

APPENDIX P

CLASSICAL RELIABILITY

**Table P-1. 2013 MCAS: Subgroup Reliabilities –
ELA**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	69,307	48	35.73	8.02	0.90	2.52
	Low Income	26,851	48	31.74	8.69	0.90	2.78
	African American	5,510	48	31.45	8.69	0.90	2.79
	Asian	4,333	48	37.63	7.27	0.89	2.40
	Hispanic	11,759	48	30.77	9.01	0.90	2.83
	Multi-race	2,345	48	35.88	7.94	0.90	2.51
	Native American	163	48	33.17	8.30	0.90	2.67
	Pacific Islander/Hawaiian	68	48	34.71	7.46	0.86	2.77
	White	45,103	48	37.36	6.93	0.88	2.40
	Female	33,969	48	36.62	7.65	0.90	2.48
	Male	35,329	48	34.87	8.26	0.90	2.55
	LEP	6,164	48	27.97	9.09	0.89	2.96
	FLEP	2,672	48	34.99	7.53	0.88	2.62
	LEPFLEP	8,836	48	30.09	9.23	0.90	2.87
	Plan 504	2,771	48	34.88	7.29	0.88	2.58
	Special Education	11,045	48	27.85	9.31	0.90	2.93
	Title I	26,771	48	32.13	8.59	0.90	2.76
4	All Students	69,214	72	48.59	10.85	0.90	3.50
	Low Income	26,045	72	43.26	11.38	0.90	3.66
	African American	5,448	72	42.91	11.67	0.90	3.69
	Asian	4,321	72	52.05	10.17	0.89	3.43
	Hispanic	11,231	72	42.25	11.76	0.90	3.71
	Multi-race	2,145	72	49.21	10.63	0.89	3.50
	Native American	180	72	45.76	11.35	0.89	3.70
	Pacific Islander/Hawaiian	75	72	47.13	11.30	0.90	3.64
	White	45,795	72	50.48	9.68	0.88	3.38
	Female	34,003	72	50.72	10.29	0.89	3.39
	Male	35,209	72	46.54	10.99	0.90	3.51
	LEP	5,401	72	37.95	11.75	0.89	3.89
	FLEP	2,775	72	47.35	10.35	0.88	3.52
	LEPFLEP	8,176	72	41.14	12.14	0.90	3.80
	Plan 504	3,221	72	47.12	9.74	0.87	3.49
	Special Education	11,631	72	37.63	11.35	0.89	3.73
	Title I	25,683	72	43.84	11.31	0.90	3.64
5	All Students	69,486	52	35.77	8.72	0.90	2.81
	Low Income	26,135	52	31.58	9.04	0.89	2.99
	African American	5,703	52	31.49	9.20	0.89	3.02
	Asian	4,162	52	38.81	8.37	0.90	2.67
	Hispanic	11,078	52	30.74	9.27	0.89	3.03
	Multi-race	1,929	52	36.51	8.57	0.90	2.78
	Native American	155	52	33.11	9.07	0.89	2.96
	Pacific Islander/Hawaiian	71	52	32.87	8.94	0.89	2.96
	White	46,366	52	37.22	7.86	0.88	2.72
	Female	34,147	52	36.96	8.36	0.89	2.78
	Male	35,335	52	34.63	8.90	0.90	2.81

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	LEP	4,419	52	25.95	9.00	0.87	3.18
	FLEP	2,891	52	34.15	8.35	0.88	2.93
	LEPFLEP	7,310	52	29.20	9.62	0.90	3.10
	Plan 504	3,561	52	34.97	7.85	0.87	2.82
	Special Education	11,976	52	26.94	9.04	0.88	3.08
	Title I	23,998	52	31.83	9.04	0.89	2.99
6	All Students	70,304	52	36.28	8.60	0.89	2.81
	Low Income	26,484	52	31.84	8.83	0.88	3.02
	African American	5,834	52	31.74	8.83	0.88	3.05
	Asian	4,098	52	38.88	8.07	0.89	2.70
	Hispanic	10,818	52	30.66	9.15	0.89	3.07
	Multi-race	1,995	52	36.50	8.41	0.89	2.80
	Native American	153	52	34.37	7.48	0.85	2.91
	Pacific Islander/Hawaiian	84	52	36.38	8.77	0.90	2.74
	White	47,294	52	37.90	7.68	0.88	2.71
	Female	34,455	52	37.65	8.26	0.89	2.75
	Male	35,843	52	34.96	8.70	0.89	2.84
	LEP	3,853	52	25.17	8.26	0.85	3.21
	FLEP	2,550	52	33.58	7.91	0.86	2.98
	LEPFLEP	6,403	52	28.52	9.11	0.88	3.15
7	Plan 504	3,768	52	35.82	7.59	0.86	2.82
	Special Education	12,113	52	27.68	8.69	0.87	3.12
	Title I	20,822	52	31.91	8.94	0.89	3.03
	All Students	70,452	72	50.44	10.64	0.90	3.35
	Low Income	26,174	72	44.92	11.14	0.90	3.60
	African American	5,883	72	45.07	11.03	0.89	3.60
	Asian	4,024	72	53.73	10.17	0.90	3.19
	Hispanic	10,794	72	43.70	11.67	0.90	3.68
	Multi-race	1,735	72	50.48	10.77	0.90	3.38
	Native American	152	72	46.05	12.02	0.91	3.55
	Pacific Islander/Hawaiian	89	72	50.71	10.05	0.88	3.42
	White	47,752	72	52.37	9.44	0.89	3.20
	Female	34,501	72	52.72	9.68	0.89	3.18
	Male	35,948	72	48.25	11.06	0.91	3.41
8	LEP	3,435	72	35.50	11.22	0.87	4.05
	FLEP	2,547	72	46.89	9.05	0.85	3.45
	LEPFLEP	5,982	72	40.35	11.78	0.89	3.88
	Plan 504	3,647	72	49.44	9.27	0.87	3.33
	Special Education	11,748	72	39.37	11.18	0.88	3.80
	Title I	19,162	72	44.99	11.18	0.90	3.58
	All Students	71,082	52	37.99	8.77	0.90	2.83
	Low Income	26,028	52	33.46	9.21	0.89	3.06
	African American	6,070	52	33.62	9.05	0.89	3.06
	Asian	3,722	52	40.58	8.46	0.90	2.66
	Hispanic	10,719	52	32.25	9.70	0.90	3.12
	Multi-race	1,581	52	37.72	9.10	0.90	2.86
	Native American	179	52	35.86	8.16	0.87	2.98

