

# **APPENDIX N**

## **RAW TO SCALED SCORE LOOK-UP TABLES**

**Table N-1. 2017 Legacy MCAS: Raw to Scaled Score Look-Up Table –  
ELA Grade 10**

Raw Score	<i>Theta</i>	<i>Information</i>	<i>Standard Error</i>	Scale Score		Achievement Levels	
				2017	2016	2017	2016
0	-6.746	0.27	10.0	200	200	1	1
1	-6.570	0.35	10.0	200	200	1	1
2	-6.394	0.47	9.8	202	202	1	1
3	-6.218	0.61	8.6	202	202	1	1
4	-6.041	0.80	7.5	204	204	1	1
5	-5.865	1.03	6.6	204	204	1	1
6	-5.689	1.31	5.9	206	206	1	1
7	-5.513	1.64	5.2	206	206	1	1
8	-5.336	2.01	4.7	206	206	1	1
9	-5.160	2.40	4.3	208	208	1	1
10	-4.984	2.81	4.0	208	208	1	1
11	-4.808	3.21	3.7	210	210	1	1
12	-4.631	3.58	3.5	210	210	1	1
13	-4.455	3.92	3.4	212	212	1	1
14	-4.279	4.21	3.3	212	212	1	1
15	-4.103	4.46	3.2	212	212	1	1
16	-3.910	4.72	3.1	214	214	1	1
17	-3.705	5.01	3.0	214	214	1	1
18	-3.517	5.35	2.9	216	216	1	1
19	-3.343	5.77	2.8	216	216	1	1
20	-3.183	6.27	2.7	218	218	1	1
21	-3.036	6.84	3.0	218	218	1	1
22	-2.900	7.45	3.5	220	218	2	1
23	-2.774	8.09	3.9	220	220	2	2
24	-2.656	8.73	4.3	222	222	2	2
25	-2.546	9.36	4.6	224	222	2	2
26	-2.442	9.98	5.0	224	224	2	2
27	-2.342	10.56	4.9	226	226	2	2
28	-2.247	11.11	4.8	228	228	2	2
29	-2.156	11.63	4.7	230	228	2	2
30	-2.068	12.11	4.6	230	230	2	2
31	-1.982	12.56	4.5	232	232	2	2
32	-1.899	12.97	4.4	234	232	2	2
33	-1.817	13.35	4.4	234	234	2	2
34	-1.737	13.71	4.2	236	236	2	2
35	-1.658	14.04	4.0	238	236	2	2
36	-1.580	14.36	3.9	238	238	2	2
37	-1.503	14.66	3.7	240	240	3	3
38	-1.426	14.94	3.5	240	240	3	3
39	-1.350	15.20	3.3	242	242	3	3
40	-1.275	15.43	3.2	242	242	3	3
41	-1.199	15.64	3.1	244	244	3	3
42	-1.124	15.81	3.1	244	244	3	3
43	-1.048	15.94	3.0	246	246	3	3
44	-0.973	16.03	3.0	246	246	3	3

continued

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
45	-0.897	16.08	3.0	248	248	3	3
46	-0.820	16.07	3.0	248	248	3	3
47	-0.742	16.00	3.0	250	250	3	3
48	-0.663	15.88	3.0	250	250	3	3
49	-0.583	15.69	3.1	252	252	3	3
50	-0.501	15.45	3.1	252	252	3	3
51	-0.418	15.14	3.1	254	254	3	3
52	-0.331	14.76	3.2	254	256	3	3
53	-0.242	14.31	3.2	256	256	3	3
54	-0.149	13.80	3.3	256	258	3	3
55	-0.052	13.21	3.2	258	258	3	3
56	0.050	12.55	3.0	258	260	3	4
57	0.159	11.82	2.8	260	262	4	4
58	0.275	11.04	2.6	260	262	4	4
59	0.400	10.23	2.4	262	262	4	4
60	0.537	9.42	2.3	262	264	4	4
61	0.687	8.64	2.4	264	266	4	4
62	0.853	7.93	2.5	264	266	4	4
63	1.036	7.30	2.6	266	268	4	4
64	1.239	6.71	2.7	268	268	4	4
65	1.467	6.03	2.9	270	270	4	4
66	1.728	5.15	3.1	272	272	4	4
67	2.042	4.05	3.5	274	274	4	4
68	2.447	2.84	4.2	276	276	4	4
69	3.025	1.72	5.3	280	280	4	4
70	3.949	1.02	6.9	280	280	4	4
71	4.000	1.02	7.0	280	280	4	4
72	4.000	1.02	7.0	280	280	4	4

