

APPENDIX D

IRT ITEM PARAMETERS

All of the tables in appendix D use the following abbreviations in column headings:

Item = the internal reference number for each item
Type = the type of item:
MC = multiple-choice
OR = open-response
SA = short-answer
E-CON = Standard English Conventions (ELA Composition)
E-DEV = Topic Development (ELA Composition)
A = discrimination C = pseudo guessing parameter
B = difficulty D = step parameters

For additional information about IRT item parameters, refer to section 4.3 of this report.

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English Language Arts

Table D-1. 2009 MCAS: IRT Item Parameters—English Language Arts Grade 3

Item	Type	A	B	C	D1	D2	D3	D4
257185	MC	0.345	-2.836	0.000				
257191	MC	0.840	-1.756	0.370				
257192	MC	0.543	-0.726	0.125				
257193	MC	0.996	-0.762	0.224				
257196	MC	1.271	-0.744	0.198				
257199	MC	1.283	-0.927	0.312				
257200	MC	0.955	-0.998	0.335				
257207	MC	0.935	-2.242	0.260				
268862	MC	0.860	-1.591	0.304				
268866	MC	0.764	-2.179	0.150				
268871	MC	0.912	0.156	0.125				
268874	MC	0.842	-2.024	0.181				
269970	MC	0.779	-1.214	0.322				
269977	MC	0.763	-1.246	0.248				
269991	MC	1.265	-0.635	0.274				
269997	MC	1.223	-0.771	0.220				
272193	MC	0.670	-1.520	0.132				
270003	MC	1.081	-0.005	0.270				
270025	MC	0.890	-0.672	0.289				
270033	MC	0.932	-0.890	0.272				
220645	MC	0.352	-1.821	0.000				
220646	MC	1.484	0.015	0.182				
220653	MC	1.288	-0.957	0.162				
220657	MC	1.291	-0.198	0.161				
268835	MC	1.224	-0.758	0.309				
268840	MC	0.778	-2.290	0.251				
268842	MC	1.366	-1.539	0.256				
268845	MC	0.944	-1.069	0.305				
268847	MC	0.801	-0.876	0.305				
268849	MC	1.101	-1.337	0.229				
268851	MC	1.595	-0.735	0.175				
268857	MC	0.846	-0.957	0.336				
268888	MC	1.012	-0.479	0.166				
272194	MC	1.103	-0.280	0.280				
268889	MC	0.691	-1.132	0.205				
268892	MC	0.725	-1.209	0.209				
258852	MC	1.065	-0.343	0.228				
258853	MC	0.952	-0.955	0.524				
258854	MC	0.966	-0.570	0.327				
258860	MC	0.881	-0.634	0.349				
270039	OR	0.820	1.314		3.469	1.041	-1.055	-3.455
268858	OR	0.678	0.484		4.102	0.988	-1.355	-3.735

Table D-2. 2009 MCAS: IRT Item Parameters—English Language Arts Grade 4

Item	Type	A	B	C	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
268976	MC	0.442	-0.829	0.100										
268977	MC	0.664	-2.062	0.297										
268978	MC	0.630	-0.571	0.291										
268982	MC	0.566	-1.305	0.176										
268983	MC	0.363	-3.348	0.000										
268987	MC	1.019	-0.740	0.263										
268991	MC	0.772	-2.212	0.181										
268992	MC	1.024	-0.861	0.171										
260416	MC	0.325	-3.053	0.000										
260421	MC	0.598	-0.702	0.145										
260423	MC	0.705	-1.072	0.149										
260425	MC	0.536	-1.107	0.108										
260429	MC	0.723	-1.861	0.200										
268947	MC	0.538	0.127	0.146										
268948	MC	0.919	-1.461	0.159										
268949	MC	0.676	-1.517	0.150										
268952	MC	0.448	-1.688	0.000										
227308	MC	0.666	-1.010	0.120										
227318	MC	0.771	-0.274	0.187										
227320	MC	0.916	-1.659	0.242										
227322	MC	1.077	-1.302	0.242										
227325	MC	1.203	-1.528	0.199										
227330	MC	0.561	-0.514	0.156										
227337	MC	0.774	-0.706	0.205										
256056	MC	0.581	-1.043	0.100										
256039	MC	0.977	-0.637	0.166										
256040	MC	0.856	-1.218	0.292										
256042	MC	0.767	-0.335	0.232										
256044	MC	0.435	-1.382	0.200										
256045	MC	1.152	-1.010	0.185										
256052	MC	0.642	-0.853	0.148										
256066	MC	0.669	-1.885	0.176										
266225	MC	0.827	-1.413	0.119										
266112	MC	0.912	-1.604	0.201										
266138	MC	0.882	-0.498	0.229										
266146	MC	0.978	-0.360	0.178										
268997	OR	0.896	0.260		2.705	0.971	-0.939	-2.738						
268954	OR	0.928	0.114		2.365	0.875	-0.886	-2.355						
227341	OR	0.791	0.105		3.455	0.711	-1.304	-2.863						
256089	OR	0.840	0.222		2.734	0.755	-0.961	-2.528						
261562C	E-CON	0.961	-1.315		2.695	1.977	0.392	-0.304	-1.994	-2.765				
261562T	T-DEV	0.908	0.888		4.790	4.137	2.686	2.002	0.291	-0.437	-1.709	-2.599	-4.077	-5.086

