

Appendix Q

CLASSICAL RELIABILITY

Table Q-1. 2010 MCAS: Subgroup Reliabilities – English Language Arts

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	69,417	48	35.20	7.95	0.90	2.51
	Low Income	24,638	48	31.34	8.77	0.90	2.75
	African American	5,350	48	31.10	8.85	0.90	2.77
	Asian	3,946	48	36.11	7.74	0.90	2.45
	Hispanic	10,425	48	30.24	9.12	0.91	2.80
	Multi-race	1,952	48	35.61	7.63	0.89	2.50
	Native American	154	48	33.16	8.30	0.90	2.68
	Pacific Islander/Hawaiian	90	48	34.59	8.10	0.90	2.58
	White	47,469	48	36.67	6.93	0.88	2.40
	Female	33,962	48	36.02	7.60	0.90	2.46
	Male	35,436	48	34.41	8.20	0.90	2.55
	Limited English Proficient (LEP)	5,854	48	27.81	9.21	0.90	2.89
	Formerly LEP (FLEP)	2,056	48	33.84	7.74	0.88	2.64
	LEPFLEP	7,910	48	29.37	9.24	0.91	2.83
	Plan 504	1,153	48	32.87	8.15	0.89	2.67
	Special Education	11,264	48	27.99	9.22	0.90	2.88
	Title I	24,648	48	31.71	8.68	0.90	2.73
4	All Students	69,561	72	49.81	10.62	0.90	3.39
	Low Income	24,291	72	44.03	10.94	0.89	3.57
	African American	5,347	72	43.69	11.01	0.89	3.59
	Asian	3,813	72	52.41	10.31	0.90	3.31
	Hispanic	10,292	72	43.01	11.31	0.90	3.61
	Multi-race	1,692	72	49.72	10.71	0.90	3.43
	Native American	147	72	46.95	11.03	0.90	3.51
	Pacific Islander/Hawaiian	92	72	51.78	9.54	0.88	3.34
	White	48,146	72	51.75	9.52	0.88	3.29
	Female	34,003	72	51.39	10.18	0.89	3.31
	Male	35,537	72	48.30	10.80	0.90	3.40
	Limited English Proficient (LEP)	5,429	72	40.16	11.38	0.89	3.70
	Formerly LEP (FLEP)	1,869	72	47.58	10.45	0.89	3.50
	LEPFLEP	7,298	72	42.06	11.61	0.90	3.66
	Plan 504	1,524	72	46.56	9.59	0.87	3.45
	Special Education	11,680	72	39.60	11.05	0.89	3.70
	Title I	24,188	72	44.49	10.85	0.89	3.54
5	All Students	69,769	52	36.74	8.48	0.90	2.69
	Low Income	24,088	52	32.23	9.04	0.90	2.90
	African American	5,546	52	32.18	9.13	0.90	2.92
	Asian	3,508	52	38.75	8.38	0.90	2.59
	Hispanic	10,067	52	31.17	9.41	0.90	2.95
	Multi-race	1,546	52	36.59	8.50	0.90	2.70
	Native American	182	52	34.89	8.31	0.89	2.78
	Pacific Islander/Hawaiian	59	52	35.34	8.10	0.88	2.76
	White	48,828	52	38.27	7.48	0.88	2.59
	Female	34,233	52	37.85	8.18	0.90	2.65
	Male	35,519	52	35.66	8.62	0.90	2.69
	Limited English Proficient (LEP)	4,202	52	27.24	9.45	0.89	3.07
	Formerly LEP (FLEP)	2,106	52	34.29	8.56	0.89	2.84
	LEPFLEP	6,308	52	29.59	9.74	0.90	3.00

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
6	Plan 504	1,559	52	34.74	8.06	0.88	2.77
	Special Education	11,900	52	28.40	9.05	0.89	3.01
	Title I	22,665	52	32.53	9.06	0.90	2.89
	All Students	71,008	52	36.68	8.31	0.89	2.74
	Low Income	24,249	52	32.23	8.86	0.89	2.96
	African American	5,675	52	32.03	8.91	0.89	2.98
	Asian	3,535	52	39.38	8.10	0.90	2.62
	Hispanic	9,982	52	31.39	9.11	0.89	3.00
	Multi-race	1,459	52	36.53	8.54	0.90	2.72
	Native American	165	52	34.56	7.63	0.86	2.82
	Pacific Islander/Hawaiian	59	52	37.29	8.09	0.88	2.75
	White	50,086	52	38.09	7.39	0.87	2.65
	Female	34,635	52	38.05	7.78	0.88	2.68
	Male	36,344	52	35.38	8.58	0.90	2.77
	Limited English Proficient (LEP)	3,402	52	26.59	9.07	0.88	3.15
	Formerly LEP (FLEP)	1,959	52	33.96	8.18	0.87	2.92
	LEPFLEP	5,361	52	29.28	9.45	0.89	3.09
	Plan 504	1,691	52	34.27	7.97	0.87	2.83
	Special Education	12,390	52	28.33	8.72	0.88	3.07
	Title I	21,353	52	32.59	8.81	0.89	2.94
	7	All Students	70,146	72	50.88	10.61	0.91
Low Income		23,506	72	44.95	11.01	0.90	3.44
African American		5,605	72	45.13	10.97	0.90	3.45
Asian		3,506	72	53.94	10.47	0.91	3.16
Hispanic		9,526	72	43.73	11.30	0.91	3.48
Multi-race		1,417	72	50.80	10.64	0.90	3.28
Native American		219	72	47.61	11.14	0.91	3.32
Pacific Islander/Hawaiian		76	72	50.47	12.24	0.92	3.51
White		49,758	72	52.70	9.56	0.89	3.13
Female		34,289	72	52.80	10.07	0.90	3.13
Male		35,838	72	49.05	10.80	0.91	3.26
Limited English Proficient (LEP)		2,793	72	35.63	11.24	0.89	3.73
Formerly LEP (FLEP)		1,687	72	46.50	9.99	0.88	3.40
LEPFLEP		4,480	72	39.72	12.00	0.91	3.66
Plan 504		1,476	72	47.48	10.25	0.90	3.31
Special Education	11,991	72	39.92	10.76	0.89	3.58	
Title I	18,714	72	45.27	10.93	0.90	3.42	
8	All Students	71,039	52	38.13	9.19	0.90	2.84
	Low Income	23,376	52	33.12	9.79	0.90	3.11
	African American	5,667	52	33.18	9.63	0.89	3.13
	Asian	3,551	52	40.94	8.66	0.91	2.65
	Hispanic	9,524	52	32.03	10.23	0.90	3.16
	Multi-race	1,304	52	38.22	9.20	0.91	2.83
	Native American	186	52	35.80	10.33	0.91	3.02
	Pacific Islander/Hawaiian	98	52	35.49	10.51	0.92	3.00
	White	50,660	52	39.66	8.22	0.89	2.73
	Female	34,610	52	39.57	8.67	0.90	2.76
	Male	36,400	52	36.77	9.45	0.91	2.86
	Limited English Proficient (LEP)	2,633	52	24.23	9.57	0.88	3.36

