
- EL = Electrical and Communications Systems
- EM = Electromagnetism
- ES = Earth and Space Science
- EV = Evolution and Biodiversity
- FL = Fluid and Thermal Systems
- GE = Genetics
- GE = Geometry
- HT = Heat and Heat Transfer
- LA = Language
- LS = Life Science
- LT = Reading and Literature
- ME = Measurement
- MF = Motion and Forces
- NS = Number Sense and Operations
- PH = Introductory Physics
- PR = Patterns, Relations, and Algebra
- PS = Physical Sciences
- SO = Solutions, Equilibrium, and Acid-Base Theory
- SP = Data Analysis, Statistics, and probability
- TE = Technology/Engineering
- TH = Properties of Matter and Thermochemistry
- WV = Waves and Radiation

**Table Q-15. 2015 MCAS-Alt: Subgroup Reliabilities –
ELA**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	1,075	26	21.51	1.14	0.67	0.65
	Low Income	511	26	21.63	0.95	0.66	0.55
	African American	150	26	21.58	1.05	0.65	0.62
	Asian	56	26	21.25	1.38	0.58	0.89
	Hispanic	293	26	21.65	0.87	0.61	0.54
	Multi-race	41	26	21.88	0.40	-0.06	0.41
	Native American	5					
	Pacific Islander/Hawaiian	2					
	White	525	26	21.40	1.29	0.70	0.71
	Female	345	26	21.49	1.08	0.62	0.67
	Male	727	26	21.51	1.17	0.69	0.65
	LEP	121	26	21.63	0.82	0.55	0.55
	FLEP	20	26	21.65	1.09	0.86	0.41
	LEPFLEP	141	26	21.63	0.86	0.61	0.53
	Plan 504	5					
	Special Education	1,075	26	21.51	1.14	0.67	0.65
	Title I	525	26	21.68	0.88	0.66	0.52
4	All Students	1,212	39	31.06	3.40	0.79	1.56
	Low Income	583	39	31.24	3.29	0.80	1.48
	African American	157	39	31.00	3.39	0.79	1.57
	Asian	62	39	30.89	3.32	0.75	1.66
	Hispanic	335	39	31.61	2.92	0.79	1.35
	Multi-race	42	39	30.98	3.11	0.77	1.48
	Native American	5					
	Pacific Islander/Hawaiian	1					
	White	603	39	30.77	3.65	0.80	1.64
	Female	416	39	30.92	3.56	0.82	1.50
	Male	792	39	31.12	3.31	0.76	1.62
	LEP	135	39	31.68	2.61	0.60	1.64
	FLEP	49	39	31.37	3.24	0.17	2.95
	LEPFLEP	184	39	31.60	2.79	0.59	1.79
	Plan 504	11	39	32.00	2.49	0.76	1.23
	Special Education	1,210	39	31.06	3.39	0.79	1.56
	Title I	588	39	31.49	3.02	0.78	1.43
5	All Students	1,050	26	21.56	1.04	0.63	0.63
	Low Income	492	26	21.58	0.97	0.62	0.60
	African American	126	26	21.77	0.66	0.47	0.48
	Asian	53	26	21.60	1.12	0.81	0.49
	Hispanic	272	26	21.55	1.08	0.62	0.67
	Multi-race	33	26	21.58	0.87	0.48	0.62
	Native American	1					
	Pacific Islander/Hawaiian	3					
	White	561	26	21.51	1.09	0.63	0.66
	Female	351	26	21.47	1.19	0.70	0.65
	Male	699	26	21.60	0.95	0.56	0.63

