

# **Appendix P**

## **CLASSICAL RELIABILITY**

**Table P-1. 2012 MCAS: Subgroup Reliabilities –  
ELA**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	69,439	48	35.85	8.46	0.91	2.58
	Low Income	25,748	48	31.63	9.22	0.91	2.84
	African American	5,442	48	31.10	9.29	0.90	2.87
	Asian	4,318	48	37.56	8.05	0.91	2.44
	Hispanic	11,209	48	30.65	9.51	0.91	2.88
	Multi-race	2,217	48	36.35	8.38	0.91	2.53
	Native American	189	48	33.67	9.28	0.91	2.73
	Pacific Islander/Hawaiian	71	48	33.61	9.24	0.91	2.75
	White	45,977	48	37.51	7.31	0.89	2.46
	Female	34,056	48	36.77	8.08	0.90	2.53
	Male	35,377	48	34.97	8.72	0.91	2.61
	LEP	6,358	48	27.64	9.52	0.90	2.99
	FLEP	2,324	48	35.51	7.85	0.89	2.65
	LEPFLEP	8,682	48	29.75	9.75	0.91	2.91
	Plan 504	2,696	48	35.22	7.96	0.89	2.62
	Special Education	11,556	48	28.07	9.68	0.91	2.96
	Title I	25,896	48	31.99	9.17	0.91	2.82
4	All Students	68,873	72	49.32	10.12	0.89	3.28
	Low Income	25,318	72	44.21	10.68	0.89	3.50
	African American	5,547	72	43.33	11.05	0.90	3.56
	Asian	4,098	72	52.29	9.41	0.89	3.14
	Hispanic	10,832	72	43.28	10.95	0.90	3.52
	Multi-race	1,998	72	49.92	9.86	0.89	3.27
	Native American	157	72	45.94	10.44	0.90	3.37
	Pacific Islander/Hawaiian	70	72	46.91	10.65	0.90	3.36
	White	46,153	72	51.19	8.95	0.87	3.17
	Female	33,872	72	50.95	9.72	0.89	3.20
	Male	34,994	72	47.75	10.25	0.90	3.31
	LEP	5,749	72	39.57	11.23	0.89	3.66
	FLEP	2,318	72	48.06	9.58	0.88	3.32
	LEPFLEP	8,067	72	42.01	11.44	0.90	3.59
	Plan 504	3,133	72	48.09	9.12	0.87	3.28
	Special Education	11,886	72	39.53	10.89	0.89	3.63
	Title I	24,984	72	44.58	10.65	0.89	3.47
5	All Students	69,989	52	35.54	8.56	0.89	2.81
	Low Income	25,797	52	31.32	8.91	0.89	2.99
	African American	5,712	52	31.16	8.91	0.89	3.02
	Asian	4,047	52	37.59	8.48	0.90	2.74
	Hispanic	10,558	52	30.25	9.17	0.89	3.04
	Multi-race	2,053	52	35.67	8.50	0.89	2.81
	Native American	155	52	34.04	7.20	0.84	2.92
	Pacific Islander/Hawaiian	85	52	36.27	8.47	0.89	2.83
	White	47,352	52	37.07	7.68	0.87	2.72

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	Female	34,359	52	36.73	8.28	0.89	2.78
	Male	35,622	52	34.39	8.66	0.89	2.81
	LEP	4,796	52	26.15	8.78	0.87	3.14
	FLEP	2,295	52	34.15	8.21	0.87	2.93
	LEPFLEP	7,091	52	28.74	9.38	0.89	3.10
	Plan 504	3,480	52	34.69	7.71	0.87	2.83
	Special Education	12,347	52	27.22	8.76	0.88	3.07
	Title I	23,947	52	31.58	8.96	0.89	2.98
6	All Students	70,239	52	36.41	8.98	0.90	2.87
	Low Income	25,706	52	31.40	9.20	0.89	3.07
	African American	5,714	52	31.01	9.28	0.89	3.10
	Asian	3,954	52	39.02	8.69	0.90	2.75
	Hispanic	10,612	52	30.28	9.51	0.89	3.12
	Multi-race	1,769	52	36.46	8.91	0.90	2.88
	Native American	152	52	33.24	9.05	0.89	3.04
	Pacific Islander/Hawaiian	90	52	37.19	9.11	0.90	2.90
	White	47,928	52	38.21	7.91	0.88	2.77
	Female	34,313	52	37.72	8.57	0.89	2.82
	Male	35,918	52	35.17	9.18	0.90	2.88
	LEP	4,175	52	25.23	8.85	0.87	3.22
	FLEP	2,475	52	33.86	7.98	0.86	3.01
	LEPFLEP	6,650	52	28.44	9.50	0.89	3.18
	Plan 504	3,385	52	35.55	7.86	0.86	2.89
	Special Education	12,311	52	27.61	9.04	0.88	3.14
	Title I	20,702	52	31.39	9.31	0.89	3.09
7	All Students	70,554	72	50.27	10.54	0.90	3.38
	Low Income	25,560	72	44.81	10.99	0.89	3.57
	African American	5,986	72	45.16	10.86	0.89	3.55
	Asian	3,620	72	53.30	10.47	0.90	3.32
	Hispanic	10,431	72	43.50	11.58	0.90	3.64
	Multi-race	1,595	72	50.03	10.87	0.90	3.41
	Native American	179	72	47.58	9.97	0.88	3.46
	Pacific Islander/Hawaiian	65	72	47.83	10.61	0.89	3.56
	White	48,654	72	52.15	9.38	0.88	3.25
	Female	34,653	72	52.34	9.89	0.89	3.24
	Male	35,895	72	48.27	10.77	0.90	3.41
	LEP	3,337	72	35.28	11.57	0.88	3.99
	FLEP	2,148	72	46.26	9.77	0.87	3.46
	LEPFLEP	5,485	72	39.58	12.14	0.90	3.86
	Plan 504	3,244	72	49.17	9.25	0.87	3.36
	Special Education	12,103	72	39.47	10.86	0.88	3.68
	Title I	18,520	72	44.71	11.08	0.90	3.57
8	All Students	71,657	52	38.88	8.78	0.90	2.74
	Low Income	25,185	52	34.30	9.55	0.90	2.99
	African American	6,050	52	34.59	9.38	0.90	2.98
	Asian	3,694	52	42.03	8.09	0.90	2.49