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Pacific Islander/Hawaiian	66	52	36.15	8.15	0.87	2.96
	White	48,714	52	39.62	7.75	0.88	2.73
	Female	34,893	52	39.71	8.14	0.89	2.72
	Male	36,181	52	36.34	9.04	0.90	2.88
	LEP	3,016	52	24.47	8.70	0.86	3.29
	FLEP	1,954	52	33.81	8.18	0.86	3.06
	LEPFLEP	4,970	52	28.14	9.64	0.89	3.24
	Plan 504	3,603	52	37.42	7.59	0.86	2.84
	Special Education	11,719	52	28.70	9.16	0.88	3.18
	Title I	18,897	52	33.55	9.33	0.89	3.05
10	All Students	67,804	72	55.29	9.83	0.89	3.23
	Low Income	22,631	72	50.31	10.97	0.89	3.64
	African American	5,711	72	50.39	10.88	0.89	3.62
	Asian	3,772	72	57.55	10.04	0.90	3.11
	Hispanic	9,098	72	48.79	11.72	0.90	3.79
	Multi-race	1,466	72	55.34	9.83	0.89	3.23
	Native American	175	72	53.89	8.99	0.87	3.27
	Pacific Islander/Hawaiian	78	72	53.82	12.49	0.92	3.59
	White	47,504	72	56.96	8.47	0.87	3.01
	Female	33,729	72	57.02	9.13	0.89	3.04
	Male	34,075	72	53.59	10.20	0.89	3.34
	LEP	2,549	72	36.94	11.80	0.84	4.66
	FLEP	1,407	72	49.85	9.52	0.86	3.59
	LEPFLEP	3,956	72	41.53	12.65	0.88	4.42
	Plan 504	3,379	72	55.88	8.23	0.86	3.08
	Special Education	10,199	72	45.30	11.24	0.88	3.91
	Title I	13,897	72	50.05	10.82	0.89	3.60

Table P-2. 2013 MCAS: Subgroup Reliabilities – Mathematics

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	69,415	40	29.63	7.36	0.88	2.50
	Low Income	26,927	40	26.48	7.81	0.88	2.71
	African American	5,528	40	25.60	7.85	0.88	2.75
	Asian	4,336	40	32.76	6.13	0.87	2.21
	Hispanic	11,785	40	26.02	8.01	0.88	2.72
	Multi-race	2,356	40	29.49	7.59	0.89	2.50
	Native American	163	40	27.07	6.98	0.85	2.74
	Pacific Islander/Hawaiian	68	40	28.07	8.34	0.91	2.55
	White	45,146	40	30.79	6.65	0.87	2.41
	Female	34,013	40	29.82	7.19	0.88	2.49
	Male	35,387	40	29.46	7.51	0.89	2.51
	LEP	6,215	40	24.47	8.06	0.88	2.78
	FLEP	2,676	40	29.84	7.04	0.87	2.49
	LEPFLEP	8,891	40	26.08	8.15	0.89	2.71

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM	
			Maximum	Mean	Standard Deviation			
3	Plan 504	2,769	40	28.69	7.00	0.86	2.60	
	Special Education	11,085	40	23.18	8.26	0.88	2.83	
	Title I	26,824	40	26.91	7.77	0.88	2.69	
4	All Students	69,538	54	36.78	10.18	0.90	3.27	
	Low Income	26,189	54	31.96	10.22	0.90	3.30	
	African American	5,472	54	30.84	10.38	0.90	3.30	
	Asian	4,348	54	41.86	9.09	0.88	3.09	
	Hispanic	11,319	54	31.36	10.28	0.90	3.30	
	Multi-race	2,154	54	36.88	10.41	0.90	3.29	
	Native American	180	54	33.48	10.60	0.90	3.31	
	Pacific Islander/Hawaiian	75	54	33.96	10.94	0.92	3.19	
	White	45,955	54	38.35	9.37	0.88	3.22	
	Female	34,148	54	36.95	9.97	0.89	3.26	
	Male	35,374	54	36.61	10.37	0.90	3.28	
	LEP	5,480	54	28.72	10.23	0.90	3.30	
	FLEP	2,783	54	36.03	9.87	0.89	3.25	
	LEPFLEP	8,263	54	31.19	10.69	0.90	3.32	
	Plan 504	3,233	54	35.57	9.82	0.89	3.31	
	Special Education	11,732	54	27.88	10.29	0.89	3.36	
	Title I	25,806	54	32.64	10.24	0.90	3.30	
	5	All Students	69,500	54	37.42	11.09	0.91	3.40
		Low Income	26,134	54	32.23	11.32	0.91	3.47
		African American	5,706	54	31.11	11.35	0.91	3.47
Asian		4,170	54	43.41	9.61	0.90	3.04	
Hispanic		11,098	54	31.55	11.46	0.91	3.48	
Multi-race		1,931	54	37.61	11.22	0.91	3.38	
Native American		153	54	33.58	11.55	0.91	3.48	
Pacific Islander/Hawaiian		71	54	34.00	11.38	0.90	3.57	
White		46,335	54	39.08	10.17	0.89	3.32	
Female		34,167	54	37.93	10.77	0.90	3.38	
Male		35,318	54	36.93	11.37	0.91	3.40	
LEP		4,460	54	27.62	11.37	0.91	3.44	
FLEP		2,895	54	36.41	11.06	0.90	3.42	
LEPFLEP		7,355	54	31.08	12.04	0.92	3.49	
Plan 504		3,548	54	35.83	10.36	0.89	3.43	
Special Education		11,925	54	26.85	11.20	0.90	3.46	
Title I		24,035	54	32.77	11.30	0.91	3.47	
6		All Students	70,311	54	37.43	11.39	0.92	3.28
		Low Income	26,493	54	31.94	11.68	0.91	3.50
		African American	5,834	54	31.47	11.59	0.91	3.51
	Asian	4,103	54	43.84	9.90	0.92	2.79	
	Hispanic	10,849	54	30.71	11.97	0.91	3.53	
	Multi-race	1,993	54	36.94	11.75	0.92	3.31	
	Native American	152	54	34.85	11.13	0.91	3.40	
	Pacific Islander/Hawaiian	84	54	38.04	12.01	0.93	3.21	
	White	47,250	54	39.19	10.34	0.91	3.17	
	Female	34,444	54	38.00	10.94	0.91	3.23	
	Male	35,845	54	36.89	11.77	0.92	3.32	