**Table N-2. 2017 Legacy MCAS: Raw to Scaled Score Look-Up Table – Mathematics Grade 10**

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
0	-8.565	0.02	10.0	200	200	1	1
1	-7.990	0.03	10.0	202	202	1	1
2	-7.415	0.04	10.0	202	202	1	1
3	-6.841	0.05	10.0	204	204	1	1
4	-6.266	0.07	10.0	204	204	1	1
5	-5.691	0.11	10.0	206	206	1	1
6	-5.117	0.19	10.0	206	206	1	1
7	-4.542	0.37	10.0	208	208	1	1
8	-3.940	0.87	7.2	208	208	1	1
9	-3.269	2.40	4.4	210	210	1	1
10	-2.899	4.04	3.4	210	212	1	1
11	-2.638	5.58	2.9	212	214	1	1
12	-2.434	7.01	2.6	214	214	1	1

continued

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
13	-2.264	8.32	2.3	216	216	1	1
14	-2.116	9.53	2.2	216	216	1	1
15	-1.985	10.63	2.1	218	218	1	1
16	-1.866	11.64	2.0	218	218	1	1
17	-1.757	12.56	2.7	218	218	1	1
18	-1.656	13.42	3.5	220	220	2	2
19	-1.560	14.23	4.3	220	220	2	2
20	-1.470	15.00	5.0	222	222	2	2
21	-1.384	15.75	5.7	224	224	2	2
22	-1.301	16.46	6.3	226	226	2	2
23	-1.222	17.13	6.2	228	228	2	2
24	-1.145	17.75	6.1	230	230	2	2
25	-1.071	18.32	6.0	232	232	2	2
26	-0.998	18.84	5.9	234	234	2	2
27	-0.927	19.28	5.8	236	234	2	2
28	-0.857	19.67	5.8	238	236	2	2
29	-0.789	19.99	5.7	240	238	3	2
30	-0.721	20.25	5.7	242	240	3	3
31	-0.654	20.45	5.6	244	242	3	3
32	-0.587	20.61	5.6	244	244	3	3
33	-0.520	20.73	5.6	246	246	3	3
34	-0.454	20.81	5.6	248	248	3	3
35	-0.388	20.87	5.6	250	248	3	3
36	-0.322	20.92	5.6	252	250	3	3
37	-0.255	20.95	5.6	254	252	3	3
38	-0.188	20.99	5.3	254	254	3	3
39	-0.120	21.01	4.7	256	256	3	3
40	-0.052	21.03	4.1	258	258	3	3
41	0.017	21.02	3.4	260	260	4	4
42	0.087	20.97	2.8	260	260	4	4
43	0.158	20.85	2.1	260	260	4	4
44	0.231	20.65	1.5	262	262	4	4
45	0.306	20.34	1.5	262	262	4	4
46	0.383	19.92	1.5	262	262	4	4
47	0.463	19.35	1.5	264	262	4	4
48	0.546	18.65	1.5	264	264	4	4
49	0.633	17.79	1.6	264	264	4	4
50	0.726	16.79	1.6	264	264	4	4
51	0.825	15.63	1.7	266	266	4	4
52	0.932	14.33	1.8	266	266	4	4
53	1.050	12.91	1.9	266	268	4	4
54	1.181	11.38	2.0	268	268	4	4
55	1.332	9.76	2.1	268	268	4	4
56	1.510	8.03	2.4	270	270	4	4
57	1.733	6.15	2.7	272	272	4	4
58	2.042	4.06	3.3	274	274	4	4
59	2.600	1.69	5.1	278	276	4	4
60	4.000	0.18	10.0	280	280	4	4