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Hispanic	10,214	52	33.08	10.04	0.91	3.04
	Multi-race	1,557	52	38.69	8.92	0.90	2.75
	Native American	171	52	35.48	8.94	0.89	3.00
	Pacific Islander/Hawaiian	56	52	40.38	8.44	0.91	2.57
	White	49,886	52	40.38	7.72	0.88	2.63
	Female	35,070	52	40.34	8.10	0.89	2.63
	Male	36,580	52	37.49	9.18	0.91	2.79
	LEP	3,033	52	25.22	9.47	0.88	3.27
	FLEP	1,510	52	35.05	8.16	0.86	3.00
	LEPFLEP	4,543	52	28.48	10.17	0.90	3.21
	Plan 504	3,543	52	38.65	7.58	0.87	2.75
	Special Education	12,210	52	29.81	9.56	0.89	3.14
	Title I	18,167	52	34.48	9.52	0.90	2.97
	All Students	68,106	72	53.77	9.98	0.90	3.17
10	Low Income	22,259	72	48.30	10.87	0.89	3.52
	African American	5,798	72	48.14	10.61	0.89	3.56
	Asian	3,706	72	55.85	10.35	0.91	3.08
	Hispanic	8,774	72	46.59	11.62	0.90	3.66
	Multi-race	1,379	72	53.99	9.87	0.90	3.14
	Native American	160	72	50.71	11.16	0.90	3.45
	Pacific Islander/Hawaiian	87	72	50.67	11.80	0.92	3.31
	White	48,159	72	55.62	8.59	0.88	2.98
	Female	33,682	72	54.97	9.59	0.90	3.07
	Male	34,413	72	52.60	10.21	0.90	3.22
	LEP	2,766	72	35.89	11.32	0.86	4.26
	FLEP	1,026	72	48.07	9.78	0.87	3.50
	LEPFLEP	3,792	72	39.18	12.19	0.88	4.16
	Plan 504	3,187	72	54.41	8.21	0.86	3.05
Special Education	10,608	72	44.03	11.04	0.89	3.70	
Title I	12,629	72	47.53	10.75	0.89	3.51	

**Table P-2. 2012 MCAS: Subgroup Reliabilities – Mathematics**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	69,510	40	29.98	7.62	0.90	2.43
	Low Income	25,771	40	26.37	8.28	0.90	2.62
	African American	5,455	40	25.45	8.65	0.91	2.66
	Asian	4,326	40	33.24	6.35	0.89	2.15
	Hispanic	11,242	40	25.65	8.41	0.90	2.65
	Multi-race	2,217	40	30.12	7.70	0.90	2.41
	Native American	188	40	27.37	8.33	0.91	2.57
	Pacific Islander/Hawaiian	71	40	28.39	7.93	0.90	2.50
	White	45,995	40	31.27	6.69	0.88	2.35

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	Female	34,066	40	29.96	7.57	0.90	2.43
	Male	35,437	40	29.99	7.66	0.90	2.42
	LEP	6,399	40	24.28	8.72	0.91	2.69
	FLEP	2,323	40	30.20	7.35	0.89	2.43
	LEPFLEP	8,722	40	25.86	8.78	0.91	2.63
	Plan 504	2,703	40	29.41	7.23	0.88	2.48
	Special Education	11,557	40	23.50	8.64	0.90	2.70
	Title I	25,943	40	26.84	8.25	0.90	2.61
4	All Students	69,032	54	37.24	10.31	0.90	3.30
	Low Income	25,417	54	32.22	10.60	0.89	3.51
	African American	5,559	54	30.31	10.58	0.89	3.54
	Asian	4,114	54	42.12	8.85	0.89	2.96
	Hispanic	10,890	54	31.51	10.80	0.89	3.53
	Multi-race	2,003	54	37.19	10.28	0.90	3.31
	Native American	158	54	34.47	10.59	0.90	3.42
	Pacific Islander/Hawaiian	71	54	35.01	11.15	0.91	3.38
	White	46,219	54	39.01	9.32	0.88	3.21
	Female	33,908	54	37.50	10.17	0.90	3.29
	Male	35,118	54	36.99	10.44	0.90	3.31
	LEP	5,798	54	29.10	10.94	0.89	3.57
	FLEP	2,330	54	36.37	10.10	0.89	3.34
	LEPFLEP	8,128	54	31.19	11.20	0.90	3.53
	Plan 504	3,142	54	36.02	9.66	0.88	3.37
	Special Education	11,928	54	28.42	10.78	0.89	3.55
	Title I	25,077	54	32.65	10.60	0.89	3.50
5	All Students	70,035	54	37.06	11.64	0.91	3.43
	Low Income	25,804	54	31.30	11.81	0.91	3.55
	African American	5,720	54	30.10	11.58	0.91	3.54
	Asian	4,056	54	42.84	10.40	0.91	3.10
	Hispanic	10,586	54	30.21	11.97	0.91	3.55
	Multi-race	2,056	54	36.48	11.97	0.92	3.44
	Native American	157	54	34.39	12.12	0.92	3.51
	Pacific Islander/Hawaiian	86	54	38.36	12.35	0.93	3.32
	White	47,352	54	38.97	10.62	0.90	3.32
	Female	34,361	54	37.32	11.37	0.91	3.43
	Male	35,671	54	36.81	11.88	0.92	3.43
	LEP	4,827	54	27.30	12.00	0.91	3.54
	FLEP	2,292	54	35.84	11.65	0.91	3.47
	LEPFLEP	7,119	54	30.05	12.54	0.92	3.56
	Plan 504	3,475	54	35.46	10.89	0.90	3.48
	Special Education	12,336	54	26.08	11.67	0.91	3.57
	Title I	23,979	54	31.85	11.85	0.91	3.55
6	All Students	70,258	54	37.92	11.44	0.92	3.26
	Low Income	25,707	54	32.18	11.81	0.91	3.46
	African American	5,719	54	31.63	11.86	0.91	3.48
	Asian	3,957	54	43.75	9.78	0.91	2.87