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
6	LEP	3,911	54	26.46	11.87	0.91	3.61
	FLEP	2,554	54	35.80	11.19	0.91	3.34
	LEPFLEP	6,465	54	30.15	12.47	0.92	3.55
	Plan 504	3,760	54	36.26	10.43	0.90	3.33
	Special Education	12,077	54	25.96	11.27	0.90	3.60
	Title I	20,831	54	32.48	11.83	0.91	3.48
7	All Students	70,733	54	35.80	11.96	0.92	3.39
	Low Income	26,336	54	29.59	11.76	0.91	3.50
	African American	5,909	54	28.90	11.58	0.91	3.50
	Asian	4,031	54	42.37	10.70	0.92	3.02
	Hispanic	10,885	54	28.18	11.95	0.91	3.50
	Multi-race	1,739	54	35.73	12.33	0.92	3.40
	Native American	151	54	31.60	11.94	0.91	3.49
	Pacific Islander/Hawaiian	90	54	36.50	11.66	0.92	3.36
	White	47,888	54	37.85	10.93	0.91	3.30
	Female	34,617	54	36.27	11.64	0.92	3.38
	Male	36,097	54	35.35	12.24	0.92	3.40
	LEP	3,497	54	22.51	10.88	0.90	3.44
	FLEP	2,551	54	33.02	11.33	0.91	3.46
	LEPFLEP	6,048	54	26.94	12.23	0.92	3.52
8	Plan 504	3,663	54	34.75	10.81	0.90	3.38
	Special Education	11,813	54	23.91	11.05	0.90	3.47
	Title I	19,279	54	29.83	11.89	0.91	3.50
	All Students	71,054	54	35.08	11.72	0.91	3.48
	Low Income	25,996	54	29.37	11.43	0.91	3.52
	African American	6,045	54	29.06	11.40	0.91	3.51
	Asian	3,739	54	41.84	10.69	0.91	3.18
	Hispanic	10,748	54	28.30	11.58	0.91	3.50
	Multi-race	1,565	54	34.69	12.25	0.92	3.50
	Native American	178	54	31.06	11.36	0.90	3.53
	Pacific Islander/Hawaiian	67	54	33.07	10.95	0.90	3.43
	White	48,674	54	36.85	10.90	0.90	3.42
	Female	34,890	54	35.62	11.41	0.91	3.47
	Male	36,147	54	34.57	11.98	0.92	3.47
10	LEP	3,063	54	22.82	10.82	0.90	3.38
	FLEP	1,954	54	31.17	11.30	0.90	3.50
	LEPFLEP	5,017	54	26.07	11.73	0.91	3.47
	Plan 504	3,599	54	34.15	10.53	0.89	3.49
	Special Education	11,655	54	23.35	10.40	0.89	3.43
	Title I	18,909	54	29.98	11.67	0.91	3.50
	All Students	67,929	60	39.83	12.52	0.92	3.56
	Low Income	22,684	60	33.34	13.00	0.92	3.78
	African American	5,722	60	31.70	12.65	0.91	3.79
	Asian	3,794	60	46.02	11.61	0.92	3.26
	Hispanic	9,137	60	31.06	13.14	0.92	3.80
	Multi-race	1,457	60	39.56	12.76	0.92	3.59
	Native American	176	60	38.32	12.42	0.92	3.62

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
10	Pacific Islander/Hawaiian	75	60	37.81	14.16	0.93	3.73
	White	47,568	60	42.01	11.15	0.91	3.40
	Female	33,711	60	39.86	12.20	0.92	3.54
	Male	34,218	60	39.80	12.83	0.92	3.58
	LEP	2,609	60	22.05	12.26	0.91	3.65
	FLEP	1,400	60	32.96	12.25	0.91	3.73
	LEPFLEP	4,009	60	25.86	13.32	0.92	3.77
	Plan 504	3,386	60	40.46	10.72	0.89	3.50
	Special Education	10,299	60	26.90	12.10	0.90	3.78
	Title I	13,920	60	33.45	13.13	0.92	3.77