**Table N-3. 2017 Legacy MCAS: Raw to Scaled Score Look-Up Table –  
Science Grade 5**

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
0	-7.163	0.10	10.0	200	200	1	1
1	-6.819	0.12	10.0	200	200	1	1
2	-6.475	0.16	10.0	202	202	1	1
3	-6.132	0.21	10.0	202	202	1	1
4	-5.788	0.28	10.0	204	204	1	1
5	-5.444	0.37	9.3	204	204	1	1
6	-5.101	0.49	8.0	204	204	1	1
7	-4.757	0.65	6.9	206	206	1	1
8	-4.413	0.89	5.9	206	206	1	1
9	-4.069	1.22	5.1	208	208	1	1
10	-3.640	1.84	4.1	208	208	1	1
11	-3.298	2.53	3.5	208	210	1	1
12	-3.027	3.23	3.1	210	210	1	1
13	-2.801	3.90	2.8	210	212	1	1
14	-2.605	4.53	2.6	212	212	1	1
15	-2.431	5.11	2.5	212	214	1	1
16	-2.272	5.64	2.4	214	214	1	1
17	-2.126	6.11	2.3	214	216	1	1
18	-1.990	6.54	2.2	216	216	1	1
19	-1.862	6.93	2.1	216	216	1	1
20	-1.739	7.28	2.1	216	218	1	1
21	-1.622	7.59	2.0	218	218	1	1
22	-1.509	7.88	2.0	218	218	1	1
23	-1.399	8.13	2.4	218	220	1	2
24	-1.292	8.36	2.9	220	220	2	2
25	-1.187	8.57	3.4	220	220	2	2
26	-1.085	8.77	4.0	220	222	2	2
27	-0.983	8.94	4.5	222	224	2	2
28	-0.883	9.09	5.0	224	226	2	2
29	-0.784	9.22	5.4	226	226	2	2
30	-0.685	9.33	5.4	228	228	2	2
31	-0.587	9.42	5.3	228	230	2	2
32	-0.488	9.47	5.3	230	232	2	2
33	-0.388	9.49	5.3	232	232	2	2
34	-0.288	9.47	5.3	234	234	2	2
35	-0.186	9.41	5.4	236	236	2	2
36	-0.082	9.31	5.7	238	238	2	2
37	0.024	9.17	5.9	238	238	2	2
38	0.133	8.98	6.1	240	240	3	3
39	0.246	8.75	6.4	244	242	3	3
40	0.363	8.47	6.7	246	244	3	3
41	0.486	8.16	7.0	248	248	3	3
42	0.616	7.81	7.2	250	250	3	3
43	0.753	7.43	7.2	254	252	3	3

continued

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
44	0.900	7.02	6.7	256	254	3	3
45	1.058	6.58	6.1	260	258	4	3
46	1.231	6.10	5.5	262	260	4	4
47	1.421	5.56	4.9	264	262	4	4
48	1.636	4.94	4.7	266	264	4	4
49	1.884	4.22	5.1	268	266	4	4
50	2.182	3.41	5.7	272	270	4	4
51	2.560	2.58	6.5	276	274	4	4
52	3.073	1.80	7.8	280	278	4	4
53	3.870	1.01	10.0	280	280	4	4
54	4.000	0.91	10.0	280	280	4	4

**Table N-4. 2017 Legacy MCAS: Raw to Scaled Score Look-Up Table –  
Science Grade 8**

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
0	-13.402	0.00	10.0	200	200	1	1
1	-12.492	0.00	10.0	200	200	1	1
2	-11.581	0.00	10.0	202	202	1	1
3	-10.670	0.00	10.0	202	202	1	1
4	-9.759	0.00	10.0	204	204	1	1
5	-8.849	0.01	10.0	204	204	1	1
6	-7.938	0.01	10.0	204	204	1	1
7	-7.027	0.03	10.0	206	206	1	1
8	-6.117	0.06	10.0	206	206	1	1
9	-5.206	0.13	10.0	206	206	1	1
10	-4.295	0.27	8.5	208	208	1	1
11	-3.288	0.68	5.4	208	210	1	1
12	-2.702	1.36	3.8	210	210	1	1
13	-2.329	2.22	3.0	212	212	1	1
14	-2.054	3.16	2.5	214	214	1	1
15	-1.834	4.12	2.2	214	214	1	1
16	-1.649	5.08	2.0	214	214	1	1
17	-1.489	6.02	1.8	216	216	1	1
18	-1.346	6.92	1.7	216	216	1	1
19	-1.216	7.78	1.6	216	216	1	1
20	-1.096	8.57	1.5	218	218	1	1
21	-0.985	9.31	1.5	218	218	1	1
22	-0.880	10.00	1.4	218	218	1	1
23	-0.780	10.64	1.6	218	218	1	1
24	-0.684	11.25	2.2	220	220	2	2
25	-0.591	11.84	2.8	220	220	2	2
26	-0.502	12.41	3.4	220	220	2	2
27	-0.414	12.95	3.9	222	222	2	2