Table D-3. 2009 MCAS: IRT Item Parameters—English Language Arts Grade 5

Item	Type	A	B	C	D1	D2	D3	D4
266212	MC	0.842	-2.158	0.451				
266210	MC	0.848	-1.311	0.264				
266208	MC	1.044	-0.940	0.191				
266214	MC	0.348	-3.050	0.000				
266216	MC	0.618	-1.434	0.221				
266215	MC	0.581	-1.666	0.257				
266211	MC	0.699	-0.244	0.338				
266219	MC	0.894	-1.702	0.332				
258978	MC	0.560	-2.527	0.000				
258992	MC	0.768	-0.528	0.201				
258982	MC	0.966	-1.652	0.348				
258987	MC	1.017	-1.297	0.308				
258989	MC	1.053	-1.042	0.238				
270987	MC	0.846	-0.431	0.165				
270991	MC	0.887	-0.782	0.261				
270992	MC	0.805	-0.873	0.283				
270993	MC	0.761	-1.253	0.102				
285034	MC	0.744	-0.994	0.209				
285035	MC	0.444	-0.375	0.111				
285036	MC	0.736	-1.199	0.107				
285037	MC	0.769	-0.424	0.288				
285038	MC	0.867	-1.766	0.182				
285039	MC	0.983	-1.074	0.232				
285040	MC	0.957	-0.386	0.237				
270131	MC	0.769	-1.470	0.377				
270139	MC	1.117	-0.824	0.333				
270141	MC	0.559	-1.225	0.194				
270145	MC	0.543	-0.348	0.140				
270153	MC	1.165	-0.806	0.220				
270157	MC	0.946	-1.107	0.344				
270193	MC	0.464	-1.357	0.100				
270178	MC	0.885	-1.643	0.175				
266157	MC	0.788	-0.862	0.161				
266158	MC	1.038	-1.019	0.215				
266159	MC	0.767	-1.212	0.202				
266171	MC	0.981	-0.267	0.171				
266221	OR	0.644	-0.694		4.372	1.593	-1.730	-4.236
270998	OR	0.746	0.115		3.847	1.549	-1.495	-3.901
285041	OR	0.883	-0.028		3.036	0.826	-1.063	-2.799
270206	OR	0.638	-0.248		3.743	1.347	-1.361	-3.728

Table D-4. 2009 MCAS: IRT Item Parameters—English Language Arts Grade 6

Item	Type	A	B	C	D1	D2	D3	D4
266635	MC	0.634	-1.214	0.429				
266641	MC	0.883	-2.360	0.216				
266671	MC	0.898	-1.441	0.199				
266668	MC	0.627	-0.276	0.318				
266675	MC	1.020	-1.664	0.283				
266680	MC	0.651	-2.253	0.267				
266679	MC	0.844	-0.524	0.256				
266681	MC	1.189	-1.015	0.325				
266434	MC	0.465	-3.577	0.000				
266429	MC	0.242	-1.335	0.150				
273251	MC	0.627	-0.961	0.213				
266437	MC	0.230	-2.024	0.000				
271523	MC	0.677	-1.541	0.272				
271526	MC	0.636	-0.810	0.230				
271529	MC	1.237	-0.532	0.161				
271537	MC	0.673	-0.572	0.195				
257541	MC	0.690	-1.160	0.235				
257549	MC	0.972	-1.061	0.163				
257550	MC	0.247	-5.100	0.000				
257551	MC	0.542	-0.174	0.174				
257555	MC	0.720	-1.602	0.167				
257560	MC	0.977	-1.662	0.338				
257561	MC	0.587	-1.717	0.100				
257564	MC	0.647	-0.658	0.280				
257288	MC	1.030	-0.958	0.273				
257294	MC	1.022	-1.516	0.258				
257298	MC	0.639	-0.982	0.133				
257304	MC	1.126	-0.629	0.256				
257308	MC	0.565	-0.811	0.167				
257309	MC	0.727	-1.808	0.178				
257311	MC	0.542	-0.595	0.241				
257312	MC	1.153	-1.388	0.251				
257352	MC	0.756	-0.592	0.178				
257357	MC	0.725	-0.244	0.253				
257363	MC	0.533	-0.721	0.142				
257375	MC	0.983	-1.542	0.221				
244965	MC	0.774	-1.263	0.176				
266686	OR	0.783	-0.488		2.739	0.832	-0.864	-2.707
271539	OR	0.945	-0.118		2.635	0.993	-1.014	-2.613
257570	OR	0.828	-0.395		2.671	0.921	-0.999	-2.593
257314	OR	0.810	-0.394		3.023	0.936	-1.139	-2.819

Table D-5. 2009 MCAS: IRT Item Parameters—English Language Arts Grade 7

Item	Type	A	B	C	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
271179	MC	0.766	-1.160	0.185										
271181	MC	0.566	-0.927	0.339										
271183	MC	0.431	-0.852	0.047										
271186	MC	0.920	-2.473	0.227										
271180	MC	0.742	-1.030	0.128										
271189	MC	0.570	-1.092	0.183										
271192	MC	0.330	-3.508	0.000										
266553	MC	0.614	-1.214	0.075										
266558	MC	0.585	-2.315	0.000										
266568	MC	0.305	-2.446	0.000										
266565	MC	0.352	-2.173	0.000										
266557	MC	0.826	-1.789	0.147										
271201	MC	0.343	-0.833	0.000										
271203	MC	0.924	-0.578	0.124										
271208	MC	0.647	-1.446	0.293										
271209	MC	0.904	-0.619	0.258										
256687	MC	0.261	-2.809	0.000										
256730	MC	0.537	-0.256	0.201										
256731	MC	0.534	-1.641	0.000										
256733	MC	0.942	-1.142	0.194										
256748	MC	0.466	-2.095	0.000										
256752	MC	0.523	0.871	0.252										
256778	MC	0.707	-0.427	0.173										
256789	MC	0.417	-1.023	0.030										
271296	MC	0.793	-0.428	0.217										
271298	MC	0.639	-2.489	0.000										
271300	MC	0.815	-1.059	0.071										
271302	MC	0.799	-0.912	0.112										
271304	MC	0.796	-1.181	0.189										
271307	MC	1.117	-1.294	0.236										
271294	MC	0.893	-0.378	0.159										
271310	MC	0.580	-1.559	0.000										
266627	MC	0.529	-2.504	0.000										
266631	MC	0.867	-1.255	0.233										
266656	MC	0.936	-1.989	0.145										
266632	MC	0.952	-1.835	0.099										
271198	OR	0.883	-1.199		3.277	1.044	-1.193	-3.128						
271214	OR	1.006	-0.384		2.372	0.747	-0.765	-2.355						
256790	OR	0.972	-0.314		2.202	0.871	-0.629	-2.444						
271315	OR	1.006	-0.439		2.227	0.665	-0.711	-2.182						
273653C	E-CON	1.049	-1.686		2.475	1.852	0.422	-0.307	-1.800	-2.643				
273653T	T-DEV	0.973	0.331		4.583	4.038	2.593	1.933	0.345	-0.355	-1.712	-2.531	-4.050	-4.844