Table P-3. 2013 MCAS: Subgroup Reliabilities – STE

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	All Students	69,566	54	36.04	9.30	0.87	3.38
	Low Income	26,186	54	31.27	9.13	0.86	3.45
	African American	5,718	54	29.88	9.22	0.86	3.48
	Asian	4,168	54	39.21	9.26	0.87	3.28
	Hispanic	11,107	54	30.31	9.32	0.86	3.47
	Multi-race	1,936	54	36.68	9.07	0.86	3.35
	Native American	153	54	33.51	8.92	0.85	3.43
	Pacific Islander/Hawaiian	70	54	32.77	9.48	0.87	3.44
	White	46,379	54	37.87	8.36	0.84	3.31
	Female	34,185	54	35.96	9.21	0.86	3.40
	Male	35,367	54	36.11	9.38	0.87	3.36
	LEP	4,464	54	25.44	8.76	0.85	3.43
	FLEP	2,903	54	33.37	8.78	0.85	3.45
	LEPFLEP	7,367	54	28.57	9.59	0.87	3.48
	Plan 504	3,540	54	36.02	8.59	0.85	3.33
	Special Education	12,047	54	28.74	9.09	0.86	3.42
	Title I	24,043	54	31.29	9.16	0.86	3.45
8	All Students	70,992	54	33.92	10.05	0.88	3.43
	Low Income	25,957	54	28.41	9.67	0.87	3.53
	African American	6,049	54	27.45	9.64	0.87	3.53
	Asian	3,737	54	37.58	10.26	0.90	3.32
	Hispanic	10,724	54	26.82	9.89	0.87	3.54
	Multi-race	1,560	54	34.13	10.46	0.89	3.44
	Native American	178	54	31.44	9.42	0.86	3.50
	Pacific Islander/Hawaiian	67	54	32.16	9.13	0.86	3.44
	White	48,637	54	36.02	8.97	0.86	3.34
	Female	34,858	54	33.40	9.77	0.88	3.43
	Male	36,117	54	34.42	10.29	0.89	3.42
	LEP	3,062	54	19.94	8.28	0.82	3.47
	FLEP	1,953	54	28.05	9.29	0.85	3.56
	LEPFLEP	5,015	54	23.10	9.54	0.86	3.55

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Plan 504	3,590	54	34.38	9.02	0.86	3.39
	Special Education	11,690	54	25.42	9.55	0.87	3.51
	Title I	18,857	54	28.29	9.86	0.87	3.52

Table P-4. 2013 MCAS: Subgroup Reliabilities – High School Biology

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	48,648	60	39.88	11.60	0.91	3.39
Low Income	16,653	60	33.47	11.57	0.91	3.55
African American	3,726	60	32.77	11.39	0.90	3.57
Asian	2,737	60	44.51	11.57	0.92	3.20
Hispanic	6,708	60	31.33	11.72	0.91	3.58
Multi-race	1,057	60	39.04	11.67	0.91	3.41
Native American	132	60	35.58	10.31	0.89	3.44
Pacific Islander/Hawaiian	51	60	41.53	12.81	0.93	3.35
White	34,137	60	42.05	10.36	0.90	3.27
Female	24,325	60	40.29	11.31	0.91	3.38
Male	24,273	60	39.50	11.85	0.92	3.39
LEP	1,934	60	23.45	9.77	0.87	3.51
FLEP	1,110	60	32.39	11.02	0.90	3.57
LEPFLEP	3,044	60	26.71	11.11	0.90	3.59
Plan 504	2,391	60	40.23	10.18	0.89	3.34
Special Education	7,542	60	29.24	10.80	0.89	3.54
Title I	9,910	60	33.37	11.62	0.91	3.56

Table P-5. 2013 MCAS: Subgroup Reliabilities – High School Chemistry

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	1,145	60	39.99	11.35	0.91	3.41
Low Income	292	60	33.64	11.73	0.91	3.55
African American	150	60	33.35	11.63	0.91	3.50
Asian	97	60	43.71	10.75	0.91	3.27
Hispanic	114	60	30.79	12.13	0.91	3.63
Multi-race	30	60	41.13	12.10	0.92	3.33
Native American	2					
Pacific Islander/Hawaiian	3					
White	747	60	42.23	9.90	0.89	3.29
Female	583	60	39.73	11.49	0.91	3.43
Male	561	60	40.29	11.20	0.91	3.38

continued

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
LEP	72	60	23.60	8.73	0.85	3.39
FLEP	17	60	38.18	9.40	0.87	3.36
LEPFLEP	89	60	26.38	10.53	0.89	3.48
Plan 504	59	60	41.41	9.47	0.87	3.38
Special Education	69	60	31.54	11.56	0.91	3.55
Title I	119	60	25.45	9.52	0.87	3.48

Table P-6. 2013 MCAS: Subgroup Reliabilities – High School Introductory Physics

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	16,913	60	36.79	12.08	0.91	3.59
Low Income	6,333	60	29.63	10.90	0.89	3.61
African American	2,001	60	29.81	10.46	0.88	3.58
Asian	1,038	60	42.81	12.22	0.92	3.41
Hispanic	2,928	60	27.86	10.89	0.89	3.60
Multi-race	413	60	37.96	12.10	0.91	3.61
Native American	34	60	32.15	10.86	0.90	3.40
Pacific Islander/Hawaiian	15	60	37.93	11.15	0.90	3.49
White	10,463	60	40.01	10.70	0.90	3.47
Female	8,342	60	36.33	11.82	0.91	3.61
Male	8,558	60	37.26	12.30	0.92	3.58
LEP	1,028	60	22.98	9.49	0.86	3.51
FLEP	426	60	32.18	10.11	0.87	3.59
LEPFLEP	1,454	60	25.67	10.54	0.89	3.57
Plan 504	857	60	37.76	11.09	0.90	3.53
Special Education	2,614	60	27.83	10.45	0.88	3.60
Title I	4,408	60	28.42	11.00	0.89	3.60

Table P-7. 2013 MCAS: Subgroup Reliabilities – High School Technology/Engineering

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	2,528	60	35.01	10.76	0.89	3.51
Low Income	1,335	60	31.14	10.36	0.88	3.52
African American	297	60	30.18	9.55	0.87	3.47
Asian	54	60	37.02	10.34	0.88	3.61
Hispanic	560	60	28.69	10.50	0.89	3.52
Multi-race	47	60	33.98	9.91	0.88	3.44
Native American	7					
Pacific Islander/Hawaiian	6					
White	1,554	60	38.19	9.75	0.87	3.45

continued

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
Female	932	60	31.86	10.71	0.89	3.52
Male	1,594	60	36.87	10.35	0.89	3.49
LEP	145	60	21.46	8.77	0.85	3.42
FLEP	95	60	32.23	9.54	0.86	3.51
LEPFLEP	240	60	25.72	10.49	0.89	3.48
Plan 504	142	60	37.36	9.15	0.86	3.43
Special Education	663	60	30.12	9.97	0.88	3.48
Title I	1,073	60	32.60	10.70	0.89	3.51