continued

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
28	-0.329	13.48	4.5	224	224	2	2
29	-0.245	13.98	5.1	224	224	2	2
30	-0.162	14.44	5.1	226	226	2	2
31	-0.080	14.87	5.0	228	228	2	2
32	0.001	15.24	4.9	230	230	2	2
33	0.083	15.56	4.9	232	232	2	2
34	0.164	15.80	4.8	232	232	2	2
35	0.245	15.97	4.8	234	234	2	2
36	0.328	16.05	4.7	236	236	2	2
37	0.411	16.04	4.5	238	238	2	2
38	0.496	15.94	4.4	240	240	3	3
39	0.582	15.73	4.2	240	242	3	3
40	0.671	15.42	4.1	242	242	3	3
41	0.764	14.99	3.9	244	244	3	3
42	0.860	14.45	3.9	244	246	3	3
43	0.961	13.76	4.0	246	246	3	3
44	1.069	12.92	4.2	248	248	3	3
45	1.185	11.92	4.3	250	250	3	3
46	1.313	10.75	4.6	252	252	3	3
47	1.456	9.44	4.9	254	254	3	3
48	1.619	8.04	5.4	256	256	3	3
49	1.810	6.62	6.3	258	260	3	4
50	2.040	5.26	7.4	262	264	4	4
51	2.332	3.95	8.9	268	268	4	4
52	2.733	2.63	10.0	276	276	4	4
53	3.413	1.19	10.0	280	280	4	4
54	4.000	0.57	10.0	280	280	4	4

**Table N.-5. 2017 Legacy MCAS: Raw to Scaled Score Look-Up Table –  
Biology Grade HS**

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
0	-19.992	0.00	10.0	200	200	1	1
1	-18.464	0.00	10.0	200	200	1	1
2	-16.935	0.00	10.0	202	202	1	1
3	-15.406	0.00	10.0	202	202	1	1
4	-13.878	0.00	10.0	204	204	1	1
5	-12.349	0.00	10.0	204	204	1	1
6	-10.820	0.00	10.0	206	206	1	1
7	-9.292	0.00	10.0	206	206	1	1
8	-7.763	0.00	10.0	208	208	1	1
9	-6.235	0.01	10.0	208	208	1	1
10	-4.706	0.05	10.0	210	210	1	1
11	-3.106	0.58	6.2	210	210	1	1