Table D-6. 2009 MCAS: IRT Item Parameters—English Language Arts Grade 8

Item	Type	A	B	C	D1	D2	D3	D4
270379	MC	1.144	-0.922	0.250				
270387	MC	0.567	-1.198	0.142				
270384	MC	1.077	-0.930	0.347				
270390	MC	0.647	-1.064	0.058				
271981	MC	1.008	-0.199	0.088				
270403	MC	0.385	-2.253	0.000				
270407	MC	1.190	-1.101	0.165				
259414	MC	0.893	-0.509	0.295				
259430	MC	0.926	-0.034	0.157				
259432	MC	1.075	-0.559	0.255				
259435	MC	0.667	-0.617	0.306				
271323	MC	1.133	-0.518	0.211				
271328	MC	0.890	-0.622	0.197				
271330	MC	0.968	-0.358	0.181				
271345	MC	0.956	-0.356	0.176				
271441	MC	0.575	-1.513	0.000				
271431	MC	0.979	-0.304	0.306				
271433	MC	1.187	-0.425	0.198				
271443	MC	1.003	-1.312	0.159				
271437	MC	0.329	-3.770	0.000				
284514	MC	0.767	-1.668	0.125				
271434	MC	0.719	-1.077	0.123				
271447	MC	0.775	-1.400	0.379				
259644	MC	0.988	-1.704	0.192				
259649	MC	0.523	-1.507	0.000				
260588	MC	1.169	-0.374	0.215				
259654	MC	1.161	-1.200	0.299				
260587	MC	0.820	-1.159	0.285				
259660	MC	1.040	-1.250	0.166				
259659	MC	1.040	-0.517	0.175				
259664	MC	0.932	-0.925	0.312				
266360	MC	0.619	-1.272	0.111				
266363	MC	1.112	-1.592	0.210				
266364	MC	1.262	-1.617	0.230				
266373	MC	0.990	-1.264	0.216				
266375	MC	1.027	-1.656	0.176				
270410	MC	0.894	-0.906		2.529	0.963	-0.970	-2.523
272837	MC	0.957	-0.620		2.503	0.710	-0.880	-2.333
271448	MC	0.872	-0.580		2.531	0.856	-0.840	-2.546
259670	MC	1.014	-0.289		2.372	0.614	-0.796	-2.190

Table D-7. 2009 MCAS: IRT Item Parameters—English Language Arts Grade 10

Item	Type	A	B	C	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
259276	MC	1.150	-0.157	0.284										
259280	MC	1.615	0.044	0.343										
259314	MC	1.124	-0.310	0.138										
259319	MC	1.144	0.740	0.224										
259323	MC	0.846	-0.309	0.200										
259325	MC	1.482	-0.057	0.233										
259326	MC	1.412	0.506	0.266										
266295	MC	0.961	0.623	0.199										
266299	MC	0.967	-0.299	0.147										
266300	MC	0.860	0.203	0.194										
266302	MC	1.255	-0.365	0.223										
266303	MC	1.233	0.153	0.205										
268600	MC	1.224	-0.267	0.312										
268602	MC	0.842	0.648	0.178										
268608	MC	1.279	-0.230	0.271										
268613	MC	0.651	-0.480	0.220										
259752	MC	1.058	-0.096	0.149										
259753	MC	1.438	-0.095	0.173										
259755	MC	0.859	0.045	0.175										
259759	MC	1.985	-0.167	0.263										
259761	MC	1.857	-0.065	0.225										
259767	MC	0.841	0.457	0.199										
259769	MC	0.725	0.248	0.192										
259770	MC	0.850	-0.060	0.251										
255052	MC	1.263	0.798	0.186										
255053	MC	0.921	0.285	0.147										
255054	MC	1.235	-0.429	0.233										
255057	MC	1.527	-0.318	0.178										
255063	MC	1.137	0.268	0.144										
255068	MC	1.185	-0.142	0.182										
255069	MC	1.063	0.185	0.220										
257279	MC	0.826	0.401	0.246										
257283	MC	0.841	0.262	0.233										
257284	MC	0.723	0.248	0.243										
257286	MC	0.735	0.264	0.170										
257282	MC	0.830	0.309	0.152										
259328	OR	1.590	0.598		1.447	0.504	-0.443	-1.508						
268615	OR	1.566	0.506		1.695	0.538	-0.603	-1.630						
259772	OR	1.624	0.622		1.097	0.497	-0.369	-1.225						
255073	OR	1.176	0.360		1.453	0.805	-0.414	-1.844						
263255C	E-CON	1.768	-1.074		1.533	1.224	0.223	-0.116	-1.197	-1.667				
263255T	T-DEV	1.577	0.340		2.895	2.645	1.826	1.506	0.288	-0.169	-1.280	-1.777	-2.762	-3.173