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
10	Formerly LEP (FLEP)	1,183	52	33.10	9.34	0.89	3.14
	LEPFLEP	3,816	52	26.98	10.35	0.90	3.32
	Plan 504	1,394	52	36.25	8.98	0.89	2.93
	Special Education	11,665	52	28.46	9.72	0.89	3.23
	Title I	17,995	52	33.32	9.78	0.90	3.10
	All Students	69,753	72	52.12	10.23	0.90	3.25
	Low Income	21,064	72	46.37	10.80	0.89	3.51
	African American	5,739	72	46.43	10.77	0.89	3.51
	Asian	3,467	72	53.94	10.88	0.91	3.22
	Hispanic	8,771	72	45.14	11.13	0.90	3.56
	Multi-race	1,163	72	51.49	10.58	0.90	3.35
	Native American	184	72	49.71	11.26	0.90	3.58
	Pacific Islander/Hawaiian	67	72	50.10	11.82	0.91	3.48
	White	50,292	72	53.90	9.11	0.88	3.12
	Female	34,414	72	53.67	9.81	0.90	3.14
	Male	35,323	72	50.61	10.40	0.90	3.29
	Limited English Proficient (LEP)	2,287	72	35.13	10.68	0.87	3.85
	Formerly LEP (FLEP)	1,037	72	43.36	10.32	0.88	3.60
	LEPFLEP	3,324	72	37.70	11.24	0.88	3.82
	Plan 504	1,006	72	50.25	8.88	0.86	3.28
Special Education	10,602	72	41.46	10.45	0.88	3.63	
Title I	12,429	72	45.49	10.52	0.89	3.49	

Table Q-2. 2010 MCAS: Subgroup Reliabilities – Mathematics

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	69,347	40	29.53	7.64	0.90	2.42
	Low Income	24,556	40	25.75	8.12	0.90	2.61
	African American	5,350	40	24.66	8.20	0.90	2.64
	Asian	3,944	40	32.09	6.82	0.89	2.21
	Hispanic	10,343	40	24.96	8.32	0.90	2.62
	Multi-race	1,960	40	29.18	7.93	0.91	2.44
	Native American	154	40	27.21	8.06	0.90	2.54
	Pacific Islander/Hawaiian	91	40	29.77	7.47	0.90	2.39
	White	47,469	40	30.88	6.80	0.88	2.35
	Female	33,912	40	29.47	7.62	0.90	2.43
	Male	35,413	40	29.58	7.66	0.90	2.41
	Limited English Proficient (LEP)	5,815	40	23.82	8.44	0.90	2.65
	Formerly LEP (FLEP)	2,044	40	28.87	7.82	0.90	2.44
	LEPFLEP	7,859	40	25.13	8.58	0.91	2.60
	Plan 504	1,149	40	27.43	7.72	0.89	2.57
	Special Education	11,247	40	23.31	8.27	0.89	2.71
	Title I	24,571	40	26.16	8.08	0.90	2.59
4	All Students	69,591	54	37.26	10.26	0.90	3.26
	Low Income	24,262	54	32.36	10.70	0.90	3.44
	African American	5,339	54	31.03	10.72	0.90	3.46
	Asian	3,821	54	41.35	9.55	0.90	3.01

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
	Hispanic	10,260	54	31.63	11.03	0.90	3.47
	Multi-race	1,696	54	37.07	10.36	0.90	3.28
	Native American	150	54	35.08	10.60	0.90	3.36
	Pacific Islander/Hawaiian	91	54	40.30	8.63	0.87	3.10
	White	48,199	54	38.84	9.32	0.88	3.18
	Female	33,971	54	37.43	10.08	0.90	3.25
	Male	35,597	54	37.10	10.43	0.90	3.28
	Limited English Proficient (LEP)	5,409	54	30.00	11.24	0.90	3.49
	Formerly LEP (FLEP)	1,881	54	36.14	10.66	0.90	3.32
	LEPFLEP	7,290	54	31.58	11.41	0.91	3.46
	Plan 504	1,521	54	34.50	9.53	0.87	3.38
	Special Education	11,705	54	28.56	10.68	0.89	3.48
	Title I	24,147	54	32.81	10.64	0.90	3.44
	5	All Students	69,660	54	37.04	11.61	0.92
Low Income		23,987	54	31.07	11.83	0.91	3.55
African American		5,533	54	30.34	11.79	0.91	3.57
Asian		3,506	54	42.15	10.49	0.92	3.01
Hispanic		10,014	54	29.79	12.16	0.91	3.59
Multi-race		1,542	54	36.61	11.76	0.92	3.35
Native American		181	54	34.24	11.10	0.91	3.39
Pacific Islander/Hawaiian		59	54	34.32	12.03	0.91	3.63
White		48,793	54	38.95	10.58	0.91	3.20
Female		34,180	54	37.01	11.45	0.92	3.34
Male		35,466	54	37.07	11.76	0.92	3.32
Limited English Proficient (LEP)		4,183	54	26.71	12.17	0.91	3.64
Formerly LEP (FLEP)		2,104	54	34.25	12.04	0.92	3.47
LEPFLEP		6,287	54	29.23	12.64	0.92	3.62
Plan 504	1,555	54	34.75	11.08	0.90	3.42	
Special Education	11,808	54	26.22	11.70	0.90	3.61	
Title I	22,587	54	31.56	11.91	0.91	3.54	
6	All Students	70,950	54	37.59	11.59	0.92	3.28
	Low Income	24,225	54	31.54	11.92	0.91	3.50
	African American	5,669	54	30.72	11.80	0.91	3.53
	Asian	3,531	54	43.63	9.97	0.92	2.83
	Hispanic	9,985	54	30.30	12.07	0.91	3.52
	Multi-race	1,462	54	36.99	11.83	0.92	3.31
	Native American	167	54	33.92	10.60	0.89	3.44
	Pacific Islander/Hawaiian	59	54	36.85	12.72	0.93	3.29
	White	50,040	54	39.44	10.58	0.91	3.17
	Female	34,616	54	37.73	11.41	0.92	3.25
	Male	36,316	54	37.47	11.77	0.92	3.28
	Limited English Proficient (LEP)	3,413	54	26.23	12.14	0.91	3.57
	Formerly LEP (FLEP)	1,962	54	34.55	11.64	0.91	3.41
	LEPFLEP	5,375	54	29.26	12.61	0.92	3.55
Plan 504	1,689	54	34.38	11.11	0.90	3.43	
Special Education	12,336	54	26.42	11.33	0.90	3.55	
Title I	21,340	54	32.31	11.95	0.92	3.48	
7	All Students	70,168	54	36.84	11.79	0.92	3.29
	Low Income	23,542	54	30.61	11.93	0.91	3.50