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	LEP	102	26	21.81	0.50	0.35	0.40
	FLEP	32	26	21.66	0.94	0.58	0.61
	LEPFLEP	134	26	21.78	0.63	0.47	0.46
	Plan 504	8					
	Special Education	1,050	26	21.56	1.04	0.63	0.63
	Title I	495	26	21.67	0.93	0.64	0.56
	All Students	1,041	26	21.54	1.08	0.63	0.65
	Low Income	453	26	21.62	0.96	0.58	0.63
	African American	146	26	21.68	0.75	0.54	0.51
	Asian	41	26	21.56	1.00	0.57	0.66
	Hispanic	276	26	21.56	1.00	0.59	0.64
	Multi-race	17	26	21.59	0.87	0.38	0.68
	Native American	1					
6	Pacific Islander/Hawaiian	2					
	White	555	26	21.48	1.19	0.66	0.69
	Female	311	26	21.41	1.24	0.71	0.67
	Male	728	26	21.59	1.00	0.58	0.65
	LEP	96	26	21.49	1.10	0.57	0.72
	FLEP	30	26	21.77	0.68	0.43	0.51
	LEPFLEP	126	26	21.56	1.02	0.56	0.68
	Plan 504	5					
	Special Education	1,041	26	21.54	1.08	0.63	0.65
	Title I	485	26	21.62	0.96	0.61	0.60
	All Students	1,078	39	31.08	3.25	0.74	1.65
	Low Income	448	39	31.01	3.33	0.76	1.63
	African American	136	39	31.21	3.07	0.63	1.88
Asian	65	39	31.52	2.76	0.82	1.19	
Hispanic	251	39	31.13	3.29	0.78	1.56	
Multi-race	27	39	32.07	1.82	0.62	1.12	
Native American	3						
7	Pacific Islander/Hawaiian	0					
	White	594	39	30.94	3.35	0.74	1.72
	Female	339	39	30.85	3.37	0.77	1.61
	Male	738	39	31.18	3.19	0.73	1.67
	LEP	96	39	30.90	3.43	0.53	2.34
	FLEP	22	39	31.95	2.36	0.44	1.77
	LEPFLEP	118	39	31.09	3.27	0.52	2.26
	Plan 504	3					
	Special Education	1,078	39	31.08	3.25	0.74	1.65
	Title I	394	39	31.55	2.84	0.67	1.64
	All Students	877	26	21.48	1.13	0.66	0.66
	Low Income	370	26	21.50	1.14	0.72	0.60
	African American	130	26	21.54	0.98	0.61	0.61
Asian	38	26	21.08	1.76	0.78	0.82	
Hispanic	227	26	21.66	0.76	0.55	0.51	
Multi-race	19	26	21.21	1.87	0.88	0.64	
Native American	2						

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Pacific Islander/Hawaiian	1					
	White	456	26	21.44	1.18	0.65	0.70
	Female	289	26	21.36	1.37	0.74	0.70
	Male	585	26	21.55	0.98	0.59	0.63
	LEP	89	26	21.53	0.93	0.61	0.58
	FLEP	20	26	21.80	0.89	0.90	0.28
	LEPFLEP	109	26	21.58	0.93	0.65	0.54
	Plan 504	6					
	Special Education	877	26	21.48	1.13	0.66	0.66
	Title I	341	26	21.65	0.78	0.48	0.56
10	All Students	749	39	30.27	3.69	0.77	1.77
	Low Income	295	39	29.92	3.90	0.80	1.74
	African American	108	39	31.21	3.37	0.89	1.14
	Asian	43	39	30.49	3.38	0.60	2.14
	Hispanic	174	39	29.28	4.17	0.79	1.89
	Multi-race	14	39	28.36	4.20	0.71	2.25
	Native American	1					
	Pacific Islander/Hawaiian	0					
	White	409	39	30.47	3.47	0.72	1.83
	Female	251	39	30.37	3.67	0.78	1.72
	Male	498	39	30.21	3.71	0.77	1.79
	LEP	93	39	30.28	3.51	0.75	1.75
	FLEP	14	39	30.64	2.90	0.72	1.54
	LEPFLEP	107	39	30.33	3.43	0.75	1.72
	Plan 504	6					
Special Education	748	39	30.28	3.68	0.77	1.76	
Title I	198	39	30.02	3.75	0.83	1.56	

Note: No reliability or SEM values are reported for some subgroups, because there were some items for which only one student in the subgroup received a score.

Table Q-16. 2015 MCAS-Alt: Subgroup Reliabilities – Mathematics

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	1,100	26	21.44	1.29	0.70	0.70
	Low Income	514	26	21.60	0.98	0.61	0.61
	African American	159	26	21.61	1.01	0.67	0.58
	Asian	54	26	21.07	1.89	0.74	0.96
	Hispanic	296	26	21.59	1.17	0.71	0.64
	Multi-race	44	26	21.48	1.23	0.75	0.61
	Native American	6					
	Pacific Islander/Hawaiian	2					
	White	535	26	21.35	1.35	0.69	0.75
	Female	349	26	21.39	1.31	0.69	0.73
	Male	747	26	21.47	1.28	0.71	0.69