Mathematics

Table D-8. 2009 MCAS: IRT Item Parameters—Mathematics Grade 3

<i>Item</i>	<i>Type</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D1</i>	<i>D2</i>
252322	MC	1.023	-1.165	0.316		
218441	MC	0.851	-1.519	0.205		
253571	MC	0.562	-2.693	0.000		
282303	MC	1.051	-1.142	0.170		
252908	MC	0.996	0.369	0.149		
206989	MC	0.966	-0.823	0.309		
207802	MC	0.720	-1.530	0.258		
206961	MC	0.901	-1.214	0.266		
198154	MC	0.954	-0.856	0.096		
207015	MC	1.082	-0.869	0.170		
227135	MC	0.960	-0.251	0.195		
253621	MC	0.793	-1.409	0.185		
218473	MC	0.660	-1.486	0.370		
218466	MC	0.767	-0.772	0.082		
227282	MC	0.758	-1.534	0.000		
261819	MC	0.757	-0.314	0.038		
260976	MC	0.689	-0.071	0.282		
264565	MC	1.371	-0.160	0.203		
253628	MC	0.788	-0.928	0.210		
227151	MC	1.037	0.497	0.281		
218327	MC	0.617	-0.431	0.249		
261012	MC	1.025	-0.391	0.233		
218311	MC	0.460	-1.201	0.000		
207152	MC	1.103	-0.767	0.220		
207001	MC	0.848	-1.073	0.162		
252366	SA	0.566	-1.951			
260566	SA	0.802	-0.908			
241008	SA	0.760	-2.171			
260987	SA	0.648	-1.275			
227281	SA	0.372	-2.297			
265025	OR	0.564	-0.914		0.994	-0.994
261853	OR	0.885	-0.733		1.450	-1.450
260997	OR	0.716	-0.535		1.068	-1.068
265024	OR	1.034	0.129		0.616	-0.616
264572	OR	0.917	-0.490		0.261	-0.261

Table D-9. 2009 MCAS: IRT Item Parameters—Mathematics Grade 4

Item	Type	A	B	C	D1	D2	D3	D4
218874	MC	0.804	-1.588	0.144				
258226	MC	0.887	-0.215	0.480				
270728	MC	1.253	0.192	0.339				
247515	MC	1.327	-0.127	0.301				
228510	MC	1.225	1.066	0.173				
270767	MC	0.887	0.513	0.282				
258239	MC	0.574	-1.344	0.000				
258241	MC	1.107	-0.471	0.325				
258209	MC	0.683	-0.414	0.268				
247593	MC	1.122	-0.368	0.167				
258233	MC	1.156	-0.254	0.159				
258298	MC	0.865	0.639	0.085				
258294	MC	1.088	-0.539	0.164				
258199	MC	1.109	-1.400	0.304				
227398	MC	0.432	0.178	0.157				
247702	MC	0.711	-1.117	0.358				
258178	MC	0.626	-0.660	0.000				
258271	MC	0.686	0.662	0.150				
258281	MC	0.877	-0.031	0.240				
221901	MC	1.611	0.361	0.092				
247465	MC	0.917	-1.140	0.388				
218973	MC	0.559	-2.453	0.000				
218910	MC	1.154	0.093	0.303				
247607	MC	0.712	-0.725	0.380				
258202	MC	0.917	0.127	0.419				
250369	MC	0.978	-0.741	0.375				
258214	MC	0.953	0.108	0.214				
258188	MC	1.488	0.147	0.264				
227575	MC	0.832	-0.235	0.393				
219073	SA	0.838	0.339					
219062	SA	0.628	-0.804					
250540	SA	1.123	0.216					
247646	SA	0.654	-0.576					
227534	SA	0.927	-0.013					
258284	OR	0.906	-0.769		1.740	0.298	-0.742	-1.296
258248	OR	0.991	-0.369		1.046	0.244	-0.369	-0.921
258223	OR	1.196	-0.718		1.831	0.144	-0.612	-1.363
250300	OR	0.681	-1.262		2.067	0.436	-0.721	-1.783
250833	OR	0.733	-0.933		1.965	0.254	-0.607	-1.612

Table D-10. 2009 MCAS: IRT Item Parameters—Mathematics Grade 5

Item	Type	A	B	C	D1	D2	D3	D4
262053	MC	0.679	-0.574	0.339				
261587	MC	0.941	-0.611	0.161				
248891	MC	0.501	-1.300	0.367				
262099	MC	0.982	-0.295	0.168				
260701	MC	0.956	-1.231	0.209				
204703	MC	0.990	-0.223	0.352				
221140	MC	1.308	0.403	0.062				
260696	MC	0.769	-0.739	0.033				
261581	MC	0.952	-0.423	0.316				
261594	MC	0.910	-1.356	0.301				
262104	MC	1.269	0.141	0.311				
249051	MC	0.969	-0.202	0.135				
262227	MC	0.978	-0.896	0.369				
248871	MC	1.125	-0.555	0.141				
262137	MC	1.510	-0.102	0.092				
248877	MC	0.914	0.318	0.098				
261591	MC	0.895	-0.209	0.245				
217304	MC	1.664	-0.107	0.168				
204712	MC	1.051	-1.301	0.350				
261201	MC	0.989	0.808	0.224				
261578	MC	1.118	-0.041	0.265				
262210	MC	1.087	-0.814	0.169				
249000	MC	1.461	0.748	0.142				
261576	MC	0.739	-0.796	0.142				
262193	MC	1.575	0.957	0.294				
261573	MC	0.733	-0.721	0.000				
261592	MC	0.472	-0.048	0.358				
248998	MC	0.788	-0.641	0.367				
261582	MC	1.002	-0.583	0.182				
261226	SA	0.639	-1.036					
260705	SA	0.645	-0.009					
260830	SA	0.794	-1.007					
261598	SA	0.668	-0.841					
262236	SA	0.903	-0.533					
261599	OR	0.877	-1.556		0.967	0.294	0.046	-1.307
260841	OR	1.138	-0.219		1.218	0.185	-0.119	-1.284
261228	OR	0.803	0.122		1.920	0.311	-0.579	-1.652
249099	OR	0.920	-0.795		1.043	0.431	-0.010	-1.464
221210	OR	1.113	-0.643		0.705	0.147	-0.148	-0.705