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM	
			Maximum	Mean	Standard Deviation			
	African American	5,606	54	29.78	11.80	0.91	3.49	
	Asian	3,518	54	42.61	10.69	0.92	2.95	
	Hispanic	9,554	54	29.12	12.04	0.91	3.52	
	Multi-race	1,415	54	36.52	12.21	0.93	3.32	
	Native American	221	54	32.53	12.15	0.92	3.42	
	Pacific Islander/Hawaiian	76	54	35.78	12.31	0.93	3.36	
	White	49,743	54	38.74	10.77	0.91	3.18	
	Female	34,320	54	37.22	11.44	0.92	3.26	
	Male	35,836	54	36.47	12.09	0.92	3.32	
	Limited English Proficient (LEP)	2,801	54	23.65	11.88	0.91	3.56	
	Formerly LEP (FLEP)	1,688	54	33.55	11.90	0.92	3.43	
	LEPFLEP	4,489	54	27.37	12.82	0.92	3.58	
	Plan 504	1,476	54	33.83	11.36	0.91	3.41	
	Special Education	11,935	54	25.33	11.08	0.90	3.53	
	Title I	18,738	54	31.16	11.93	0.91	3.48	
	8	All Students	70,897	54	36.45	12.10	0.92	3.52
		Low Income	23,268	54	30.12	12.09	0.91	3.57
African American		5,662	54	29.65	11.69	0.91	3.55	
Asian		3,553	54	43.05	10.80	0.91	3.17	
Hispanic		9,485	54	28.53	12.22	0.92	3.56	
Multi-race		1,303	54	36.12	12.35	0.92	3.56	
Native American		180	54	32.69	11.97	0.91	3.65	
Pacific Islander/Hawaiian		97	54	31.78	12.50	0.92	3.51	
White		50,580	54	38.27	11.20	0.90	3.46	
Female		34,549	54	36.58	11.80	0.91	3.50	
Male		36,332	54	36.33	12.37	0.92	3.54	
Limited English Proficient (LEP)		2,646	54	22.96	11.73	0.91	3.49	
Formerly LEP (FLEP)		1,187	54	31.55	12.45	0.92	3.59	
LEPFLEP		3,833	54	25.62	12.60	0.92	3.56	
Plan 504		1,394	54	33.52	11.50	0.90	3.58	
Special Education		11,545	54	24.20	10.97	0.90	3.46	
Title I		17,968	54	30.57	12.19	0.91	3.57	
10	All Students	69,792	60	39.88	13.32	0.92	3.68	
	Low Income	21,083	60	32.71	13.22	0.91	3.92	
	African American	5,742	60	31.58	12.94	0.91	3.93	
	Asian	3,478	60	46.38	12.65	0.93	3.28	
	Hispanic	8,807	60	30.57	13.26	0.91	3.96	
	Multi-race	1,165	60	38.63	13.94	0.93	3.73	
	Native American	180	60	36.87	14.20	0.93	3.80	
	Pacific Islander/Hawaiian	67	60	37.84	14.59	0.93	3.82	
	White	50,279	60	42.06	12.18	0.92	3.53	
	Female	34,428	60	39.68	13.00	0.92	3.68	
	Male	35,346	60	40.07	13.62	0.93	3.67	
	Limited English Proficient (LEP)	2,367	60	24.67	12.96	0.91	3.90	
	Formerly LEP (FLEP)	1,027	60	31.12	13.34	0.91	3.94	
	LEPFLEP	3,394	60	26.62	13.40	0.91	3.96	
	Plan 504	1,003	60	37.46	12.16	0.91	3.73	
	Special Education	10,618	60	27.16	11.89	0.89	3.89	
	Title I	12,445	60	31.93	13.10	0.91	3.92	

Table Q-3. 2010 MCAS: Subgroup Reliabilities – Science and Technology/Engineering

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	All Students	69,828	54	36.24	8.94	0.87	3.28
	Low Income	24,102	54	30.95	8.87	0.85	3.40
	African American	5,556	54	29.71	8.81	0.85	3.44
	Asian	3,504	54	38.03	9.07	0.87	3.22
	Hispanic	10,081	54	29.75	9.12	0.86	3.43
	Multi-race	1,544	54	36.34	8.91	0.86	3.29
	Native American	182	54	33.09	8.19	0.83	3.39
	Pacific Islander/Hawaiian	60	54	34.57	8.37	0.83	3.41
	White	48,870	54	38.20	7.85	0.84	3.18
	Female	34,264	54	35.97	8.87	0.86	3.31
	Male	35,551	54	36.49	9.00	0.87	3.23
	Limited English Proficient (LEP)	4,223	54	25.79	8.83	0.85	3.46
	Formerly LEP (FLEP)	2,107	54	32.66	8.81	0.85	3.40
	LEPFLEP	6,330	54	28.08	9.40	0.86	3.46
	Plan 504	1,553	54	35.51	8.56	0.85	3.27
	Special Education	11,984	54	29.37	9.01	0.86	3.42
	Title I	22,675	54	31.03	8.91	0.85	3.41
8	All Students	70,879	54	33.70	9.81	0.88	3.43
	Low Income	23,228	54	27.76	9.41	0.86	3.54
	African American	5,650	54	26.62	9.01	0.84	3.56
	Asian	3,550	54	36.73	9.89	0.88	3.35
	Hispanic	9,463	54	25.99	9.36	0.86	3.56
	Multi-race	1,307	54	33.78	9.95	0.88	3.43
	Native American	180	54	30.30	9.90	0.87	3.52
	Pacific Islander/Hawaiian	97	54	30.23	10.10	0.87	3.60
	White	50,597	54	35.75	8.82	0.86	3.35
	Female	34,542	54	33.11	9.71	0.87	3.47
	Male	36,322	54	34.27	9.87	0.88	3.38
	Limited English Proficient (LEP)	2,628	54	20.47	8.00	0.81	3.51
	Formerly LEP (FLEP)	1,186	54	27.08	9.23	0.85	3.58
	LEPFLEP	3,814	54	22.53	8.94	0.84	3.56
	Plan 504	1,386	54	32.84	9.41	0.87	3.42
	Special Education	11,611	54	25.33	9.24	0.85	3.52
	Title I	17,930	54	27.58	9.44	0.86	3.54

