

## STATISTICAL SUMMARY

### SPRING 2021 ADMINISTRATION OF OHIO'S STATE TESTS (OST) IN ENGLISH LANGUAGE ARTS, MATHEMATICS, SCIENCE AND SOCIAL STUDIES

The State Board of Education of Ohio adopted Ohio's Learning Standards in English language arts and mathematics in 2010 as part of a multi-state effort. In that same year, the State Board adopted new, more rigorous, standards in science and social studies. Ohio's Learning Standards for English language arts, mathematics, science, and social studies describe the educational targets for students in each subject area. Ohio's State Tests are designed to measure student progress toward achievement of Ohio's Learning Standards. In spring 2016, the Ohio Department of Education administered, for the first time, Ohio's State Tests in English language arts (ELA) and mathematics to assess proficiency with respect to Ohio's Learning Standards. Specifically, the state tests assess student achievement in meeting the English language arts and mathematics standards in grades 3 through 8 and high school coursework, and social studies standards in high school coursework in U.S. History and U.S. Government. In science, students take state tests in grades 5 and 8, and following instruction in biology in high school.

Ohio's State Tests are a series of fixed form assessments that were intended for online administration. However, because some schools were not ready to transition to the online testing environment, the assessments are offered in both online and paper formats.

Statistics reported here are based on the results of all public school and community students participating in the spring 2021 administration. The statistics include repeat examinees in Grade 3 ELA and all high school end-of-course tests.

**Table 1 – Operational Summary Statistics**

Test	N-count	Max Raw Score	Raw Score Mean	Raw Score Standard Deviation	Raw Score SEM	Max Scale Score	Min Scale Score	Scale Score Mean	Scale Score Standard Deviation	Scale Score SEM	Reliability
<b>English Language Arts</b>											
Grade 3 ELA	111,464	41	17.70	8.00	2.77	863	545	700	52	18.01	0.88
Grade 4 ELA	113,313	42	19.91	8.57	2.97	846	549	704	47	15.95	0.88
Grade 5 ELA	113,754	41	22.80	8.41	2.91	848	552	715	50	16.90	0.88
Grade 6 ELA	117,304	61	30.86	12.06	3.41	851	555	701	45	13.22	0.92
Grade 7 ELA	119,263	61	31.58	12.30	3.48	833	568	709	42	11.76	0.92
Grade 8 ELA	120,885	61	29.89	11.67	3.50	805	586	699	32	9.57	0.91
High School 1 ELA	5,828	61	20.52	10.21	3.54	800	606	683	26	8.92	0.88
High School 2 ELA	121,748	61	30.49	11.90	3.57	808	597	708	32	9.23	0.91
<b>Mathematics</b>											
Grade 3 Math	111,683	49	25.31	11.94	3.16	818	587	706	49	12.70	0.93
Grade 4 Math	112,438	49	22.35	12.27	3.01	835	605	713	50	12.85	0.94
Grade 5 Math	112,389	49	19.79	12.12	3.21	804	624	700	37	10.08	0.93
Grade 6 Math	115,223	52	23.28	12.12	3.21	790	616	698	35	9.19	0.93
Grade 7 Math	11,2900	53	20.76	10.97	3.29	806	605	698	35	10.23	0.91
Grade 8 Math	97,410	52	21.21	10.47	3.14	774	633	696	23	6.97	0.91
Algebra	124,604	54	21.80	11.32	3.20	814	618	702	34	9.71	0.92
Geometry	107,803	55	18.35	11.25	3.38	810	604	693	38	11.21	0.91
Integrated Math 1	3,231	55	18.33	10.85	3.43	814	618	691	32	9.86	0.90
Integrated Math 2	5,069	55	14.36	11.00	3.48	813	594	676	39	12.61	0.90
<b>Sciences</b>											
Grade 5 Science	113,019	56	28.43	11.44	3.24	845	559	711	50	13.87	0.92
Grade 8 Science	119,501	55	25.48	11.11	3.33	868	575	713	45	13.64	0.91

Test	N-count	Max Raw Score	Raw Score Mean	Raw Score Standard Deviation	Raw Score SEM	Max Scale Score	Min Scale Score	Scale Score Mean	Scale Score Standard Deviation	Scale Score SEM	Reliability
<b>Biology</b>	118,067	55	23.89	10.48	3.31	823	617	712	30	9.66	0.90
<b>Social Studies</b>											
<b>American Government</b>	72,454	54	28.22	10.69	3.38	774	642	712	19	6.00	0.90
<b>American History</b>	99,227	54	28.16	10.82	3.42	800	619	714	25	8.02	0.90

Note: SEM is standard error of measurement. Min and Max Scale Score and Max Raw Score show the minimum/maximum possible score the students could achieve.