Table D-11. 2009 MCAS: IRT Item Parameters—Mathematics Grade 6

Item	Type	A	B	C	D1	D2	D3	D4
251264	MC	0.743	-1.563	0.029				
251327	MC	0.973	-1.536	0.021				
221665	MC	0.652	-2.059	0.000				
251366	MC	1.180	-1.106	0.166				
251455	MC	0.911	-0.465	0.244				
264295	MC	0.978	-1.037	0.184				
251266	MC	1.467	-0.154	0.269				
265880	MC	1.374	-0.446	0.174				
229825	MC	1.043	-0.511	0.177				
251289	MC	0.791	-0.705	0.202				
217521	MC	0.730	0.039	0.207				
223174	MC	1.031	0.072	0.357				
265884	MC	0.842	-1.779	0.000				
251310	MC	1.076	-0.847	0.182				
264768	MC	0.729	-0.227	0.438				
266134	MC	0.679	-1.044	0.000				
265878	MC	1.559	-0.158	0.215				
281967	MC	0.800	-1.868	0.032				
265887	MC	1.046	-0.077	0.262				
221630	MC	1.377	-0.028	0.100				
221756	MC	1.426	0.163	0.375				
266129	MC	1.107	0.482	0.214				
229868	MC	0.480	-0.374	0.086				
264400	MC	0.979	0.437	0.251				
281968	MC	0.977	0.366	0.152				
266127	MC	1.195	0.398	0.287				
265873	MC	1.543	0.201	0.247				
266131	MC	0.818	0.176	0.166				
265892	MC	0.807	-0.801	0.188				
266130	SA	0.946	-0.245					
264308	SA	0.610	-0.302					
265896	SA	0.821	-0.700					
223228	SA	0.884	0.189					
223211	SA	0.991	0.087					
266143	OR	0.921	-0.685		2.503	0.063	-0.723	-1.842
264420	OR	1.365	-0.332		1.286	0.013	-0.310	-0.990
265901	OR	1.275	-0.375		1.065	0.142	-0.207	-0.999
264779	OR	0.950	-0.343		2.072	0.680	-0.811	-1.941
264309	OR	1.261	0.008		1.252	0.201	-0.273	-1.181

Table D-12. 2009 MCAS: IRT Item Parameters—Mathematics Grade 7

Item	Type	A	B	C	D1	D2	D3	D4
281969	MC	0.928	-1.757	0.000				
259284	MC	1.136	-0.244	0.316				
250202	MC	0.844	-0.561	0.194				
281970	MC	0.779	-1.223	0.000				
205226	MC	0.564	-0.346	0.000				
261063	MC	0.734	-0.445	0.174				
260322	MC	1.954	0.303	0.294				
219513	MC	0.863	-1.585	0.000				
259247	MC	0.965	0.002	0.237				
260344	MC	0.904	-0.060	0.180				
219474	MC	0.921	-0.605	0.180				
219453	MC	1.026	-0.080	0.192				
261650	MC	1.158	0.125	0.389				
219459	MC	1.104	-0.365	0.216				
219502	MC	1.284	0.065	0.164				
219525	MC	1.384	-0.732	0.579				
228019	MC	1.606	-0.119	0.255				
205579	MC	1.312	-0.253	0.250				
260273	MC	1.502	0.597	0.238				
250203	MC	1.079	-0.576	0.356				
249122	MC	1.303	-1.083	0.225				
219457	MC	1.663	0.486	0.310				
250518	MC	1.035	-0.170	0.340				
250253	MC	0.879	-0.484	0.181				
262289	MC	1.515	0.224	0.233				
250330	MC	1.363	0.055	0.156				
281973	MC	0.882	-0.681	0.096				
259162	MC	0.907	-0.316	0.176				
205629	MC	1.034	-1.084	0.138				
259285	SA	1.205	-0.668					
208766	SA	1.155	-0.177					
250537	SA	0.607	-1.349					
228039	SA	0.995	-0.560					
281971	SA	0.743	-1.450					
262321	OR	1.228	-0.676		1.412	0.248	-0.558	-1.103
259293	OR	1.677	-0.027		1.107	0.233	-0.249	-1.091
261631	OR	1.161	-0.009		1.092	0.328	-0.502	-0.918
281972	OR	1.358	-0.623		0.942	0.384	-0.197	-1.128
261655	OR	1.249	-0.088		0.890	0.404	-0.364	-0.930

Table D-13. 2009 MCAS: IRT Item Parameters—Mathematics Grade 8

Item	Type	A	B	C	D1	D2	D3	D4
228687	MC	0.487	-2.803	0.147				
263844	MC	0.801	0.128	0.244				
265592	MC	0.738	-0.542	0.000				
228159	MC	0.718	0.332	0.208				
219577	MC	0.920	-0.150	0.340				
253719	MC	0.890	-0.823	0.138				
228106	MC	1.325	-1.002	0.183				
263849	MC	0.824	0.303	0.293				
265936	MC	1.015	0.739	0.131				
263841	MC	1.044	0.289	0.205				
263847	MC	1.059	-0.567	0.160				
264787	MC	1.059	0.563	0.489				
265960	MC	1.041	0.372	0.111				
259974	MC	1.072	-0.415	0.156				
219573	MC	1.214	0.538	0.147				
253838	MC	0.962	-1.007	0.057				
264760	MC	0.788	-0.677	0.097				
229552	MC	1.200	-0.282	0.082				
228318	MC	0.486	-2.422	0.000				
265340	MC	0.787	-0.025	0.149				
265347	MC	0.771	-0.670	0.354				
219608	MC	1.460	0.003	0.302				
253830	MC	0.719	-1.697	0.000				
253652	MC	1.414	0.335	0.265				
263842	MC	0.967	-0.074	0.318				
219587	MC	1.144	0.089	0.297				
264517	MC	0.531	-0.314	0.000				
272976	MC	1.141	0.379	0.226				
263851	MC	1.464	0.182	0.340				
253766	SA	1.068	-0.226					
219703	SA	0.714	0.504					
268713	SA	1.087	-1.131					
253788	SA	0.898	-0.669					
219694	SA	0.966	-0.688					
264746	OR	1.196	0.027		1.328	0.106	-0.224	-1.210
239641	OR	1.193	0.236		2.397	-0.020	-0.825	-1.553
253783	OR	1.363	0.508		0.863	0.190	-0.088	-0.965
253894	OR	1.265	-0.061		0.976	0.076	-0.199	-0.854
265583	OR	1.149	0.158		1.469	-0.138	-0.353	-0.978