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
6	Hispanic	10,630	54	31.00	12.06	0.92	3.49
	Multi-race	1,771	54	37.28	11.81	0.92	3.30
	Native American	152	54	34.28	11.55	0.91	3.40
	Pacific Islander/Hawaiian	89	54	40.37	9.67	0.90	3.12
	White	47,923	54	39.75	10.37	0.91	3.14
	Female	34,305	54	38.33	11.07	0.91	3.23
	Male	35,948	54	37.53	11.77	0.92	3.28
	LEP	4,216	54	27.00	12.01	0.91	3.52
	FLEP	2,475	54	36.66	11.04	0.91	3.32
	LEPFLEP	6,691	54	30.57	12.56	0.92	3.50
	Plan 504	3,396	54	36.70	10.37	0.90	3.32
	Special Education	12,292	54	26.65	11.55	0.91	3.51
	Title I	20,705	54	32.82	11.92	0.92	3.45
	All Students	70,694	54	36.44	11.72	0.91	3.42
7	Low Income	25,680	54	30.36	11.58	0.90	3.62
	African American	5,992	54	29.76	11.60	0.90	3.62
	Asian	3,635	54	42.55	10.59	0.92	3.02
	Hispanic	10,534	54	28.94	11.70	0.90	3.64
	Multi-race	1,592	54	35.86	12.10	0.92	3.45
	Native American	180	54	32.69	11.14	0.90	3.56
	Pacific Islander/Hawaiian	65	54	33.57	12.19	0.92	3.47
	White	48,675	54	38.48	10.71	0.90	3.31
	Female	34,665	54	37.04	11.43	0.91	3.40
	Male	36,024	54	35.87	11.97	0.92	3.43
	LEP	3,406	54	23.86	11.13	0.89	3.67
	FLEP	2,148	54	32.69	11.29	0.90	3.56
	LEPFLEP	5,554	54	27.28	11.99	0.91	3.67
	Plan 504	3,251	54	35.51	10.65	0.89	3.47
Special Education	12,114	54	24.97	10.82	0.89	3.63	
Title I	18,624	54	30.41	11.67	0.90	3.62	
8	All Students	71,536	54	35.05	12.58	0.93	3.38
	Low Income	25,104	54	28.37	12.25	0.92	3.48
	African American	6,019	54	27.63	11.90	0.92	3.47
	Asian	3,700	54	42.18	11.15	0.93	3.02
	Hispanic	10,228	54	26.86	12.35	0.92	3.48
	Multi-race	1,555	54	34.13	13.02	0.93	3.42
	Native American	170	54	30.61	11.03	0.90	3.54
	Pacific Islander/Hawaiian	57	54	34.95	12.98	0.93	3.41
	White	49,785	54	37.15	11.62	0.92	3.30
	Female	35,029	54	35.09	12.40	0.93	3.39
	Male	36,505	54	35.01	12.75	0.93	3.37
	LEP	3,064	54	21.18	11.54	0.91	3.38
	FLEP	1,511	54	29.83	11.93	0.92	3.45
	LEPFLEP	4,575	54	24.04	12.36	0.92	3.45

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Plan 504	3,550	54	34.59	11.42	0.91	3.40
	Special Education	12,099	54	22.66	11.18	0.91	3.43
	Title I	18,116	54	28.67	12.26	0.92	3.47
10	All Students	68,054	60	40.06	12.91	0.92	3.59
	Low Income	22,208	60	33.57	13.09	0.92	3.78
	African American	5,790	60	32.94	12.82	0.91	3.78
	Asian	3,730	60	47.55	11.85	0.93	3.17
	Hispanic	8,784	60	31.38	13.28	0.92	3.83
	Multi-race	1,382	60	39.92	13.01	0.92	3.58
	Native American	159	60	35.27	13.86	0.93	3.73
	Pacific Islander/Hawaiian	87	60	36.28	14.45	0.93	3.71
	White	48,076	60	41.96	11.79	0.91	3.47
	Female	33,632	60	40.46	12.48	0.92	3.54
	Male	34,408	60	39.66	13.31	0.93	3.62
	LEP	2,815	60	24.83	13.05	0.92	3.78
	FLEP	1,037	60	35.08	13.26	0.92	3.76
	LEPFLEP	3,852	60	27.59	13.87	0.92	3.85
	Plan 504	3,199	60	40.19	11.49	0.90	3.55
	Special Education	10,639	60	27.62	11.80	0.90	3.80
Title I	12,615	60	33.03	13.01	0.92	3.78	

**Table P-3. 2012 MCAS: Subgroup Reliabilities – STE**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	All Students	70,107	54	34.97	9.84	0.88	3.44
	Low Income	25,863	54	29.42	9.59	0.87	3.47
	African American	5,717	54	27.80	9.43	0.86	3.47
	Asian	4,055	54	37.11	10.13	0.89	3.41
	Hispanic	10,606	54	28.06	9.63	0.87	3.47
	Multi-race	2,058	54	35.04	9.78	0.88	3.43
	Native American	156	54	32.81	9.39	0.86	3.50
	Pacific Islander/Hawaiian	86	54	35.21	10.13	0.89	3.42
	White	47,407	54	37.20	8.72	0.85	3.38
	Female	34,385	54	35.04	9.73	0.87	3.46
	Male	35,719	54	34.90	9.94	0.88	3.42
	LEP	4,833	54	23.57	8.77	0.85	3.39
	FLEP	2,290	54	31.48	9.08	0.85	3.50
	LEPFLEP	7,123	54	26.11	9.61	0.87	3.46
	Plan 504	3,470	54	35.13	9.16	0.86	3.41
	Special Education	12,476	54	27.23	9.62	0.87	3.43
Title I	23,997	54	29.38	9.67	0.87	3.48	
8	All Students	71,504	54	33.44	10.29	0.89	3.43
	Low Income	25,049	54	27.48	9.87	0.88	3.47