Table Q-4. 2010 MCAS: Subgroup Reliabilities – High School Biology

<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	55,581	60	35.48	11.92	0.91	3.55
Low Income	19,490	60	28.76	11.23	0.90	3.56
African American	4,952	60	28.00	10.97	0.89	3.57
Asian	2,676	60	39.23	13.06	0.93	3.55
Hispanic	8,673	60	26.22	10.95	0.89	3.55
Multi-race	1,027	60	34.93	11.72	0.91	3.57
Native American	169	60	30.96	11.02	0.90	3.57
Pacific Islander/Hawaiian	66	60	32.98	12.97	0.92	3.56
White	37,903	60	38.39	10.55	0.89	3.48
Female	27,423	60	35.57	11.70	0.91	3.57
Male	28,119	60	35.42	12.11	0.92	3.52
Limited English Proficient (LEP)	2,728	60	20.55	8.99	0.85	3.48
Formerly LEP (FLEP)	1,084	60	26.92	10.56	0.88	3.59
LEPFLEP	3,812	60	22.36	9.89	0.87	3.53
Plan 504	674	60	34.79	9.98	0.88	3.47
Special Education	10,472	60	25.32	10.19	0.88	3.48
Title I	11,534	60	27.41	10.76	0.89	3.53

Table Q-5. 2010 MCAS: Subgroup Reliabilities – High School Chemistry

<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	2,094	60	30.50	14.31	0.93	3.77
Low Income	695	60	21.08	11.46	0.90	3.56
African American	286	60	21.81	11.39	0.90	3.59
Asian	160	60	36.30	14.22	0.93	3.74
Hispanic	356	60	19.97	10.47	0.89	3.53
Multi-race	55	60	36.78	14.40	0.93	3.87
Native American	6					
Pacific Islander/Hawaiian	2					
White	1,223	60	34.66	13.30	0.92	3.72
Female	1,077	60	29.22	14.07	0.93	3.77
Male	1,013	60	31.90	14.44	0.93	3.77
Limited English Proficient (LEP)	179	60	20.74	9.25	0.85	3.57
Formerly LEP (FLEP)	36	60	19.94	13.07	0.93	3.45
LEPFLEP	215	60	20.60	9.96	0.87	3.55
Plan 504	7					
Special Education	282	60	18.87	10.03	0.88	3.48
Title I	456	60	16.53	7.65	0.81	3.35

Table Q-6. 2010 MCAS: 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	18,976	60	33.85	11.85	0.91	3.64
Low Income	6,616	60	26.49	10.42	0.88	3.63
African American	2,501	60	25.74	10.22	0.87	3.64
Asian	1,018	60	38.31	12.02	0.91	3.60
Hispanic	2,750	60	25.19	10.33	0.88	3.61
Multi-race	343	60	35.17	12.53	0.91	3.67
Native American	40	60	28.65	9.15	0.85	3.55
Pacific Islander/Hawaiian	21	60	30.24	11.77	0.90	3.71
White	12,284	60	37.06	10.60	0.89	3.54
Female	9,352	60	33.26	11.51	0.90	3.64
Male	9,613	60	34.43	12.15	0.91	3.63
Limited English Proficient (LEP)	1,008	60	21.90	10.02	0.88	3.53
Formerly LEP (FLEP)	283	60	29.33	11.59	0.90	3.65
LEPFLEP	1,291	60	23.53	10.83	0.89	3.58
Plan 504	151	60	34.20	10.07	0.87	3.58
Special Education	3,051	60	24.44	10.44	0.88	3.58
Title I	4,714	60	25.60	10.29	0.88	3.62

Table Q-7. 2010 MCAS: 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	2,178	60	31.66	10.49	0.87	3.78
Low Income	860	60	26.98	9.66	0.85	3.72
African American	174	60	25.68	7.76	0.78	3.66
Asian	62	60	28.13	12.16	0.90	3.83
Hispanic	356	60	25.11	9.16	0.84	3.71
Multi-race	43	60	32.63	10.78	0.88	3.79
Native American	8					
Pacific Islander/Hawaiian	7					
White	1,525	60	34.05	9.98	0.86	3.76
Female	691	60	29.64	9.68	0.85	3.73
Male	1,487	60	32.61	10.72	0.87	3.79
Limited English Proficient (LEP)	131	60	21.40	9.69	0.86	3.63
Formerly LEP (FLEP)	31	60	25.13	8.87	0.82	3.71
LEPFLEP	162	60	22.12	9.62	0.86	3.66
Plan 504	22	60	33.91	10.10	0.86	3.71
Special Education	667	60	25.68	9.61	0.85	3.69
Title I	501	60	28.20	10.30	0.87	3.76

Note: No reliability or SEM values are reported for HS Technology/Engineering and for some subgroups for the other HS STE tests, because there were some items for which only one student received a score.

Table Q-8. 2010 MCAS: Reliabilities by Reporting Category by Grade – English Language Arts

Grade	Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	LA	8	8	6.48	1.74	0.69	0.96
	LT	33	40	28.72	6.62	0.88	2.31
4	CC	1	8	6.71	1.29		
	CT	1	12	7.11	1.67		
	LA	7	7	5.72	1.44	0.61	0.90
	LT	33	45	30.27	7.63	0.88	2.63
5	LA	5	5	3.94	1.18	0.52	0.81
	LT	35	47	32.80	7.68	0.89	2.56
6	LA	8	8	6.02	1.74	0.62	1.07
	LT	32	44	30.66	7.05	0.87	2.51
7	CC	1	8	6.68	1.18		
	CT	1	12	7.09	1.47		
	LA	4	4	3.34	0.94	0.52	0.66
	LT	36	48	33.78	8.21	0.89	2.68
8	LA	6	6	4.52	1.46	0.59	0.93
	LT	34	46	33.62	8.10	0.89	2.68
10	CC	1	8	6.83	1.15		
	CT	1	12	7.03	1.35		
	LA	6	6	4.44	1.41	0.52	0.98
	LT	34	46	33.82	7.57	0.88	2.66

*Reporting Category definitions follow table Q-14.