**Table 2 – Scale Score Cut Points for Basic, Proficient, Accelerated, and Advanced Performance Levels Test**

Test	Basic	Proficient	Accelerated	Advanced
<b>English Language Arts</b>				
Grade 3 ELA	672	700	725	752
Grade 4 ELA	674	700	725	753
Grade 5 ELA	669	700	725	755
Grade 6 ELA	668	700	725	751
Grade 7 ELA	670	700	725	749
Grade 8 ELA	682	700	725	744
High School ELA 1	683	700	725	739
High School ELA 2	679	700	725	742
<b>Mathematics</b>				
Grade 3 Math	683	700	725	753
Grade 4 Math	686	700	725	759
Grade 5 Math	687	700	725	749
Grade 6 Math	682	700	725	744
Grade 7 Math	684	700	725	755
Grade 8 Math	690	700	725	744
Algebra	682	700	725	754
Geometry	678	700	725	756
Integrated Math 1	682	700	725	754
Integrated Math 2	677	700	725	758
<b>Science</b>				
Grade 5 Science	664	700	725	753
Grade 8 Science	674	700	725	766
Biology	685	700	725	735
Physical Science	684	700	725	749
<b>Social Studies</b>				
American Government	687	700	725	739
American History	684	700	725	738

**Table 3 – Percentage of Students at Each Performance Level**

Test	N-Count	Limited	Basic	Proficient	Accelerated	Advanced	At or Above Proficient
<b>English Language Arts</b>							
Grade 3 ELA	111,464	30	20	16	15	18	50
Grade 4 ELA	113,313	27	17	18	22	15	56
Grade 5 ELA	113,754	17	18	23	17	26	65
Grade 6 ELA	117,304	23	25	22	15	15	52
Grade 7 ELA	119,263	17	23	21	22	17	60
Grade 8 ELA	120,885	29	18	32	13	7	53
High School ELA 1	5,828	50	26	17	4	3	24
High School ELA 2	121,748	17	20	31	17	15	63
<b>Mathematics</b>							
Grade 3 Math	111,683	32	12	18	19	19	56
Grade 4 Math	112,438	32	8	20	20	20	60
Grade 5 Math	112,389	38	13	24	14	10	48
Grade 6 Math	115,223	35	18	23	13	11	46
Grade 7 Math	112,900	37	19	21	16	7	44
Grade 8 Math	97,410	41	16	32	9	2	43
Algebra	124,604	29	23	25	17	7	49
Geometry	107,803	34	23	21	16	6	42
Integrated Math 1	3,231	44	21	19	11	5	35
Integrated Math 2	5,069	61	15	11	9	5	24
<b>Science</b>							
Grade 5 Science	113,019	19	23	16	19	23	58
Grade 8 Science	119,501	19	21	20	27	13	60
Biology	118,067	19	17	31	11	23	64
<b>Social Studies</b>							
American Government	72,454	6	22	47	16	10	72
American History	99,227	11	21	34	16	18	68

**SUBSCALE DATA**

**Table 4 – Raw Score Ranges for Below Proficient, At/Near Proficient and Above Proficient**

Test	Strand	Below Mastery	At/Near Mastery	Above Mastery
<b>Grade 3 ELA</b>	RI	0-5	6-9	10-16
	RL	0-5	6-9	10-15
	W	0-1	2-4	5-10
<b>Grade 4 ELA</b>	RI	0-5	6-9	10-16
	RL	0-6	7-10	11-16
	W	0-1	2-4	5-10
<b>Grade 5 ELA</b>	RI	0-7	8-10	11-16
	RL	0-5	6-9	10-15
	W	0-2	3-5	6-10
<b>Grade 6 ELA</b>	RI	0-9	10-14	15-24
	RL	0-6	7-11	12-17
	W	0-8	9-11	12-20
<b>Grade 7 ELA</b>	RI	0-8	9-13	14-24
	RL	0-6	7-10	11-17
	W	0-7	8-10	11-20
<b>Grade 8 ELA</b>	RI	0-7	8-11	12-21
	RL	0-8	9-13	14-20
	W	0-7	8-11	12-20
<b>High School 1 ELA</b>	RI	0-7	8-12	13-26
	RL	0-5	6-9	10-15
	W	0-7	8-11	12-20
<b>High School 2 ELA</b>	RI	0-8	9-14	15-25
	RL	0-5	6-9	10-16
	W	0-6	7-10	11-20

Note: RL = Reading Literary Text; RI = Reading Informational Text; W = Writing). The ranges are based on online test form.