Table D-14. 2009 MCAS: IRT Item Parameters—Mathematics Grade 10

Item	Type	A	B	C	D1	D2	D3	D4
269006	MC	1.338	-0.120	0.176				
250900	MC	0.596	0.325	0.234				
250921	MC	2.477	0.855	0.202				
260877	MC	1.569	1.564	0.376				
260263	MC	0.575	1.375	0.201				
254106	MC	1.764	1.468	0.469				
268428	MC	0.930	0.362	0.358				
258797	MC	0.976	1.287	0.320				
254300	MC	0.945	-0.167	0.174				
271548	MC	1.875	1.567	0.235				
253905	MC	2.197	1.123	0.323				
260863	MC	2.211	1.208	0.288				
250889	MC	1.280	0.542	0.283				
229508	MC	1.152	0.246	0.199				
253140	MC	1.802	0.070	0.221				
258799	MC	1.107	0.502	0.166				
260881	MC	1.589	1.171	0.103				
261445	MC	2.146	1.094	0.168				
269051	MC	1.692	0.912	0.196				
258396	MC	1.240	0.904	0.255				
272829	MC	1.908	1.191	0.244				
260865	MC	1.418	1.321	0.269				
268498	MC	1.796	0.945	0.227				
268098	MC	1.686	0.932	0.116				
258397	MC	1.234	0.593	0.231				
268057	MC	1.814	0.830	0.133				
254557	MC	1.362	0.811	0.186				
268662	MC	1.559	0.702	0.083				
260878	MC	1.425	1.177	0.125				
250676	MC	0.990	1.358	0.132				
258462	MC	1.561	1.184	0.140				
258806	MC	1.316	0.670	0.083				
260265	SA	1.210	-0.054					
254137	SA	1.236	0.196					
268298	SA	0.835	0.133					
269060	SA	0.771	0.076					
272635	OR	1.135	0.106		1.186	0.284	-0.323	-1.147
261545	OR	1.002	0.283		1.869	0.572	-0.965	-1.476
260901	OR	2.416	0.910		0.573	0.158	-0.160	-0.571
268432	OR	1.582	0.547		0.943	0.111	-0.252	-0.801
268509	OR	1.808	0.686		1.374	0.047	-0.442	-0.979
268680	OR	1.668	0.258		0.841	0.494	-0.386	-0.948

Science and Technology/Engineering

**Table D-15. 2009 MCAS: IRT Item Parameters—
Science and Technology/Engineering Grade 5**

<i>Item</i>	<i>Type</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D1</i>	<i>D2</i>	<i>D3</i>	<i>D4</i>
273727	MC	0.543	-1.800	0.217				
264799	MC	0.577	-1.517	0.186				
273737	MC	0.648	-1.297	0.092				
245208	MC	0.571	-1.607	0.093				
273724	MC	0.847	0.570	0.407				
273786	MC	0.740	-0.011	0.319				
264843	MC	0.692	0.326	0.213				
273701	MC	0.833	0.166	0.281				
264894	MC	0.753	-0.579	0.304				
228973	MC	0.731	-0.246	0.246				
273763	MC	1.192	-1.029	0.268				
273715	MC	0.716	-0.006	0.129				
273766	MC	0.456	0.211	0.271				
245569	MC	0.618	0.619	0.439				
273722	MC	0.609	-2.076	0.123				
273708	MC	0.814	-0.332	0.458				
273751	MC	0.336	-2.359	0.000				
273784	MC	0.519	-2.502	0.000				
273778	MC	0.779	-0.947	0.225				
273704	MC	0.538	-0.840	0.189				
229183	MC	0.755	0.449	0.144				
273711	MC	0.681	-1.510	0.207				
273744	MC	0.886	-0.045	0.163				
273736	MC	0.861	-1.444	0.133				
264800	MC	0.645	-0.638	0.205				
229110	MC	0.713	0.983	0.300				
273781	MC	0.728	-1.092	0.258				
273694	MC	0.930	-0.612	0.230				
264864	MC	0.467	-0.973	0.070				
273755	MC	0.600	-0.896	0.269				
273710	MC	0.885	-1.361	0.216				
245530	MC	1.125	-1.317	0.258				
273682	MC	0.491	-0.009	0.294				
273713	MC	0.749	1.022	0.259				
273759	OR	0.910	0.382		1.303	0.545	-0.334	-1.515
273698	OR	0.758	0.517		2.311	0.656	-0.705	-2.262
273696	OR	0.607	0.256		1.564	0.628	-0.726	-1.467
273743	OR	0.582	0.581		2.556	0.823	-0.542	-2.837
273782	OR	0.758	-1.611		1.420	0.736	-0.140	-2.016