Table P-8. 2013 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	8	8	6.60	1.83	0.76	0.91
	LT	33	40	29.13	6.54	0.87	2.34
4	CC	1	8	6.32	1.47		
	CT	1	12	6.60	1.80		
	LA	10	10	7.82	2.04	0.68	1.16
	LT	30	42	27.85	7.08	0.88	2.50
5	LA	6	6	4.83	1.38	0.61	0.86
	LT	34	46	30.95	7.70	0.88	2.67
6	LA	7	7	5.27	1.67	0.63	1.01
	LT	33	45	31.01	7.31	0.87	2.62
7	CC	1	8	6.55	1.37		
	CT	1	12	6.70	1.62		
	LA	7	7	5.32	1.65	0.64	0.99
	LT	33	45	31.87	7.31	0.88	2.55
8	LA	5	5	3.90	1.19	0.50	0.84
	LT	35	47	34.09	7.99	0.89	2.70
10	CC	1	8	7.06	1.33		
	CT	1	12	7.30	1.60		
	LA	35	47	36.72	6.97	0.87	2.50
	LT	5	5	4.21	1.11	0.60	0.71

* Reporting category definitions follow table P-14.

Table P-9. 2013 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	5	6	4.43	1.41	0.51	0.98
	MD	9	10	6.51	2.08	0.60	1.31
	NF	6	6	4.74	1.39	0.61	0.86

continued

Grade	Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	NT	5	6	4.66	1.51	0.53	1.03
	OA	11	12	9.30	2.52	0.73	1.31
4	GE	5	8	5.55	1.52	0.31	1.26
	MD	8	11	6.11	2.86	0.67	1.65
	NF	10	10	8.15	2.01	0.73	1.06
	NT	11	11	8.55	2.26	0.70	1.23
	OA	8	14	8.41	3.34	0.68	1.89
5	GE	6	6	4.26	1.40	0.53	0.96
	MD	8	11	7.48	2.65	0.64	1.60
	NF	10	13	8.42	3.56	0.75	1.77
	NT	10	13	8.99	3.14	0.69	1.75
	OA	8	11	8.26	2.14	0.60	1.34
6	EE	13	16	12.28	3.39	0.78	1.60
	GE	8	11	6.80	2.61	0.68	1.47
	NS	10	10	7.21	2.36	0.73	1.22
	RP	6	9	5.54	2.48	0.55	1.66
	SP	5	8	5.60	2.10	0.57	1.38
7	EE	8	11	7.73	2.72	0.72	1.44
	GE	11	11	7.48	2.50	0.73	1.29
	NS	10	13	8.47	3.34	0.74	1.70
	RP	8	11	6.81	2.91	0.61	1.82
	SP	5	8	5.31	2.00	0.57	1.31
8	EE	13	16	10.63	3.89	0.75	1.95
	FN	10	13	8.67	2.84	0.63	1.74
	GE	13	16	10.57	4.11	0.79	1.87
	NS	3	3	1.80	0.98	0.45	0.73
	SP	3	6	3.40	1.47	0.34	1.20
10	AF	12	18	11.76	3.94	0.73	2.03
	GE	12	18	12.22	3.94	0.79	1.82
	NQ	9	12	7.45	3.16	0.71	1.71
	SP	9	12	8.41	2.83	0.70	1.54

* Reporting category definitions follow table P-14.

Table P-10. 2013 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	9.75	3.26	0.66	1.90
	LS	13	16	10.90	3.01	0.69	1.67
	PS	11	14	10.29	2.77	0.62	1.72
	TE	5	8	5.10	1.82	0.35	1.47
8	ES	11	14	9.04	3.25	0.69	1.79
	LS	11	14	8.77	2.92	0.67	1.67
	PS	10	13	7.23	2.99	0.65	1.77
	TE	10	13	8.87	2.46	0.57	1.62

* Reporting category definitions follow table P-14.

Table P-11. 2013 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	5.85	2.00	0.52	1.39
BC	12	15	9.40	2.96	0.72	1.55
EC	9	12	8.77	2.57	0.67	1.48
EV	9	12	7.67	2.76	0.68	1.55
GE	9	12	8.19	2.94	0.69	1.65

* Reporting category definitions follow table P-14.

Table P-12. 2013 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	11.03	2.84	0.72	1.51
BR	12	18	11.98	4.04	0.73	2.09
SO	9	12	7.21	2.61	0.65	1.54
TH	12	15	9.77	3.15	0.74	1.62

* Reporting category definitions follow table P-14.

Table P-13. 2013 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	7.37	2.91	0.65	1.72
HT	6	9	4.90	2.06	0.58	1.34
MF	18	24	15.52	5.11	0.80	2.27
WV	12	15	9.00	3.25	0.70	1.78

* Reporting category definitions follow table P-14.

Table P-14. 2013 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	8.22	2.50	0.62	1.54
ED	9	12	6.52	2.75	0.61	1.71
EL	15	18	10.62	3.61	0.73	1.89
FL	12	18	9.66	3.42	0.70	1.87