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	LEP	122	26	21.70	0.77	0.55	0.52
	FLEP	23	26	21.52	0.99	0.67	0.57
	LEPFLEP	145	26	21.67	0.81	0.57	0.53
	Plan 504	5					
	Special Education	1,100	26	21.44	1.29	0.70	0.70
	Title I	538	26	21.67	0.90	0.62	0.56
4	All Students	1,117	26	21.52	1.18	0.65	0.70
	Low Income	534	26	21.53	1.12	0.67	0.64
	African American	156	26	21.60	1.08	0.70	0.60
	Asian	53	26	21.40	1.13	0.55	0.76
	Hispanic	310	26	21.66	0.94	0.62	0.58
	Multi-race	32	26	21.38	0.91	0.39	0.71
	Native American	4					
	Pacific Islander/Hawaiian	0					
	White	555	26	21.43	1.35	0.67	0.77
	Female	399	26	21.48	1.27	0.67	0.72
	Male	714	26	21.54	1.14	0.64	0.68
	LEP	115	26	21.69	0.78	0.50	0.55
	FLEP	50	26	22.00	0.00		
	LEPFLEP	165	26	21.78	0.66	0.53	0.46
Plan 504	9						
Special Education	1,115	26	21.52	1.19	0.65	0.70	
Title I	538	26	21.69	0.87	0.62	0.53	
5	All Students	1,103	26	21.55	1.06	0.60	0.67
	Low Income	506	26	21.60	0.99	0.58	0.64
	African American	131	26	21.79	0.72	0.49	0.51
	Asian	56	26	21.45	1.17	0.60	0.74
	Hispanic	279	26	21.63	0.99	0.70	0.55
	Multi-race	35	26	21.40	1.09	0.42	0.83
	Native American	2					
	Pacific Islander/Hawaiian	3					
	White	595	26	21.48	1.12	0.57	0.73
	Female	377	26	21.49	1.16	0.67	0.66
	Male	726	26	21.58	1.00	0.55	0.67
	LEP	97	26	21.76	0.69	0.47	0.50
	FLEP	30	26	21.73	0.83	0.39	0.65
	LEPFLEP	127	26	21.76	0.72	0.44	0.54
Plan 504	6						
Special Education	1,103	26	21.55	1.06	0.60	0.67	
Title I	492	26	21.73	0.81	0.56	0.54	
6	All Students	1,150	26	21.53	1.16	0.67	0.67
	Low Income	499	26	21.62	0.94	0.61	0.58
	African American	168	26	21.68	0.77	0.47	0.56
	Asian	42	26	21.62	0.94	0.71	0.50
	Hispanic	296	26	21.60	1.04	0.64	0.62
	Multi-race	25	26	21.64	1.38	0.66	0.81
	Native American	1					

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
6	Pacific Islander/Hawaiian	2					
	White	613	26	21.44	1.29	0.69	0.72
	Female	348	26	21.41	1.36	0.72	0.72
	Male	800	26	21.58	1.05	0.63	0.64
	LEP	104	26	21.62	0.96	0.64	0.58
	FLEP	34	26	21.82	0.39	-0.17	0.42
	LEPFLEP	138	26	21.67	0.86	0.60	0.54
	Plan 504	4					
	Special Education	1,150	26	21.53	1.16	0.67	0.67
	Title I	510	26	21.67	0.87	0.57	0.57
7	All Students	1,080	26	21.51	1.18	0.66	0.69
	Low Income	444	26	21.51	1.16	0.68	0.66
	African American	139	26	21.68	0.88	0.57	0.57
	Asian	65	26	21.31	1.46	0.73	0.76
	Hispanic	238	26	21.60	1.10	0.62	0.68
	Multi-race	30	26	21.33	1.49	0.76	0.72
	Native American	3					
	Pacific Islander/Hawaiian	0					
	White	603	26	21.45	1.22	0.66	0.71
	Female	348	26	21.45	1.29	0.70	0.70
	Male	731	26	21.53	1.13	0.63	0.69
	LEP	96	26	21.66	1.01	0.80	0.45
	FLEP	21	26	21.95	0.22	0.00	0.22
	LEPFLEP	117	26	21.71	0.93	0.79	0.42
	Plan 504	3					
	Special Education	1,080	26	21.51	1.18	0.66	0.69
	Title I	390	26	21.77	0.81	0.56	0.54
8	All Students	946	26	21.51	1.18	0.67	0.68
	Low Income	389	26	21.50	1.20	0.72	0.64
	African American	132	26	21.70	0.88	0.67	0.51
	Asian	41	26	21.27	1.50	0.80	0.67
	Hispanic	241	26	21.66	0.86	0.54	0.58
	Multi-race	17	26	21.06	2.41	0.90	0.75
	Native American	4					
	Pacific Islander/Hawaiian	2					
	White	504	26	21.43	1.27	0.65	0.75
	Female	309	26	21.42	1.39	0.73	0.72
	Male	633	26	21.56	1.05	0.61	0.66
	LEP	92	26	21.52	1.05	0.61	0.66
	FLEP	20	26	21.60	0.99	0.73	0.52
	LEPFLEP	112	26	21.54	1.04	0.62	0.64
	Plan 504	6					
	Special Education	946	26	21.51	1.18	0.67	0.68
	Title I	349	26	21.74	0.80	0.54	0.54
10	All Students	746	39	30.49	3.61	0.89	1.20
	Low Income	292	39	30.50	3.48	0.91	1.07
	African American	102	39	30.87	3.71	0.92	1.03
	Asian	40	39	30.90	3.24		