continued

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
12	-2.476	1.57	3.8	212	212	1	1
13	-2.132	2.65	2.9	214	214	1	1
14	-1.891	3.80	2.4	216	216	1	1
15	-1.703	5.04	2.1	216	216	1	1
16	-1.547	6.34	1.9	218	218	1	1
17	-1.413	7.67	1.7	218	218	1	1
18	-1.295	9.00	1.6	218	218	1	1
19	-1.187	10.29	2.3	218	218	1	1
20	-1.088	11.51	3.0	220	220	2	2
21	-0.996	12.64	3.7	220	220	2	2
22	-0.910	13.66	4.4	222	222	2	2
23	-0.827	14.58	5.1	224	224	2	2
24	-0.748	15.39	5.7	226	226	2	2
25	-0.671	16.10	6.0	226	228	2	2
26	-0.597	16.72	5.9	228	230	2	2
27	-0.525	17.26	5.8	230	232	2	2
28	-0.453	17.74	5.7	232	234	2	2
29	-0.383	18.15	5.6	234	234	2	2
30	-0.314	18.52	5.4	236	236	2	2
31	-0.245	18.84	5.1	238	238	2	2
32	-0.177	19.11	4.9	238	240	2	3
33	-0.109	19.32	4.6	240	242	3	3
34	-0.040	19.46	4.3	242	242	3	3
35	0.029	19.54	4.1	242	244	3	3
36	0.098	19.53	3.9	244	244	3	3
37	0.168	19.42	3.9	246	246	3	3
38	0.240	19.23	3.9	246	248	3	3
39	0.312	18.93	3.9	248	248	3	3
40	0.387	18.53	4.0	248	250	3	3
41	0.464	18.04	4.0	250	252	3	3
42	0.543	17.47	4.1	252	252	3	3
43	0.625	16.81	4.2	252	254	3	3
44	0.710	16.07	4.3	254	256	3	3
45	0.800	15.29	4.3	256	256	3	3
46	0.894	14.45	4.1	258	258	3	3
47	0.993	13.58	3.9	260	260	4	4
48	1.098	12.69	3.6	260	260	4	4
49	1.210	11.79	3.4	262	262	4	4
50	1.331	10.89	3.1	262	264	4	4
51	1.461	9.98	3.2	264	264	4	4
52	1.604	9.06	3.4	266	266	4	4
53	1.763	8.11	3.6	268	268	4	4
54	1.941	7.13	3.8	270	268	4	4
55	2.147	6.17	4.1	272	270	4	4
56	2.388	5.29	4.4	274	272	4	4
57	2.678	4.52	4.8	276	276	4	4
58	3.039	3.71	5.3	280	278	4	4
59	3.556	2.34	6.7	280	280	4	4
60	4.000	1.29	9.0	280	280	4	4



**Table N-6. 2017 Legacy MCAS: Raw to Scaled Score Look-Up Table –  
Chemistry Grade HS**

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
0	-24.650	0.00	10.0	200	200	1	1
1	-22.247	0.00	10.0	200	200	1	1
2	-19.845	0.00	10.0	202	202	1	1
3	-17.442	0.00	10.0	202	202	1	1
4	-15.039	0.00	10.0	202	204	1	1
5	-12.636	0.00	10.0	204	204	1	1
6	-10.233	0.00	10.0	204	204	1	1
7	-7.830	0.00	10.0	206	206	1	1
8	-5.427	0.03	10.0	206	206	1	1
9	-3.014	0.55	6.2	206	206	1	1
10	-2.224	1.83	3.4	210	210	1	1
11	-1.845	3.30	2.6	212	212	1	1
12	-1.592	4.89	2.1	214	214	1	1
13	-1.400	6.53	1.8	214	214	1	1
14	-1.244	8.18	1.6	214	216	1	1
15	-1.111	9.83	1.5	216	216	1	1
16	-0.995	11.46	1.4	216	216	1	1
17	-0.891	13.07	1.3	216	216	1	1
18	-0.796	14.63	1.2	216	218	1	1
19	-0.708	16.08	1.2	218	218	1	1
20	-0.625	17.39	1.1	218	218	1	1
21	-0.546	18.50	1.1	218	218	1	1
22	-0.471	19.42	1.1	218	218	1	1
23	-0.398	20.15	1.0	218	220	1	2
24	-0.328	20.74	1.4	220	220	2	2
25	-0.259	21.24	2.4	220	220	2	2
26	-0.192	21.68	3.4	220	220	2	2
27	-0.126	22.12	4.4	220	222	2	2
28	-0.061	22.58	5.4	222	224	2	2
29	0.003	23.07	6.3	224	228	2	2
30	0.066	23.59	7.3	228	230	2	2
31	0.128	24.13	7.3	230	232	2	2
32	0.189	24.68	7.2	232	234	2	2
33	0.250	25.21	7.0	234	236	2	2
34	0.311	25.70	6.7	236	238	2	2
35	0.371	26.11	6.4	238	240	2	3
36	0.431	26.44	6.1	240	242	3	3
37	0.491	26.65	5.9	242	244	3	3
38	0.552	26.72	5.6	244	246	3	3
39	0.613	26.65	5.4	246	246	3	3
40	0.675	26.43	5.4	246	248	3	3
41	0.739	26.06	5.4	248	250	3	3
42	0.804	25.53	5.5	250	252	3	3
43	0.870	24.87	5.5	252	254	3	3