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	African American	6,011	54	26.46	9.47	0.87	3.44
	Asian	3,693	54	37.21	10.25	0.89	3.33
	Hispanic	10,182	54	25.83	9.99	0.88	3.46
	Multi-race	1,554	54	33.02	10.73	0.90	3.44
	Native American	171	54	29.47	9.61	0.87	3.49
	Pacific Islander/Hawaiian	57	54	33.54	10.41	0.89	3.39
	White	49,814	54	35.59	9.24	0.87	3.37
	Female	35,010	54	33.04	10.03	0.88	3.44
	Male	36,492	54	33.82	10.52	0.89	3.41
	LEP	3,058	54	19.54	8.50	0.85	3.33
	FLEP	1,513	54	27.03	8.98	0.85	3.46
	LEPFLEP	4,571	54	22.02	9.35	0.87	3.40
	Plan 504	3,534	54	33.92	9.34	0.87	3.40
	Special Education	12,152	54	24.73	9.51	0.87	3.41
	Title I	18,093	54	27.16	9.87	0.88	3.46

**Table P-4. 2012 MCAS: Subgroup Reliabilities – High School Biology**

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	48,423	60	39.02	11.11	0.91	3.32
Low Income	16,286	60	32.85	11.11	0.90	3.43
African American	3,625	60	32.56	10.90	0.90	3.40
Asian	2,658	60	42.98	11.78	0.92	3.23
Hispanic	6,551	60	30.60	11.11	0.90	3.45
Multi-race	990	60	38.45	10.80	0.90	3.33
Native American	151	60	33.48	11.96	0.92	3.40
Pacific Islander/Hawaiian	60	60	37.33	12.35	0.93	3.33
White	34,318	60	41.09	9.93	0.89	3.24
Female	24,335	60	39.19	10.91	0.91	3.34
Male	24,059	60	38.87	11.30	0.91	3.30
LEP	1,990	60	24.09	10.16	0.89	3.43
FLEP	917	60	33.13	10.91	0.90	3.47
LEPFLEP	2,907	60	26.94	11.22	0.90	3.48
Plan 504	2,086	60	39.78	9.80	0.89	3.27
Special Education	7,571	60	29.21	10.59	0.90	3.43
Title I	8,520	60	32.17	10.79	0.90	3.42

**Table P-5. 2012 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	1,355	60	38.90	12.27	0.91	3.67
Low Income	345	60	32.56	12.97	0.92	3.77
African American	191	60	31.66	11.83	0.90	3.76
Asian	112	60	43.61	10.27	0.88	3.50
Hispanic	150	60	27.88	13.06	0.92	3.76
Multi-race	45	60	42.42	10.70	0.89	3.60
Native American	2					
Pacific Islander/Hawaiian	0					
White	853	60	41.71	10.61	0.89	3.54
Female	686	60	37.88	12.04	0.91	3.68
Male	668	60	39.97	12.41	0.91	3.65
LEP	91	60	23.48	11.18	0.89	3.70
FLEP	7					
LEPFLEP	98	60	24.79	12.08	0.91	3.72
Plan 504	61	60	40.34	10.44	0.88	3.64
Special Education	115	60	33.23	12.24	0.91	3.66
Title I	158	60	23.55	9.80	0.87	3.60

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-6. 2012 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	17,375	60	35.90	11.68	0.91	3.59
Low Income	6,250	60	29.14	11.00	0.89	3.65
African American	2,159	60	28.87	10.74	0.89	3.64
Asian	1,073	60	41.94	11.08	0.91	3.38
Hispanic	2,567	60	27.52	11.16	0.89	3.64
Multi-race	483	60	36.72	12.12	0.91	3.57
Native American	44	60	33.73	9.58	0.87	3.48
Pacific Islander/Hawaiian	25	60	37.48	10.53	0.88	3.64
White	11,012	60	38.63	10.36	0.89	3.47
Female	8,459	60	35.54	11.23	0.90	3.57
Male	8,908	60	36.26	12.08	0.91	3.60
LEP	1,018	60	23.93	10.90	0.89	3.58
FLEP	290	60	31.16	10.85	0.89	3.61
LEPFLEP	1,308	60	25.53	11.29	0.90	3.62
Plan 504	709	60	37.00	10.46	0.89	3.52
Special Education	2,701	60	26.64	10.71	0.89	3.62
Title I	4,403	60	28.25	11.05	0.89	3.65

**Table P-7. 2012 MCAS: Subgroup Reliabilities – High School Technology/Engineering**

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	2,033	60	35.43	10.74	0.89	3.57
Low Income	890	60	30.60	10.62	0.88	3.62
African American	177	60	31.81	9.68	0.86	3.61
Asian	43	60	37.81	11.36	0.90	3.64
Hispanic	403	60	27.12	10.86	0.89	3.68
Multi-race	41	60	36.54	9.42	0.87	3.46
Native American	3					
Pacific Islander/Hawaiian	1					
White	1,361	60	38.29	9.33	0.86	3.47
Female	716	60	34.04	10.86	0.89	3.62
Male	1,314	60	36.23	10.58	0.89	3.53
LEP	223	60	20.99	9.10	0.84	3.60
FLEP	26	60	33.77	9.10	0.85	3.52
LEPFLEP	249	60	22.32	9.89	0.86	3.64
Plan 504	77	60	39.30	9.94	0.88	3.47
Special Education	521	60	30.84	8.68	0.84	3.51
Title I	595	60	31.31	11.34	0.90	3.65

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-8. 2012 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	6.95	1.97	0.68	1.12
	LT	32	39	28.91	6.90	0.89	2.31
4	CC	1	8	6.42	1.26		
	CT	1	12	6.81	1.59		
	LA	7	7	5.38	1.59	0.63	0.97
	LT	33	45	30.72	7.18	0.88	2.51
5	LA	6	6	4.57	1.36	0.53	0.93
	LT	34	46	30.97	7.60	0.88	2.65
6	LA	6	6	4.47	1.44	0.57	0.95
	LT	34	46	31.94	7.91	0.88	2.71
7	CC	1	8	6.71	1.24		
	CT	1	12	6.92	1.50		
	LA	7	7	5.79	1.32	0.54	0.90
	LT	33	45	30.85	7.77	0.88	2.73
8	LA	6	6	4.83	1.43	0.66	0.84
	LT	34	46	34.06	7.67	0.88	2.60
10	CC	1	8	6.98	1.25		
	CT	1	12	7.22	1.49		

continued

Grade	Item Reporting Category	Number of Items	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
10	LA	6	6	4.90	1.26	0.58	0.81
	LT	34	46	34.67	7.14	0.88	2.51

\* Reporting category definitions follow table P-14.