**Table D-16. 2009 MCAS: IRT Item Parameters—
Science and Technology/Engineering Grade 8**

<i>Item</i>	<i>Type</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D1</i>	<i>D2</i>	<i>D3</i>	<i>D4</i>
265296	MC	0.889	-1.496	0.469				
265299	MC	0.462	-1.691	0.000				
229354	MC	1.054	-0.220	0.379				
274001	MC	0.805	-0.775	0.281				
273915	MC	0.706	-0.679	0.173				
246294	MC	0.655	-0.887	0.177				
265267	MC	1.329	0.747	0.332				
273679	MC	0.643	0.254	0.285				
246377	MC	0.714	0.060	0.237				
227961	MC	1.355	-0.440	0.233				
273997	MC	0.371	1.617	0.158				
226417	MC	1.519	0.820	0.434				
273897	MC	0.860	-0.457	0.156				
229375	MC	0.968	1.004	0.231				
246362	MC	0.541	-0.741	0.000				
273944	MC	1.801	0.650	0.308				
273680	MC	0.819	1.624	0.319				
273930	MC	0.563	-2.557	0.000				
273891	MC	1.045	-0.225	0.318				
273917	MC	0.888	-0.167	0.265				
274023	MC	1.336	-0.474	0.262				
246307	MC	0.802	0.210	0.285				
229476	MC	1.255	0.685	0.191				
273923	MC	0.655	0.380	0.392				
273882	MC	1.322	-0.278	0.224				
246374	MC	0.727	0.122	0.250				
265244	MC	0.807	1.176	0.201				
273922	MC	0.919	-0.562	0.323				
229438	MC	1.267	0.083	0.192				
273961	MC	1.287	-0.479	0.217				
273974	MC	1.051	0.913	0.201				
246340	MC	0.962	0.197	0.242				
265213	MC	1.261	0.044	0.223				
237703	MC	0.710	-0.406	0.161				
273921	OR	0.911	0.435		1.392	0.575	-0.366	-1.601
273941	OR	0.765	-0.604		1.612	0.408	-0.551	-1.468
273920	OR	0.879	0.307		1.654	0.439	-0.487	-1.606
281084	OR	0.767	0.813		1.686	0.387	-0.430	-1.642
274029	OR	0.907	0.386		1.753	0.451	-0.676	-1.528

**Table D-17. 2009 MCAS: IRT Item Parameters—
High School Biology (Grades 9–11)**

<i>Item</i>	<i>Type</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D1</i>	<i>D2</i>	<i>D3</i>	<i>D4</i>
208042	MC	1.231	-0.026	0.283				
208113	MC	1.437	-0.255	0.350				
235175	MC	0.603	-0.605	0.156				
208134	MC	1.468	0.150	0.166				
248893	MC	0.931	0.102	0.040				
243372	MC	0.944	-0.457	0.301				
209032	MC	1.638	0.580	0.201				
219822	MC	0.621	0.108	0.171				
219815	MC	0.635	-0.863	0.230				
219826	MC	0.640	0.063	0.215				
219827	MC	1.004	-0.614	0.256				
266423	MC	0.650	-1.262	0.166				
209033	MC	1.451	0.565	0.305				
273807	MC	1.080	-0.678	0.143				
244288	MC	1.238	0.162	0.215				
261181	MC	1.331	-0.530	0.256				
261414	MC	1.098	0.066	0.132				
208214	MC	0.917	0.732	0.171				
266316	MC	0.928	-0.214	0.176				
271710	MC	1.597	0.586	0.346				
213734	MC	1.624	-0.251	0.246				
260998	MC	0.904	-0.372	0.172				
229477	MC	0.936	0.333	0.093				
261019	MC	0.817	-0.092	0.232				
234802	MC	0.840	-1.043	0.343				
256923	MC	1.118	0.075	0.201				
209050	MC	0.809	-0.674	0.537				
261009	MC	0.849	1.139	0.253				
268446	MC	1.110	0.117	0.182				
261015	MC	0.963	-0.295	0.166				
260993	MC	1.559	-0.245	0.224				
268449	MC	0.850	-0.328	0.209				
261335	MC	0.497	-0.109	0.137				
243376	MC	0.782	0.010	0.285				
234751	MC	0.962	-0.695	0.182				
271716	MC	0.465	-1.568	0.000				
234833	MC	0.968	-0.159	0.219				
260949	MC	0.919	0.344	0.294				
261008	MC	1.449	0.691	0.169				
273815	MC	0.986	-0.780	0.238				
219830	OR	1.157	0.641		1.814	1.412	-0.998	-2.228
256965	OR	1.082	-0.049		2.039	0.697	-0.702	-2.034
261241	OR	0.938	-0.736		1.800	0.566	-0.569	-1.797
241739	OR	1.101	1.182		1.704	0.445	-0.501	-1.648
248970	OR	1.452	0.575		1.586	0.560	-0.796	-1.350

**Table D-18. 2009 MCAS: IRT Item Parameters—
High School Chemistry (Grades 9–11)**

<i>Item</i>	<i>Type</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D1</i>	<i>D2</i>	<i>D3</i>	<i>D4</i>
246824	MC	1.024	0.248	0.204				
229331	MC	1.695	0.573	0.177				
246825	MC	1.673	1.093	0.188				
226985	MC	1.618	0.255	0.097				
258915	MC	0.795	-0.005	0.137				
246821	MC	1.802	0.919	0.145				
264314	MC	1.254	0.791	0.183				
216945	MC	2.118	0.193	0.270				
226999	MC	0.653	-0.893	0.164				
260745	MC	1.376	0.960	0.195				
229548	MC	1.221	0.173	0.214				
258935	MC	1.399	1.032	0.263				
260766	MC	1.304	0.059	0.229				
208270	MC	1.520	0.219	0.186				
274061	MC	1.256	0.273	0.259				
274049	MC	1.335	0.459	0.149				
251803	MC	1.043	-0.191	0.228				
258941	MC	1.852	0.989	0.255				
252645	MC	1.296	1.593	0.258				
229235	MC	1.400	0.234	0.266				
264310	MC	1.178	-0.615	0.246				
208259	MC	0.953	-0.965	0.258				
252678	MC	1.329	-0.316	0.289				
229666	MC	1.412	0.553	0.271				
244829	MC	0.949	0.832	0.222				
260036	MC	0.565	0.866	0.233				
229587	MC	1.282	0.890	0.209				
244849	MC	1.207	1.030	0.210				
252675	MC	1.134	-0.419	0.260				
258938	MC	0.570	0.234	0.209				
244939	MC	1.033	1.135	0.215				
261087	MC	1.302	1.052	0.281				
258932	MC	1.157	0.846	0.327				
246822	MC	1.222	1.260	0.180				
271911	MC	0.778	0.481	0.253				
274078	MC	1.071	0.625	0.336				
206662	MC	1.048	-0.303	0.134				
252658	MC	1.448	0.245	0.237				
252670	MC	2.688	1.211	0.254				
264341	MC	2.254	0.507	0.203				
258922	OR	0.929	0.647		1.456	0.403	-0.447	-1.412
274045	OR	1.381	0.080		1.573	0.420	-0.335	-1.658
206688	OR	1.348	0.797		0.753	0.180	-0.223	-0.710
244944	OR	1.030	1.060		1.046	0.422	-0.438	-1.030
261661	OR	1.531	-0.198		0.976	0.441	-0.304	-1.112