Table Q-9. 2010 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	5	3.79	1.17	0.44	0.88
	ME	4	5	3.67	1.17	0.46	0.85
	NS	13	14	9.89	3.20	0.79	1.48
	PR	7	8	6.41	1.64	0.63	1.00
	SP	7	8	5.76	1.95	0.71	1.05
4	GE	4	7	4.38	1.69	0.44	1.27
	ME	3	6	4.07	1.60	0.38	1.26
	NS	16	19	13.79	3.80	0.76	1.86
	PR	11	11	7.92	2.46	0.71	1.31
	SP	8	11	7.11	2.46	0.61	1.53
5	GE	4	7	4.05	1.81	0.45	1.34
	ME	7	7	4.88	1.74	0.66	1.02
	NS	15	18	12.77	4.03	0.79	1.83
	PR	11	14	9.69	3.62	0.74	1.83
	SP	5	8	5.64	2.03	0.61	1.27
6	GE	4	7	4.89	1.74	0.43	1.31
	ME	4	7	4.72	1.78	0.61	1.11
	NS	15	18	12.24	4.41	0.80	1.97
	PR	14	14	10.42	3.07	0.80	1.38
	SP	5	8	5.31	2.14	0.55	1.43

Grade	Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
7	GE	4	7	4.84	1.89	0.48	1.37
	ME	7	7	4.55	1.91	0.70	1.04
	NS	11	14	8.70	3.66	0.78	1.72
	PR	12	15	10.41	3.34	0.74	1.71
	SP	8	11	8.33	2.45	0.64	1.46
8	GE	4	7	4.28	1.99	0.42	1.51
	ME	4	7	4.39	2.20	0.52	1.53
	NS	11	14	9.02	3.54	0.71	1.91
	PR	12	15	10.17	3.62	0.78	1.71
	SP	11	11	8.59	2.29	0.73	1.18
10	GE	6	9	5.98	2.39	0.68	1.36
	ME	7	10	6.86	2.60	0.65	1.55
	NS	8	11	7.28	2.71	0.68	1.53
	PR	12	18	11.65	4.30	0.76	2.10
	SP	9	12	8.11	2.92	0.68	1.66

* Reporting Category definitions follow table Q-14.

Table Q-10. 2010 MCAS: Reliabilities by Reporting Category by Grade – Science and Technology/Engineering

Grade	Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	ES	13	16	9.75	3.28	0.68	1.87
	LS	13	16	11.04	2.86	0.67	1.64
	PS	11	14	10.62	2.57	0.63	1.55
	TE	5	8	4.83	1.81	0.33	1.48
8	ES	10	13	7.67	3.00	0.65	1.78
	LS	11	14	9.82	2.90	0.64	1.75
	PS	10	13	7.44	2.63	0.63	1.59
	TE	11	14	8.77	2.91	0.64	1.73

* Reporting Category definitions follow table Q-14.

Table Q-11. 2010 MCAS: Reliabilities by Reporting Category – High School Biology

Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
AP	6	9	4.62	2.14	0.54	1.46
BC	12	15	8.99	3.29	0.70	1.81
EC	9	12	8.31	2.71	0.69	1.52
EV	9	12	7.15	2.85	0.74	1.44
GE	9	12	6.43	2.76	0.62	1.69

* Reporting Category definitions follow table Q-14.

Table Q-12. 2010 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	8.39	4.04	0.77	1.94
BR	13	19	9.72	5.08	0.80	2.27
SO	8	11	5.35	2.93	0.72	1.55
TH	12	15	7.04	3.49	0.76	1.72

* Reporting Category definitions follow table Q-14.

Table Q-13. 2010 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	7.56	2.94	0.65	1.73
HT	6	9	5.25	1.99	0.55	1.33
MF	18	24	13.47	5.07	0.80	2.30
WV	12	15	7.56	3.27	0.69	1.81

* Reporting Category definitions follow table Q-14.

Table Q-14. 2010 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	7.17	2.49	0.55	1.68
ED	9	12	7.16	2.79	0.55	1.88
EL	15	18	8.57	3.14	0.61	1.96
FL	12	18	8.77	3.85	0.72	2.02

*Reporting Category definitions follow this table.

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 Science
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. 2010 MCAS-Alt: Subgroup Reliabilities – English Language Arts

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	1,197	26	21.56	1.11	0.68	0.63
	Low Income	603	26	21.70	1.00	0.74	0.51
	African American	133	26	21.70	0.86	0.66	0.50
	Asian	47	26	21.49	1.10	0.61	0.69
	Hispanic	274	26	21.67	1.06	0.71	0.57
	Native American	4					
	White	704	26	21.50	1.14	0.66	0.67
	Pacific Islander/Hawaiian	1					
	Multi-race	29	26	21.90	0.62	0.44	0.46
	Male	870	26	21.60	1.02	0.66	0.59
	Female	325	26	21.46	1.29	0.69	0.72
	Title I	448	26	21.75	0.96	0.77	0.46
	Limited English Proficient (LEP)	96	26	21.50	1.51	0.80	0.68
	Formerly LEP (FLEP)	42	26	21.76	1.03	0.83	0.42
	LEPFLEP	138	26	21.58	1.39	0.80	0.61
	Special Education	1,195	26	21.56	1.10	0.67	0.63
Plan 504	81	26	21.38	1.09	0.50	0.77	
4	All Students	1,362	39	32.08	2.20	0.80	0.97
	Low Income	755	39	32.22	1.97	0.78	0.93
	African American	150	39	32.13	2.04	0.80	0.92
	Asian	47	39	32.32	1.82	0.45	1.35
	Hispanic	348	39	32.15	2.15	0.80	0.97
	Native American	2					
	White	774	39	32.03	2.29	0.81	0.99
	Pacific Islander/Hawaiian	4					
	Multi-race	34	39	32.06	1.91	0.71	1.02
	Male	920	39	32.07	2.21	0.78	1.03
	Female	442	39	32.12	2.20	0.85	0.87
	Title I	534	39	32.30	1.87	0.79	0.85
	Limited English Proficient (LEP)	144	39	32.26	2.11	0.77	1.02
	Formerly LEP (FLEP)	47	39	32.72	1.26	0.67	0.73
	LEPFLEP	191	39	32.38	1.95	0.75	0.98
	Special Education	1,362	39	32.08	2.20	0.80	0.97
Plan 504	106	39	31.64	2.42	0.78	1.15	
5	All Students	1,214	26	21.59	1.16	0.72	0.61
	Low Income	648	26	21.70	0.92	0.70	0.50
	African American	145	26	21.59	1.10	0.78	0.52
	Asian	40	26	21.50	1.24	0.73	0.64
	Hispanic	297	26	21.71	1.00	0.71	0.53
	Native American	3					
	White	700	26	21.53	1.24	0.72	0.66
	Pacific Islander/Hawaiian	3					
	Multi-race	26	26	21.65	0.75	0.50	0.53
	Male	815	26	21.62	1.10	0.71	0.59
	Female	399	26	21.51	1.27	0.74	0.65
	Title I	480	26	21.73	0.86	0.68	0.49
	Limited English Proficient (LEP)	120	26	21.59	1.22	0.74	0.63
	Formerly LEP (FLEP)	44	26	21.70	0.79	0.66	0.46