Table 4 – Continued

Test	Strand	Below Mastery	At/Near Mastery	Above Mastery
Grade 3 Math	FRA	0-4	5-7	8-12
	G	0-4	5-7	8-11
	MUD	0-4	5-7	8-13
	MR	0-8	9-13	13-27
	NO	0-3	4-7	7-13
Grade 4 Math	FRA	0-4	5-8	9-19
	G	0-3	4-6	7-11
	MUD	0-5	6-9	10-19
	MR	0-6	7-11	12-30
Grade 5 Math	D	0-5	6-9	10-18
	FRA	0-4	5-8	9-19
	G	0-3	4-6	7-12
	MR	0-9	10-14	15-31
Grade 6 Math	EE	0-6	7-10	11-17
	GS	0-2	3-5	6-11
	MR	0-7	8-12	13-26
	NS	0-3	4-6	7-11
	RP	0-4	5-8	9-13
Grade 7 Math	G	0-3	4-6	7-12
	MR	0-8	9-13	14-33
	NS	0-4	5-8	9-16
	RP	0-3	4-6	7-12
	SP	0-2	3-5	6-13
Grade 8 Math	EE	0-4	5-7	8-13
	F	0-3	4-6	7-11
	G	0-5	6-8	9-16
	MR	0-7	8-12	13-29
	NS	0-3	4-6	7-12
Algebra	F	0-6	7-11	12-24
	MR	0-6	7-10	11-23
	NQEE	0-5	6-9	10-19
	S	0-2	3-5	6-11
Geometry	CP	0-4	5-8	9-19

Test	Strand	Below Mastery	At/Near Mastery	Above Mastery
	C	0-1	2-4	5-10
	MR	0-9	10-14	15-36
	P	0-2	3-5	6-10
	ST	0-3	4-7	8-16
<b>Integrated Math 1</b>	A	0-3	4-6	7-13
	G	0-2	3-6	7-12
	MR	0-9	10-14	15-33
	NQF	0-5	6-9	10-19
	S	0-2	3-5	6-11
<b>Integrated Math 2</b>	F	0-2	3-5	6-11
	G	0-4	5-8	9-20
	MR	0-7	8-12	13-31
	NQEE	0-3	4-6	7-14
	P	0-3	4-6	7-10

Note: MR = Model Reasoning; MUD = Multiplication & Division; NO = Numbers & Operations; G = Geometry; FRA = Fractions; D = Decimals; EE = Expressions & Equations; NS = The Number System; GS = Geometry and Statistics; RP = Ratios and Proportions; SP = Statistics and Probability; F = Functions; NQEE = Number, Quantities, Equations and Expressions; S = Statistics; CP = Congruence & Proof; ST = Similarity & Trigonometry; C = Circles; P = Probability; A = Algebra; NQF = Number & Quantity/Functions. The ranges are based on online test form.



**Table 4 – Continued**

<b>Test</b>	<b>Strand</b>	<b>Below Mastery</b>	<b>At/Near Mastery</b>	<b>Above Mastery</b>
<b>Grade 5 Science</b>	ES	0-5	6-8	9-15
	LS	0-8	9-12	13-20
	PS	0-6	7-10	11-21
<b>Grade 8 Science</b>	ES	0-6	7-10	11-22
	LS	0-3	4-7	8-16
	PS	0-5	6-9	10-17
<b>Biology</b>	Ce	0-2	3-5	6-13
	DI	0-3	4-6	7-15
	E	0-4	5-7	8-14
	H	0-2	3-5	6-13

Note: ES = Earth Science; LS = Life Science; PS = Physical Science; H = Heredity; E = Evolution; DI = Diversity and Interdependence of Life; Ce = Cells. The ranges are based on online test form.

**Table 4 – Continued**

<b>Test</b>	<b>Strand</b>	<b>Below Proficient</b>	<b>At/Near Proficient</b>	<b>Above Proficient</b>
<b>American Government</b>	AGA	0-4	5-8	9-17
	AGB	0-4	5-8	9-22
	AGC	0-5	6-9	10-15
<b>American History</b>	AHA	0-2	3-5	6-12
	AHB	0-8	9-12	13-23
	AHC	0-5	6-9	10-19

Note: EG = Economics and Geography; GO=Government; HI=History; EC=Economics; GE=Geography; HG=History and Government; AGA = Historic Documents; AGB = Principles & Structures; AGC = Ohio/Policy/Economy; AHA = Skills & Documents; AHB = 1877-1945; AHC = 1945-Present. The ranges are based on online test form.