**Table P-9. 2012 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	4	3.10	1.04	0.49	0.75
	ME	5	6	4.07	1.60	0.58	1.04
	NS	15	16	12.14	3.24	0.79	1.48
	PR	7	8	6.05	1.78	0.60	1.13
	SP	5	6	4.62	1.35	0.58	0.87
4	GE	5	8	5.43	2.01	0.54	1.36
	ME	5	8	5.44	1.99	0.46	1.46
	NS	19	22	15.28	4.44	0.78	2.06
	PR	5	8	5.30	1.78	0.52	1.23
	SP	8	8	5.79	1.87	0.65	1.11
5	GE	5	5	3.68	1.27	0.53	0.88
	ME	5	8	4.89	2.26	0.54	1.54
	NS	19	22	14.67	5.49	0.84	2.18
	PR	11	14	10.49	2.79	0.68	1.58
	SP	2	5	3.33	1.42	0.22	1.25
6	GE	5	5	3.40	1.37	0.56	0.91
	ME	5	8	5.24	2.28	0.56	1.51
	NS	16	19	13.43	4.09	0.81	1.80
	PR	13	16	11.58	3.57	0.77	1.69
	SP	3	6	4.27	1.65	0.45	1.23
7	GE	5	8	5.45	1.98	0.51	1.38
	ME	6	6	4.05	1.69	0.67	0.97
	NS	13	16	10.23	4.18	0.78	1.98
	PR	13	16	11.35	3.36	0.74	1.72
	SP	5	8	5.37	2.20	0.58	1.42
8	GE	8	8	5.52	2.03	0.67	1.16
	ME	2	5	2.86	1.56	0.46	1.14
	NS	11	14	9.50	3.64	0.78	1.71
	PR	16	19	12.57	4.64	0.83	1.92
	SP	5	8	4.60	2.18	0.54	1.48
10	GE	9	9	5.88	2.10	0.63	1.28
	ME	6	9	6.39	2.26	0.57	1.48
	NS	9	12	7.83	3.16	0.75	1.57
	PR	12	18	10.98	4.36	0.79	2.00
	SP	6	12	8.97	2.76	0.67	1.58

\* Reporting category definitions follow table P-14.

**Table P-10. 2012 MCAS: Reliabilities by Reporting Category by Grade – STE**

Grade	Item Reporting Category	Number of Items	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	ES	13	16	9.85	3.49	0.70	1.90
	LS	13	16	10.81	3.16	0.68	1.79
	PS	11	14	9.35	2.87	0.63	1.75
	TE	5	8	4.96	1.83	0.37	1.45
10	ES	10	13	7.92	2.92	0.68	1.66
	LS	10	13	7.78	2.97	0.65	1.76
	PS	11	14	8.45	3.24	0.67	1.86
	TE	11	14	9.29	2.66	0.65	1.58

\* Reporting category definitions follow table P-14.

**Table P-11. 2012 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	5.86	2.04	0.53	1.39
BC	12	15	8.82	3.16	0.72	1.69
EC	9	12	8.55	2.19	0.57	1.43
EV	9	12	8.32	2.61	0.69	1.44
GE	9	12	7.47	2.90	0.75	1.46

\* Reporting category definitions follow table P-14.

**Table P-12. 2012 MCAS: Reliabilities by Reporting Category – High School Chemistry**

Item Reporting Category	Number of Items	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
AS	12	15	9.64	3.56	0.74	1.80
BR	12	18	11.65	3.94	0.73	2.04
SO	9	12	7.26	2.97	0.62	1.84
TH	12	15	10.35	3.18	0.72	1.68

\* Reporting category definitions follow table P-14.

**Table P-13. 2012 MCAS: Reliabilities by Reporting Category – High School Introductory Physics**

Item Reporting Category	Number of Items	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
EM	9	12	7.15	2.54	0.64	1.54
HT	6	9	4.98	2.08	0.59	1.34
MF	18	24	14.28	4.99	0.79	2.29
WV	12	15	9.49	3.39	0.69	1.89

\* Reporting category definitions follow table P-14.

**Table P-14. 2012 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	7.93	2.47	0.62	1.53
ED	9	12	8.72	2.42	0.64	1.44
EL	12	18	7.71	3.76	0.70	2.07
FL	15	18	11.07	3.68	0.70	2.00