* 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 P-15. 2013 MCAS-Alt: Subgroup Reliabilities –
ELA**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	1,099	26	21.54	1.05	0.62	0.64
	Low Income	645	26	21.58	1.00	0.65	0.59
	African American	126	26	21.69	0.79	0.62	0.49
	Asian	64	26	21.36	1.42	0.71	0.77
	Hispanic	276	26	21.56	1.05	0.68	0.59
	Multi-race	40	26	21.60	0.96	0.58	0.62
	Native American	2					
	Pacific Islander/Hawaiian	4					
	White	581	26	21.52	1.02	0.57	0.67
	Female	354	26	21.45	1.12	0.63	0.68
	Male	742	26	21.58	1.01	0.62	0.62
	LEP	118	26	21.54	1.09	0.63	0.66
	FLEP	45	26	21.87	0.63	0.52	0.43
	LEPFLEP	163	26	21.63	0.99	0.63	0.61
	Plan 504	8					
	Special Education	1,099	26	21.54	1.05	0.62	0.64
	Title I	509	26	21.57	0.96	0.60	0.61
4	All Students	1,334	39	31.77	2.64	0.71	1.42
	Low Income	769	39	31.98	2.48	0.72	1.31
	African American	171	39	32.08	2.32	0.44	1.74
	Asian	51	39	31.41	3.03	0.64	1.83
	Hispanic	355	39	31.83	2.66	0.74	1.36
	Multi-race	30	39	31.23	3.11	0.66	1.83
	Native American	2					
	Pacific Islander/Hawaiian	3					
	White	717	39	31.72	2.66	0.73	1.39
	Female	407	39	31.75	2.67	0.78	1.25
	Male	926	39	31.78	2.63	0.66	1.53
	LEP	123	39	31.67	2.83	0.77	1.35
	FLEP	38	39	32.11	2.58	0.83	1.07
	LEPFLEP	161	39	31.78	2.77	0.78	1.29
	Plan 504	2					
	Special Education	1,334	39	31.77	2.64	0.71	1.42
	Title I	633	39	31.97	2.46	0.71	1.32
5	All Students	1,244	26	21.56	1.10	0.68	0.63
	Low Income	681	26	21.66	0.94	0.66	0.54
	African American	153	26	21.76	0.64	0.37	0.51
	Asian	71	26	21.44	1.25	0.61	0.78
	Hispanic	294	26	21.55	1.19	0.72	0.63
	Multi-race	32	26	21.59	1.13	0.72	0.60
	Native American	4					
	Pacific Islander/Hawaiian	0					
	White	689	26	21.52	1.13	0.69	0.63
	Female	401	26	21.56	1.14	0.73	0.60
	Male	842	26	21.55	1.09	0.65	0.64

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	LEP	118	26	21.58	1.25	0.77	0.59
	FLEP	44	26	21.82	0.58	0.41	0.45
	LEPFLEP	162	26	21.65	1.11	0.75	0.56
	Plan 504	4					
	Special Education	1,244	26	21.56	1.10	0.68	0.63
	Title I	531	26	21.72	0.89	0.65	0.52
	All Students	1,154	26	21.55	1.14	0.70	0.63
	Low Income	630	26	21.66	0.97	0.66	0.57
	African American	148	26	21.65	1.06	0.62	0.65
	Asian	47	26	21.62	1.13	0.66	0.66
6	Hispanic	279	26	21.60	1.06	0.70	0.58
	Multi-race	24	26	21.50	1.29	0.86	0.48
	Native American	5					
	Pacific Islander/Hawaiian	2					
	White	646	26	21.51	1.19	0.71	0.64
	Female	355	26	21.48	1.36	0.75	0.68
	Male	797	26	21.58	1.03	0.66	0.60
	LEP	92	26	21.52	1.18	0.74	0.61
	FLEP	38	26	21.95	0.52	0.50	0.37
	LEPFLEP	130	26	21.65	1.05	0.72	0.55
7	Plan 504	4					
	Special Education	1,154	26	21.55	1.14	0.70	0.63
	Title I	405	26	21.65	1.01	0.66	0.59
	All Students	1,176	39	31.57	2.86	0.81	1.24
	Low Income	649	39	31.67	2.78	0.79	1.29
	African American	143	39	31.91	2.33	0.80	1.04
	Asian	42	39	30.48	3.93	0.92	1.11
	Hispanic	298	39	31.15	3.23	0.81	1.41
	Multi-race	35	39	31.94	2.52	0.70	1.37
	Native American	0					
8	Pacific Islander/Hawaiian	3					
	White	652	39	31.76	2.67	0.79	1.21
	Female	404	39	31.61	2.88	0.85	1.13
	Male	770	39	31.56	2.85	0.79	1.31
	LEP	109	39	31.75	2.80	0.81	1.21
	FLEP	37	39	30.57	3.91	0.94	0.95
	LEPFLEP	146	39	31.45	3.15	0.89	1.04
	Plan 504	1					
	Special Education	1,176	39	31.57	2.86	0.81	1.24
	Title I	411	39	31.61	2.80	0.72	1.47
8	All Students	929	26	21.50	1.19	0.70	0.65
	Low Income	484	26	21.68	0.91	0.62	0.56
	African American	128	26	21.57	1.15	0.73	0.60
	Asian	30	26	21.00	1.58	0.58	1.02
	Hispanic	217	26	21.67	0.83	0.49	0.59
	Multi-race	19	26	21.21	1.23	0.69	0.69
Native American	1						

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Pacific Islander/Hawaiian	1					
	White	531	26	21.45	1.29	0.74	0.66
	Female	310	26	21.38	1.39	0.74	0.70
	Male	619	26	21.56	1.08	0.66	0.63
	LEP	95	26	21.59	0.95	0.54	0.64
	FLEP	15	26	21.80	0.77	0.53	0.53
	LEPFLEP	110	26	21.62	0.93	0.54	0.63
	Plan 504	0					
	Special Education	929	26	21.50	1.19	0.70	0.65
	Title I	315	26	21.68	0.89	0.59	0.57
10	All Students	799	39	30.91	3.32	0.77	1.61
	Low Income	385	39	31.03	3.29	0.79	1.51
	African American	90	39	30.79	3.23	0.79	1.47
	Asian	38	39	31.50	2.84	0.65	1.67
	Hispanic	163	39	31.13	3.25	0.80	1.45
	Multi-race	6					
	Native American	3					
	Pacific Islander/Hawaiian	1					
	White	496	39	30.81	3.40	0.76	1.68
	Female	272	39	30.83	3.38	0.77	1.63
	Male	527	39	30.95	3.30	0.77	1.59
	LEP	62	39	30.82	3.18	0.65	1.89
	FLEP	18	39	31.22	3.34	0.57	2.18
	LEPFLEP	80	39	30.91	3.19	0.63	1.93
	Plan 504	2					
Special Education	799	39	30.91	3.32	0.77	1.61	
Title I	165	39	31.38	3.01	0.56	1.99	