**Table 5 – Percentage of Students Below Proficient, At/Near Proficient and Above Proficient**

Test	Strand	Below Proficient	At Proficient	Above Proficient
Grade 3 ELA	RI	31	39	30
	RL	35	36	30
	W	32	48	20
Grade 4 ELA	RI	25	42	33
	RL	35	29	36
	W	28	30	42
Grade 5 ELA	RI	23	24	53
	RL	28	31	41
	W	19	43	38
Grade 6 ELA	RI	32	30	38
	RL	26	44	30
	W	42	19	39
Grade 7 ELA	RI	25	30	44
	RL	23	31	45
	W	38	17	46
Grade 8 ELA	RI	38	31	31
	RL	34	37	30
	W	32	20	48
High School ELA 1	RI	44	34	21
	RL	37	42	21
	W	82	10	8
High School ELA 2	RI	21	40	39
	RL	23	38	39
	W	32	20	48

Note: RL = Reading Literary Text; RI = Reading Informational Text; W = Writing

**Table 5 – Continued**

<b>Test</b>	<b>Strand</b>	<b>Below Proficient</b>	<b>At Proficient</b>	<b>Above Proficient</b>
<b>Grade 3 Math</b>	FRA	33	29	39
	G	23	36	41
	MUD	35	24	41
	MR	35	22	43
	NO	31	29	40
<b>Grade 4 Math</b>	FRA	33	24	44
	G	32	30	38
	MUD	28	28	44
	MR	28	23	48
<b>Grade 5 Math</b>	D	40	22	38
	FRA	40	26	34
	G	35	32	33
	MR	44	19	37
<b>Grade 6 Math</b>	EE	43	28	28
	GS	31	40	29
	MR	39	24	37
	NS	35	34	31
	RP	37	32	32
<b>Grade 7 Math</b>	G	38	41	22
	MR	41	23	36
	NS	37	31	32
	RP	33	36	31
	SP	32	37	31
<b>Grade 8 Math</b>	EE	42	27	31
	F	35	44	21
	G	49	26	25
	MR	41	29	30
	NS	36	33	31
<b>Algebra</b>	F	35	31	34
	MR	34	28	39
	NQEE	36	29	36
	S	23	45	31
<b>Geometry</b>	CP	45	31	24

Test	Strand	Below Proficient	At Proficient	Above Proficient
	C	33	43	25
	MR	48	22	30
	P	28	47	25
	ST	39	31	30
Integrated Math 1	A	43	32	25
	G	41	47	13
	MR	54	18	28
	NQF	54	23	22
	S	32	41	27
Integrated Math 2	F	49	33	18
	G	67	17	16
	MR	65	16	19
	NQEE	64	18	18
	P	63	27	9

Note: MR = Model Reasoning; MUD = Multiplication & Division; NO = Numbers & Operations; G = Geometry; FRA = Fractions; D = Decimals; EE = Expressions & Equations; NS = The Number System; GS = Geometry and Statistics; RP = Ratios and Proportions; SP = Statistics and Probability; F = Functions; NQEE = Number, Quantities, Equations and Expressions; S = Statistics; CP = Congruence & Proof; ST = Similarity & Trigonometry; C = Circles; P = Probability; A = Algebra; NQF = Number & Quantity/Functions

**Table 5 – Continued**

Test	Strand	Below Proficient	At Proficient	Above Proficient
<b>Grade 5 Science</b>	ES	31	29	41
	LS	32	22	46
	PS	28	34	38
<b>Grade 8 Science</b>	ES	27	31	42
	LS	19	40	41
	PS	26	30	44
<b>Biology</b>	Ce	13	50	37
	DI	24	35	41
	E	25	24	51
	H	19	37	44

Note: ES = Earth Science; LS = Life Science; PS = Physical Science; H = Heredity; E = Evolution; DI = Diversity and Interdependence of Life; Ce = Cells.

**Table 5 – Continued**

<b>Test</b>	<b>Strand</b>	<b>Below Proficient</b>	<b>At Proficient</b>	<b>Above Proficient</b>
<b>American Government</b>	AGA	11	31	58
	AGB	14	34	52
	AGC	15	36	49
<b>American History</b>	AHA	12	34	54
	AHB	23	27	50
	AHC	20	31	49

Note: EG = Economics and Geography; GO=Government; HI=History; EC=Economics; GE=Geography; HG=History and Government; AGA = Historic Documents; AGB = Principles & Structures; AGC = Ohio/Policy/Economy; AHA = Skills & Documents; AHB = 1877-1945; AHC = 1945-Present