\* 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. 2012 MCAS-Alt: Subgroup Reliabilities –  
ELA**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	1,162	26	21.58	1.05	0.64	0.64
	Low Income	659	26	21.66	0.85	0.56	0.57
	African American	137	26	21.60	0.98	0.59	0.63
	Asian	44	26	21.45	1.19	0.78	0.56
	Hispanic	296	26	21.67	0.76	0.53	0.52
	Multi-race	21	26	21.95	1.02	0.50	0.72
	Native American	2					
	Pacific Islander/Hawaiian	3					
	White	654	26	21.53	1.17	0.66	0.69
	Female	356	26	21.49	1.26	0.75	0.63
	Male	804	26	21.62	0.95	0.55	0.64
	LEP	106	26	21.62	0.81	0.57	0.53
	FLEP	25	26	21.80	0.50	0.27	0.43
	LEPFLEP	131	26	21.66	0.76	0.54	0.51
	Plan 504	7					
	Special Education	1,161	26	21.58	1.05	0.64	0.64
	Title I	508	26	21.66	0.81	0.52	0.56
4	All Students	1,326	39	31.71	2.62	0.75	1.30
	Low Income	727	39	31.86	2.62	0.75	1.30
	African American	155	39	31.66	2.76	0.64	1.65
	Asian	81	39	31.57	2.89	0.80	1.29
	Hispanic	301	39	31.81	2.81	0.79	1.28
	Multi-race	36	39	31.28	2.87	0.44	2.14
	Native American	5					
	Pacific Islander/Hawaiian	0					
	White	745	39	31.72	2.47	0.74	1.25
	Female	437	39	31.57	2.83	0.75	1.41
	Male	887	39	31.78	2.50	0.75	1.25
	LEP	117	39	31.64	2.87	0.77	1.38
	FLEP	44	39	31.93	2.64	0.60	1.67
	LEPFLEP	161	39	31.72	2.81	0.75	1.40
	Plan 504	5					
	Special Education	1,326	39	31.71	2.62	0.75	1.30
	Title I	551	39	31.86	2.59	0.73	1.34
5	All Students	1,298	26	21.53	1.11	0.66	0.64
	Low Income	702	26	21.61	0.95	0.63	0.57
	African American	169	26	21.59	1.05	0.73	0.54
	Asian	44	26	21.36	1.45	0.75	0.72
	Hispanic	321	26	21.59	1.00	0.66	0.58
	Multi-race	28	26	21.57	0.74	0.22	0.66
	Native American	5					
	Pacific Islander/Hawaiian	3					
	White	723	26	21.50	1.15	0.65	0.68

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	Female	391	26	21.51	1.29	0.78	0.60
	Male	904	26	21.54	1.01	0.58	0.66
	LEP	122	26	21.61	0.98	0.68	0.56
	FLEP	46	26	21.70	0.87	0.68	0.49
	LEPFLEP	168	26	21.64	0.95	0.67	0.54
	Plan 504	5					
	Special Education	1,298	26	21.53	1.11	0.66	0.64
	Title I	546	26	21.61	0.93	0.64	0.56
6	All Students	1,205	26	21.53	1.20	0.74	0.61
	Low Income	659	26	21.66	0.90	0.66	0.52
	African American	145	26	21.59	1.08	0.76	0.53
	Asian	43	26	21.58	0.79	0.36	0.63
	Hispanic	298	26	21.59	1.01	0.71	0.54
	Multi-race	29	26	21.72	1.16	0.84	0.47
	Native American	1					
	Pacific Islander/Hawaiian	4					
	White	682	26	21.49	1.29	0.74	0.66
	Female	409	26	21.48	1.42	0.80	0.63
	Male	793	26	21.55	1.07	0.68	0.61
	LEP	116	26	21.74	0.88	0.76	0.43
	FLEP	40	26	21.68	0.83	0.66	0.48
	LEPFLEP	156	26	21.72	0.86	0.73	0.44
	Plan 504	3					
	Special Education	1,205	26	21.53	1.20	0.74	0.61
Title I	457	26	21.65	0.93	0.70	0.51	
7	All Students	1,091	39	31.18	3.15	0.76	1.53
	Low Income	560	39	31.35	3.07	0.75	1.53
	African American	138	39	30.90	3.47	0.75	1.72
	Asian	42	39	31.52	2.54	0.83	1.04
	Hispanic	241	39	31.34	3.04	0.74	1.54
	Multi-race	32	39	30.19	3.60	0.64	2.17
	Native American	3					
	Pacific Islander/Hawaiian	1					
	White	627	39	31.20	3.11	0.77	1.50
	Female	357	39	31.11	3.24	0.80	1.44
	Male	732	39	31.21	3.11	0.74	1.58
	LEP	100	39	31.13	3.11	0.82	1.33
	FLEP	24	39	31.04	2.97	0.68	1.69
	LEPFLEP	124	39	31.11	3.07	0.79	1.40
	Plan 504	0					
	Special Education	1,091	39	31.18	3.15	0.76	1.53
Title I	382	39	31.25	3.07	0.76	1.50	
8	All Students	945	26	21.52	1.16	0.68	0.66
	Low Income	500	26	21.64	0.93	0.66	0.54
	African American	115	26	21.63	0.85	0.55	0.57
	Asian	33	26	21.70	0.77	0.27	0.66

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Hispanic	219	26	21.57	1.17	0.80	0.53
	Multi-race	22	26	21.59	1.05	0.58	0.68
	Native American	1					
	Pacific Islander/Hawaiian	1					
	White	550	26	21.48	1.21	0.65	0.71
	Female	316	26	21.49	1.32	0.72	0.70
	Male	626	26	21.55	1.05	0.64	0.63
	LEP	82	26	21.66	0.96	0.73	0.50
	FLEP	20	26	21.65	1.35	0.84	0.54
	LEPFLEP	102	26	21.66	1.04	0.76	0.51
	Plan 504	1					
	Special Education	945	26	21.52	1.16	0.68	0.66
	Title I	309	26	21.65	0.91	0.66	0.53
	All Students	891	39	30.50	3.77	0.76	1.84
10	Low Income	436	39	30.85	3.53	0.70	1.92
	African American	130	39	31.29	3.26	0.69	1.81
	Asian	28	39	30.71	4.44	0.74	2.28
	Hispanic	200	39	30.45	3.83	0.79	1.74
	Multi-race	10	39	30.70	3.83	-0.23	4.24
	Native American	3					
	Pacific Islander/Hawaiian	2					
	White	509	39	30.31	3.80	0.76	1.85
	Female	318	39	30.46	3.93	0.80	1.74
	Male	568	39	30.52	3.68	0.72	1.94
	LEP	96	39	30.78	3.57	0.74	1.80
	FLEP	14	39	30.71	2.87	0.60	1.80
	LEPFLEP	110	39	30.77	3.48	0.73	1.81
	Plan 504	1					
Special Education	891	39	30.50	3.77	0.76	1.84	
Title I	224	39	30.95	3.57	0.75	1.78	