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
10	Hispanic	174	39	30.25	3.78	0.93	0.97
	Multi-race	12	39	28.67	4.48		
	Native American	1					
	Pacific Islander/Hawaiian	0					
	White	417	39	30.53	3.50	0.83	1.43
	Female	253	39	30.67	3.52	0.90	1.12
	Male	493	39	30.40	3.65	0.88	1.24
	LEP	86	39	30.65	3.56	0.87	1.28
	FLEP	12	39	32.08	2.31		
	LEPFLEP	98	39	30.83	3.45	0.87	1.26
	Plan 504	7					
Special Education	745	39	30.49	3.61	0.89	1.20	
Title I	199	39	30.63	3.76	0.89	1.25	

Note: No reliability or SEM values are reported for some subgroups, because there were some items for which only one student in the subgroup received a score.

Table Q-17. 2015 MCAS-Alt: Subgroup Reliabilities – STE

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	All Students	1,047	39	31.66	2.73	0.82	1.17
	Low Income	475	39	31.76	2.60	0.82	1.10
	African American	122	39	32.29	2.14	0.62	1.31
	Asian	53	39	31.89	2.45	0.86	0.91
	Hispanic	263	39	31.73	2.66	0.84	1.08
	Multi-race	36	39	31.14	3.03	0.72	1.59
	Native American	1					
	Pacific Islander/Hawaiian	3					
	White	566	39	31.51	2.85	0.81	1.23
	Female	334	39	31.46	2.90	0.86	1.09
	Male	713	39	31.75	2.64	0.78	1.25
	LEP	91	39	31.92	2.60	0.10	2.48
	FLEP	30	39	32.57	1.19	0.90	0.38
	LEPFLEP	121	39	32.08	2.35	0.78	1.10
	Plan 504	6					
	Special Education	1,047	39	31.66	2.73	0.82	1.17
	Title I	474	39	32.00	2.40	0.83	1.00
8	All Students	959	39	31.47	2.95	0.82	1.26
	Low Income	400	39	31.48	2.93	0.86	1.08
	African American	129	39	31.87	2.74	0.77	1.30
	Asian	42	39	31.71	2.61	0.87	0.92
	Hispanic	255	39	31.29	3.12	0.77	1.51
	Multi-race	16	39	30.63	4.19	0.94	0.99
	Native American	3					
	Pacific Islander/Hawaiian	2					
	White	507	39	31.49	2.89	0.82	1.24

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Female	309	39	31.41	3.04	0.87	1.11
	Male	646	39	31.52	2.90	0.77	1.39
	LEP	90	39	31.19	3.29	0.87	1.20
	FLEP	21	39	32.52	1.36	0.89	0.46
	LEPFLEP	111	39	31.44	3.06	0.87	1.11
	Plan 504	7					
	Special Education	959	39	31.47	2.95	0.82	1.26
	Title I	353	39	31.93	2.50	0.73	1.29

Note: No reliability or SEM values are reported for some subgroups, because there were some items for which only one student in the subgroup received a score.