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 P-16. 2013 MCAS-Alt: Subgroup Reliabilities – Mathematics

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	1,052	26	21.51	1.22	0.72	0.65
	Low Income	589	26	21.58	1.14	0.73	0.59
	African American	108	26	21.71	0.82	0.65	0.49
	Asian	63	26	21.40	1.40	0.72	0.73
	Hispanic	265	26	21.53	1.19	0.73	0.61
	Multi-race	40	26	21.48	1.20	0.52	0.83
	Native American	2					
	Pacific Islander/Hawaiian	4					
	White	564	26	21.49	1.26	0.73	0.65
	Female	342	26	21.45	1.20	0.69	0.67
	Male	707	26	21.54	1.23	0.73	0.64

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	LEP	107	26	21.53	1.17	0.68	0.66
	FLEP	37	26	21.92	0.36	0.48	0.26
	LEPFLEP	144	26	21.63	1.04	0.68	0.58
	Plan 504	7					
	Special Education	1,052	26	21.51	1.22	0.72	0.65
	Title I	475	26	21.58	1.00	0.61	0.63
	All Students	1,244	26	21.57	1.09	0.65	0.64
	Low Income	704	26	21.72	0.89	0.66	0.52
	African American	160	26	21.80	0.61	0.31	0.51
	Asian	45	26	21.38	1.64	0.80	0.73
	Hispanic	323	26	21.67	0.98	0.69	0.54
	Multi-race	27	26	21.59	0.89	0.43	0.67
	Native American	2					
	Pacific Islander/Hawaiian	3					
4	White	679	26	21.49	1.18	0.64	0.70
	Female	387	26	21.49	1.23	0.71	0.67
	Male	856	26	21.61	1.02	0.62	0.63
	LEP	103	26	21.75	0.62	0.46	0.46
	FLEP	33	26	21.82	0.88	0.83	0.36
	LEPFLEP	136	26	21.76	0.69	0.60	0.43
	Plan 504	2					
	Special Education	1,244	26	21.57	1.09	0.65	0.64
	Title I	584	26	21.74	0.83	0.63	0.50
	All Students	1,301	26	21.50	1.18	0.66	0.68
	Low Income	698	26	21.62	0.99	0.67	0.57
	African American	160	26	21.66	0.80	0.48	0.58
	Asian	68	26	21.40	1.22	0.67	0.71
	Hispanic	308	26	21.49	1.31	0.72	0.70
	Multi-race	34	26	21.65	1.18	0.80	0.53
	Native American	4					
	Pacific Islander/Hawaiian	0					
5	White	725	26	21.47	1.19	0.65	0.70
	Female	432	26	21.45	1.24	0.69	0.69
	Male	867	26	21.52	1.15	0.65	0.68
	LEP	116	26	21.65	1.24	0.84	0.49
	FLEP	47	26	21.77	0.52	0.22	0.46
	LEPFLEP	163	26	21.68	1.08	0.80	0.48
	Plan 504	5					
	Special Education	1,301	26	21.50	1.18	0.66	0.68
	Title I	538	26	21.68	0.94	0.66	0.55
	All Students	1,143	26	21.51	1.25	0.70	0.69
	Low Income	618	26	21.66	1.08	0.64	0.65
6	African American	149	26	21.68	0.99	0.64	0.59
	Asian	36	26	21.72	0.74	0.38	0.58
	Hispanic	267	26	21.65	1.14	0.67	0.65
	Multi-race	25	26	21.16	1.75	0.80	0.79
	Native American	5					

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
6	Pacific Islander/Hawaiian	2					
	White	656	26	21.42	1.33	0.70	0.73
	Female	351	26	21.46	1.41	0.72	0.74
	Male	790	26	21.53	1.18	0.68	0.67
	LEP	88	26	21.72	1.24	0.66	0.72
	FLEP	33	26	21.82	0.64	0.68	0.36
	LEPFLEP	121	26	21.74	1.11	0.66	0.64
	Plan 504	5					
	Special Education	1,143	26	21.51	1.25	0.70	0.69
	Title I	396	26	21.76	1.03	0.67	0.59
	All Students	1,151	26	21.54	1.21	0.71	0.65
Low Income	619	26	21.64	1.05	0.74	0.53	
African American	147	26	21.76	1.00	0.73	0.52	
Asian	37	26	21.32	1.56	0.72	0.83	
Hispanic	278	26	21.53	1.16	0.73	0.60	
Multi-race	31	26	21.84	0.58	0.65	0.35	
Native American	1						
Pacific Islander/Hawaiian	4						
7	White	650	26	21.51	1.24	0.68	0.70
Female	408	26	21.57	1.25	0.76	0.62	
Male	741	26	21.52	1.19	0.68	0.67	
LEP	95	26	21.82	0.96	0.81	0.42	
FLEP	35	26	21.49	1.62	0.98	0.24	
LEPFLEP	130	26	21.73	1.17	0.90	0.38	
Plan 504	0						
Special Education	1,151	26	21.54	1.21	0.71	0.65	
Title I	395	26	21.71	0.85	0.62	0.52	
All Students	976	26	21.53	1.13	0.68	0.64	
Low Income	496	26	21.74	0.87	0.69	0.49	
African American	136	26	21.60	1.10	0.74	0.56	
Asian	37	26	21.27	1.39	0.72	0.73	
Hispanic	220	26	21.68	0.91	0.69	0.51	
Multi-race	20	26	21.35	1.09	0.36	0.87	
Native American	2						
Pacific Islander/Hawaiian	1						
8	White	557	26	21.48	1.20	0.67	0.68
Female	326	26	21.41	1.35	0.76	0.67	
Male	650	26	21.59	1.00	0.61	0.62	
LEP	93	26	21.70	1.08	0.65	0.64	
FLEP	18	26	21.89	0.47	0.60	0.30	
LEPFLEP	111	26	21.73	1.01	0.65	0.60	
Plan 504	1						
Special Education	976	26	21.53	1.13	0.68	0.64	
Title I	319	26	21.77	0.78	0.63	0.47	
All Students	804	39	30.89	3.34	0.85	1.28	
10	Low Income	398	39	30.97	3.35	0.85	1.30
African American	89	39	30.92	3.33	0.83	1.35	
Asian	37	39	31.86	2.21	0.81	0.95	