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
6	LEPFLEP	164	26	21.62	1.12	0.72	0.59
	Special Education Plan 504	1,214	26	21.59	1.16	0.72	0.61
	All Students	1,190	26	21.61	1.14	0.70	0.63
	Low Income	616	26	21.73	0.95	0.65	0.56
	African American	145	26	21.81	0.78	0.63	0.47
	Asian	41	26	21.56	0.98	0.63	0.59
	Hispanic	249	26	21.60	1.14	0.73	0.59
	Native American	2					
	White	722	26	21.59	1.16	0.67	0.66
	Pacific Islander/Hawaiian	2					
	Multi-race	26	26	21.31	2.02	0.88	0.69
	Male	773	26	21.60	1.13	0.67	0.65
	Female	416	26	21.63	1.17	0.75	0.58
	Title I	435	26	21.74	0.83	0.63	0.50
	Limited English Proficient (LEP)	85	26	21.59	1.08	0.75	0.54
	Formerly LEP (FLEP)	31	26	21.90	0.40	0.48	0.29
	LEPFLEP	116	26	21.67	0.96	0.74	0.49
	Special Education Plan 504	1,189	26	21.61	1.14	0.70	0.63
		122	26	21.13	1.43	0.55	0.95
	7	All Students	1,155	39	31.99	2.35	0.81
Low Income		580	39	32.26	1.92	0.74	0.98
African American		120	39	31.61	2.73	0.76	1.34
Asian		39	39	32.10	2.45	0.91	0.74
Hispanic		253	39	32.12	2.09	0.80	0.94
Native American		7					
White		701	39	31.96	2.41	0.82	1.03
Pacific Islander/Hawaiian		3					
Multi-race		28	39	32.75	0.65	0.45	0.48
Male		745	39	31.99	2.41	0.82	1.02
Female		408	39	31.99	2.24	0.79	1.03
Title I		351	39	32.12	2.02	0.78	0.96
Limited English Proficient (LEP)		95	39	32.12	2.20	0.77	1.05
Formerly LEP (FLEP)		34	39	32.21	1.93	0.73	1.01
LEPFLEP		129	39	32.14	2.12	0.76	1.05
Special Education Plan 504		1,153	39	31.99	2.35	0.81	1.02
	113	39	31.35	2.99	0.79	1.38	
8	All Students	1,120	26	21.48	1.34	0.75	0.66
	Low Income	572	26	21.55	1.34	0.80	0.60
	African American	155	26	21.17	2.05	0.87	0.73
	Asian	34	26	21.65	0.92	0.56	0.61
	Hispanic	247	26	21.46	1.45	0.77	0.70
	Native American	4					
	White	659	26	21.56	1.07	0.67	0.62
	Pacific Islander/Hawaiian	2					
	Multi-race	12	26	21.42	1.44	0.50	1.02
	Male	721	26	21.45	1.40	0.77	0.67
	Female	396	26	21.54	1.24	0.73	0.65
	Title I	354	26	21.42	1.64	0.83	0.68

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
10	Limited English Proficient (LEP)	97	26	21.43	1.23	0.75	0.61
	Formerly LEP (FLEP)	22	26	21.68	0.57	0.10	0.54
	LEPFLEP	119	26	21.48	1.14	0.72	0.60
	Special Education	1,118	26	21.48	1.34	0.75	0.67
	Plan 504	107	26	20.92	2.16	0.81	0.93
	All Students	827	39	31.22	3.10	0.79	1.43
	Low Income	363	39	31.48	2.98	0.79	1.37
	African American	89	39	31.39	3.11	0.79	1.43
	Asian	44	39	30.70	3.14	0.68	1.77
	Hispanic	163	39	31.34	3.22	0.83	1.32
	Native American	4					
	White	514	39	31.19	3.07	0.77	1.46
	Pacific Islander/Hawaiian	1					
	Multi-race	9					
	Male	533	39	31.32	3.06	0.79	1.40
	Female	294	39	31.05	3.17	0.78	1.49
	Title I	179	39	31.63	2.87	0.82	1.23
	Limited English Proficient (LEP)	63	39	31.76	2.47	0.65	1.46
	Formerly LEP (FLEP)	21	39	32.43	1.25	0.66	0.73
	LEPFLEP	84	39	31.93	2.24	0.65	1.33
Special Education	827	39	31.22	3.10	0.79	1.43	
Plan 504	114	39	31.48	3.08	0.80	1.38	