Table Q-18. 2015 MCAS-Alt: Subgroup Reliabilities – High School Biology

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	574	39	31.15	3.25	0.80	1.45
Low Income	251	39	31.03	3.38	0.80	1.51
African American	93	39	31.39	3.26	0.73	1.70
Asian	35	39	31.17	2.68	0.74	1.36
Hispanic	157	39	30.88	3.55	0.81	1.54
Multi-race	12	39	29.75	4.00	0.55	2.69
Native American	0					
Pacific Islander/Hawaiian	0					
White	277	39	31.27	3.10	0.83	1.29
Female	190	39	31.11	3.40	0.85	1.30
Male	384	39	31.16	3.18	0.77	1.53
LEP	84	39	30.99	3.62	0.71	1.93
FLEP	8					
LEPFLEP	92	39	31.05	3.54	0.71	1.91
Plan 504	3					
Special Education	573	39	31.15	3.25	0.80	1.45
Title I	187	39	31.82	2.62	0.88	0.92

Note: No reliability or SEM values are reported for some subgroups, because there were some items for which only one student in the subgroup received a score.

Table Q-19. 2015 MCAS-Alt: Subgroup Reliabilities – High School Chemistry

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	57	39	31.47	2.59	0.72	1.36
Low Income	18	39	31.00	2.81	0.61	1.76
African American	11	39	32.18	2.40	0.00	2.40
Asian	0					
Hispanic	12	39	32.33	0.98	0.42	0.75

continued

<i>Subgroup</i>	<i>Number of Students</i>	<i>Raw Score</i>			<i>Alpha</i>	<i>SEM</i>
		<i>Maximum</i>	<i>Mean</i>	<i>Standard Deviation</i>		
Multi-race	0					
Native American	1					
Pacific Islander/Hawaiian	0					
White	33	39	30.88	2.94	0.71	1.60
Female	25	39	31.32	2.41	0.66	1.40
Male	32	39	31.59	2.75	0.77	1.31
LEP	8					
FLEP	0					
LEPFLEP	8					
Plan 504	1					
Special Education	57	39	31.47	2.59	0.72	1.36
Title I	18	39	32.28	1.96	0.57	1.29

Note: No reliability or SEM values are reported for some subgroups, because there were some items for which only one student in the subgroup received a score.

Table Q-20. 2015 MCAS-Alt: Subgroup Reliabilities – High School Introductory Physics

<i>Subgroup</i>	<i>Number of Students</i>	<i>Raw Score</i>			<i>Alpha</i>	<i>SEM</i>
		<i>Maximum</i>	<i>Mean</i>	<i>Standard Deviation</i>		
All Students	45	39	29.24	4.09	0.78	1.91
Low Income	10	39	27.10	3.70	0.79	1.69
African American	3					
Asian	4					
Hispanic	5					
Multi-race	1					
Native American	0					
Pacific Islander/Hawaiian	0					
White	32	39	29.44	3.56	0.61	2.21
Female	13	39	29.38	3.73	0.57	2.44
Male	32	39	29.19	4.28	0.80	1.92
LEP	0					
FLEP	0					
LEPFLEP	0					
Plan 504	1					
Special Education	45	39	29.24	4.09	0.78	1.91
Title I	2					

Note: No reliability or SEM values are reported for some subgroups, because there were some items for which only one student in the subgroup received a score.

**Table Q-21. 2015 MCAS-Alt: Subgroup Reliabilities –
High School Technology/Engineering**

<i>Subgroup</i>	<i>Number of Students</i>	<i>Raw Score</i>			<i>Alpha</i>	<i>SEM</i>
		<i>Maximum</i>	<i>Mean</i>	<i>Standard Deviation</i>		
All Students	69	39	31.32	2.99	0.66	1.73
Low Income	18	39	31.28	3.39	0.73	1.77
African American	1					
Asian	0					
Hispanic	13	39	30.77	3.79	0.73	1.96
Multi-race	0					
Native American	0					
Pacific Islander/Hawaiian	0					
White	55	39	31.45	2.82	0.65	1.66
Female	16	39	31.75	2.27	0.65	1.35
Male	53	39	31.19	3.18	0.66	1.85
LEP	2					
FLEP	1					
LEPFLEP	3					
Plan 504	1					
Special Education	69	39	31.32	2.99	0.66	1.73
Title I	10	39	32.70	0.67	0.38	0.53

Note: No reliability or SEM values are reported for some subgroups, because there were some items for which only one student in the subgroup received a score.