**Table D-19. 2009 MCAS: IRT Item Parameters—
High School Introductory Physics (Grades 9–11)**

<i>Item</i>	<i>Type</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D1</i>	<i>D2</i>	<i>D3</i>	<i>D4</i>
208489	MC	1.307	0.220	0.277				
211087	MC	1.242	-0.380	0.332				
261108	MC	1.449	0.726	0.216				
273125	MC	0.779	0.685	0.416				
266493	MC	0.655	-0.098	0.218				
246997	MC	0.978	-0.270	0.213				
261513	MC	1.267	1.134	0.153				
261110	MC	1.524	0.477	0.207				
246879	MC	1.085	0.983	0.364				
266487	MC	0.880	0.437	0.319				
235327	MC	0.871	0.513	0.353				
266472	MC	0.779	-0.357	0.184				
261497	MC	0.627	-0.256	0.204				
208475	MC	0.648	0.615	0.294				
246946	MC	1.109	0.695	0.176				
261272	MC	0.906	1.626	0.335				
235257	MC	1.004	0.232	0.328				
235237	MC	1.487	-0.058	0.155				
235254	MC	0.921	-0.157	0.386				
261151	MC	1.590	0.989	0.180				
251772	MC	1.095	-0.772	0.184				
246573	MC	1.519	0.375	0.183				
261235	MC	1.039	-0.400	0.218				
261105	MC	1.032	0.164	0.271				
246950	MC	1.362	0.124	0.089				
226225	MC	0.911	-0.624	0.253				
266480	MC	0.661	-0.726	0.380				
261119	MC	1.237	1.020	0.330				
258346	MC	1.001	-0.244	0.179				
258367	MC	0.731	0.614	0.103				
226774	MC	0.893	-1.103	0.288				
210933	MC	0.732	-0.050	0.156				
208338	MC	0.990	1.011	0.329				
208495	MC	1.008	-0.411	0.173				
235384	MC	0.853	-0.029	0.149				
266491	MC	0.916	0.873	0.257				
258348	MC	1.231	0.484	0.262				
211100	MC	0.616	-1.358	0.299				
266502	MC	0.748	0.468	0.270				
261103	MC	1.571	1.393	0.209				
261500	OR	1.079	0.539		2.139	0.820	-1.235	-1.724
261149	OR	1.392	0.265		1.023	0.328	-0.284	-1.067
261283	OR	1.307	0.613		1.343	0.649	-0.563	-1.429
261282	OR	1.119	0.331		1.058	0.407	-0.168	-1.298
261144	OR	1.031	-0.068		1.781	0.563	-0.555	-1.789

**Table D-20. 2009 MCAS: IRT Item Parameters—
High School Technology/Engineering(Grades 9–11)**

<i>Item</i>	<i>Type</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D1</i>	<i>D2</i>	<i>D3</i>	<i>D4</i>
248606	MC	1.000	-0.897	0.000				
230894	MC	1.000	0.011	0.000				
260810	MC	1.000	-0.228	0.000				
251766	MC	1.000	-0.072	0.000				
271578	MC	1.000	-0.657	0.000				
206779	MC	1.000	-0.015	0.000				
221741	MC	1.000	-0.053	0.000				
260805	MC	1.000	-0.201	0.000				
230779	MC	1.000	0.143	0.000				
274276	MC	1.000	-0.778	0.000				
246665	MC	1.000	-0.504	0.000				
208981	MC	1.000	-0.017	0.000				
271568	MC	1.000	-0.293	0.000				
274351	MC	1.000	-0.311	0.000				
206609	MC	1.000	-0.692	0.000				
271574	MC	1.000	-0.180	0.000				
265112	MC	1.000	-0.605	0.000				
267503	MC	1.000	0.439	0.000				
273173	MC	1.000	0.133	0.000				
260849	MC	1.000	0.168	0.000				
221742	MC	1.000	-0.266	0.000				
265155	MC	1.000	-0.547	0.000				
251729	MC	1.000	-0.592	0.000				
230916	MC	1.000	0.114	0.000				
208100	MC	1.000	0.243	0.000				
271590	MC	1.000	0.305	0.000				
271579	MC	1.000	-0.271	0.000				
244762	MC	1.000	0.659	0.000				
221588	MC	1.000	0.385	0.000				
221714	MC	1.000	-0.387	0.000				
268475	MC	1.000	-0.373	0.000				
274330	MC	1.000	-0.210	0.000				
260848	MC	1.000	0.369	0.000				
215946	MC	1.000	-0.735	0.000				
251731	MC	1.000	0.218	0.000				
246643	MC	1.000	-1.273	0.000				
208123	MC	1.000	0.339	0.000				
267220	MC	1.000	-0.265	0.000				
265035	MC	1.000	-0.382	0.000				
265083	MC	1.000	-0.924	0.000				
260817	OR	1.000	0.857		1.491	0.492	-0.258	-1.726
271587	OR	1.000	0.714		1.860	0.514	-0.609	-1.765
265082	OR	1.000	-0.227		1.099	0.371	-0.379	-1.092
260819	OR	1.000	-0.285		1.424	0.473	-0.460	-1.437
206792	OR	1.000	1.169		1.527	0.636	-0.965	-1.198