Table Q-16. 2010 MCAS-Alt: Subgroup Reliabilities – Mathematics

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	1,232	26	21.56	1.20	0.70	0.66
	Low Income	630	26	21.68	1.08	0.73	0.56
	African American	135	26	21.60	1.03	0.66	0.60
	Asian	47	26	21.53	1.10	0.68	0.62
	Hispanic	288	26	21.72	0.98	0.72	0.52
	Native American	4					
	White	721	26	21.51	1.28	0.70	0.71
	Pacific Islander/Hawaiian	2					
	Multi-race	30	26	21.70	1.12	0.93	0.31
	Male	877	26	21.60	1.14	0.69	0.63
	Female	353	26	21.48	1.31	0.72	0.69
	Title I	467	26	21.72	0.94	0.73	0.48
	Limited English Proficient (LEP)	98	26	21.62	1.22	0.80	0.55
	Formerly LEP (FLEP)	40	26	21.70	0.79	0.46	0.58
	LEPFLEP	138	26	21.64	1.11	0.75	0.56
	Special Education	1,230	26	21.57	1.19	0.70	0.65
	Plan 504	88	26	21.44	1.13	0.49	0.81
4	All Students	1,342	26	21.54	1.25	0.74	0.63
	Low Income	742	26	21.64	1.04	0.73	0.54
	African American	156	26	21.51	1.24	0.73	0.64
	Asian	43	26	21.77	0.61	0.47	0.44

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
	Hispanic	337	26	21.64	1.07	0.76	0.52
	Native American	2					
	White	760	26	21.49	1.36	0.75	0.68
	Pacific Islander/Hawaiian	5					
	Multi-race	36	26	21.47	1.00	0.48	0.72
	Male	889	26	21.57	1.19	0.73	0.62
	Female	453	26	21.47	1.36	0.76	0.66
	Title I	530	26	21.68	0.98	0.71	0.53
	Limited English Proficient (LEP)	133	26	21.74	0.89	0.73	0.46
	Formerly LEP (FLEP)	45	26	21.76	1.07	0.77	0.51
	LEPFLEP	178	26	21.74	0.93	0.74	0.47
	Special Education	1,342	26	21.54	1.25	0.74	0.63
	Plan 504	106	26	21.31	1.16	0.55	0.78
5	All Students	1,276	26	21.60	1.22	0.72	0.64
	Low Income	663	26	21.75	0.89	0.62	0.55
	African American	148	26	21.66	0.97	0.61	0.60
	Asian	35	26	21.54	1.09	0.77	0.52
	Hispanic	305	26	21.76	1.03	0.76	0.51
	Native American	2					
	White	756	26	21.53	1.33	0.72	0.70
	Pacific Islander/Hawaiian	3					
	Multi-race	27	26	21.59	1.08	0.73	0.56
	Male	836	26	21.65	1.13	0.70	0.62
	Female	440	26	21.51	1.37	0.75	0.69
	Title I	491	26	21.73	0.90	0.67	0.52
	Limited English Proficient (LEP)	116	26	21.66	1.28	0.83	0.54
Formerly LEP (FLEP)	42	26	21.71	1.25	0.92	0.36	
LEPFLEP	158	26	21.68	1.27	0.85	0.50	
Special Education	1,276	26	21.60	1.22	0.72	0.64	
Plan 504	121	26	21.29	1.18	0.48	0.85	
6	All Students	1,260	26	21.62	1.20	0.72	0.64
	Low Income	646	26	21.76	0.91	0.62	0.56
	African American	151	26	21.77	0.99	0.80	0.44
	Asian	46	26	21.57	1.38	0.76	0.67
	Hispanic	257	26	21.65	1.08	0.66	0.63
	Native American	2					
	White	772	26	21.60	1.23	0.70	0.67
	Pacific Islander/Hawaiian	2					
	Multi-race	27	26	21.26	2.14	0.84	0.86
	Male	819	26	21.60	1.19	0.70	0.65
	Female	440	26	21.66	1.23	0.75	0.62
	Title I	449	26	21.77	0.88	0.65	0.52
	Limited English Proficient (LEP)	89	26	21.74	0.92	0.76	0.45
Formerly LEP (FLEP)	33	26	21.79	0.65	0.47	0.47	
LEPFLEP	122	26	21.75	0.86	0.72	0.46	
Special Education	1,259	26	21.62	1.20	0.72	0.64	
Plan 504	126	26	21.26	1.39	0.59	0.88	
7	All Students	1,208	26	21.53	1.30	0.73	0.67
	Low Income	599	26	21.72	0.88	0.63	0.53

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM	
			Maximum	Mean	Standard Deviation			
	African American	128	26	21.76	0.91	0.59	0.59	
	Asian	40	26	21.50	1.43	0.79	0.66	
	Hispanic	260	26	21.57	1.08	0.71	0.58	
	Native American	5						
	White	734	26	21.47	1.41	0.74	0.71	
	Pacific Islander/Hawaiian	3						
	Multi-race	32	26	21.66	1.45	0.90	0.46	
	Male	767	26	21.57	1.30	0.76	0.64	
	Female	438	26	21.45	1.28	0.70	0.70	
	Title I	365	26	21.70	0.90	0.63	0.54	
	Limited English Proficient (LEP)	95	26	21.57	1.03	0.66	0.60	
	Formerly LEP (FLEP)	34	26	21.68	0.98	0.74	0.50	
	LEPFLEP	129	26	21.60	1.01	0.68	0.57	
	Special Education	1,205	26	21.53	1.29	0.74	0.66	
	Plan 504	117	26	21.31	1.57	0.75	0.79	
	8	All Students	1,220	26	21.56	1.38	0.75	0.69
		Low Income	608	26	21.65	1.30	0.77	0.63
African American		169	26	21.36	1.87	0.85	0.72	
Asian		36	26	21.53	1.16	0.66	0.68	
Hispanic		255	26	21.47	1.60	0.79	0.74	
Native American		4						
White		731	26	21.63	1.13	0.67	0.65	
Pacific Islander/Hawaiian		2						
Multi-race		16	26	21.75	2.05	0.80	0.92	
Male		776	26	21.56	1.34	0.73	0.69	
Female		441	26	21.55	1.44	0.78	0.68	
Title I		364	26	21.53	1.68	0.83	0.70	
Limited English Proficient (LEP)		103	26	21.45	1.37	0.79	0.63	
Formerly LEP (FLEP)		25	26	21.76	0.60	0.44	0.45	
LEPFLEP		128	26	21.51	1.26	0.77	0.60	
Special Education		1,218	26	21.56	1.38	0.75	0.69	
Plan 504		121	26	21.14	2.19	0.84	0.88	
10	All Students	850	39	30.93	3.41	0.83	1.39	
	Low Income	378	39	31.27	3.34	0.81	1.46	
	African American	91	39	31.05	3.40	0.90	1.07	
	Asian	45	39	31.16	2.89	0.85	1.14	
	Hispanic	166	39	30.83	3.57	0.82	1.50	
	Native American	5						
	White	528	39	30.95	3.40	0.84	1.38	
	Pacific Islander/Hawaiian	2						
	Multi-race	9						
	Male	538	39	30.84	3.42	0.82	1.45	
	Female	311	39	31.08	3.40	0.85	1.30	
	Title I	185	39	31.44	3.22	0.91	0.96	
	Limited English Proficient (LEP)	63	39	31.65	2.71	0.75	1.36	
	Formerly LEP (FLEP)	22	39	31.32	3.37	0.93	0.91	
	LEPFLEP	85	39	31.56	2.88	0.81	1.25	
	Special Education	849	39	30.93	3.41	0.83	1.39	
	Plan 504	121	39	31.02	3.35	0.91	1.03	