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. 2012 MCAS-Alt: Subgroup Reliabilities – Mathematics**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	All Students	1,131	26	21.57	1.09	0.61	0.69
	Low Income	633	26	21.65	0.95	0.60	0.60
	African American	145	26	21.60	1.01	0.60	0.64
	Asian	39	26	21.54	0.97	0.36	0.78
	Hispanic	285	26	21.65	0.91	0.58	0.59
	Multi-race	22	26	21.68	0.89	0.51	0.63
	Native American	1					

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	Pacific Islander/Hawaiian	3					
	White	632	26	21.53	1.20	0.63	0.73
	Female	346	26	21.49	1.20	0.65	0.71
	Male	784	26	21.61	1.05	0.58	0.68
	LEP	102	26	21.56	1.19	0.67	0.69
	FLEP	22	26	21.73	0.55	0.17	0.50
	LEPFLEP	124	26	21.59	1.10	0.65	0.66
	Plan 504	5					
	Special Education	1,130	26	21.57	1.10	0.61	0.69
	Title I	494	26	21.65	0.92	0.56	0.61
4	All Students	1,261	26	21.50	1.21	0.67	0.70
	Low Income	672	26	21.62	1.06	0.69	0.60
	African American	141	26	21.70	0.77	0.52	0.53
	Asian	78	26	21.33	1.47	0.77	0.70
	Hispanic	288	26	21.57	1.15	0.68	0.65
	Multi-race	36	26	21.58	0.87	0.50	0.62
	Native American	5					
	Pacific Islander/Hawaiian	0					
	White	710	26	21.44	1.29	0.67	0.75
	Female	430	26	21.46	1.30	0.69	0.72
	Male	829	26	21.51	1.17	0.66	0.68
	LEP	111	26	21.59	1.16	0.67	0.66
	FLEP	41	26	21.85	0.65	0.66	0.38
	LEPFLEP	152	26	21.66	1.05	0.68	0.60
	Plan 504	5					
	Special Education	1,261	26	21.50	1.21	0.67	0.70
	Title I	512	26	21.61	1.02	0.63	0.62
5	All Students	1,317	26	21.57	1.14	0.69	0.64
	Low Income	710	26	21.68	0.93	0.67	0.54
	African American	159	26	21.65	0.97	0.71	0.52
	Asian	42	26	21.52	1.15	0.72	0.61
	Hispanic	314	26	21.71	0.87	0.58	0.56
	Multi-race	32	26	21.72	0.63	0.40	0.49
	Native American	4					
	Pacific Islander/Hawaiian	3					
	White	758	26	21.50	1.25	0.70	0.69
	Female	417	26	21.52	1.28	0.72	0.68
	Male	897	26	21.60	1.05	0.66	0.61
	LEP	116	26	21.72	0.75	0.54	0.51
	FLEP	45	26	21.87	0.66	0.48	0.48
	LEPFLEP	161	26	21.76	0.73	0.52	0.50
Plan 504	4						
Special Education	1,317	26	21.57	1.14	0.69	0.64	
Title I	531	26	21.70	0.92	0.70	0.51	
6	All Students	1,240	26	21.56	1.25	0.74	0.64
	Low Income	693	26	21.68	0.98	0.65	0.58

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
6	African American	154	26	21.65	1.12	0.69	0.62
	Asian	42	26	21.43	1.31	0.78	0.62
	Hispanic	305	26	21.61	1.09	0.67	0.63
	Multi-race	27	26	21.59	0.93	0.56	0.61
	Native American	2					
	Pacific Islander/Hawaiian	5					
	White	702	26	21.53	1.33	0.76	0.65
	Female	434	26	21.50	1.48	0.78	0.69
	Male	803	26	21.59	1.10	0.69	0.61
	LEP	117	26	21.88	0.80	0.60	0.50
	FLEP	39	26	21.69	0.95	0.56	0.63
	LEPFLEP	156	26	21.83	0.84	0.59	0.54
	Plan 504	2					
	Special Education	1,240	26	21.56	1.25	0.74	0.64
	Title I	460	26	21.73	0.97	0.66	0.56
All Students	1,030	26	21.50	1.20	0.67	0.69	
Low Income	520	26	21.63	0.96	0.65	0.57	
7	African American	136	26	21.53	1.10	0.65	0.65
	Asian	38	26	21.16	1.39	0.71	0.74
	Hispanic	214	26	21.56	1.12	0.72	0.59
	Multi-race	37	26	21.22	1.25	0.53	0.86
	Native American	4					
	Pacific Islander/Hawaiian	1					
	White	591	26	21.51	1.24	0.67	0.71
	Female	331	26	21.49	1.20	0.71	0.65
	Male	697	26	21.51	1.20	0.66	0.70
	LEP	94	26	21.55	0.99	0.60	0.62
	FLEP	23	26	21.57	1.08	0.77	0.51
	LEPFLEP	117	26	21.56	1.00	0.64	0.60
	Plan 504	0					
	Special Education	1,030	26	21.50	1.20	0.67	0.69
	Title I	331	26	21.50	1.04	0.60	0.66
All Students	1,012	26	21.54	1.17	0.68	0.66	
Low Income	536	26	21.70	0.88	0.66	0.51	
8	African American	124	26	21.61	0.95	0.52	0.66
	Asian	36	26	21.39	1.46	0.64	0.87
	Hispanic	232	26	21.67	0.98	0.78	0.46
	Multi-race	21	26	21.62	0.74	0.39	0.58
	Native American	2					
	Pacific Islander/Hawaiian	1					
	White	592	26	21.49	1.26	0.68	0.71
	Female	346	26	21.52	1.24	0.71	0.67
	Male	663	26	21.56	1.12	0.66	0.65
	LEP	94	26	21.71	0.96	0.68	0.54
	FLEP	21	26	21.67	1.11	0.79	0.51
	LEPFLEP	115	26	21.70	0.98	0.71	0.53