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
10	Hispanic	170	39	31.08	3.21	0.81	1.41
	Multi-race	7					
	Native American	3					
	Pacific Islander/Hawaiian	1					
	White	495	39	30.76	3.45	0.87	1.23
	Female	278	39	30.76	3.51	0.84	1.41
	Male	526	39	30.96	3.25	0.86	1.22
	LEP	65	39	31.43	3.03	0.86	1.13
	FLEP	16	39	31.75	3.44		
	LEPFLEP	81	39	31.49	3.09	0.84	1.22
	Plan 504	3					
Special Education	804	39	30.89	3.34	0.85	1.28	
Title I	167	39	31.58	2.97	0.83	1.23	

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 P-17. 2013 MCAS-Alt: Subgroup Reliabilities – STE

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	All Students	1,187	39	31.56	2.86	0.82	1.21
	Low Income	630	39	31.63	2.86	0.81	1.25
	African American	146	39	31.82	2.64	0.68	1.50
	Asian	74	39	31.23	3.08	0.87	1.10
	Hispanic	277	39	31.60	2.89	0.85	1.10
	Multi-race	31	39	31.84	2.56	0.87	0.91
	Native American	4					
	Pacific Islander/Hawaiian	0					
	White	653	39	31.50	2.90	0.81	1.26
	Female	390	39	31.38	2.99	0.83	1.24
	Male	795	39	31.65	2.80	0.82	1.19
	LEP	116	39	31.71	2.90	0.88	1.00
	FLEP	38	39	32.03	2.59	0.51	1.82
	LEPFLEP	154	39	31.79	2.82	0.87	1.01
	Plan 504	5					
	Special Education	1,187	39	31.56	2.86	0.82	1.21
	Title I	504	39	31.87	2.63	0.78	1.22
8	All Students	921	39	31.22	3.19	0.83	1.32
	Low Income	459	39	31.36	3.21	0.76	1.58
	African American	124	39	31.66	3.10	0.87	1.11
	Asian	36	39	31.22	3.42	0.81	1.48
	Hispanic	210	39	30.88	3.42	0.82	1.44
	Multi-race	18	39	31.61	2.75	0.55	1.83
	Native American	2					
	Pacific Islander/Hawaiian	1					
	White	528	39	31.23	3.12	0.82	1.32

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Female	298	39	30.95	3.53	0.87	1.28
	Male	623	39	31.35	3.00	0.80	1.36
	LEP	84	39	30.93	3.49	0.81	1.51
	FLEP	14	39	32.71	0.83	0.72	0.44
	LEPFLEP	98	39	31.18	3.30	0.80	1.47
	Plan 504	0					
	Special Education	921	39	31.22	3.19	0.83	1.32
	Title I	301	39	31.54	2.97	0.82	1.26

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 P-18. 2013 MCAS-Alt: Subgroup Reliabilities – High School Biology

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	591	39	31.21	3.15	0.68	1.78
Low Income	325	39	31.16	3.31	0.72	1.76
African American	74	39	31.24	3.50	0.58	2.28
Asian	27	39	30.56	3.39	0.64	2.02
Hispanic	138	39	31.28	3.23	0.73	1.68
Multi-race	4					
Native American	2					
Pacific Islander/Hawaiian	1					
White	344	39	31.22	3.04	0.68	1.72
Female	199	39	31.40	3.01	0.67	1.73
Male	392	39	31.11	3.22	0.69	1.80
LEP	56	39	31.18	3.33	0.71	1.79
FLEP	13	39	32.00	1.78	0.70	0.97
LEPFLEP	69	39	31.33	3.10	0.71	1.68
Plan 504	3					
Special Education	591	39	31.21	3.15	0.68	1.78
Title I	146	39	31.40	3.19	0.59	2.04

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 P-19. 2013 MCAS-Alt: Subgroup Reliabilities – High School Chemistry

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	46	39	31.63	2.50	0.79	1.16
Low Income	17	39	31.76	2.63	0.45	1.95
African American	9					
Asian	1					
Hispanic	8					

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	0					
Pacific Islander/Hawaiian	0					
White	28	39	31.54	2.69	0.80	1.21
Female	21	39	31.62	2.52	0.81	1.11
Male	25	39	31.64	2.53	0.76	1.24
LEP	3					
FLEP	2					
LEPFLEP	5					
Plan 504	0					
Special Education	46	39	31.63	2.50	0.79	1.16
Title I	5					

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 P-20. 2013 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	56	39	31.59	4.40	0.79	2.02
Low Income	16	39	29.94	4.20	0.78	1.98
African American	8					
Asian	0					
Hispanic	4					
Multi-race	0					
Native American	0					
Pacific Islander/Hawaiian	0					
White	44	39	31.80	4.25	0.79	1.92
Female	19	39	31.05	4.29	0.80	1.91
Male	37	39	31.86	4.49	0.79	2.04
LEP	2					
FLEP	1					
LEPFLEP	3					
Plan 504	0					
Special Education	56	39	31.59	4.40	0.79	2.02
Title I	9					

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 P-21. 2013 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	61	39	30.57	3.82	0.82	1.60
Low Income	16	39	30.25	4.19	0.86	1.57
African American	5					
Asian	4					
Hispanic	7					
Multi-race	0					
Native American	0					
Pacific Islander/Hawaiian	0					
White	45	39	30.44	3.68	0.76	1.82
Female	10	39	30.80	3.55	0.84	1.43
Male	51	39	30.53	3.90	0.82	1.64
LEP	1					
FLEP	2					
LEPFLEP	3					
Plan 504	0					
Special Education	61	39	30.57	3.82	0.82	1.60
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.