Table Q-17. 2010 MCAS-Alt: Subgroup Reliabilities – Science and Technology/Engineering

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	All Students	1,090	39	32.04	2.33	0.84	0.92
	Low Income	568	39	32.27	2.13	0.82	0.90
	African American	132	39	32.23	1.92	0.77	0.92
	Asian	35	39	32.31	1.69	0.82	0.72
	Hispanic	272	39	32.04	2.48	0.80	1.11
	Native American	2					
	White	624	39	32.01	2.35	0.85	0.90
	Pacific Islander/Hawaiian	2					
	Multi-race	23	39	31.43	3.01	0.86	1.11
	Male	743	39	32.10	2.23	0.82	0.96
	Female	347	39	31.93	2.53	0.87	0.91
	Title I	441	39	32.24	2.11	0.75	1.05
	Limited English Proficient (LEP)	103	39	31.88	2.75	0.80	1.23
	Formerly LEP (FLEP)	36	39	32.08	2.39	0.86	0.91
	LEPFLEP	139	39	31.94	2.66	0.81	1.17
	Special Education	1,090	39	32.04	2.33	0.84	0.92
Plan 504	100	39	31.93	2.04	0.83	0.83	
8	All Students	1,053	39	31.88	2.62	0.90	0.83
	Low Income	544	39	32.09	2.37	0.92	0.67
	African American	147	39	31.79	3.04	0.96	0.59
	Asian	33	39	32.00	2.83	0.90	0.90
	Hispanic	239	39	31.79	2.65	0.90	0.84
	Native American	5					
	White	609	39	31.96	2.47	0.85	0.96
	Pacific Islander/Hawaiian	2					
	Multi-race	12	39	31.42	3.12	0.89	1.04
	Male	680	39	31.87	2.57	0.89	0.85
	Female	370	39	31.90	2.72	0.92	0.79
	Title I	324	39	31.82	2.77	0.96	0.56
	Limited English Proficient (LEP)	98	39	32.04	2.20	0.86	0.83
	Formerly LEP (FLEP)	22	39	31.77	2.33	0.43	1.76
	LEPFLEP	120	39	31.99	2.21	0.83	0.91
	Special Education	1,051	39	31.88	2.62	0.90	0.83
Plan 504	99	39	31.15	3.75	0.95	0.83	

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. 2010 MCAS-Alt: Subgroup Reliabilities – High School Biology

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
HS	All Students	719	39	31.05	3.33	0.92	0.95
	Low Income	324	39	31.08	3.31	0.94	0.81
	African American	85	39	31.06	3.40		
	Asian	36	39	30.58	3.34		
	Hispanic	148	39	31.02	3.46		
	Native American	4					
	White	433	39	31.10	3.30	0.91	0.99
	Pacific Islander/Hawaiian	1					
	Multi-race	7					
	Male	459	39	31.06	3.37	0.92	0.95
	Female	257	39	31.03	3.28		
	Title I	173	39	30.87	3.50		
	Limited English Proficient (LEP)	60	39	30.73	3.57		
	Formerly LEP (FLEP)	19	39	31.37	3.13		
	LEPFLEP	79	39	30.89	3.46		
	Special Education	716	39	31.05	3.34	0.92	0.95
	Plan 504	96	39	31.69	2.82		

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. 2010 MCAS-Alt: Subgroup Reliabilities – High School Chemistry

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
HS	All Students	68	39	31.76	2.84	0.65	1.67
	Low Income	30	39	32.33	1.65		
	African American	9					
	Asian	3					
	Hispanic	12	39	31.25	4.35		
	Native American	0					
	White	43	39	31.93	2.21		
	Pacific Islander/Hawaiian	0					
	Multi-race	1					
	Male	48	39	31.88	2.56		
	Female	20	39	31.50	3.50		
	Title I	15	39	31.20	2.81		
	Limited English Proficient (LEP)	6					
	Formerly LEP (FLEP)	4					
	LEPFLEP	10	39	32.70	0.95		
	Special Education	68	39	31.76	2.84	0.65	1.67
	Plan 504	7					

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. 2010 MCAS-Alt: Subgroup Reliabilities – High School Introductory Physics

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
HS	All Students	54	39	30.69	3.68	0.75	1.84
	Low Income	19	39	31.95	2.82		
	African American	6					
	Asian	4					
	Hispanic	12	39	30.83	3.33		
	Native American	0					
	White	29	39	30.48	4.05		
	Pacific Islander/Hawaiian	1					
	Multi-race	2					
	Male	34	39	31.21	3.47		
	Female	20	39	29.80	3.94	0.72	2.08
	Title I	12	39	32.75	0.87		
	Limited English Proficient (LEP)	3					
	Formerly LEP (FLEP)	1					
	LEPFLEP	4					
	Special Education	54	39	30.69	3.68	0.75	1.84
	Plan 504	7					

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. 2010 MCAS-Alt: Subgroup Reliabilities – High School Technology/Engineering

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
HS	All Students	73	39	30.81	3.31		
	Low Income	15	39	32.80	0.56		
	African American	6					
	Asian	6					
	Hispanic	7					
	Native American	0					
	White	53	39	30.64	3.36		
	Pacific Islander/Hawaiian	0					
	Multi-race	0					
	Male	51	39	31.55	2.37		
	Female	22	39	29.09	4.45		
	Title I	3					
	Limited English Proficient (LEP)	3					
	Formerly LEP (FLEP)	2					
	LEPFLEP	5					
	Special Education	73	39	30.81	3.31		
	Plan 504	11	39	29.27	2.97		

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.