continued

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
44	0.940	24.06	5.6	254	256	3	3
45	1.012	23.15	5.2	256	258	3	3
46	1.087	22.14	4.6	258	260	3	4
47	1.165	21.05	4.1	260	260	4	4
48	1.249	19.91	3.5	262	262	4	4
49	1.337	18.72	2.9	262	262	4	4
50	1.432	17.50	2.6	264	264	4	4
51	1.533	16.24	2.7	264	264	4	4
52	1.644	14.93	2.8	266	266	4	4
53	1.765	13.53	2.9	266	266	4	4
54	1.900	12.02	3.1	268	268	4	4
55	2.056	10.38	3.4	270	270	4	4
56	2.240	8.60	3.7	272	270	4	4
57	2.471	6.72	4.2	274	274	4	4
58	2.782	4.79	4.9	278	276	4	4
59	3.273	2.70	6.6	280	280	4	4
60	4.000	0.86	10.0	280	280	4	4

**Table N-7. 2017 Legacy MCAS: Raw to Scaled Score Look-Up Table – Introductory Physics Grade HS**

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
0	-36.142	0.00	10.0	200	200	1	1
1	-33.302	0.00	10.0	200	200	1	1
2	-30.462	0.00	10.0	202	202	1	1
3	-27.623	0.00	10.0	202	202	1	1
4	-24.783	0.00	10.0	204	204	1	1
5	-21.944	0.00	10.0	204	204	1	1
6	-19.104	0.00	10.0	206	206	1	1
7	-16.265	0.00	10.0	206	206	1	1
8	-13.425	0.00	10.0	208	208	1	1
9	-10.586	0.00	10.0	208	208	1	1
10	-7.746	0.00	10.0	210	210	1	1
11	-4.907	0.01	10.0	210	212	1	1
12	-2.626	0.88	4.3	212	214	1	1
13	-2.064	2.39	2.6	214	214	1	1
14	-1.757	3.89	2.0	216	216	1	1
15	-1.538	5.26	1.8	216	216	1	1
16	-1.364	6.51	1.6	218	218	1	1
17	-1.217	7.63	1.5	218	218	1	1
18	-1.089	8.68	1.4	218	218	1	1
19	-0.974	9.67	1.9	218	218	1	1
20	-0.869	10.62	2.8	220	220	2	2
21	-0.771	11.55	3.6	220	220	2	2
22	-0.679	12.45	4.4	220	220	2	2
23	-0.593	13.33	5.1	222	222	2	2

continued

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
24	-0.510	14.18	5.8	224	224	2	2
25	-0.431	15.01	6.3	226	226	2	2
26	-0.354	15.80	6.1	228	228	2	2
27	-0.280	16.54	6.0	230	230	2	2
28	-0.208	17.24	5.9	232	232	2	2
29	-0.138	17.89	5.8	234	234	2	2
30	-0.068	18.47	5.5	236	234	2	2
31	0.000	19.00	5.3	238	236	2	2
32	0.068	19.47	5.1	240	238	3	2
33	0.135	19.88	4.9	240	240	3	3
34	0.202	20.22	4.6	242	242	3	3
35	0.269	20.50	4.5	244	242	3	3
36	0.336	20.71	4.3	244	244	3	3
37	0.403	20.86	4.3	246	246	3	3
38	0.471	20.92	4.3	248	246	3	3
39	0.539	20.91	4.3	248	248	3	3
40	0.609	20.80	4.3	250	250	3	3
41	0.680	20.59	4.3	252	250	3	3
42	0.752	20.29	4.3	252	252	3	3
43	0.826	19.88	4.4	254	254	3	3
44	0.902	19.38	4.4	256	256	3	3
45	0.981	18.79	4.2	258	258	3	3
46	1.063	18.13	3.9	258	258	3	3
47	1.149	17.40	3.6	260	260	4	4
48	1.238	16.62	3.2	262	262	4	4
49	1.333	15.78	2.9	262	262	4	4
50	1.433	14.89	2.8	264	264	4	4
51	1.540	13.94	2.9	264	266	4	4
52	1.656	12.90	3.0	266	266	4	4
53	1.782	11.77	3.1	266	268	4	4
54	1.922	10.56	3.3	268	270	4	4
55	2.081	9.26	3.5	270	272	4	4
56	2.265	7.86	3.8	272	274	4	4
57	2.490	6.32	4.3	274	278	4	4
58	2.787	4.53	5.0	278	280	4	4
59	3.265	2.36	7.0	280	280	4	4
60	4.000	0.73	10.0	280	280	4	4