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	Plan 504	1					
	Special Education	1,012	26	21.54	1.17	0.68	0.66
	Title I	341	26	21.70	0.89	0.66	0.52
10	All Students	874	39	30.41	3.75	0.87	1.36
	Low Income	421	39	30.67	3.71	0.83	1.52
	African American	136	39	31.15	3.41	0.85	1.30
	Asian	26	39	30.12	4.66	0.89	1.57
	Hispanic	176	39	30.63	3.64	0.86	1.37
	Multi-race	12	39	29.50	4.42		
	Native American	3					
	Pacific Islander/Hawaiian	2					
	White	510	39	30.17	3.80	0.87	1.35
	Female	307	39	30.49	3.78	0.90	1.21
	Male	562	39	30.37	3.73	0.84	1.49
	LEP	88	39	30.99	3.29	0.81	1.44
	FLEP	14	39	31.00	3.82		
	LEPFLEP	102	39	30.99	3.35	0.84	1.32
	Plan 504	1					
Special Education	874	39	30.41	3.75	0.87	1.36	
Title I	203	39	30.63	3.77	0.88	1.30	

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. 2012 MCAS-Alt: Subgroup Reliabilities – STE**

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	All Students	1,190	39	31.61	2.83	0.83	1.18
	Low Income	632	39	31.74	2.71	0.77	1.31
	African American	157	39	31.63	2.84	0.85	1.10
	Asian	42	39	31.29	3.38	0.89	1.12
	Hispanic	297	39	31.81	2.56	0.77	1.24
	Multi-race	26	39	30.38	3.87	0.78	1.82
	Native American	4					
	Pacific Islander/Hawaiian	3					
	White	657	39	31.63	2.82	0.83	1.17
	Female	357	39	31.71	2.75	0.85	1.07
	Male	831	39	31.59	2.86	0.81	1.25
	LEP	107	39	31.90	2.51	0.78	1.17
	FLEP	43	39	31.42	3.12	0.78	1.46
	LEPFLEP	150	39	31.76	2.69	0.78	1.27
	Plan 504	3					
Special Education	1,190	39	31.61	2.83	0.83	1.18	
Title I	504	39	31.69	2.76	0.79	1.27	

continued

Grade	Subgroup	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
8	All Students	913	39	31.17	3.25	0.83	1.33
	Low Income	480	39	31.25	3.26	0.77	1.54
	African American	117	39	31.54	2.73	0.72	1.44
	Asian	35	39	30.66	4.11	0.74	2.10
	Hispanic	203	39	31.43	3.00	0.86	1.14
	Multi-race	19	39	31.58	2.99		
	Native American	0					
	Pacific Islander/Hawaiian	2					
	White	535	39	31.03	3.37	0.84	1.33
	Female	302	39	30.95	3.59	0.87	1.27
	Male	610	39	31.28	3.07	0.80	1.38
	LEP	81	39	31.14	3.23	0.71	1.73
	FLEP	15	39	32.60	1.55		
	LEPFLEP	96	39	31.36	3.07	0.75	1.53
	Plan 504	1					
	Special Education	913	39	31.17	3.25	0.83	1.33
	Title I	293	39	31.39	2.99	0.78	1.41

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. 2012 MCAS-Alt: Subgroup Reliabilities – High School Biology**

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	597	39	30.87	3.45	0.73	1.81
Low Income	301	39	31.26	3.21	0.71	1.74
African American	96	39	30.95	3.33	0.79	1.54
Asian	23	39	30.74	3.63	0.61	2.28
Hispanic	137	39	31.22	3.11	0.73	1.61
Multi-race	8					
Native American	3					
Pacific Islander/Hawaiian	1					
White	326	39	30.65	3.60	0.72	1.91
Female	209	39	31.13	3.27	0.80	1.47
Male	386	39	30.72	3.55	0.68	2.02
LEP	70	39	31.30	2.98	0.71	1.61
FLEP	12	39	31.50	2.88	0.87	1.05
LEPFLEP	82	39	31.33	2.95	0.74	1.50
Plan 504	0					
Special Education	597	39	30.87	3.45	0.73	1.81
Title I	150	39	30.99	3.35	0.74	1.69

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. 2012 MCAS-Alt: 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	43	39	31.19	3.11	0.76	1.53
Low Income	15	39	31.00	2.93	0.77	1.41
African American	6					
Asian	0					
Hispanic	6					
Multi-race	2					
Native American	0					
Pacific Islander/Hawaiian	0					
White	28	39	31.18	3.22	0.86	1.19
Female	14	39	30.64	3.39	0.92	0.97
Male	29	39	31.45	3.00	0.51	2.09
LEP	6					
FLEP	0					
LEPFLEP	6					
Plan 504	0					
Special Education	43	39	31.19	3.11	0.76	1.53
Title I	10	39	30.90	2.81	0.77	1.34

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. 2012 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	75	39	30.13	4.65	0.91	1.38
Low Income	33	39	30.58	3.61	0.88	1.23
African American	10	39	31.10	3.28	0.46	2.40
Asian	2					
Hispanic	15	39	31.40	3.31		
Multi-race	1					
Native American	1					
Pacific Islander/Hawaiian	0					
White	46	39	29.43	5.26	0.92	1.53
Female	26	39	30.23	4.97	0.92	1.40
Male	49	39	30.08	4.53	0.91	1.39
LEP	8					
FLEP	0					
LEPFLEP	8					
Plan 504	1					
Special Education	75	39	30.13	4.65	0.91	1.38
Title I	20	39	31.50	3.59	0.75	1.78

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. 2012 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	82	39	30.05	4.05	0.82	1.74
Low Income	19	39	29.05	3.66	0.85	1.43
African American	4					
Asian	2					
Hispanic	10	39	30.60	3.20	0.60	2.02
Multi-race	0					
Native American	0					
Pacific Islander/Hawaiian	1					
White	65	39	30.00	4.25	0.81	1.84
Female	17	39	28.76	3.78	0.75	1.91
Male	65	39	30.38	4.08	0.82	1.73
LEP	1					
FLEP	2					
LEPFLEP	3					
Plan 504	0					
Special Education	82	39	30.05	4.05	0.82	1.74
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.