**Table N-8. 2017 Legacy MCAS: Raw to Scaled Score Look-Up Table –  
Technology and Engineering Grade HS**

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
0	-4.232	0.25	10.0	200	200	1	1
1	-2.804	2.56	4.6	202	202	1	1
2	-2.367	4.89	3.3	206	206	1	1
3	-2.101	7.06	2.8	208	206	1	1
4	-1.906	9.11	2.4	208	208	1	1
5	-1.749	11.05	2.2	210	210	1	1
6	-1.618	12.90	2.1	210	210	1	1
7	-1.504	14.67	1.9	212	212	1	1
8	-1.402	16.35	1.8	212	212	1	1
9	-1.310	17.94	1.7	214	212	1	1
10	-1.226	19.45	1.7	214	214	1	1
11	-1.148	20.87	1.6	214	214	1	1
12	-1.075	22.20	1.6	214	214	1	1
13	-1.006	23.45	1.5	216	214	1	1
14	-0.940	24.60	1.5	216	216	1	1
15	-0.877	25.66	1.5	216	216	1	1
16	-0.817	26.63	1.4	216	216	1	1
17	-0.759	27.52	1.4	218	216	1	1
18	-0.703	28.31	1.4	218	218	1	1
19	-0.648	29.01	1.4	218	218	1	1
20	-0.595	29.62	1.4	218	218	1	1
21	-0.542	30.14	1.4	218	218	1	1
22	-0.491	30.57	2.1	220	218	2	1
23	-0.440	30.91	2.8	220	220	2	2
24	-0.390	31.17	3.5	220	220	2	2
25	-0.340	31.34	4.2	220	220	2	2
26	-0.290	31.42	4.9	222	222	2	2
27	-0.241	31.42	5.5	224	222	2	2
28	-0.192	31.33	6.2	226	224	2	2
29	-0.142	31.16	6.3	228	226	2	2
30	-0.093	30.91	6.3	230	228	2	2
31	-0.043	30.58	6.4	232	230	2	2
32	0.008	30.16	6.4	234	232	2	2
33	0.059	29.67	6.1	234	234	2	2
34	0.111	29.11	5.7	236	236	2	2
35	0.163	28.47	5.3	238	238	2	2
36	0.217	27.75	4.9	240	240	3	3
37	0.272	26.97	4.5	242	240	3	3
38	0.329	26.11	4.1	242	242	3	3
39	0.387	25.19	3.7	244	242	3	3
40	0.447	24.21	3.7	244	244	3	3
41	0.510	23.16	3.8	246	246	3	3
42	0.574	22.06	3.9	246	246	3	3
43	0.642	20.91	4.0	248	248	3	3

continued

Raw Score	Theta	Information	Standard Error	Scale Score		Achievement Levels	
				2017	2016	2017	2016
44	0.714	19.71	4.1	250	248	3	3
45	0.789	18.48	4.2	250	250	3	3
46	0.869	17.21	4.4	252	252	3	3
47	0.954	15.92	4.6	254	254	3	3
48	1.045	14.63	4.7	256	256	3	3
49	1.144	13.34	4.6	258	256	3	3
50	1.251	12.07	4.5	260	258	4	3
51	1.368	10.85	4.3	260	260	4	4
52	1.497	9.69	4.2	262	262	4	4
53	1.639	8.61	4.0	264	264	4	4
54	1.799	7.61	4.3	266	266	4	4
55	1.979	6.68	4.6	268	268	4	4
56	2.187	5.77	4.9	270	270	4	4
57	2.434	4.78	5.4	274	274	4	4
58	2.751	3.61	6.2	278	278	4	4
59	3.236	2.08	8.1	280	280	4	4
60	4.000	0.69	10.0	280	280	4	4